Volume I
San Bernardino Valley College Master Plan
Draft Program Environmental Impact Report

State Clearinghouse No. 2009041098

September 2009

Prepared for:

San Bernardino Community College District
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SAN BERNARDINO VALLEY COLLEGE

MASTER PLAN

DRAFT

PROGRAM ENVIRONMENTAL IMPACT REPORT

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TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF APPENDICES

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

TABLE OF CONTENTS

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Executive Summary has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123(b), which states that an Environmental Impact Report (EIR) should contain a brief summary of the Proposed Project and its consequences, and should identify:

" 1. Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect;

2. Areas of public controversy known to the lead agency, including issues raised by the agencies and the public; and

3. Issues to be resolved, including the choice among alternatives and how to mitigate the significant effects."

This Draft Program EIR (PEIR) identifies and evaluates the potential environmental impacts associated with the implementation of the proposed Master Plan for San Bernardino Valley College (SBVC). This PEIR was prepared in accordance with CEQA (Public Resources Code Sections 21000-21177) and the Guidelines for the Implementation of CEQA published by the Resources Agency of the State of California (California Administrative Code Sections 15000 *et seq*).

The SBVC Master Plan is a land use plan to guide the physical development of the campus. It is not an implementation plan; that is, its adoption does not constitute a commitment to any specific project details, construction schedule, or funding priority. Rather, the Master Plan describes a program of potential development for the campus through buildout, which is estimated to occur by 2030. The funding, scheduling, and details of each development project undertaken during the planning horizon will be subject to individual approval by the San Bernardino Community College District (SBCCD). Therefore, the EIR for the SBVC Master Plan is a Program EIR, which evaluates at a program level the environmental effects of buildout of the campus under the Master Plan.

A PEIR is defined in the CEQA Guidelines as an EIR "which may be prepared on a series of actions that can be characterized as one large project and are related either geographically, as logical parts in the chain of contemplated actions, in connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program…." (CEQA Guidelines Section 158168). Implementation of the Master Plan would take approximately 20 years. Details of projects that would be implemented under the full Master Plan buildout are unknown. Under CEQA, these future projects will rely on the PEIR as the base environmental document for environmental review. Prior to implementation, when greater detail is known, each project must go through another CEQA review process. They will be examined in light of the Master Plan and Master Plan PEIR to determine if the project falls within the

scope of the Master Plan as examined in the PEIR. If the Lead Agency finds that the subsequent activity would be consistent with the Master Plan, and would not result in new effects or require new mitigation measures, the Lead Agency can approve the activity as being within the scope of the project covered by the PEIR and no new environmental document would be required (CEQA Guidelines Section 15168). Otherwise, subsequent environmental documentation must be prepared. If subsequent documentation is prepared, the environmental analyses would be tiered from this PEIR by incorporating by reference its general discussions and the analysis of cumulative impacts. Subsequent environmental documents would be focused on project- and site-specific impacts.

CEQA requires that the Lead Agency, in this case the San Bernardino Community College District (SBCCD), to consider the information contained in the PEIR prior to taking any discretionary action. This PEIR may also be used by other public agencies that must make discretionary actions related to the proposed Master Plan.

ES.2 PROJECT LOCATION AND SETTING

SBVC is an 87-acre community college campus in the SBCCD. It is one of three facility locations in the SBCCD, which also includes Crafton Hills College, located approximately 16 miles east in the City of Yucaipa, and the SBCCD administrative offices, Professional Development Center, and Applied Technology Training Center. The SBVC Master Plan area is located at 701 South Mount Vernon Avenue in the City of San Bernardino. The campus is bounded by Esperanza Street to the north, K Street to the east, Grant Avenue to the south, and Mount Vernon Avenue to the west. The campus is easily accessed from Interstate 215 (I-215), located 0.5 mile to the east and Interstate 10 (I-10), located 1.5 miles to the south.

The SBVC Master Plan area is in a developed area surrounded by a mix of residential, commercial, and industrial land uses in the City of San Bernardino and adjacent to the City of Colton. The land uses and land use designations are summarized in Table ES-1.

Table ES-1
Summary of Existing Land Use Designations

	Land Use	Zoning	General Plan Designations
SBVC Master Plan Area	Community College Campus	PF (Public Facilities) *SB*	Public Facilities (PF) *SB*
North	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
		RU (Residential Urban – 9 du/ac) *SB*	Residential Urban (RU) *SB*
	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
South	Commercial	C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R3 (Multi Family Residential) *C*	High Density Residential (HD) *C*
		R2 (Duplex Residential) *C*	Medium Density Residential (MD) *C*
		RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
East	Industrial	IL (Industrial Light) *SB*	Industrial Light (IL) *SB*
	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
West	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
		C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R1 (Single Family Residential) *C*	Low Density Residential (LD)/ Multi-Use Area (MU) *C*

Notes: *SB* = City of San Bernardino
C = City of Colton
du/ac = dwelling units per acre

ES.3 PROJECT BACKGROUND/PREVIOUS ENVIRONMENTAL DOCUMENTATION

SBVC was established in the 1920s and is part of the SBCCD. SBVC currently serves the West Valley area of the SBCCD. In 1996, as a result of the 1992 Landers and Big Bear earthquakes, the SBCCD began investigations to locate the San Jacinto fault on the campus. As a result of the 1996 Seismic Hazard Assessment (Leighton and Associates 1996), building replacement projects have been completed at the campus to replace buildings located in or within 50 feet of the fault zone, or within the folding zone, an area of uneven elevation changes during a seismic event. CEQA documentation was prepared for these projects, as described below.

ES.3.1 FEMA Seismic Hazard Mitigation Grant Project

The 1996 Seismic Hazard Assessment determined that seven buildings on the campus were in or within 50 feet of the fault zone (Leighton and Associates 1996). Title 24 of the California Code of Regulations (CCR), Part 1, Sections 4 through 317(e) (the California Building Standards Code), mandates that "no school building shall be constructed, rehabilitated, reconstructed, or relocated within 50 feet of the trace of a

geologic fault along which surface rupture can be reasonably expected to occur within the life of the school building". As a result of the geologic investigation, and in accordance with the California Building Standards Code, SBCCD applied for funding from the Hazard Mitigation Grant Program in 1998. The Hazard Mitigation Grant Program is a federal program funded by the Federal Emergency Management Agency (FEMA) and state or local government. A National Environmental Policy Act (NEPA) Environmental Assessment and Finding of No Significant Impact was completed by FEMA in 1998 (FEMA 1998) and a CEQA Environmental Impact Report (EIR) was completed in November 2000 (SBCCD 2000) for the Seismic Hazard Mitigation Project. The Seismic Hazard Mitigation Project included the demolition of the seven buildings in or within 50 feet of the San Jacinto fault zone (Life Sciences, Campus Center, Andrews Library, Medical Arts, Administration, Art, and Art Gallery). An eighth building (Publications) was demolished to provide space for replacement parking. The functions of these eight buildings were replaced with five new buildings, located outside of the fault zone and constructed to modern seismic standards: Health and Life Sciences, Campus Center, Library, Administration/Student Services, and Art/Art Gallery, all constructed between 2003 and 2006.

ES.3.2 Building Replacement Projects

The seismic assessment recommended the replacement of three additional buildings (North Hall, Physical Science, Chemistry) which are within the San Jacinto folding zone, an area of uneven elevation changes during a seismic event, and one building (Maintenance and Operations) that was outside of the unbuildable area. A CEQA Initial Study/Mitigated Negative Declaration (IS/MND) was prepared for these building replacement projects (SBCCD 2007). The projects provided modern up-to-date facilities to replace existing buildings, rather than accommodate an increase in student enrollment.

ES.3.3 Measure M Projects/ San Bernardino Valley College Master Plan

Measure M, a $500 million bond measure, was passed in February 2008. This bond measure provides funding for the design and construction of new facilities to implement the Master Plan. The Master Plan estimates that various academic buildings, infrastructure improvements, and associated parking are required to meet the planning challenges related to the fault and folding zone and to support the West Valley community college demand through 2030. These components are detailed in Section ES.6 below.

ES.4 PLANNING CHALLENGES

The master planning process identified three significant challenges at SBVC: the San Jacinto Fault and its impact on existing and future buildings; the loss of campus organization as a result of the fault; and the disintegration of campus identity from demolition of buildings (Steinberg Architects 2009). The goals of the Master Plan are to meet these challenges.

ES.4.1 The San Jacinto Fault

The San Jacinto fault has a tremendous impact at SBVC. On the campus, two lines of the fault run parallel to each other and have a required 50-foot setback to either side, creating a zone in which no structures are allowed. Additionally, a folding zone exists to the northeast of the fault, caused by the relative movement of two tectonic plates underneath the earth's surface. It is not recommended that new structures be built within the folding zone. The unbuildable zone created by the fault and folding zones is approximately 18 acres.

ES.4.2 Loss of Organization

The original campus consisted of a traditional framework of buildings arranged around open landscape quads and hardscape plazas. Structures were parallel and perpendicular to the City street grid, typically two stories in height and in the mission revival style. Buildings constructed in the 1960s and 1970s were more utilitarian in style, but in configuration reinforced the network of quads and plazas. When the fault was discovered, the necessary demolition destroyed the original framework of the campus. Because of structural engineering recommendations, new buildings were placed either parallel or perpendicular to the fault and folding zones, making them skewed in relation to existing buildings that were oriented to the street grid. With the network of quads and plazas defined by the original buildings gone, the logical sequence of circulation was lost.

ES.4.3 Identity

Because new construction should not be within the fault or folding zones, the first replacement buildings were located in available space on campus, primarily parking lots at the edges of campus. This has led to a perceived separation between the north and south sides of campus, which are divided by the 18-acre unbuildable zone.

ES.5 PROJECT GOALS

The Master Plan will create connections that link and unify the campus and community to foster a positive memorable experience and identity through the following planning principles (Steinberg Architects 2009):

- **Student-centered Culture**
  - Large central gathering place
  - Distinct districts
  - Sufficient parking
  - Serve the West Valley population

- **Hierarchy of Elements**
  - Campus edges/transitions from the campus to the community
  - Delineation of primary and secondary campus entrances
  - Variety of exterior spaces

- **Access**
  - Vehicular/pedestrian circulation
  - Accessible paths and buildings
  - Wayfinding

- **Sustainable Design**
  - Respond to natural environment
  - Flexibility of space (long-term use)
  - Energy efficiency

- **Functional Integration**
  - Consolidate instructional divisions
  - Active and passive exterior spaces
  - Interior/exterior connections

ES.6 DESCRIPTION OF PROPOSED PROJECT

The proposed Master Plan estimates that various academic buildings, infrastructure improvements, and associated parking are required to meet the planning challenges related to the fault and folding zone, which creates an 18-acre unbuildable area on the campus. Improvements are also required to support a future enrollment of 15,000 total students by 2020 and 17,000 total students by 2030. The Master Plan does not constitute a mandate for growth, nor is it a detailed implementation plan for development. Its adoption does not constitute a commitment to any specific project details, construction schedule, or funding priority. Rather, the Master Plan describes a program of potential development for the campus through buildout. The funding, scheduling, and details of each development project undertaken during the planning horizon will be subject to individual approval by the SBCCD. Table ES-2 shows the projected increases in student enrollment, building area, and parking over the planning period.

Table ES-2
SBVC Existing Conditions and Master Plan Projected Growth

	2008 Estimate	Horizon 1 2010	Horizon 2 2020	Horizon 3 2030
Student Enrollment (total)	12,561	13,300	15,000	17,000
Building Area (ASF)	426,550	418,888	427,454	526,731
Parking*	2,715	3,182	3,055	3,349

Notes:

ASF= Assignable square feet or the sum of all surface areas in a building that are assigned to, or available for assignments.

* Parking includes on-site and on-street parking supplies. Only the 2008 Estimate includes use of the Swap Meet property, which is located to the west of SBVC.

It should be noted that SBVC has more square footage than required for its current enrollment. Therefore, many of the projects in the Master Plan that replace outdated buildings would also accommodate growth without a significant increase in the overall square footage of assignable space on the campus. The main increase in ASF occurs in Horizon 3.

The Master Plan for SBVC describes the improvements to SBVC in three phases, called Horizons (Steinberg Architects 2009). The Horizons are described below.

ES.6.1 Horizon 1

Horizon 1 targets the year 2010, and primarily consists of the construction of four buildings that replace buildings within or near the San Jacinto fault folding zone (North Hall, Physical Science, Chemistry, and Maintenance and Operations) (Table ES-3). The replacement is for safety reasons, not to accommodate an increase in student population. The replacement of these buildings was initially funded by Measure P and State funding prior to the development of the Master Plan. Therefore, a CEQA IS/MND was prepared for this building replacement project in 2007 (SBCCD 2007). It is included in this PEIR for reference purposes, and as a basis for cumulative impacts analysis.

Also included in Horizon 1 is Parking Structure 1, a multi-level, approximate 1,250-space parking structure located on the south portion of campus with access from Grant Avenue and K Street. This parking structure facility was not included in the CEQA IS/MND prepared for the Measure P projects, and will be evaluated for the first time in this PEIR.

Table ES-3
Horizon 1 Projects

Horizon 1 Project	Project Description
New Buildings/Facilities	
New Maintenance and Operations Building	Physical plant space for the campus
New North Hall Replacement Building	Classrooms, labs, offices for criminal justice, humanities, humanities programs
New Media and Communications Building	Classrooms, labs, offices, media space for media and communications programs and KVCR (campus radio and television broadcasting station)
New Chemistry/Physical Science Building	Classrooms, labs offices, assembly area for chemistry and physical sciences programs
New Student Health Services Building	Clinical space; offices
New Parking Structure 1	An approximate 1,250-space parking structure (approximately 72 feet in height plus vertical circulation and lighting), with the potential for a solar photovoltaic system, located on south side of campus with access from Grant Avenue and K Street.
Renovations	
None	
Demolitions	
Maintenance and Operations Building	After the functions of the North Hall and the Maintenance and Operations Building have been moved to newly constructed buildings, they will be demolished, allowing the construction of the new Chemistry/Physical Science Building. The demolition of these buildings were analyzed in a separate IS/MND.
North Hall Building	
Chemistry/Physical Science Buildings	
Infrastructure Improvements	
Storm Drain; Sanitary Sewer; Water Distribution and Fire Protection; Heating, Ventilation, and Air Conditioning; Electrical; Natural Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Infrastructure will be extended on campus to connect new buildings.

ES.6.2 Horizon 2

Horizon 2 targets the year 2020 and is defined by the replacement of structures identified in the assessment study as in the worst condition: the Liberal Arts Building, Gymnasiums and Pools, and Technical Building (Table ES-4). The existing Liberal Arts Building would be demolished and replaced with a new Liberal Arts Building. The old gymnasiums would be demolished and replaced with two new gymnasium buildings in roughly the same area. The softball field would be relocated, the baseball field would be resurfaced, and a new soccer field would be constructed along K Street. The track and football field would remain in their current locations, but new home and visitor stands would be added.

The new Technical Building would anchor the northeast corner of the campus and provide the program and campus with public visibility and access, improving the edge of the campus in this location. The old Technical Building would be demolished and an approximately 200 to 250 space parking lot would be constructed in that location.

Table ES-4
Horizon 2 Projects

Horizon 2 Project	Project Description
New Buildings/Facilities	
New Gymnasiums 1 and 2	Offices for athletics, health services and physical education divisions. Locker rooms, weight rooms, and physical education/athletics spaces.
New Technical Building	Classrooms, labs, and offices for applied technology.
New Softball Field	Construct new softball field on existing open space south of College Ave. and north of the track.
New Soccer Field	Construct new soccer field on location of existing softball field west of K Street and east of the track.
New Liberal Arts Building	Classrooms, labs, offices for social science/human development, and computing services
New Home and Visitor Stands at Track/Football Field	Home stands would be constructed on the west side of the track/football field and visitor's stands would be constructed on the east side of the track/football field
Renovations	
Baseball Field	Resurface existing baseball field
West Drop Off Reconfiguration	Reconfigure Parking Lot 2 to provide a drop off space
Business Building Renovation	Architectural finish upgrades, building system upgrades, and remodeling
Auditorium Renovation	Architectural finish upgrades, handicap-accessible upgrades
Demolitions	
Technical Building	Functions moved to new Technical Building. Site converted to surface parking lot.
Liberal Arts Building	Functions incorporated into new Liberal Arts Building. Replaced with a new Liberal Arts Building.
Snyder Gymnasium and Women's Gymnasium	Functions incorporated into new Gymnasiums 1 and 2. Replaced with landscaped open space, new home stands, and new Gymnasiums 1 and 2.
Middle College	Middle College relocated off site per the goals of the San Bernardino City Unified School District.
Infrastructure Improvements	
Central Plant	New/additional central plant and potentially a thermal energy storage system and other energy systems will be constructed to serve the campus.
Storm Drain; Sanitary Sewer; Water Distribution and Fire Protection; Heating, Ventilation, and Air Conditioning; Electrical; Natural Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Infrastructure will be extended on campus to connect new and existing buildings.

ES.6.3 Horizon 3

Horizon 3 targets the year 2030 and represents the full buildout of the campus (Table ES-5). A new Performing Arts Building would be constructed adjacent to Grant Avenue. Two new office and classroom buildings would be constructed to support academic functions that have not yet been assigned. A multi-level, approximate 1,100 space parking structure (Parking Structure 2) with tennis courts on the top level would be constructed at the parking lot that was formerly the site of the old Technical Building.

The Planetarium would be demolished, and its function incorporated into one of the new or existing buildings. A new outdoor stage and backdrop for the existing Greek Theater would be built at its old location.

Table ES-5
Horizon 3 Projects

Horizon 3 Project	Project Description
New Buildings/Facilities	
Performing Arts	Performing arts facility
New Building 1	Replace classrooms, labs, and offices in existing Business Building and provide for accommodation of future growth.
New Building 2	Offices, classrooms, and labs for future growth.
New Parking Structure 2	An approximate 1,100-space parking structure (approximately 47 feet in height plus vertical circulation, tennis courts, and lighting) with access from Esperanza Street
New Campus Entry	New Campus Entry
Renovations	
Greek Theater	New stage and backdrop
Demolitions	
Planetarium	Functions incorporated into new or existing building. Replaced with open space/new Greek Theater backdrop
Business Building	Functions incorporated into New Building 1. Replaced with new Building 1 and landscaped open space.
Infrastructure Improvements	
Storm Drain; Sanitary Sewer; Water; Heating, Ventilation, and Air Conditioning; Electrical; Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Provide service to new and existing buildings

ES.6.4 Conceptual Landscape Plan

The conceptual landscape plan included in the Master Plan divides the campus into twelve landscape places:

1. The Glade;
2. San Jacinto Fault Interpretive Walk;
3. Riparian Garden;
4. Campus Walk;
5. North/South Campus Walk;
6. Cultural Plaza;
7. Wellness Garden;
8. Events District;
9. Student Commons;
10. Plaza;
11. Mount Vernon Landscape; and
12. Valley College Streetscape.

The conceptual landscape plan will be implemented in each Horizon, as buildings are constructed and demolished.

ES.7 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Prior to the preparation of this PEIR, an Initial Study was prepared. The Initial Study determined that the following environmental factors would either have potentially significant impacts, or required additional study before making the determination of impact significance:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services;
- Traffic and Parking; and
- Utilities.

The Initial Study determined that the following issues did not warrant further analysis in the PEIR:

- Agricultural Resources;
- Mineral Resources;
- Population and Housing; and
- Recreation.

ES.7.1 Impacts Considered Less Than Significant

Based on additional study during the preparation of the Draft PEIR, the following environmental factors were determined to have a less than significant impact as a result of the Proposed Project:

- Air Quality;
- Land Use and Planning; and
- Public Services.

ES.7.2 Potentially Significant Adverse Impacts that Can Be Mitigated

Potentially significant impacts were identified in the following environmental resource areas. However, these impacts would be reduced to levels below significant with the implementation of project-specific mitigation measures (see Table ES-6):

- Aesthetics;
- Biological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality; and
- Utilities.

ES.7.3 Unavoidable Significant Adverse Effects

Based on the analysis in Section 3.0 of this PEIR, implementation of the Proposed Project would have significant, unavoidable adverse effects to historic resources, noise, and traffic as described below. Therefore, a Statement of Overriding Considerations for these issues would be necessary before the proposed Master Plan can be approved by the SBCCD. Specifically, the SBCCD must find that benefits of the expansion of San Bernardino Valley College in accordance with the proposed Master Plan has sufficient benefit to override the unavoidable impacts to historic resources, noise, and traffic.

Historic Resources. Several buildings would become historic in age (i.e., over 50 years old) during the implementation of the Master Plan. Because the Master Plan is phased in 10-year Horizons, it is possible that one or more of these buildings will become historic in age prior to scheduled demolition or renovation in Horizons 2 and 3, and may be considered to be historical resources as defined by CEQA. If a building becomes scheduled to be renovated or demolished after it becomes 50 years in age, it would be necessary for a qualified Architectural Historian or a qualified architect with experience with historic

buildings to evaluate the building to determine if it is a historical resource according to CEQA (Mitigation Measure CR-4). If the evaluation determines that the structure is not a historical resource, there would be no impact from the Proposed Project and no further work would be required. If the evaluation determines that the structure is a historical resource, Mitigation Measures CR-3 would reduce impacts from renovation of these buildings to a less-than-significant level. Please refer to Table ES-6 at the end of this section for the referenced mitigation measures.

If it is determined after the evaluation in Mitigation Measure CR-4 that a building to be demolished is a historic resource according to CEQA, then the impact would remain significant and unavoidable (CCR Title 14 Section 15064.5).

Noise. It is not considered feasible to mitigate construction noise levels such that they would not increase the 1-hour L_{eq} from less than 65 dBA to more than 65 dBA at all sensitive receptors in the project vicinity. However, it is noted that Mitigation Measures N-1 through N-9 would control construction noise to the extent practicable. Even with these measures, construction noise would continue to be significant and unavoidable. Construction noise would be temporary, would diminish over the course of construction, and would cease entirely at the completion of the Proposed Project.

It is not considered feasible to mitigate the noise impacts associated with future sporting events at the project site because, by their nature, these are outdoor events that are intended to attract large crowds. These facilities cannot be readily enclosed; shielding them would require significant solid noise barriers (both in terms of height and length). While the Master Plan provides reconfiguration and/or upgrade to sports facilities, it is noted that these noise sources already exist at SBVC and would continue with or without the Master Plan Project. Nevertheless, during future sporting events there would be a substantial permanent increase in ambient noise levels above levels existing without the project at some of the homes to the east of SBVC. Mitigation Measure N-13 would provide some reduction in the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to be significant and unavoidable. Please refer to Table ES-6 at the end of this section for the referenced mitigation measures.

Traffic. There are significant impacts at the following unsignalized intersections:

- Grant Ave./K St. (AM)
- Grant Ave./I St. (AM and PM)
- Inland Center Drive/ I St. (AM and PM)

A significant impact at an unsignalized intersection occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection. The traffic analysis assumes that the unsignalized intersection of Inland Center Drive/I Street is not signalized in Horizon 2, as a worst-case scenario. Implementation of Mitigation Measures T-1 and T-2 would reduce impacts to a less-than-significant level. Although the SBCCD would pay its fair share toward the construction of traffic signals at the impacted intersections, signal construction is ultimately under the control of the City of San Bernardino. If the traffic signals that are

required as part of Mitigation Measure T-2 for the unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street are not constructed by the City, this impact would remain significant. Please refer to Table ES-6 at the end of this section for the referenced mitigation measures.

ES.8 AREAS OF CONTROVERSY

CEQA requires the PEIR to identify areas of controversy or public interest. Prior to the preparation of this PEIR, an Initial Study and Notice of Preparation (NOP) were prepared for the Proposed Proejct (Appendix A). The Initial Study and NOP were distributed for review and comment to Responsible and Trustee Agencies, the State Clearinghouse, and other interested parties for a 30-day scoping period from April 22, 2009 to May 21, 2009. Letters were received from the following agencies:

- City of Colton;
- South Coast Air Quality Management District;
- Department of Toxic Substances Control; and
- Governor's Office of Planning and Research – State Clearinghouse and Planning Unit.

These letters are provided in Appendix A. During the scoping period, consultation with Native American groups was also conducted. A letter was received from the Soboba Band of Luiseño Indians and is included as part of Appendix E.

A scoping meeting was held on May 5, 2009 at the San Bernardino Valley College campus. A written comment was received from the following agency and is included as part of Appendix A:

- Tim Deland, San Bernardino City Unified School District.

Issues raised during the public and agency scoping period generally fall into these categories:

- Potential adverse construction and operational air quality, noise, and traffic impacts;
- Parking and street system;
- Hydrology and groundwater quality; and
- Exposure to hazardous materials during demolition/construction.

These and other environmental issues are addressed in Section 3.0 of the PEIR.

ES.9 PROJECT ALTERNATIVES

CEQA requires an evaluation of the comparative effects of a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the project's basic objectives and that would avoid or substantially lessen any of the significant impacts of the Proposed Project. Three alternatives were evaluated and rejected because they did not meet the goals of the Master Plan and/or they would not reduce the significant,

unmitigable air quality, noise, and traffic impacts that would occur with the proposed Master Plan. As required by CEQA the No Project Alternative was evaluated.

ES.9.1 No Project Alternative

With the No Project Alternative, the proposed Master Plan would not be implemented. The construction of four buildings that replace buildings within or near the San Jacinto fault folding zone (North Hall, Physical Science, Chemistry, and Maintenance and Operations) occurs. The replacement of these buildings was initially funded by Measure P and State funding prior to the development of the Master Plan. Therefore, a CEQA IS/MND was prepared for this building replacement project in 2007 (SBCCD 2007).

With this alternative, new educational/recreational buildings would not be constructed, parking structures would not be built, campus infrastructure would not be upgraded, and the existing buildings would not be renovated. Parking would remain at 2,715 spaces which includes on-site, on-street, and Swap Meet parking. Enrollment would continue to increase according to projected growth rates and temporary classroom facilities may be added.

Summary of Impacts (No Project Alternative)

Aesthetics. With the No Project Alternative, the views from off-campus and on-campus would not change. Beneficial impacts related to improved campus landscaping and lighting would not occur. Impacts would be less than significant.

Air Quality. With the No Project Alternative, air quality impacts related to construction of the proposed Master Plan projects would not occur. However, regional air quality impacts related to student traffic would likely be worse than with the proposed Master Plan. Student enrollment would continue to increase per projected growth rates. SBVC would not be able to accommodate the increase, causing students living in the West San Bernardino Valley to commute a greater distance to community colleges outside of the SBCCD.

Biological Resources. Potential impacts to raptors/nesting birds and bats would not occur. The existing campus landscaping and buildings would remain resulting in a less than significant impact.

Cultural and Paleontologic Resources. With the No Project Alternative, potential impacts to unknown subsurface resources would not occur. Over time, the existing SBVC buildings are expected to reach 50 years in age or older. The potentially historic buildings would not be demolished or renovated. The Auditorium would not be renovated. Since no substantial grading of the project area would occur and buildings would not be demolished or renovated, the potential for disturbance of cultural or potentially historic resources would not be significant.

Geology and Soils. Potential impacts to local geology and soils related to grading and facility construction would not occur. The beneficial impacts related to building renovation and seismic safety would not occur with the No Project Alternative.

Hazards and Hazardous Materials. With the No Project Alternative, the use of hazardous materials for campus maintenance and laboratory use would remain the same. Beneficial impacts from fire system improvements would not occur.

Hydrology and Water Quality. Potential impacts to hydrology from grading and increased impervious surface area on the campus would not occur.

Land Use and Planning. With the No Project Alternative, the property would continue as a community college campus. No impact would occur.

Noise. Under the No Project Alternative, no construction would occur. As such, no impacts would occur either off- or on-site and no mitigation would be required. Operational noise is anticipated to be less than with the Proposed Project. Noise sources from outdoor sporting and entertainment events already exist at the SBVC campus and would continue with or without the Proposed Project. Impacts would be less than significant.

Public Services. With the No Project Alternative, student enrollment would continue according to projected growth rates. The need for public services would continue. The beneficial impact on fire safety from creation of additional fire safety infrastructure would not occur.

Traffic and Parking. Impacts to area intersections would occur with or without the project. In the No Project scenario, the following intersections would operate at an unacceptable LOS during one or more peak hours:

- Mill St./Mt. Vernon Ave. (PM);
- Esperanza St./Mt. Vernon Ave. (AM and PM);
- Grant Ave./Mt. Vernon Ave./La Cadena Dr. (PM);
- Grant Ave./K St. (AM);
- Inland Center Drive/ I St. (AM and PM); and
- Colton Ave./Mt. Vernon Ave. (PM).

Parking would remain at approximately 2,715 spaces which includes on-site, on-street, and Swap Meet parking. Parking demand would increase over time as with the Proposed Project, resulting in a deficit in available parking spaces and a potentially significant impact.

Utilities. With the No Project Alternative, increases in the demand for utilities would not occur. However, the beneficial impacts of improved utilities to the campus would also not occur.

Feasibility of the No Project Alternative. The No Project Alternative is feasible. However, the positive effects of the Proposed Project and its objectives, as mentioned above, would not be realized; in particular, the demolition/renovation of structures for seismic reasons, student traffic, and parking.

ES.10 ENVIRONMENTALLY PREFERRED ALTERNATIVE

CEQA Guidelines require that an EIR identify the environmentally preferred alternative. The No Project Alternative would be the environmentally preferred alternative, because it would create fewer environmental impacts than the proposed Master Plan. However, it should be noted that the No Project Alternative would not eliminate the significant, unmitigable impacts associated with student traffic.

According to CEQA Guidelines, if the environmentally preferred alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives. The Proposed Project is the only other feasible alternative, and would be the environmentally superior alternative because it would mitigate the majority of the identified impacts to a less than significant level, provide necessary parking, and would likely have fewer air quality emissions associated with student traffic. In addition, the Proposed Project would result in beneficial impacts.

ES.11 ISSUES TO BE RESOLVED BY THE LEAD AGENCY

The major issues to be resolved by the SBCCD as Lead Agency include the following:

- Whether the PEIR adequately describes the environmental impacts of the Proposed Project;
- Whether the recommended mitigation measures should be modified/adopted;
- Whether the benefits of providing expanded community college facilities override the significant impacts to historic resources, noise, and traffic; and
- Which among the Proposed Project and its Alternatives should be selected for approval.

ES.12 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-6 presents a summary of the environmental impacts analyzed and identified in this PEIR, the mitigation measures proposed for those impacts (if required), and the level of significance after mitigation.

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Table ES-6
Impact and Mitigation Summary Table

Environmental Impacts	Mitigation Measures	Residual Impact
AESTHETICS		
On-Campus Views. The landscape guidelines of the Master Plan divide the campus into twelve landscape places. The implementation of the Master Plan would result in beneficial impacts from improved landscaping. On-campus views would be improved with implementation of the Master Plan. The overall campus organization and identity, which was interrupted with the discovery of the fault and fold zone and the seismic building replacement projects conducted since the mid-1990s, would be restored. An overall beneficial impact would occur.	None required.	Beneficial impact.
Off-Campus Views. The Master Plan would transform the campus edge into a transitional zone between the public and the academic community. Building facades facing the campus edge would present the formal identity of SBVC to the community. The Master Plan would create appropriately scaled facades that are sympathetic to the adjacent streetscape. Three story buildings would be emphasized along Mount Vernon Avenue, which is a commercial street, while buildings of reduced heights and athletic fields would border residential streets (Grant Avenue, Esperanza Street, and K Street). The exception would be the two parking structures. Parking Structures 1 and 2 would be in the foreground of views from residential structures on Grant Street and Esperanza Street, respectively. The Master Plan recommends a palette of building materials to	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
guide the design and construction of new campus buildings and the remodeling of existing structures. Additionally, the Master Plan recommends the planting of trees and shrubs along the streetscapes to provide a visual buffer between the existing residential areas and the campus buildings. Impacts from the parking structures would be less than significant.		
Off-Campus Views (continued). The campus edge would incorporate landscaping that creates visual consistency along adjacent streets. Landscaping along Mount Vernon Avenue would utilize trees with stature and contain lawn areas in order to convey a campus feel and signal its presence to the community. The added landscaping to the streetscape surrounding the SBVC campus would add an aesthetic value to the community. The improved landscaping would be in conformance with the City of San Bernardino's General Plan goal to attractively design, landscape, and maintain San Bernardino's major corridors (in this case, Mount Vernon Avenue). The views from off-site areas in the City of Colton would also be improved with landscaping. A beneficial impact would occur.	None required.	Beneficial impact.
Light and Glare. Existing lighting for streets, parking lots, pedestrian pathways, stairways, building entries, building perimeters, and landscaping would be replaced with modern lighting fixtures. These modern light fixtures would provide increased visibility, and highlight elements of buildings and trees. Light fixtures used at the campus edge would be directed downward and would not exceed a light intensity level of 3 foot-candles	None required.	Beneficial impact.

Environmental Impacts	Mitigation Measures	Residual Impact
(fc) therefore no adverse impacts are expected on the surrounding properties from these light fixtures. A beneficial impact would occur by replacing the existing, older fixtures that have a high perceived brightness and glare with new fixtures that would be shielded to reduce off campus light and glare.		
Light and Glare. Higher intensity light fixtures would be employed in the sports fields, which would include fixtures ranging from 50 fc to over 100 fc. The unshielded lighting at the football field would be replaced with modern, shielded fixtures, resulting in a beneficial impact. The soccer, baseball, and softball fields adjacent to residential properties on the east side of K Street would have lighting added as a result of the Master Plan. The adjacent residences may be affected by increased lighting during sporting events. With the incorporation of Mitigation Measure A-1, light and glare impacts from the sport field lights on the adjacent residential properties would be less than significant.	**A-1:** Lighting fixtures for the sports fields shall be shielded, directed downward, and have sharp cutoff qualities at property lines, in order to minimize light and glare spillover effects that would affect adjacent residential receptors.	Less than significant.
AIR QUALITY		
Construction. The emissions associated with individual construction phases would be below the significance thresholds and Localized Significance Thresholds for all Horizons. A less than significant impact would occur.	None required.	Less than significant.
Project construction would employ dust control measures (i.e., watering twice daily) and would therefore be in compliance with strategies in the Air Quality Management Plan (AQMP, SCAQMD 2003) for attaining and maintaining the air quality standards. Construction of the Proposed Project would therefore	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
not conflict or obstruct the implementation of the AQMP or applicable portions of the State Implementation Plan. Emissions would be below the PM_{10} and $PM_{2.5}$ significance thresholds set forth by the SCAQMD. Furthermore, due to the fact that the construction phase of the project is short-term in nature, Proposed Project construction would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, nor result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$. A less than significant impact would occur.		
Because of the short-term nature of project construction and the location of construction some distance away from residences where more frequent exposure would be possible, exposure to diesel exhaust emissions during construction would not be significant.	None required.	Less than significant.
Operation. Operational emissions associated with the Master Plan would be less than the daily significance thresholds, and no significant impacts are anticipated.	None required.	Less than significant.
Localized CO Impacts. Projects involving increases in traffic and/or traffic congestion may result in localized increases in Carbon Monoxide (CO) concentrations. The Traffic Study evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the Proposed Project. The potential for CO "hot spots" was evaluated based on the results of the Traffic Study. The predicted CO concentrations would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO. Therefore, no	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
exceedances of the CO standard are predicted. The Proposed Project would not cause or contribute to a violation of this air quality standard. A less than significant impact would occur.		
Toxic Air Contaminants (TAC). TACs may be emitted from processes at SBVC, including laboratory/classroom chemical use and chemicals used for maintenance purposes. Implementation of the Master Plan would involve movement of laboratory and classroom spaces, but would not likely result in increases in use of chemicals. Increased enrollment may result in some increased use of laboratory chemicals; however, emissions of TACs would be minor and would not result in a significant impact.	None required.	Less than significant.
Odors. The new developments proposed under the SBVC Master Plan would include institutional land uses and would not be considered major sources of odors that would result in a significant impact to sensitive receptors.	None required.	Less than significant.
BIOLOGICAL RESOURCES		
Impacts to Listed and Special-status Plant Species. No listed or special-status plant species were found to occur during the biological resource assessment survey conducted in 2009. The vegetation on-site consists of native and non native trees, shrubs, and grasses, all of which have been planted there. The project site does not contain undisturbed native habitat that could support listed or special-status plant species. No impact would occur.	None required.	No impact.

Environmental Impacts	Mitigation Measures	Residual Impact
Impacts to Listed and Special Status Wildlife Species. No listed or special-status wildlife species were detected during the biological resource assessment survey conducted in 2009. However, the western mastiff bat, a CSC species, was recorded in a biological survey of the North Hall building conducted in 2007. The western mastiff bat and the western yellow bat have a high and moderate potential to occur within the ornamental trees and structures on-site. The development proposed by the Master Plan would result in less than significant impacts to roosting CSC bat species with implementation of Mitigation Measure B-1.	**B-1:** A qualified bat biologist shall conduct a preconstruction survey of potential bat roosting sites prior to removal of mature trees and existing structures. If an active bat roost is detected, bat exclusionary devices shall be installed during the non-breeding season (outside of May 1 – October 1) and after bats voluntarily leave the roost for the night to forage. Demolition shall occur once the biologist deems the structure void of bats.	Less than significant.
Impacts to Riparian Habitat or Other Sensitive Natural Communities. The SBVC campus does not contain riparian habitat or other sensitive natural communities. No impact would occur.	None required.	No impact.
Impacts to Federal or State Protected Wetlands. There are no wetlands on the SBVC campus. No impact would occur.	None required.	No impact.
Impacts to the Movement of Native Fish or Migratory Wildlife. There is no habitat for fish on the SBVC campus. However, there is suitable habitat on-site for migratory wildlife such as birds. The campus features a diverse set of trees that may provide nesting habitat for birds, which are protected under the MBTA. Suitable raptor nesting habitat is present on the large mature trees on campus and in some of the buildings. The development proposed by the Master Plan could result in a violation of the MBTA through the removal of active nests and by causing nest abandonment if habitat	**B-2:** Demolition or construction activities that require the removal of occupied trees or shrubs or other disturbances, such as constant noise and dust, shall take place outside of the bird breeding season (February 15 to September 1) to the maximum extent practicable. If construction activity occurs within the bird breeding season then pre-construction nesting surveys shall be conducted in order to ensure compliance with the MBTA and CDFG Code	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
removal activities occur during the bird breeding season (February 15 through August 31). Compliance with the MBTA would be achieved and impacts to nesting migratory birds would be reduced to a less than significant level with the implementation of Mitigation Measure B-2.	3503.5. If active nests are found during the breeding season then buffer zones shall be established around the active nest by a qualified biologist (typically 250 feet radius for a songbird and 500 feet radius for a raptor). Demolition and construction activities shall be avoided within the buffer zone until a qualified biologist determines that the nest(s) is no longer active. If the nest(s) must be removed the removal shall take place in the non-breeding season (September 1 to February 14).	
Conflicts with Local Policies or Ordinances Protecting Biological Resources. The Division of the State Architect is responsible for the approval of building plans for the San Bernardino Community College District projects. The City of San Bernardino landscape standards are used as a guideline for this analysis. The City of San Bernardino's Development Code 19.28 indicates that one of the purposes of the landscaping standards is to enhance the aesthetic appearance of development through the quality and quantity of landscaping. A section of the landscaping standards (19.28.090) is intended to address this purpose, through the requirement for a permit to remove more than 5 trees within a 36 month period. The San Bernardino Valley College Master Plan provides for extensive and enhanced re-landscaping of the campus. Impacts will thus be less than significant.	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
Conflicts with Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans. The SBVC campus is not located within the limits of any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, therefore, the development proposed by the Master Plan does not conflict with any existing conservation plan.	None required.	Less than significant.
CULTURAL AND PALEONTOLOGIC RESOURCES		
Archaeological Resources. None of the previously-documented archaeological resources in and in the vicinity of the project area remain intact today. All are believed to have been destroyed during development and construction of the campus between the 1930s and 1960s. However, it is possible that subsurface deposits associated with these resources may remain buried underneath existing buildings, parking lots, and landscape elements within SBVC. Impacts to such deposits could occur during ground-disturbing activities associated with construction and/or demolition of buildings, infrastructure improvements, and landscaping. These would be significant if the deposits are determined to be eligible for inclusion in the California Register of Historical Resources (CRHR). Mitigation Measure CR-1 would reduce these impacts to a less-than-significant level.	**CR-1:** To avoid inadvertent impacts to subsurface archaeological resources, all ground disturbing activities in undisturbed sediments shall be monitored by a qualified archaeologist. The archaeological monitor shall have the power to temporarily halt or divert equipment to allow for recordation and evaluation of any encountered resources. If evaluated as eligible for the CRHR and determined eligible by the San Bernardino Community College District, the archaeological site must be avoided and preserved. If this is not feasible, an archeological data recovery program shall be developed by a qualified archaeologist. The data recovery report shall be submitted to the San Bernardino Information Center.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
Native American Resources. No specific Native American resources were identified within the project area by the Native American Heritage Commission (NAHC) or the Native American groups contacted. However, there is a potential for subsurface resources to occur. Impacts to such resources from ground-disturbing activities would be significant. Mitigation Measure CR-2 would reduce these impacts to a less-than-significant level.	**CR-2:** To avoid inadvertent impacts to Native American resources, all ground disturbing activities in undisturbed sediments shall be observed by a Native American monitor. In the event that subsurface resources are encountered, the Native American monitor shall coordinate with the archaeological monitor to temporarily halt or divert equipment to allow for recordation and evaluation of the resource. If human remains of any kind are found during construction activities, all activities must cease immediately and the San Bernardino County Coroner must be notified, as required by state law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, SBCCD shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface	

Environmental Impacts	Mitigation Measures	Residual Impact
	disturbance. Work can continue once the MLD's recommendations have been implemented or the remains have been reburied if no agreement can be reached with the MLD (Section 5097.98 of the Public Resource Code).	
Historic Structures. The Auditorium and Observatory are historic in age (i.e., over 50 years old). The Observatory will not be demolished or renovated as part of the implementation of the Master Plan. Therefore, there would be no impacts to the Observatory.	None required.	No impact.
Historic Structures. The Auditorium has been determined eligible for the National Register of Historic Places (NRHP), making it eligible for the CRHR. The Master Plan includes renovation of the Auditorium in 2020. Renovations may include architectural finish upgrades and handicap-accessible upgrades. Any renovations that would alter the characteristics of the Auditorium that make it eligible for the NRHP and CRHR would have a significant impact on the Auditorium. Mitigation Measure CR-3 would reduce impacts to the Auditorium to a less than significant level.	**CR-3:** To mitigate potential impacts to the Auditorium and any other identified historic resource from proposed renovations, a renovation plan shall be developed by a qualified architect with experience with historic buildings or an Architectural Historian. The plans shall include specifications to ensure that the renovations do not alter its significant historic fabric that make it eligible for inclusion in the NRHP and CRHR.	Less than significant.
Historic Structures. Several other buildings would become more than 50 years in age during the implementation of the Master Plan. Because the Master Plan is phased in 10-year Horizons, it is possible that one or more of these buildings will become more than 50 years in age prior to scheduled demolition or renovation in Horizons 2 and 3, and may be considered to be historical resources as defined by CEQA. Historical resources are	**CR-4:** In the event that any building is scheduled for demolition or renovation after the building becomes 50 years in age, a qualified architect with experience with historic buildings or an Architectural Historian shall evaluate the building to determine if it is a historical resource in accordance with the CEQA Guidelines (CCR Title 14 Section	Implementation of Mitigation Measures CR-1 through CR-4 would reduce the majority of impacts to less than significant. If the evaluation in Mitigation Measure CR-4 determines

Environmental Impacts	Mitigation Measures	Residual Impact
buildings, structures, districts, sites, or objects that are listed in or considered eligible for listing in the California Register of Historical Resources (CRHR) or are on a local (city or county) inventory of historical resources (CEQA Guidelines, CCR Title 14 Section 15064.5). If a substantial adverse change, including demolition and renovation that would alter the characteristics of the building that make it eligible for listing, occurs to a historical resource, a significant impact would occur. If a building becomes scheduled to be renovated or demolished after it becomes 50 years in age, it would be necessary for a qualified Architectural Historian or a qualified architect with experience with historic buildings to evaluate the building to determine if it is a historical resource according to CEQA (Mitigation Measure CR-4). If the evaluation determines that the structure is not a historical resource, there would be no impact from the Proposed Project and no further work would be required. If the evaluation determines that the structure is a historical resource, Mitigation Measures CR-3 would reduce impacts from renovation of these building to a less-than-significant level. However, according to the CEQA Guidelines (CCR Title 14, Section 15064.5) demolition of a historic resource is a significant impact that cannot be mitigated.	15064.5). If the building is determined not to be a historic resource, then no further work shall be required. If the building is determined to be a historic resource, then Mitigation Measure CR-3 shall apply for renovation work.	that a building to be demolished is a historic resource according to CEQA, then the impact would remain significant and unavoidable (CCR Title 14 Section 15064.5).
Paleontological Resources. Excavation or other ground disturbing activities have a high potential to impact significant nonrenewable paleontological resources. These impacts would be significant without	**CR-5:** A qualified vertebrate paleontologist, as defined by the County of San Bernardino (Development Code § 82.20.040), shall develop and implement a mitigation program	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
mitigation. Mitigation Measure CR-5 would reduce impacts to a less than significant level.	for paleontologic resources. This program shall consist of: 1. Monitoring by a qualified paleontological monitor when previously undisturbed subsurface sediments are excavated, graded, or otherwise disturbed. The monitor will be equipped to recover fossils and sediment samples during excavation, but shall have the power to temporarily halt or divert equipment to allow for recovery of large or numerous fossils. 2. Preparation of recovered specimens to a point of identification and permanent preservation. This includes washing sediments to recover small invertebrate and vertebrate fossils. 3. Identification of the specimens and curation of all specimens into an established accredited museum repository (e.g., San Bernardino County Museum) with permanent retrievable paleontologic storage. Preparation of the mitigation program shall include obtaining a signed curation agreement with the museum repository prior to initiation of mitigation activities. 4. Preparation of a report of findings with an appended itemized inventory of identified specimens. The report and inventory shall be	

Environmental Impacts	Mitigation Measures	Residual Impact
	submitted to the San Bernardino Community College District and the museum repository (e.g., San Bernardino County Museum). When the San Bernardino Community College District receives the report, inventory, and verification of acceptance of the specimens by the museum repository, mitigation will be complete.	
GEOLOGY AND SOILS		
Faulting and Seismicity. The principal seismic hazard for the SBVC campus is ground shaking resulting from an earthquake occurring along the San Jacinto Fault or along other distant faults, such as the San Andreas Fault. Development proposed by the Master Plan would adhere to the building standards of the most recent California Building Code (CBC) and Uniform Building Code (UBC), which regulate the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate seismic shaking and adverse soil conditions. Many existing older buildings would be replaced with buildings that would perform better during seismic events resulting in a beneficial impact.	None required.	Beneficial impact.
Liquefaction. Development proposed by the Master Plan would adhere to the building standards of the most recent CBC and UBC resulting in buildings and structures that would perform better in liquefaction conditions than their current counterparts. A beneficial impact would occur.	None required.	Beneficial impact.

Environmental Impacts	Mitigation Measures	Residual Impact
Landslides. The general topography of the campus is flat with a gradual descending slope from north to south at approximately one half of one percent with a gradual west to east downward slope of approximately one percent. There are no hills in the vicinity of the campus. No impact would occur.	None required.	No impact.
Soils. Short-term effects on local soils would result from construction activities associated with the Proposed Project. Demolition and removal of existing structures would temporarily expose soils and increase erosion at the demolition and construction sites. These impacts would be temporary and Best Management Practices (BMPs) would be in place to minimize such impacts. Impacts would be less than significant.	None required.	Less than significant.
Temporary Excavations and Trench Backfill. Several trenches would be constructed during the implementation of the Master Plan for utilities. In addition, grading and temporary excavation would be required to construct several new buildings and structures which would expose soils. Mitigation Measure G-1 and G-2 would reduce impacts from temporary excavation and trenching activities to a level that is less than significant.	**G-1:** All temporary excavations, including utility trenches, retaining wall excavations and other excavations shall be performed in accordance with project plans, specifications, and all OSHA requirements, and the current edition of the California Construction Safety Orders. **G-2:** Utility trenches onsite shall be backfilled with the onsite material, provided it is free of debris, significant organic material, and oversized material. Prior to backfilling the trench, pipes shall be bedded in a granular material, backfilled, and compacted as specified by the project engineer.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
Additional Geotechnical Investigation. Because the proposed Master Plan would be implemented over a span of more than 20 years, details of the later development projects are unknown. Additional geotechnical investigation and analysis may be required based on final development plans. As such, Mitigation Measure G-3 shall be implemented to reduce impacts of unknown geotechnical hazards to a less than significant level.	**G-3:** A qualified geotechnical firm shall review the site and grading plans for each project as the Master Plan is implemented and comment further on the geotechnical aspects of the project. Geotechnical observations and testing shall be conducted during excavation and all phases of grading operations.	Less than significant.
HAZARDS AND HAZARDOUS MATERIALS		
Impacts Related to the Routine Transport, Use, or Disposal of Hazardous Materials. Replacement laboratory space would be constructed in the new buildings, and the use of hazardous and non-hazardous laboratory chemicals would continue. SBVC would continue to follow its requirements under its County of San Bernardino active hazardous materials handler and generator permit. SBVC would continue to use a licensed hazardous materials contractor to dispose of waste generated on the campus according to all local, state, and federal regulations. A less than significant impact would occur.	None required.	Less than significant.
Impacts Related to Upset and Accident Conditions. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers. Demolition or renovation of structures constructed prior to these dates has the potential to release lead particles and/or asbestos fibers into the air, where they may affect construction workers and the	**HAZ-1:** Prior to demolition of buildings or structures, a survey for building-related hazardous materials shall be conducted by qualified and properly-certified individuals. Asbestos surveys must be conducted by a California Division of Occupational Safety and Health-certified asbestos consultant or site surveillance technician. Surveys for lead-	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
nearby sensitive receptors, including students and staff. All of the buildings to be demolished were constructed prior to 1978. Due to the age of the buildings it is likely that these buildings contain hazardous materials related to existing building infrastructure, such as asbestos-containing materials, lead-based/bearing substances, lead-containing surface coatings, florescent light fixture tubes, PCB-containing light fixture ballasts, thermostats with mercury capsules, emergency lighting and exits with lead acid batteries, and chlorofluorocarbons. Demolition activities have the potential to release hazardous materials into the environment. Impacts would be less than significant with the implementation of Mitigation Measures HAZ-1 through HAZ-12.	based/bearing substances and lead-containing surface coatings must be conducted by a California Department of Health Service-certified lead inspector/risk assessor. If present, all recommendations regarding the removal and disposal of hazardous materials in accordance with federal, state, and local regulations shall be observed. **HAZ-2:** All asbestos disturbance and/or removal operations shall be conducted by a California Occupational Safety and Health Administration (Cal/OSHA) registered and State licensed asbestos removal contractor. All disturbance and/or abatement operations shall be under the direction of a California Certified Asbestos Consultant. At no time shall identified or suspect asbestos-containing materials be drilled, cut, sanded, scraped, or otherwise disturbed by untrained personnel. **HAZ-3:** All construction activities that may affect asbestos-containing materials shall be conducted in accordance with Title 8 of the California Code of Regulations, Section 1529. **HAZ-4:** For all abatement activities that will involve the removal of 100 square feet or more of identified asbestos-containing	

Environmental Impacts	Mitigation Measures	Residual Impact
	materials, notification shall be made to the South Coast Air Quality Management District in accordance to SCAQMD Rule 1403 and to Cal/OSHA. Notification to both entities shall occur 10 working days prior to the initiation of such activities. **HAZ-5:** Notification to employees and contractors working within the buildings shall be made in accordance with the California Health and Safety Code Section 25915 *et seq.* and Proposition 65. **HAZ-6:** All demolition involving potential and identified lead-containing surfaces shall be conducted in accordance with 8 CCR 1532.1 and 29 CFR 1926.62. In addition, all activities involving identified lead-based paints shall be conducted in accordance with 17 CCR, Division 1, Chapter 8, Sections 35001 through 36100. **HAZ-7:** Any welding, cutting, or heating of interior metal surfaces containing lead surface coating shall be conducted in accordance with 29 CFR 1926.354. **HAZ-8:** Proper waste characterization and disposal of lead contaminated debris shall be conducted in accordance with Title 22 of the California Code of Regulations and the California Health and Safety Code.	

Environmental Impacts	Mitigation Measures	Residual Impact
	HAZ-9: All identified and potential PCB-containing light fixture ballasts shall be handled, collected, transported, and disposed in accordance with the requirements of 22 CCR 67426.1. **HAZ-10:** All fluorescent light tubes, mercury containing thermostat switch capsules, batteries, and other Universal Waste Rule components shall be handled in accordance with 22 CCR 66273. **HAZ-11:** All identified and potential refrigerants shall be captures and recycled in accordance with requirements of the South Coast Air Quality Management District and the California Air Resources Board. **HAZ-12:** Prior to demolition or construction activities in existing buildings, a follow-up inspection shall be performed to identify and sample potential environmental hazards located beneath finishes and/or enclosed in wall voids, pipe chases, etc.	
Impacts Related to the Handling of Hazardous Materials within One-Quarter Mile of a School. The existing Middle College High School (MCHS) operated by the San Bernardino City Unified School District is located on the SBVC campus. The SBVC Master Plan has assumed that the MCHS would be relocated off-campus by 2020 (Horizon 2) to a location	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
to-be-determined (north of Esperanza Street) and continue their relationship with SBVC (Steinberg Architects 2009).The relocated MCHS would potentially be within one-quarter mile of the SBVC campus. There is also an on-site Child Development Center located in the southeastern portion of the campus. The SBVC campus would continue to use licensed hazardous materials contractors to dispose of hazardous and non-hazardous chemicals used in campus maintenance and campus laboratories. Impacts would be less than significant.		
Impacts Related to Impairment of an Emergency Response/Evacuation Plan. The main route emergency vehicles could take is Mount Vernon Avenue, which can be used to access the campus from both the north and south. At full Master Plan build out, all campus buildings would be accessible from the four surrounding streets. The existing fire lanes would be reconfigured as the campus develops to adequately provide access to emergence vehicles. Impacts would be less than significant.	None required.	Less than significant.
HYDROLOGY AND WATER QUALITY		
Construction-Related Erosion and Sedimentation. The proposed Master Plan would require grading activities in all three Horizons. The exposed soils would be vulnerable to erosion during construction and could result in sedimentation impacts on downstream water courses. This is a potentially significant impact without mitigation. Implementation of Mitigation Measure H-1	**H-1:** Prior to ground disturbing activities related to grading or any activity affecting federal or state waters, SBCCD shall submit for approval to the State Water Resources Control Board, a Notice of Intent (NOI) to be covered under a National Pollutant Discharge Elimination System (NPDES) General Permit	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
would reduce impacts to less than significant levels.	for Stormwater Discharges Associated with Construction Activity (General Permit) in compliance with Section 402 of the Clean Water Act. As part of the General Permit, the SBCCD shall prepare a Storm Water Pollution Prevention Plan (SWPPP) which will: (1) require implementation of Best Management Practices (BMPs) so as to prevent a net increase in sediment load in stormwater discharges relative to preconstruction levels; (2) prohibit discharges of stormwater or non-stormwater at levels which would cause or contribute to an exceedance of any applicable water quality standard contained in the regional basin plan; (3) discuss in detail the BMPs for the project related to control of sediment and erosion, non-sediment pollutants, and potential pollutants in non-stormwater discharges; (4) describe post-construction BMPs for the project; (5) explain the monitoring and maintenance program for the project's BMPs; (6) require reporting of violations to the RWQCB; and (7) list the parties responsible for SWPPP implementation and BMP maintenance both during and after construction. Upon acceptance of the NOI by the State Board, the SBCCD shall implement the SWPPP and will modify the SWPPP as directed by the Storm Water Permit.	

Environmental Impacts	Mitigation Measures	Residual Impact
Increased Stormwater Runoff and Flow Rates. Development proposed by the Master Plan would increase the amount of impervious surfaces on-site. This would change the amount of runoff and the rate at which it flows off the site. The Master Plan would account for these changes by upgrading the site's storm drainage system. The storm drainage infrastructure would be upgraded over the first two Horizons. With the infrastructure improvements proposed by the Master Plan impacts associated with the increased stormwater runoff are less than significant.	None required.	Less than significant.
Altered Drainage Pattern. The existing drainage pattern of the site would not be significantly altered by the development proposed by the Master Plan. A less than significant impact would occur.	None required.	Less than significant.
Project-Related (Post Construction) Erosion. After grading and construction, soils at finish grade would be covered by impervious surfaces, such as concrete or asphalt, or with landscaping that provides protection from erosion. Therefore, a less than significant impact would occur.	None required.	Less than significant.
Water Quality Issues. The development proposed by the Master Plan would change the use of portions of the SBVC campus. Stormwater runoff from the site after development would be affected by the increased development and use of the site. In particular, the use of fertilizers and chemicals associated with gardening and landscaping, as well as oil and grease associated with vehicles on-site, could potentially contaminate	Please refer to Mitigation Measure H-1 above.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
surface runoff. Impacts would be less than significant with the incorporation of Mitigation Measure H-1. No impacts to groundwater are expected as a result of the Proposed Project. The structures and buildings on the SBVC campus would be connected to municipal water systems.		
LAND USE AND PLANNING		
All of the development proposed as part of the SBVC Master Plan would take place within the existing SBVC campus; no additional land acquisition is proposed. The additional development proposed by the Master Plan would take into account the 18-acre no build zone created by the folding zone of the San Jacinto Fault. The Master Plan would be consistent with the existing City of San Bernardino General Plan designation of Public Facilities. No impact would occur. The proposed on-campus development would result in an improvement of educational and related uses at an existing college campus. The Master Plan does not propose a land use change, therefore no incompatibility issues would arise with existing and allowed land uses surrounding the campus.	None required.	Less than significant.
NOISE		
Construction impacts. The average noise level produced by construction of the Proposed Project is expected to increase the ambient noise level above the significance threshold of 65 dBA at all residences in the vicinity of the campus. This is a substantial temporary increase and, therefore, the impact is significant and	**N-1:** Construction and demolition shall be confined, to the extent practicable, between the hours of 7:00 a.m. and 8:00 p.m.	It is not considered feasible to mitigate construction noise levels such that they would not increase the 1-hour L_{eq} from less than 65 dBA to

Environmental Impacts	Mitigation Measures	Residual Impact
unavoidable. Mitigation measures N-1 through N-9 have been proposed that would control construction noise to the extent practicable. However, even with these measures, construction noise would continue to exceed the threshold of significance.	**N-2:** Notice shall be posted prior to construction identifying the location and dates of construction, and the name and phone number of a contact person at SBVC in case of complaints. The notice shall encourage the residents to call SBVC's contact person rather than the police in case of complaint. The notice shall inform residents of any changes to the schedule, including instances where construction may take place outside of the hours of between 7:00 a.m. and 8:00 p.m. The designated contact person shall be available throughout project construction with a mobile phone. If a complaint is received, SBVC's contact person shall take whatever reasonable steps are necessary to resolve the complaint. **N-3:** Where feasible, temporary solid noise barriers or berms shall be erected between construction equipment and sensitive off-site receptors. **N-4:** Construction storage areas shall be located away from sensitive receptors to the extent possible. Where this is not possible, the storage of waste materials, earth, and other supplies shall be positioned in a manner that will function as a noise barrier to the closest sensitive receivers.	more than 65 dBA at all sensitive receptors in the project vicinity. However, it is noted that Mitigation Measures N-1 through N-9 would control construction noise to the extent practicable. Even with these measures, construction noise would continue to be significant and unavoidable. Construction noise would be temporary, would diminish over the course of construction, and would cease entirely at the completion of the Proposed Project.

Environmental Impacts	Mitigation Measures	Residual Impact
	N-5: All construction equipment shall be equipped with properly operating mufflers of a type recommended by the manufacturer. **N-6:** Noisy construction equipment items shall be located as far as practicable from the surrounding residential properties and campus buildings. **N-7:** The quietest construction equipment owned by the contractor shall be used. The use of electric powered equipment is typically quieter than diesel, and hydraulic powered equipment is quieter than pneumatic power. If compressors powered by diesel or gasoline engines are to be used, they shall be contained or have baffles to help abate noise levels. **N-8:** All construction equipment shall be properly maintained. Poor maintenance of equipment typically causes excessive noise levels. **N-9:** Noisy construction equipment shall be operated only when necessary, and shall be switched off when not in use.	
Vibration Impacts. The primary vibratory sources during the construction of the Proposed Project are expected to be large bulldozers during grading and the drill rig for the poured-in-place piles during building	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
foundation construction. Both of these generate an approximate vibration level of 87 VdB and a peak particle velocity (PPV) of 0.089 in/s at a distance of 25 feet. At the distance of the nearest residences to the project site (across Esperanza Street, approximately 75 feet away from the nearest building site) the estimated vibration level would be 73 VdB and the estimated PPV would be 0.017 in/s. The vibration level is marginally above the impact criterion of 72 VdB for residential properties, meaning that ground vibration may be perceptible at times to the residents. However, the impact at these locations is not considered to be significant because of the short duration of the vibration and because the PPV of 0.017 in/s would be well below the level at which damage can occur (0.20 in/s). A less than significant impact would occur.		
Vibration Impacts. On the SBVC campus itself, it is possible that vibration would be perceived by occupants of the existing buildings if bulldozers or drill rigs operate within approximately 63 feet of the structures. However, the impact is not considered significant because of the short duration of the activity, and because the campus administration would have the authority to stop the construction during classroom hours if the vibration is affecting educational activities. The possibility of affecting existing campus buildings or to the existing commercial building at the northeast corner of Mount Vernon Avenue and Grant Avenue would occur if bulldozers or drill rigs operate within approximately 11 feet of them. Implementation of Mitigation Measure N-10 would reduce impacts to a less than significant level.	**N-10:** To avoid potential building damage due to vibration from heavy construction equipment (bulldozers or drill rigs), the following measures shall be implemented when use of such equipment will take place within 11 feet of existing buildings: a. Qualified structural and geotechnical engineers shall review the peak vibration velocities estimated in this report, and determine if there are any risks to the building, including possible risks from dynamic soil settlement induced by the vibration. If the structural or geotechnical engineers identify any potential risks, they	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
	shall take all necessary steps to protect the building including, but not limited to, photographing and/or videotaping the building in order to provide a record of the existing conditions before construction. b. If considered appropriate by a qualified structural engineer or geotechnical engineer, an engineer shall be on-site during the construction activities and perform such tests and observations as are necessary to ensure the structural stability of the building. This may include vibration measurements obtained inside or outside of the building.	
Traffic Noise. Based on data from the Traffic Study (Fehr & Peers 2009), analyses were conducted to identify the future traffic noise exposures that would occur in the study area, both with and without the Proposed Project. The Noise Study found that the Proposed Project would increase the traffic-generated L_{dn} by at most 2 dB at off-site sensitive receptors. This is less than the 3 dB threshold of significance; impacts would be less than significant. In addition, traffic associated with the Proposed Project would not increase the L_{dn} above the 65 dB threshold of significance at any residential properties in the study area. Therefore, impacts would be less than significant.	None required.	Less than significant.
On-site noise impacts (Horizon 1): Horizon 1 noise levels would exceed the 1-hour L_{eq} threshold of 65 dBA at some of the homes to the north of SBVC during daytime campus activities. However, this is not a	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
significant impact because the estimated noise level of 75 dBA is associated with existing campus activities and not with the Horizon 1 project (i.e., Parking Structure 1). The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA. Therefore, Horizon 1 activities would not result in the generation of noise levels in excess of local standards and the impact would be less than significant. Horizon 1 on-site activities would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project and the impact would be less than significant.		
On-site noise impacts (Horizon 2): Horizon 2 activities would increase the 1-hour L_{eq} above the threshold of 65 dBA at some of the homes to the east of SBVC during both daytime campus activities and fall afternoon sports activities. Therefore, Horizon 2 activities would result in the generation of noise levels in excess of local standards and the impact is significant at these locations under these two scenarios. The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA and less than significant. Horizon 2 on-site activities (daytime activities and Fall afternoon sports) would result in a substantial permanent increase in ambient noise levels above levels existing without the project at some of the homes to the east of SBVC; this impact would be significant and	**N-11:** An acoustical analysis shall be required for the future Technical Building to verify that noise from the facility (including auto maintenance and repair, aircraft engine testing, fans and other mechanical equipment) does not exceed a 1-hour L_{eq} of 65 dBA at noise-sensitive offsite receptors. The design features required to achieve this requirement may include one or more of the following elements, as verified by the acoustical study: noise barriers, locating activities inside the building, upgrading the design of the building to increase noise reduction, locating noisy activities away from the nearby homes, and providing silencers for air extraction fans.	It is not considered feasible to mitigate the noise impacts associated with future sporting events at the project site because, by their nature, these are outdoor events that are intended to attract large crowds. These facilities cannot be readily enclosed; shielding them would require significant solid noise barriers (both in terms of height and length). While the Master Plan provides reconfiguration and/or

Environmental Impacts	Mitigation Measures	Residual Impact
unavoidable. At all other locations, the impact is less than significant. Noise related to operation of the Technical Building and central plant have the potential for significant impacts to noise receptors. The specific design of these buildings is not currently known. Potential noise impacts from the proposed Technical Building and central plant would be mitigated to a less than significant level with the implementation of Mitigation Measures N-11 and N-12, respectively. Noise related to future sporting events would also increase noise levels at offsite receptors. Mitigation Measure N-13 would reduce, to the extent feasible, the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to exceed the threshold of significance.	**N-12:** An acoustical analysis shall be required for the future central plant to verify that the overall noise levels generated by the mechanical equipment (i.e., air conditioners, heat pumps, refrigeration equipment, etc.) do not exceed a 1-hour L_{eq} of 65 dBA at noise-sensitive offsite receptors. The design features required to achieve this requirement may include one or more of the following elements, as verified by the acoustical study: selecting quieter equipment, adding or upgrading silencers, improving the design of mechanical penthouses, raising the height of rooftop parapet walls, placing equipment inside a building, and/or installing screen walls around individual equipment items. **N-13:** Bleacher seating on the east side of the football field may be closed-backed to provide a barrier to crowd noise. The backing material may extend at least 5 feet above the level of the highest seats in each bleacher so that a barrier is also provided for noise from the higher seating levels.	upgrade to sports facilities, it is noted that these noise sources already exist at SBVC and would continue with or without the Master Plan Project. Nevertheless, during future sporting events there would be a substantial permanent increase in ambient noise levels above levels existing without the project at some of the homes to the east of SBVC. Mitigation Measure N-13 would provide some reduction in the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to be significant and unavoidable.
On-site noise impacts (Horizon 3): Horizon 3 noise levels would exceed the 1-hour L_{eq} threshold of 65 dBA at some of the homes to the east of SBVC during both daytime campus activities and fall afternoon sports	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
activities. However, this is not a significant impact because the estimated noise levels of 79 and 68 dBA are associated with Horizon 2 activities and not with the Horizon 3 project. The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA. Therefore, Horizon 3 activities would not result in the generation of noise levels in excess of local standards and the impact would be less than significant. Horizon 3 on-site activities would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts would be less than significant.		
Future Noise Impacts On Campus. The discussion of future noise impacts at SBVC has been divided into two sections: exterior and interior noise levels. **Exterior Noise Levels.** Based on data in the Traffic Study (Fehr & Peers 2009), an analysis was conducted to identify the future traffic noise exposures that would occur at the campus for Horizon 3 (Year 2030). The L_{dn} is expected to be less than the threshold of 65 dB for a school site at all proposed buildings and outdoor activity areas except at Building 25 (Liberal Arts) adjacent to Mount Vernon Avenue, where the L_{dn} would be marginally higher at about 65.2 dB. However, because there are no outdoor activity areas associated with Building 25, the impact is not significant. **Interior Noise Levels.** It has been assumed in the Noise Study that standard construction provides at least 20 dB of noise reduction with windows and doors	**N-14:** An acoustical study shall be required for Building 25 (Liberal Arts) to verify that the building has been properly designed to comply with the L_{dn} threshold of 45 dB for interior areas. The design features required to achieve the noise standard shall include one or more of the following elements, as verified by the acoustical study: sound-rated windows and doors, orientation of windows relative to Mount Vernon Avenue, upgraded exterior wall and/or roof construction, insulation batts, and/or forced air ventilation. **N-15:** Mechanical ventilation shall be installed at all new SBVC buildings since the interior threshold of 45 dB L_{dn} is to be met with windows and doors closed.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
closed. As indicated above, Building 25 (Liberal Arts Building) would be exposed to an L_{dn} of approximately 65.2 dB. Based on the assumption identified above, it is estimated that the interior L_{dn} would be approximately 45.2 dB with windows and doors closed. This marginally exceeds the threshold of 45 dB. Implementation of Mitigation Measure N-14 would reduce impacts to a less than significant level. At all other proposed buildings the interior L_{dn} would be less than 45 dB; impacts would be less than significant. Mitigation Measure N-15 would help ensure that the 45 dB interior noise threshold is not exceeded for future buildings.		
PUBLIC SERVICES		
Fire Protection. The development proposed by the Master Plan on the SBVC campus would create the need for additional infrastructure in order to meet San Bernardino City Fire Department requirements. The development proposed by the Master Plan would meet the previous requirements and includes additional fire safety infrastructure which would create a beneficial impact to campus fire safety.	None required.	Beneficial impact.
Police Protection. Although there is a projected increase in the enrollment at SBVC, there would not be a resident population on the campus. This increase in enrollment would proportionately increase the number of responses from the San Bernardino Police Department (SBPD). SBCCD public safety personnel and services on the campus would increase proportionately with growing enrollment, reducing the need for the SBPD's response to minor public safety incidences. It is	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
unlikely that the increase in students, which is small relative to the overall population of the City of San Bernardino, would require the construction of new police facilities in order to reduce response times. A less than significant impact would occur.		
Schools. No increases in the number of school age children requiring construction of new schools are anticipated as a result of this project because there would be no resident population on the campus. The SBVC Master Plan has assumed that the Middle College High School will be relocated off-campus by 2020 (Horizon 2) to a location to-be-determined (north of Esperanza Street) and continue their relationship with the SBVC. As such, impacts would be less than significant.	None required.	Less than significant.
Parks and Recreation Facilities. The development proposed by the Master Plan would result in beneficial impacts to the recreational facilities on-campus. Horizon 2 would include the demolition of both gymnasiums, the renovation of the baseball field, and the construction of two new gymnasiums, a new softball field, a new soccer field, tennis courts, and new home and visitor stands for the track/football field. Student enrollment is projected to grow from 12,561 to 17,000 by Horizon 3. The Master Plan does not include student housing. Implementation of the Master Plan would not result in the expansion or the need to build additional parks or recreational facilities. No impacts to off-campus recreational facilities are expected.	None required.	Beneficial impact.

Environmental Impacts	Mitigation Measures	Residual Impact
Public Libraries. There would be no resident population increases as a result of the Proposed Project that would generate increased library demand. No impact would occur.	None required.	No impact.
TRAFFIC AND PARKING		
Horizon 1 Traffic Impact Assessment. The Proposed Project is expected to result in a less-than-significant impact to area intersections at the end of Horizon 1.	None required.	Less than significant.
Horizon 2 Traffic Impact Assessment. There are no significant impacts at signalized intersections. At unsignalized intersections, a significant impact at Inland Center Drive/I Street occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection. The Proposed Project is expected to result in a significant impact to area intersections at the end of Horizon 2. Implementation of Mitigation Measure T-1 would reduce this impact to a less than significant level.	**T-1:** The installation of a traffic signal at the unsignalized intersection of Inland Center Drive/I Street by 2020 will improve operations to an acceptable level of service. Given the close spacing of this intersection with the interchange improvements at the Inland Center Drive/I-215 interchange, a signal interconnect system shall be required to ensure that the corridor is coordinated. Also, because the impact occurs in 2030 and is a result of both project-related traffic and cumulative growth, the SBCCD shall be responsible for a fair-share contribution toward the improvement.	Less than significant.
Horizon 3 Traffic Impact Assessment. There are no significant impacts at signalized intersections with the addition of project trips. However, there are significant impacts at the following unsignalized intersections: ♦ Grant Ave./K St. (AM) ♦ Grant Ave./I St. (AM and PM) ♦ Inland Center Drive/ I St. (AM and PM)	Please refer to Mitigation Measure T-1 above. **T-2:** The installation of a traffic signal at these unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street by 2030 would improve operations to an acceptable level of service. Since this occurs	Mitigation Measures T-1 and T-2 require the fair-share contribution toward the construction of traffic signals at three unsignalized intersections. However, the SBCCD does

Environmental Impacts	Mitigation Measures	Residual Impact
A significant impact at an unsignalized intersection occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection. This analysis assumes that the unsignalized intersection of Inland Center Drive/I Street is not signalized in Horizon 2, as a worst-case scenario. Implementation of Mitigation Measures T-1 and T-2 would reduce impacts to a less-than-significant level. Although the SBCCD would pay its fair share toward the construction of traffic signals at these intersections, signal construction is ultimately under the control of the City of San Bernardino. If the traffic signals that are required as part of Mitigation Measure T-2 for the unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street are not constructed by the City, this impact would remain significant.	in a future scenario and is associated with both project traffic and cumulative growth assumptions, the SBCCD shall be required to make a fair-share contribution toward these improvements.	not have control over these intersections (they are under the City of San Bernardino and/or Caltrans control) and therefore cannot guarantee that the signals would be constructed. Even with a fair-share contribution toward the improvement, the SBCCD cannot guarantee that Caltrans and/or the City would implement the improvement. The City of San Bernardino has indicated that the intersection of Inland Center Drive/I Street will be signalized by 2020, resulting in a reduction of impacts to this intersection to a less than significant level with the implementation of Mitigation T-1 (Tim Porter, personal communication, 2009).

Environmental Impacts	Mitigation Measures	Residual Impact
		The City of San Bernardino has not indicated that the unsignalized intersections at Grant Street/K Street and Grant Street/I Street are scheduled to receive signals by 2030 (Tim Porter, personal communication, 2009). If the traffic signals at these intersections are constructed by 2030, Mitigation Measure T-2 would reduce impacts at these intersections to a less than significant level. If the signals are not constructed, the impact would remain significant.
Grant Avenue/J Street is an all-way stop controlled intersection that is forecasted to operate unacceptably in Horizon 3. Since the project would add more than 10 peak hour trips, a signal warrant analysis was conducted. The analysis found that this intersection does not meet signal warrants. Impacts at this intersection would therefore be less than significant.	None required.	Less than significant.
Parking. The Proposed Project plans to construct an approximate 1,250 space parking structure in Horizon 1, and an approximate 1,100 space parking structure in Horizon 3. With the inclusion of the approximate 1,250	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
space parking structure, there are more than sufficient spaces on-site in Horizon 1 to accommodate the identified parking demand without use of either the Swap Meet parking area or the on-street parking spaces (which are both currently utilized). Under Horizons 2 and 3, the parking assessment indicates that it is necessary to use a portion of on-street parking or the Swap Meet site to accommodate projected parking demand. However, the demand for off-campus spaces would be less than with current conditions. Therefore, the Proposed Project is not expected to exacerbate a parking demand beyond what is occurring under existing conditions. The parking impact is considered to be less than significant and no mitigation is required.		
Transit. The Proposed Project does not conflict with the City of San Bernardino's transit policies or other policies related to transit. The impact is therefore less than significant and no mitigation is required.	None required.	Less than significant.
Bus Transit Facilities. Currently there are transit lines with stops along Mount Vernon Avenue and Mill Street. SBVC currently has an access point along Mount Vernon Avenue. The access point would remain with the project development; however, the parking lot connected to the driveway would be reduced. As a result, fewer vehicles would be utilizing this driveway. Development of the project site would not disrupt existing transit services or facilities on either Mount Vernon Avenue or Mill Street. Additionally, there are no significant impacts along either of these roadways.	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
Therefore, the project would not affect access to existing transit service; the impact is less than significant.		
Bicycle/Pedestrian Network. There is a Class I bicycle trail along Inland Center Drive/Colton Avenue proximate to the project site. Because this facility is off-street, it would not be affected by any increase in project traffic along this roadway. Additionally, there is a Class III bicycle route along Mount Vernon Avenue. Because the driveway along Mount Vernon Avenue proximate to the project site would be less utilized than it currently is, the bicycle route would not be affected with the development of the Proposed Project. Therefore, the impact is less than significant. There are currently existing sidewalks along Mill Street, Esperanza Street, Mount Vernon Avenue, Grant Avenue, K Street, I Street, and Colton Avenue/Inland Center Drive. Additionally, most intersections have one or more crosswalks, and all signalized intersections have pedestrian phases. With the addition of project traffic, existing pedestrian facilities would remain intact. Therefore, the project impact is less than significant and no mitigation is required.	None required.	Less than significant.
UTILITIES		
Water Service. The current campus water distribution system functions adequately and is well maintained. The proposed Master Plan would accommodate an increase of 4,439 additional students by 2030 (total = 17,000 students). Improvements to the water distribution	Please refer to Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 above.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
systems would occur in all three Horizons. All new water main improvements would be designed and constructed in accordance with City of San Bernardino Water Department requirements. Construction of the new water distribution system would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 impacts would be less than significant.		
Sewer Service. The current sewer system is antiquated, in disrepair, and undersized for current campus flow. The proposed Master Plan would improve the sanitary sewer system in all three Horizons. The proposed improvements to the sanitary sewer system would be designed and constructed to meet current standards. Construction of the sewer system would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 impacts would be less than significant.	Please refer to Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 above.	Less than significant.
The Proposed Project would not result in a significant increase in student enrollment. The existing San Bernardino Water Reclamation Plant would be able to accommodate the development proposed by the Master Plan. Given the available capacity of the treatment plant, the Proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. In addition, the Proposed Project would not exceed wastewater treatment requirements; a less than significant impact would occur.	None required.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
Solid Waste. The development proposed by the Master Plan would generate additional solid waste. Several buildings and structures would be demolished, renovated, or constructed. In addition, site improvements, such as new landscaping and infrastructure improvements, would take place under the proposed Master Plan. There would also be an expected increase in on-campus population resulting in the generation of additional solid waste. However, the increase in solid waste produced by the Proposed Project would take place gradually from project implementation through 2030, such that the expansion of the permitted capacity of the regional landfill would not be expected. A less than significant impact would occur. The Proposed Project would not result in the failure of compliance with federal, state, and local statutes and regulations related to solid waste. No impacts would occur.	None required.	Less than significant.
Electrical Service. The development outlined in the proposed Master Plan would improve the existing electrical distribution system where possible or replace it. Due to the proposed development and the expected increase in student enrollment the electricity needs of the campus would increase. The Proposed Project would not require or result in the construction of new City power plants or the expansion of existing plants. A less than significant impact would occur. Construction of new electrical infrastructure	Please refer to Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 above.	Less than significant.

Environmental Impacts	Mitigation Measures	Residual Impact
would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 impacts would be less than significant.		
Natural Gas Service. The development proposed by the Master Plan would reorganize the buildings on campus requiring the relocation of gas mains. Impacts from trenching, backfilling, and traffic control would occur during construction. With implementation of Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 impacts would be less than significant.	Please refer to Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 above.	Less than significant.
Telephone/Telecommunications Services. The campus features a ductbank and manhole system, built between 2002 and 2005, which would facilitate the routing of digital communication cables to the proposed buildings. Impacts are considered less than significant.	None required.	Less than significant.
Storm Water. As part of the Master Plan additional stormwater facilities would be built and improvements to the existing stormwater facilities would occur in all three of the Horizons. Work on stormwater infrastructure would create impacts from trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 impacts would be less than significant. The improvements and added stormwater infrastructure would reduce flood spots on campus during wet weather thus a beneficial impact would occur during operation.	Please refer to Mitigation Measures G-1, G-2, CR-1, CR-2, and CR-5 above.	Beneficial impact.

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SECTION 1.0
INTRODUCTION

This Draft Program Environmental Impact Report (PEIR) identifies and evaluates the potential environmental impacts associated with the implementation of the Master Plan for San Bernardino Valley College (SBVC).

1.1 PURPOSE AND USE OF THE PEIR

This PEIR was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000-21177) and the Guidelines for the Implementation of CEQA (California Administrative Code §§ 15000 *et seq*).

CEQA requires that the potential environmental impacts of a project be identified and that mitigation measures be recommended that may reduce significant impacts. CEQA requires the Lead Agency, in this case the San Bernardino Community College District (SBCCD), to consider the information contained in the PEIR prior to taking any discretionary action. This PEIR may also be used by other public agencies that must take discretionary actions related to the Proposed Project.

This PEIR is intended to provide information to the SBCCD, other public agencies, and the general public regarding the potential significant direct, indirect, and cumulative environmental impacts associated with the Proposed Project. The PEIR process also requires investigation and development of feasible mitigation measures to reduce significant adverse environmental effects of the Proposed Project to levels below significance. CEQA requires a Lead Agency neither approve nor implement a project unless significant environmental impacts have been reduced (§15091), or, if a Lead Agency approves the project even though significant impacts identified in the PEIR cannot be fully mitigated, the Lead Agency must state in writing the reasons for its action by adopting Findings and a Statement of Overriding Considerations.

The SBVC Master Plan is a land use plan to guide the physical development of the campus. It is not an implementation plan; that is, its adoption does not constitute a commitment to any specific project details, construction schedule, or funding priority. Rather, the Master Plan describes a program of potential development for the campus through buildout, which is estimated to occur by 2030. The funding, scheduling, and details of each development project undertaken during the planning horizon will be subject to individual approval by the SBCCD. Therefore, the EIR for the San Bernardino Valley College Master Plan is a Program EIR, which evaluates at a program level the environmental effects of buildout of the campus under the Master Plan.

A PEIR is defined in the CEQA Guidelines as an EIR "which may be prepared on a series of actions that can be characterized as one large project and are related either geographically, as logical parts in the chain of contemplated actions, in connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program...." (CEQA Guidelines Section 158168). Implementation of the Master Plan would take approximately 20 years. Details of projects that would be implemented under the full Master

Plan buildout are unknown. Under CEQA, these future projects will rely on the PEIR as the base environmental document for environmental review. Prior to implementation, when greater detail is known, each project must go through another CEQA review process. They will be examined in light of the Master Plan and Master Plan PEIR to determine if the project falls within the scope of the Master Plan as examined in the PEIR. If the Lead Agency finds that the subsequent activity would be consistent with the Master Plan, and would not result in new effects or require new mitigation measures, the Lead Agency can approve the activity as being within the scope of the project covered by the PEIR and no new environmental document would be required (CEQA Guidelines Section 15168). Otherwise, subsequent environmental documentation must be prepared. If subsequent documentation is prepared, the environmental analyses would be tiered from this PEIR by incorporating by reference its general discussions and the analysis of cumulative impacts. Subsequent environmental documents would be focused on project- and site-specific impacts.

This PEIR may also be used by other public agencies to issue approvals related to the Master Plan. A list of the anticipated agency approvals required to implement the Proposed Project is provided in Table 1-1. The types of actions that the SBCCD, as well as other agencies not included on this list, may take in connection with this PEIR include, but may not be limited to:

- Approve, adopt, or amend applicable plans, policies, or programs;
- Make findings of consistency;
- Approve and issue permits;
- Approve agreements;
- Provide authorization and approval of funding; and
- Provide service.

Table 1-1
Anticipated Agency Approvals and Reviews

Agency	Permit or Approval
San Bernardino Community College District	♦ Certification of the Program Environmental Impact Report ♦ Adoption of the Master Plan
California Department of General Services, Division of the State Architect	♦ Approval of Building Design
Regional Water Quality Control Board, Santa Ana Region	♦ Stormwater Construction General Permit
City of San Bernardino and City of Colton	♦ Coordination of construction of off-campus transitions within City right-of-way (utilities, sidewalks, etc.)

1.2 PEIR ORGANIZATION

This section (Section 1.0) of the PEIR provides an introduction to the Proposed Project, the purpose of the PEIR, a description of the organization of the PEIR, the intended uses of the PEIR, and a description of the public review process. Section 2.0 provides a description of the Proposed Project. Section 3.0 provides the environmental analysis of the project. This includes the description of existing conditions, the analysis of environmental impacts, and a discussion of mitigation measures to reduce or eliminate any significant environmental impacts. Section 4.0 discusses the alternatives and potential environmental impacts of implementing alternatives to the Proposed Project. Section 5.0 addresses long-term effects of the Proposed Project, including cumulative impacts, growth-inducing impacts, and significant irreversible and/or unavoidable impacts. A list of agencies and persons consulted is in Section 6.0 and references used to prepare the PEIR are provided in Section 7.0. The list of document preparers and list of acronyms and abbreviations are presented in Sections 8.0 and 9.0, respectively. The Notice of Preparation, Initial Study, and responses received during the scoping period are presented in Appendix A. Technical reports for some resource areas are also provided in the appendices.

1.3 AVAILABILITY OF THE PEIR/PUBLIC REVIEW PROCESS

In accordance with the CEQA Guidelines, the SBCCD, as Lead Agency, prepared an Initial Study and Notice of Preparation (NOP) for a PEIR on the Proposed Project. A copy of the Initial Study and NOP are provided in Appendix A. The Initial Study and NOP were distributed for review and comment to the State Clearinghouse and interested parties for a 30-day comment period (April 22 to May 21, 2009). Letters were received from the following agencies:

- City of Colton;
- South Coast Air Quality Management District;
- Department of Toxic Substances Control; and
- Governor's Office of Planning and Research – State Clearinghouse and Planning Unit.

These letters are provided in Appendix A. During the scoping period, consultation with Native American groups was also conducted. A letter was received from the Soboba Band of Luiseño Indians and is included as part of Appendix E.

A scoping meeting was held on May 5, 2009 at the San Bernardino Valley College campus. A written comment was received from the following agency and is included as part of Appendix A:

- Tim Deland, San Bernardino City Unified School District.

Under CEQA, the analysis in an EIR may be focused on issues determined in the Initial Study to be potentially significant, whereas issues found to have no impact or a less than significant impact do not require further evaluation. Based on the analysis contained in the Initial Study, this PEIR analyzes in detail the environmental impacts of the Proposed Project on the following environmental factors:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services;
- Traffic and Parking; and
- Utilities.

The Initial Study determined that the following issues did not warrant further analysis in the PEIR:

- Agricultural Resources;
- Mineral Resources;
- Population and Housing; and
- Recreation.

This Draft PEIR is being distributed for comment to the same public agencies and interested groups and individuals as the Initial Study and NOP, in addition to any others that have requested to be on the project mailing list. The Draft PEIR is also available for review at the following locations:

San Bernardino Valley College
Campus Library
701 South Mount Vernon Avenue
San Bernardino, CA 92410

San Bernardino Community College District
Facilities, Planning and Administrative Services
114 South Del Rosa Drive
San Bernardino, CA 92408

A period of 45 days has been established for public review of the Draft PEIR for the San Bernardino Valley College Master Plan. Agencies, organizations, and individuals are invited to comment on the information presented in the Draft PEIR during this period. Specifically, comments are requested on the scope and adequacy of the environmental analysis presented herein. All comments on the Draft PEIR should be sent to the following SBCCD contact:

Steven Lohr, Ed.D.
Facilities, Planning and Administrative Services
San Bernardino Community College District
114 South Del Rosa Drive
San Bernardino, CA 92408

Following the 45-day public review period, the SBCCD will prepare responses to all comments and will compile these comments and responses into a Final PEIR. The SBCCD's Board of Trustees will consider the information in the Draft and Final PEIR during project review and when making a decision to approve or deny the Proposed Project. The Final PEIR will need to be certified as complete by the Board of Trustees prior to making a decision to approve or deny the Proposed Project.

1.4 DOCUMENTS INCORPORATED BY REFERENCE

An EIR may incorporate portions or all of any publicly available document by reference (CEQA Guidelines Section 15150). The following document is available for public review at the SBCCD, 114 South Del Rosa Drive, San Bernardino, CA 92408, and is hereby incorporated by reference into this PEIR:

- *San Bernardino Valley College Master Plan* (Steinberg Architects 2009).

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SECTION 2.0
PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

San Bernardino Valley College (SBVC) is an 87-acre community college campus in the San Bernardino Community College District (SBCCD). It is one of three facility locations in the SBCCD, which also includes Crafton Hills College, located approximately 16 miles east in the City of Yucaipa, and the SBCCD administrative offices, Professional Development Center, and Applied Technology Training Center (Figure 2-1). The SBVC Master Plan area is located at 701 South Mount Vernon Avenue in the City of San Bernardino (Figure 2-2). The campus is bounded by Esperanza Street to the north, K Street to the east, Grant Avenue to the south, and Mount Vernon Avenue to the west. The campus is easily accessed from Interstate 215 (I-215), located 0.5 mile to the east and Interstate 10 (I-10), located 1.5 miles to the south.

The SBVC Master Plan area is in a developed area surrounded by a mix of residential, commercial, and industrial land uses in the City of San Bernardino and adjacent to the City of Colton (Figure 2-2). The land uses and land use designations are summarized in Table 2-1.

Table 2-1
Summary of Existing Land Use Designations

	Land Use	Zoning	General Plan Designations
SBVC Master Plan Area	Community College Campus	PF (Public Facilities) *SB*	Public Facilities (PF) *SB*
North	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
		RU (Residential Urban – 9 du/ac) *SB*	Residential Urban (RU) *SB*
	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
South	Commercial	C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R3 (Multi Family Residential) *C*	High Density Residential (HD) *C*
		R2 (Duplex Residential) *C*	Medium Density Residential (MD) *C*
		RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
East	Industrial	IL (Industrial Light) *SB*	Industrial Light (IL) *SB*
	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
West	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
		C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R1 (Single Family Residential) *C*	Low Density Residential (LD)/ Multi-Use Area (MU) *C*

Notes: *SB* = City of San Bernardino
C = City of Colton
du/ac = dwelling units per acre

2.2 PROJECT BACKGROUND/PREVIOUS ENVIRONMENTAL DOCUMENTATION

SBVC was established in the 1920s and is part of the SBCCD (Figures 2-1 and 2-2). SBVC currently serves the West Valley area of the SBCCD. The existing campus layout is shown on Figure 2-3. In 1996, as a result of the 1992 Landers and Big Bear earthquakes, the SBCCD began investigations to locate the San Jacinto fault on the campus. As a result of the 1996 Seismic Hazard Assessment (Leighton and Associates 1996), building replacement projects have been completed at the campus to replace buildings located in or within 50 feet of the fault zone, or within the folding zone, an area of uneven elevation changes during a seismic event. CEQA documentation was prepared for these projects, as described below.

2.2.1 FEMA Seismic Hazard Mitigation Grant Project

The 1996 Seismic Hazard Assessment determined that seven buildings on the campus were in or within 50 feet of the fault zone (Leighton and Associates 1996). Title 24 of the California Code of Regulations (CCR), Part 1, Sections 4 through 317(e) (the California Building Standards Code), mandates that "no school building shall be constructed, rehabilitated, reconstructed, or relocated within 50 feet of the trace of a geologic fault along which surface rupture can be reasonably expected to occur within the life of the school building". As a result of the geologic investigation, and in accordance with the California Building Standards Code, SBCCD applied for funding from the Hazard Mitigation Grant Program in 1998. The Hazard Mitigation Grant Program is a federal program funded by the Federal Emergency Management Agency (FEMA) and state or local government. A National Environmental Policy Act (NEPA) Environmental Assessment and Finding of No Significant Impact was completed by FEMA in 1998 (FEMA 1998) and a CEQA Environmental Impact Report (EIR) was completed in November 2000 (SBCCD 2000) for the Seismic Hazard Mitigation Project. The Seismic Hazard Mitigation Project included the demolition of the seven buildings in or within 50 feet of the San Jacinto fault zone (Life Sciences, Campus Center, Andrews Library, Medical Arts, Administration, Art, and Art Gallery). An eighth building (Publications) was demolished to provide space for replacement parking. The functions of these eight buildings were replaced with five new buildings, located outside of the fault zone and constructed to modern seismic standards: Health and Life Sciences, Campus Center, Library, Administration/Student Services, and Art/Art Gallery, all constructed between 2003 and 2006.

2.2.2 Building Replacement Projects

The seismic assessment recommended the replacement of three additional buildings (North Hall, Physical Science, Chemistry) which are within the San Jacinto folding zone, an area of uneven elevation changes during a seismic event, and one building (Maintenance and Operations) that was outside of the unbuildable area. A CEQA Initial Study/Mitigated Negative Declaration (IS/MND) was prepared for these building replacement projects (SBCCD 2007). The projects provided modern up-to-date facilities to replace existing buildings, rather than accommodate an increase in student enrollment.

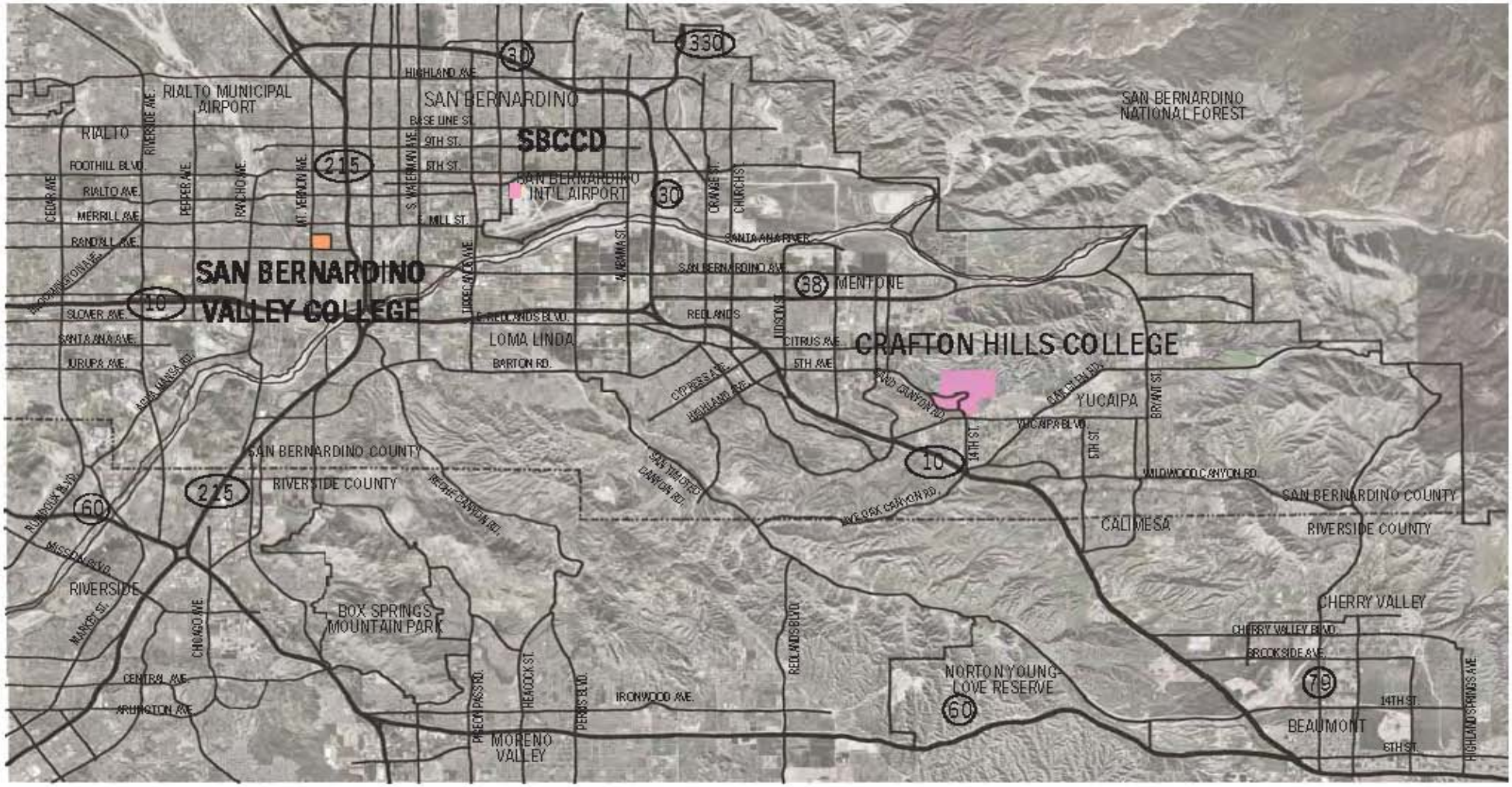

Figure 2-1
Vicinity Map

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Source: Steinberg Architects 2009

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Source: Steinberg Architects 2009

Figure 2-2
Area Map

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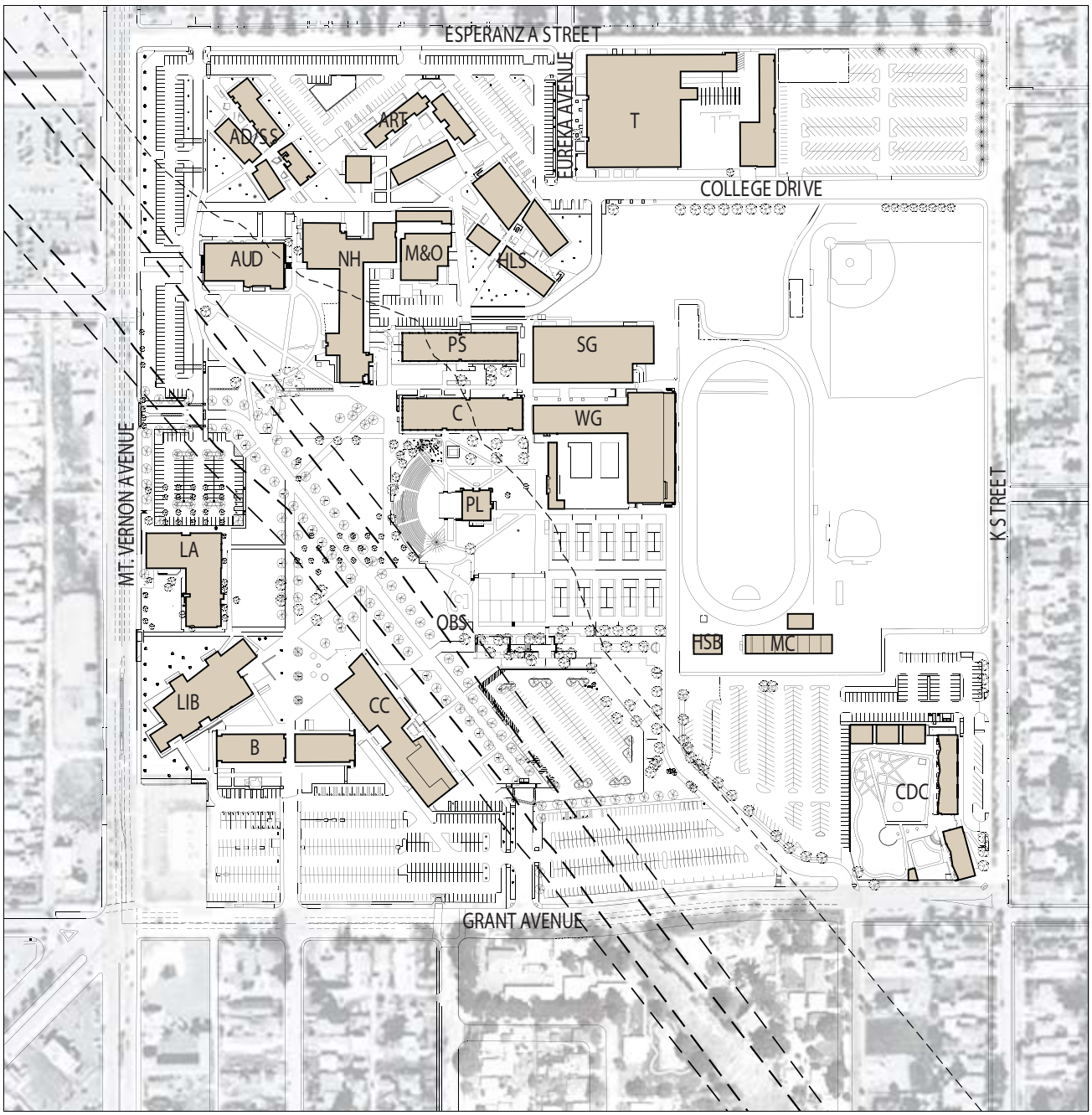

BUILDINGS

AD/SS	ADMN/STUDENT SERVICES	NH	NORTH HALLL
ART	ART & GALLERY	OBS	OBSEVARTORY
AU	AUDITORIUM	PL	PLANETARIUM
B	BUSINESS	PS	PHYSICAL SCIENCE
C	CHEMISTRY	SG	SNYDER GYM
CC	CAMPUS CENTER	T	TECHNICAL
CDC	CHILD DEVELOPMENT CENTER	WG	WOMEN'S GYM
HLS	HEALTH & LIFE SCIENCES		
HSB	HEALTH SERVICES BUILDING		
LA	LIBERAL ARTS		
LIB	LIBRARY		
M&O	MAINTENANCE & OPERATIONS		

Figure 2-3
Existing Site Plan

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Source: Steinberg Architects 2009

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2.2.3 Measure M Projects/San Bernardino Valley College Master Plan

Measure M, a $500 million bond measure, was passed in February 2008. This bond measure provides funding for the design and construction of new facilities to implement the Master Plan. The Master Plan estimates that various academic buildings, infrastructure improvements, and associated parking are required to meet the planning challenges related to the fault and folding zone and to support the West Valley community college demand through 2030. These components are detailed in Sections 2.4 and 2.5, below.

2.3 PLANNING CHALLENGES AND PROJECT GOALS

The master planning process identified three significant challenges at SBVC: the San Jacinto Fault and its impact on existing and future buildings; the loss of campus organization as a result of the fault; and the disintegration of campus identity from demolition of buildings (Steinberg Architects 2009). The goals of the Master Plan are to meet these challenges.

2.3.1 The San Jacinto Fault

The San Jacinto fault has a tremendous impact at SBVC. On the campus, two lines of the fault run parallel to each other and have a required 50-foot setback to either side, creating a zone in which no structures are allowed (Figure 2-4). Additionally, a folding zone exists to the northeast of the fault, caused by the relative movement of two tectonic plates underneath the earth's surface. It is not recommended that new structures be built within the folding zone. The unbuildable zone created by the fault and folding zones is approximately 18 acres.

2.3.2 Loss of Organization

The original campus consisted of a traditional framework of buildings arranged around open landscape quads and hardscape plazas. Structures were parallel and perpendicular to the City street grid, typically two stories in height and in the mission revival style. Buildings constructed in the 1960s and 1970s were more utilitarian in style, but in configuration reinforced the network of quads and plazas. When the fault was discovered, the necessary demolition destroyed the original framework of the campus. Because of structural engineering recommendations, new buildings were placed either parallel or perpendicular to the fault and folding zones, making them skewed in relation to existing buildings that were oriented to the street grid. With the network of quads and plazas defined by the original buildings gone, the logical sequence of circulation was lost.

2.3.3 Identity

Because new construction should not be within the fault or folding zones, the first replacement buildings were located in available space on campus, primarily parking lots at the edges of campus. This has led to a perceived separation between the north and south sides of campus, which are divided by the 18-acre unbuildable zone.

2.3.4 Project Goals

The Master Plan will create connections that link and unify the campus and community to foster a positive memorable experience and identity through the following planning principles (Steinberg Architects 2009):

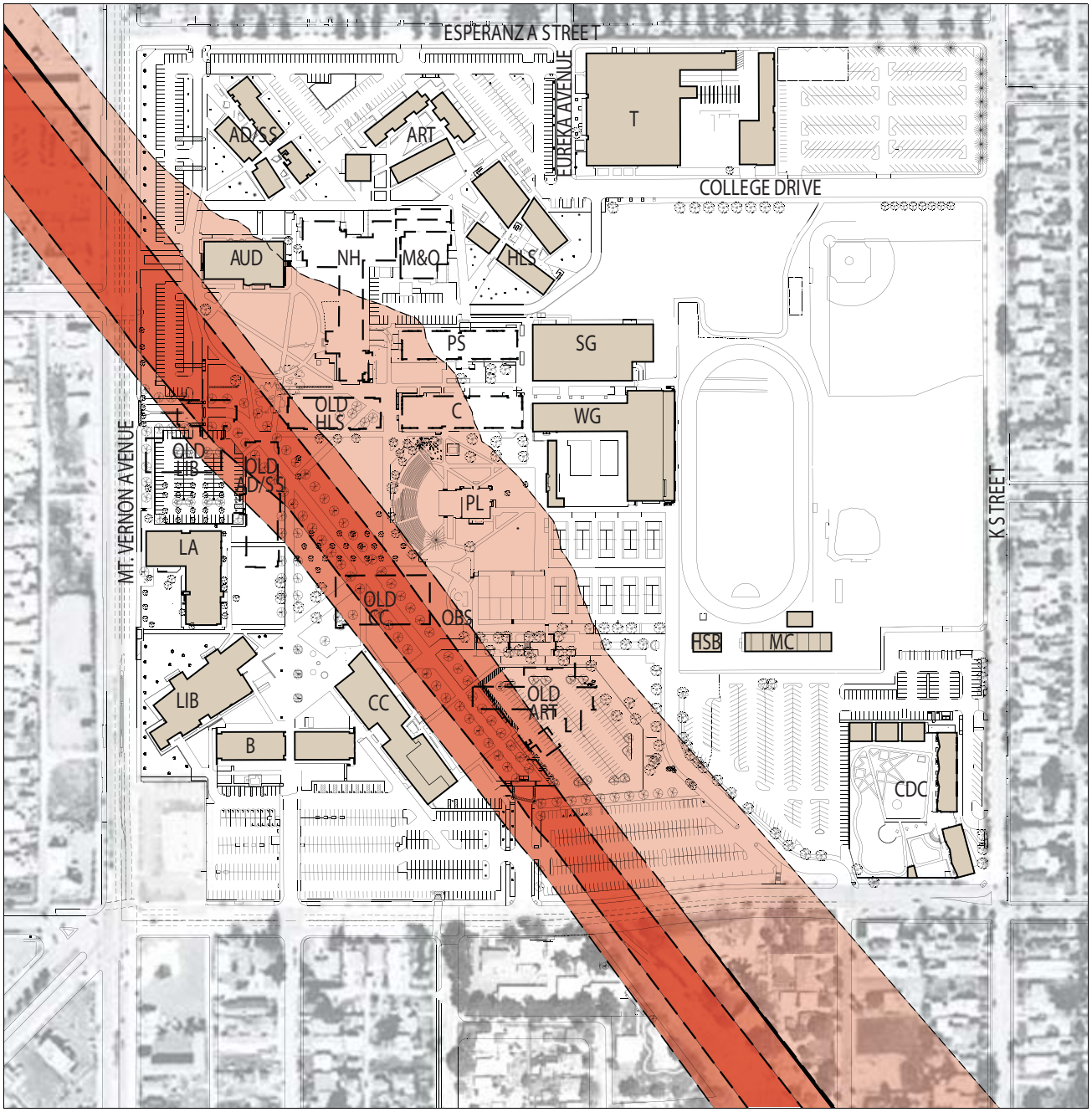
- **Student-centered Culture**
  - Large central gathering place
  - Distinct districts
  - Sufficient parking
  - Serve the West Valley population

- **Hierarchy of Elements**
  - Campus edges/transitions from the campus to the community
  - Delineation of primary and secondary campus entrances
  - Variety of exterior spaces

- **Access**
  - Vehicular/pedestrian circulation
  - Accessible paths and buildings
  - Wayfinding

- **Sustainable Design**
  - Respond to natural environment
  - Flexibility of space (long-term use)
  - Energy efficiency

- **Functional Integration**
  - Consolidate instructional divisions
  - Active and passive exterior spaces
  - Interior/exterior connections



LEGEND

- FAULT ZONE
- 50' SETBACK
- FOLD ZONE
- EXISTING BUILDINGS
- TO BE DEMOLISHED BUILDINGS

BUILDINGS

AD/SS	ADMN/STUDENT SERVICES	NH	NORTH HALLL
ART	ART & GALLERY	OBS	OBSEVARTORY
AU	AUDITORIUM	PL	PLANETARIUM**
B	BUSINESS	PS	PHYSICAL SCIENCE*
C	CHEMISTRY*	SBCCD	DISTRICT WAREHOUSE
CC	CAMPUS CENTER	SG	SNYDER GYM
CDC	CHILD DEVELOPMENT CENTER	T	TECHNICAL
HLS	HEALTH & LIFE SCIENCES	WG	WOMEN'S GYM
HSB	HEALTH SERVICES BUILDING		
LA	LIBERAL ARTS		
LIB	LIBRARY		
M&O	MAINTENANCE & OPERATIONS*	*To be demolished	
MC	MIDDLE COLLEGE	** Recommended for demolition	

Figure 2-4
Fault/Folding Zones

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Source: Steinberg Architects 2009

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2.4 PROJECT SUMMARY

The proposed Master Plan estimates that various academic buildings, infrastructure improvements, and associated parking are required to meet the planning challenges related to the fault and folding zone, which creates an 18-acre unbuildable area on the campus. Improvements are also required to support a future enrollment of 15,000 total students by 2020 and 17,000 total students by 2030. The Master Plan does not constitute a mandate for growth, nor is it a detailed implementation plan for development. Its adoption does not constitute a commitment to any specific project details, construction schedule, or funding priority. Rather, the Master Plan describes a program of potential development for the campus through buildout. The funding, scheduling, and details of each development project undertaken during the planning horizon will be subject to individual approval by the SBCCD. Table 2-2 shows the projected increases in student enrollment, building area, and parking over the planning period.

Table 2-2
SBVC Existing Conditions and Master Plan Projected Growth

	2008 Estimate	Horizon 1 2010	Horizon 2 2020	Horizon 3 2030
Student Enrollment (total)	12,561	13,300	15,000	17,000
Building Area (ASF)	426,550	418,888	427,454	526,731
Parking*	2,715	3,182	3,055	3,349

Notes:

ASF= Assignable square feet or the sum of all surface areas in a building that are assigned to, or available for assignments.

* Parking includes on-site and on-street parking supplies. Only the 2008 Estimate includes use of the Swap Meet property, which is located to the west of SBVC.

It should be noted that SBVC has more square footage than required for its current enrollment. Therefore, many of the projects in the Master Plan that replace outdated buildings would also accommodate growth without a significant increase in the overall square footage of assignable space on the campus. The main increase in ASF occurs in Horizon 3.

The Master Plan for SBVC describes the improvements to SBVC in three phases, called Horizons (Steinberg Architects 2009). The Horizons are described below.

2.4.1 Horizon 1

Horizon 1 targets the year 2010, and primarily consists of the construction of four buildings that replace buildings within or near the San Jacinto fault folding zone (North Hall, Physical Science, Chemistry, and Maintenance and Operations) (Figure 2-5 and Table 2-3). The replacement is for safety reasons, not to accommodate an increase in student population. The replacement of these buildings was initially funded by Measure P and State funding prior to the development of the Master Plan. Therefore, a CEQA IS/MND was prepared for this building replacement project in 2007 (SBCCD 2007). It is included in this PEIR for reference purposes, and as a basis for cumulative impacts analysis.

Also included in Horizon 1 is Parking Structure 1, a multi-level, approximate 1,250-space parking structure located on the south portion of campus with access from Grant Avenue and K Street. This parking structure facility was not included in the CEQA IS/MND prepared for the Measure P projects, and will be evaluated for the first time in this PEIR.

Table 2-3
Horizon 1 Projects

Horizon 1 Project	Project Description
New Buildings/Facilities	
New Maintenance and Operations Building	Physical plant space for the campus
New North Hall Replacement Building	Classrooms, labs, offices for criminal justice, humanities, humanities programs
New Media and Communications Building	Classrooms, labs, offices, media space for media and communications programs and KVCR (campus radio and television broadcasting station)
New Chemistry/Physical Science Building	Classrooms, labs offices, assembly area for chemistry and physical sciences programs
New Student Health Services Building	Clinical space; offices
New Parking Structure 1	An approximate 1,250-space parking structure (approximately 72 feet in height plus vertical circulation and lighting), with the potential for a solar photovoltaic system, located on south side of campus with access from Grant Avenue and K Street.
Renovations	
None	
Demolitions	
Maintenance and Operations Building	After the functions of the North Hall and the Maintenance and Operations Building have been moved to newly constructed buildings, they will be demolished, allowing the construction of the new Chemistry/Physical Science Building. The demolition of these buildings were analyzed in a separate IS/MND.
North Hall Building	
Chemistry/Physical Science Buildings	
Infrastructure Improvements	
Storm Drain; Sanitary Sewer; Water Distribution and Fire Protection; Heating, Ventilation, and Air Conditioning; Electrical; Natural Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Infrastructure will be extended on campus to connect new buildings.

HORIZON 1	
17	CHEMISTRY AND PHYSICAL SCIENCES
18	NORTH HALL REPLACEMENT BLDG
19	MEDIA/ COMMUNICATIONS
20	STUDENT HEALTH SERVICES
21	MAINTENANCE AND OPERATIONS
22	PARKING STRUCTURE 1

EXISTING BUILDINGS	
1	ADMIN./ STUDENT SERVICES
2	ART & GALLERY
3	AUDITORIUM
4	BUSINESS
5	CAMPUS CENTER
6	CHILD DEVELOPMENT CENTER
7	HEALTH & LIFE SCIENCES
8	LIBERAL ARTS
9	LIBRARY
10	MIDDLE COLLEGE
11	OBSERVATORY
12	PLANETARIUM
13	SNYDER GYMNASIUM
14	TECHNICAL BUILDING
15	WOMEN'S GYMNASIUM
16	CENTRAL PLANT

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Source: Steinberg Architects 2009

Figure 2-5
Horizon 1

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2.4.2 Horizon 2

Horizon 2 targets the year 2020 and is defined by the replacement of structures identified in the assessment study as in the worst condition: the Liberal Arts Building, Gymnasiums and Pools, and Technical Building (Figure 2-6 and Table 2-4). The existing Liberal Arts Building would be demolished and replaced with a new Liberal Arts Building. The old gymnasiums would be demolished and replaced with two new gymnasium buildings in roughly the same area. The softball field would be relocated, the baseball field would be resurfaced, and a new soccer field would be constructed along K Street. The track and football field would remain in their current locations, but new home and visitor stands would be added.

The new Technical Building would anchor the northeast corner of the campus and provide the program and campus with public visibility and access, improving the edge of the campus in this location. The old Technical Building would be demolished and an approximately 200 to 250 space parking lot would be constructed in that location.

Table 2-4
Horizon 2 Projects

Horizon 2 Project	Project Description
New Buildings/Facilities	
New Gymnasiums 1 and 2	Offices for athletics, health services and physical education divisions. Locker rooms, weight rooms, and physical education/athletics spaces.
New Technical Building	Classrooms, labs, and offices for applied technology.
New Softball Field	Construct new softball field on existing open space south of College Ave. and north of the track.
New Soccer Field	Construct new soccer field on location of existing softball field west of K Street and east of the track.
New Liberal Arts Building	Classrooms, labs, offices for social science/human development, and computing services
New Home and Visitor Stands at Track/Football Field	Home stands would be constructed on the west side of the track/football field and visitor's stands would be constructed on the east side of the track/football field
Renovations	
Baseball Field	Resurface existing baseball field
West Drop Off Reconfiguration	Reconfigure Parking Lot 2 to provide a drop off space
Business Building Renovation	Architectural finish upgrades, building system upgrades, and remodeling
Auditorium Renovation	Architectural finish upgrades, handicap-accessible upgrades
Demolitions	
Technical Building	Functions moved to new Technical Building. Site converted to surface parking lot.
Liberal Arts Building	Functions incorporated into new Liberal Arts Building. Replaced with a new Liberal Arts Building.

Horizon 2 Project	Project Description
Snyder Gymnasium and Women's Gymnasium	Functions incorporated into new Gymnasiums 1 and 2. Replaced with landscaped open space, new home stands, and new Gymnasiums 1 and 2.
Middle College	Middle College relocated off site per the goals of the San Bernardino City Unified School District.
Infrastructure Improvements	
Central Plant	New/additional central plant and potentially a thermal energy storage system and other energy systems will be constructed to serve the campus.
Storm Drain; Sanitary Sewer; Water Distribution and Fire Protection; Heating, Ventilation, and Air Conditioning; Electrical; Natural Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Infrastructure will be extended on campus to connect new and existing buildings.

HORIZON 1

17	CHEMISTRY AND PHYSICAL SCIENCES
18	NORTH HALL REPLACEMENT BLDG
19	MEDIA/ COMMUNICATIONS
20	STUDENT HEALTH SERVICES
21	MAINTENANCE AND OPERATIONS
22	PARKING STRUCTURE 1

HORIZON 2

23	GYMNASIUM 1
24	GYMNASIUM 2
25	LIBERAL ARTS
26	TECHNICAL BUILDING
27	STADIUM STANDS
28	FIELD IMPROVEMENTS
29	CENTRAL PLANT

EXISTING BUILDINGS

1	ADMIN./ STUDENT SERVICES
2	ART & GALLERY
3	AUDITORIUM
4	BUSINESS
5	CAMPUS CENTER
6	CHILD DEVELOPMENT CENTER
7	HEALTH & LIFE SCIENCES
8	LIBERAL ARTS
9	LIBRARY
10	MIDDLE COLLEGE
11	OBSERVATORY
12	PLANETARIUM
13	SNYDER GYMNASIUM
14	TECHNICAL BUILDING
15	WOMEN'S GYMNASIUM
16	CENTRAL PLANT

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Source: Steinberg Architects 2009

Figure 2-6
Horizon 2

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2.4.3 Horizon 3

Horizon 3 targets the year 2030 and represents the full buildout of the campus (Figure 2-7 and Table 2-5). A new Performing Arts Building would be constructed adjacent to Grant Avenue. Two new office and classroom buildings would be constructed to support academic functions that have not yet been assigned. A multi-level, approximate 1,100 space parking structure (Parking Structure 2) with tennis courts on the top level would be constructed at the parking lot that was formerly the site of the old Technical Building.

The Planetarium would be demolished, and its function incorporated into one of the new or existing buildings. A new outdoor stage and backdrop for the existing Greek Theater would be built at its old location.

Table 2-5
Horizon 3 Projects

Horizon 3 Project	Project Description
New Buildings/Facilities	
Performing Arts	Performing arts facility
New Building 1	Replace classrooms, labs, and offices in existing Business Building and provide for accommodation of future growth.
New Building 2	Offices, classrooms, and labs for future growth.
New Parking Structure 2	An approximate 1,100-space parking structure (approximately 47 feet in height plus vertical circulation, tennis courts, and lighting) with access from Esperanza Street
New Campus Entry	New Campus Entry
Renovations	
Greek Theater	New stage and backdrop
Demolitions	
Planetarium	Functions incorporated into new or existing building. Replaced with open space/new Greek Theater backdrop
Business Building	Functions incorporated into New Building 1. Replaced with new Building 1 and landscaped open space.
Infrastructure Improvements	
Storm Drain; Sanitary Sewer; Water; Heating, Ventilation, and Air Conditioning; Electrical; Gas; Telecommunications; Sitework; Access Improvements; Signage; Landscape/Hardscape; Solar Photovoltaic	Provide service to new and existing buildings

2.5 CONCEPTUAL LANDSCAPE PLAN

The conceptual landscape plan included in the Master Plan divides the campus into twelve landscape places:

1. The Glade;
2. San Jacinto Fault Interpretive Walk;
3. Riparian Garden;
4. Campus Walk;
5. North/South Campus Walk;
6. Cultural Plaza;
7. Wellness Garden;
8. Events District;
9. Student Commons;
10. Plaza;
11. Mount Vernon Landscape; and
12. Valley College Streetscape.

The conceptual landscape plan will be implemented in each Horizon, as buildings are constructed and demolished. The twelve landscaped places are described below and shown on Figure 2-8.

2.5.1 The Glade

Centrally located in the unbuildable fault and folding zone and surrounded by old and new buildings, the Glade serves to provide the campus with a large open space lawn area in which to hold various events and activities. At over nine acres, the Glade includes a six-acre multi-use lawn area, the renovated outdoor Greek Theater, and the Observatory.

2.5.2 Riparian Garden

The Riparian Garden is also located in the unbuildable fault and folding zone. It would be integration of stormwater collection and existing site topography to create an ecological landscape that is highly functional and educational. Currently, stormwater on campus is either directed into the adjacent streets or into storm drains. The Riparian Garden would partially replace the existing method by directing the runoff into a planted swale where the water can slow down and be readily absorbed back into the ground. The planting palette within this zone would be specifically suited to the functional aspects of an arroyo landscape. It would contain water only in the rainy season. In the dry season, the Riparian Garden would be characterized by a fairly flat, rock bottom swale with planted slopes.

HORIZON 1

17	CHEMISTRY AND PHYSICAL SCIENCES
18	NORTH HALL REPLACEMENT BLDG
19	MEDIA/ COMMUNICATIONS
20	STUDENT HEALTH SERVICES
21	MAINTENANCE AND OPERATIONS
22	PARKING STRUCTURE 1

HORIZON 2

23	GYMNASIUM 1
24	GYMNASIUM 2
25	LIBERAL ARTS
26	TECHNICAL BUILDING
27	STADIUM STANDS
28	FIELD IMPROVEMENTS
29	CENTRAL PLANT

HORIZON 3

30	PERFORMING ARTS
31	BUILDING 1
32	BUILDING 2
33	PARKING STRUCTURE 2

EXISTING BUILDINGS

1	ADMIN./ STUDENT SERVICES
2	ART & GALLERY
3	AUDITORIUM
4	BUSINESS
5	CAMPUS CENTER
6	CHILD DEVELOPMENT CENTER
7	HEALTH & LIFE SCIENCES
8	LIBERAL ARTS
9	LIBRARY
10	MIDDLE COLLEGE
11	OBSERVATORY
12	PLANETARIUM
13	SNYDER GYMNASIUM
14	TECHNICAL BUILDING
15	WOMEN'S GYMNASIUM
16	CENTRAL PLANT

Figure 2-7
Horizon 3

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Source: Steinberg Architects 2009

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2.5.3 San Jacinto Interpretive Walk

The San Jacinto Interpretive Walk is inspired by the presence of the San Jacinto fault zone on the campus. The fault zone provides the campus with an opportunity to create an educational landscape comprised of interpretive signage, native plants, and lighting. The walk would be situated within the folding zone of the fault along existing topography.

2.5.4 Cultural Plaza

The Cultural Plaza would be located north of the Glade. The plaza would contain architectural remnants salvaged from the previous demolition of the College's earliest buildings, such as an architectural frieze and a wrought iron gate. The salvaged items would be artistically displayed alongside other elements that could include a donor recognition area that highlights the continuing support of the SBVC alumni, formally-arranged seating, a fountain, and a rose garden. Existing mature oaks would be retained.

2.5.5 Wellness Garden

The Wellness Garden would be located north of the new Gymnasium complex. Plant species that have been used by cultures throughout the world for food, medication, etc. would be highlighted in this garden, such as lavender, ginkgo, juniper, and aloe. Located near the gymnasium and athletic fields, the Wellness Garden would provide shady spaces for relaxation and fitness.

2.5.6 Student Commons

The Student Commons would be a series of outdoor rooms framed by the new Liberal Arts Building, North Hall Replacement Building, Library, and Campus Center. As courtyards, these spaces would maintain a scale that is more intimate than other spaces on the campus. The courtyards would flow freely from building interior to the outdoors.

2.5.7 Events District

The Events District would be located between the Campus Walk and the Student Commons and would be highly accessible by pedestrians. The space would be a mix of hardscape and softscape that can accommodate a variety of uses. This flexible open space directly adjacent to the Campus Center would be the prime destination for student activities such as Homecoming, pep rallies, and career and book fairs.

2.5.8 Plaza

The Plaza is intended to provide an activity area adjacent to the Performing Arts facility.

2.5.9 Campus Walk

The Campus Walk would be the major pedestrian walkway within the campus. At approximately 1,600 feet in length, the 20-foot-wide walkway would stretch from Mount Vernon Avenue to Grant Avenue and traverse the Glade, the Student Commons, and the Events district. The walkway would create a conduit for pedestrians and bicyclists moving through campus from one building to another. It would be defined by canopy trees and an evergreen groundcover.

2.5.10 North/South Campus Walk

The North/South Campus Walk would be a linear area between the athletic fields and the Glade. The walk would connect the two parking structures on the campus. The overall width would be over 80 feet and length would be approximately 1,400 feet, containing a 12-foot-wide path, open lawn, and palm trees along both sides.

2.5.11 Mount Vernon Landscape

The Mount Vernon Landscape would give the campus identity along its western edge. Heavy vehicular circulation along this road would be softened visually though a landscape approach using large-scale triangular-shaped gardens continuously along Mount Vernon Avenue and wrapping along Esperanza Street.

2.5.12 Valley College Streetscape

The Valley College Streetscape would create a stronger pedestrian experience along the edges of the campus. Along Esperanza and K Streets, the proposed landscape plan recommends a layering of plant material to create a visual buffer between the campus and adjacent neighborhoods.

LANDSCAPE PLACES

1	THE GLADE
2	SAN JACINTO FAULT INTERPRETIVE WALK
3	RIPARIAN GARDEN
4	CAMPUS WALK
5	NORTH/SOUTH CAMPUS WALK
6	CULTURAL PLAZA
7	WELLNESS GARDEN
8	EVENTS DISTRICT
9	STUDENT COMMONS
10	PLAZA
11	MOUNT VERNON LANDSCAPE
12	SBVC STREETSCAPE

Figure 2-8
Landcsape Plan

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Source: Steinberg Architects 2009

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SECTION 3.0

ENVIRONMENTAL ANALYSIS

3.1 INTRODUCTION

This section provides a discussion of the environmental issues found to be potentially significant in the Initial Study (Appendix A). Sections 3.2 through 3.13 provide a detailed discussion of the environmental settings, impacts associated with the Proposed Project, and mitigation measures designed to reduce significant impacts to a less than significant level (as required) for the following resources:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural and Paleontologic Resources;
- Geology and Soils Resources;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public services;
- Traffic and Parking; and
- Utilities.

To assist the reader in comparing information about the various environmental issues, each section presents information under the following headings:

- Environmental Setting: The existing environment within and in the vicinity of SBVC is described.
- Thresholds of Significance: Relevant thresholds of significance as identified by CEQA or other relevant standards are identified.
- Environmental Impacts: The nature and extent of project impacts relative to the issue areas listed above are analyzed. These analyses address direct (or primary) effects of the Proposed Project as well as indirect (or secondary) effects. Where applicable, impacts are identified as short-term or long-term.
- Mitigation Measures: Measures to reduce or eliminate project impacts are provided, as applicable.
- Residual Impacts After Mitigation: A discussion of the significance of each impact after mitigation is provided.

As discussed in Section 1.1, impacts of the implementation of the proposed Master Plan are discussed at a program level. Prior to implementation, when greater detail is known, individual projects must go through another CEQA review process. They will be examined in light of the PEIR to determine whether an additional environmental document must be prepared.

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3.2 AESTHETICS

This section discusses the potential aesthetic and visual resource impacts associated with the Proposed Project.

3.2.1 Environmental Setting

The SBVC Master Plan area is located in the City of San Bernardino and adjacent to the City of Colton. The campus is situated on an 87-acre site that is relatively flat in an urban setting. The campus is bordered by Esperanza Street on the north, Mount Vernon Avenue on the west, Grant Avenue on the south, and K Street on the east. Mount Vernon Avenue and Grant Avenue are four lane roads while Esperanza Street and K Street are two lane roads. Surrounding land uses consist of a mix of residential and commercial uses. Residential areas surrounding SBVC are composed mostly of single-family residences with limited parcels zoned for higher density residential to the north and south of the campus. The commercial corridor along Mount Vernon Avenue is characterized as a pattern of strip commercial, with vacant or underutilized parcels and structures, and uncoordinated aesthetics and signage (City of San Bernardino 2005a). Existing views are provided in Figures 3.2-1 and 3.2-2.

The campus core developed towards Mount Vernon Avenue, which has traditionally been the main commercial corridor of the area, with athletic fields and parking lots located adjacent to the residential neighborhoods. Original structures of the campus were typically two stories high and in the Mission Revival style. Buildings constructed in the 1960s and 1970s are in a more utilitarian style. The original layout of the campus buildings was orthogonal to the City of San Bernardino and City of Colton grids, which created a traditional framework of buildings arranged around open landscaped quads and hardscape plazas. With the discovery of the San Jacinto Fault, an 18-acre no build zone was created that bisects the campus from the northwest to the southeast destroying the original framework of the campus. The campus has multiple entry points, all with relatively equal importance. There is no recognizable edge to the campus that signals its presence to the community. There are disparate architectural styles and there is no hierarchy to the organization of buildings and surrounding spaces (Steinberg Architects 2009).

Existing Architectural Aesthetics. The SBVC campus is defined by three major architectural styles: Mission Revival, Utilitarian, and Deconstructivism (Steinberg Architect 2009).

An example of the Mission Revival style includes the Auditorium. Mission Revival style is characterized by: massive walls with broad unadorned surfaces, low pitched clay tile roofs, arched windows and doors, use of exterior materials such as plaster, stucco, or concrete, towers on larger buildings, curved gables, arcaded corridors, pierced arches, and exposed rafters.

Examples of the Utilitarian style include the Physical Science Building, the Planetarium/Greek Theatre, and the Liberal Arts Building. Utilitarian style buildings were

built during the 1960s and the 1970s. These buildings are characterized by having punched and store front windows, sloped and flat roofs, and use materials such as stucco, brick, stone, and split-face concrete block.

An example of Deconstructivism includes the Library. Deconstructivism began in the 1980s and attempts to dismantle the basic elements of architecture and recompose them into disharmonious abstract forms. It is characterized by fragmentations, composition of different geometries, illogical patterns, and manipulations of surface or skin.

Existing Landscape Aesthetics. The green spaces at SBVC are organized into four categories, which include large formal green, passive green, intimate pocket, and recreation (Steinberg Architects 2009).

There are two types of formal green spaces. One type is a quad defined by a predominantly open lawn space, bordered by buildings or clear edges. The other type is defined by a formal structure of planting which creates a formal aesthetic setting. Large formal green spaces include the quad in the center of the campus west of the Greek Theatre, which is surrounded by mature trees. Other formal green spaces include the quad south of the Auditorium, the rose garden near Mount Vernon Avenue, and the rose garden in front of the Liberal Arts Building.

Passive green spaces are lawn areas with trees and shrubs that do not create defined spaces but provide buffers between buildings and pedestrian walkways. Passive green spaces exist throughout the campus in between buildings.

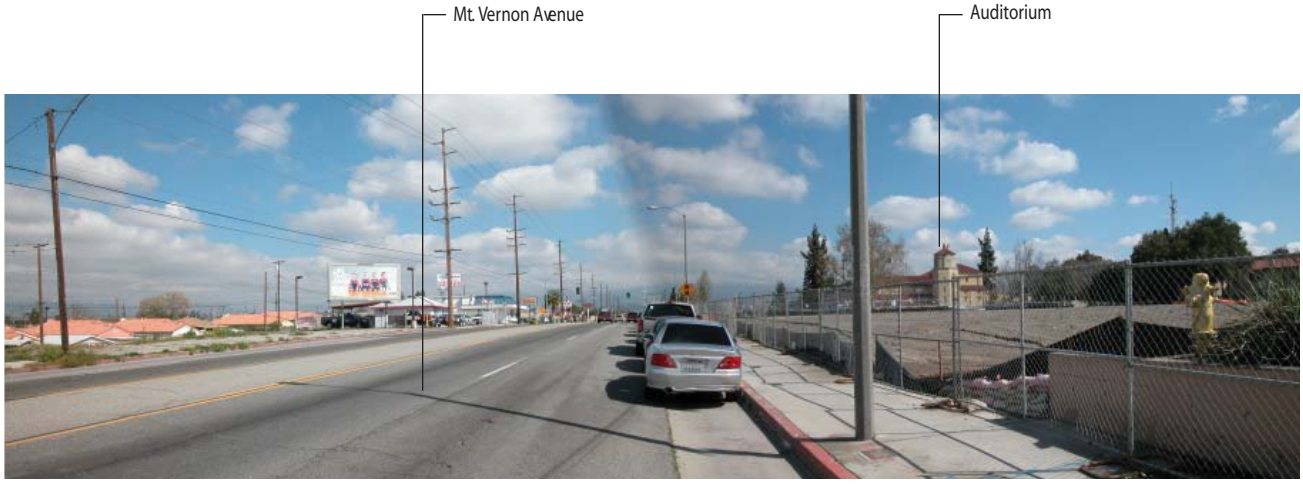
Intimate pockets are spaces for one or two peoples and are typically characterized by a bench in a grouping of trees just off the path of travel. Such a space exists by the North Hall Building near the redwood trees.

Recreational spaces include sports fields, located at the eastern edge of campus. These spaces consist of the football and baseball fields. The football field is a synthetic turf field.

Existing Lighting. A lighting assessment was prepared for the campus (HLB Lighting Design 2006). The campus currently uses a mix of different pathway fixtures, parking fixtures, and sports field lighting fixtures. Lighting on the campus ranges from 0 to 40 foot candles (fc). The current lighting has been added over time during the life of the campus and there are no standard lighting fixtures. Many of the fixtures are older and are aimed upward to assist in spreading the light away from the fixture locations, resulting in high perceived brightness and glare. Currently, only the football field and tennis courts have nighttime lighting. The existing football field lighting is a high-wattage floodlight mounted in clusters to a structural pole assembly. There are no shielding structures to assist in blocking stray light into the sky or adjacent areas.

View of Mt. Vernon Avenue looking south.

View of Mt. Vernon Avenue at the corner of Grant Avenue and La Cadena Drive looking north.



View of Mt. Vernon Avenue looking north.

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Source: Steinberg Architects 2009

Figure 3.2-1
Context - Site Images

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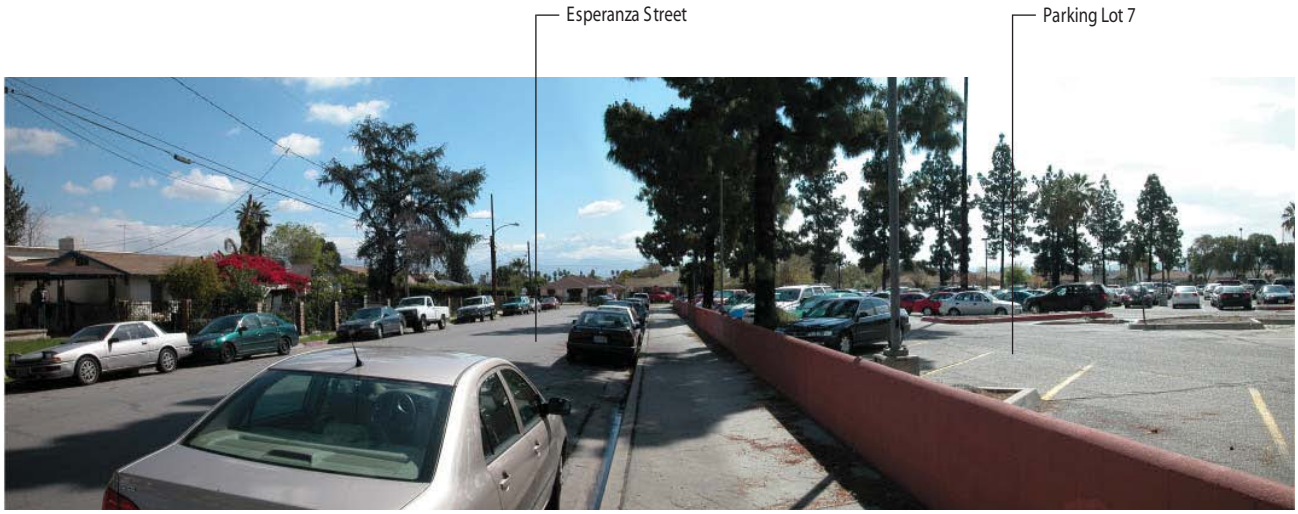
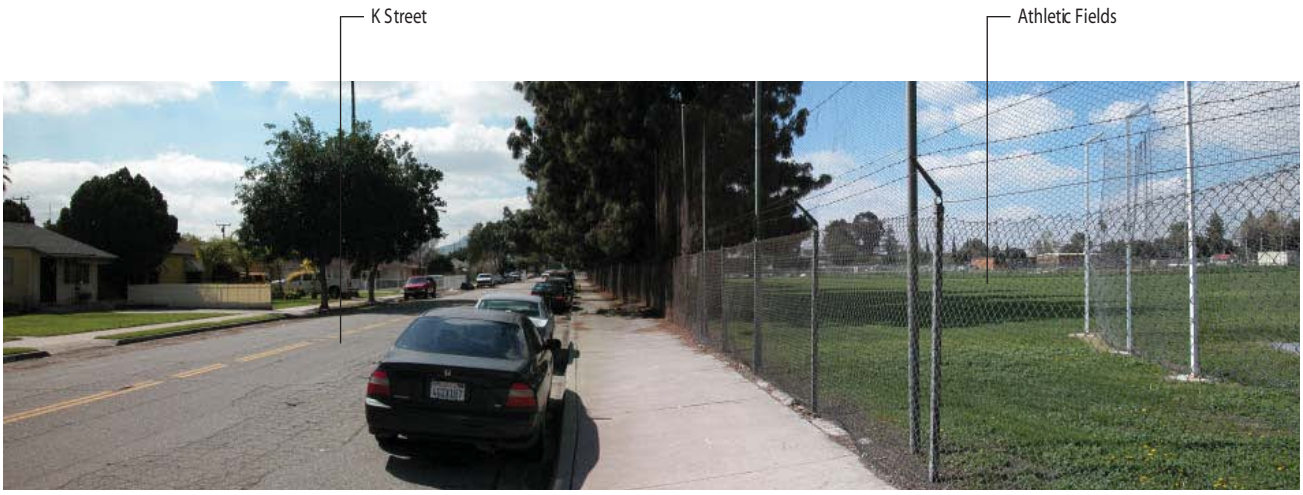


View of Esperanza Street looking east.



View of K Street looking south.

View of Grant Avenue looking into campus.

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Source: Steinberg Architects 2009

Figure 3.2-2
Context - Site Images

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Applicable Plans, Policies, and Regulations. The SBVC Master Plan area is located within the City of San Bernardino and adjacent to the City of Colton. Policies regarding scenic resources in these jurisdictions are described below.

City of San Bernardino. Mount Vernon Avenue is designated as a major corridor in the City of San Bernardino. The City's Community Design Goals related to scenic resources applicable to the Proposed Project include:

- **Goal 5.2:** Attractively design, landscape, and maintain San Bernardino's major corridors.

City of Colton. The City's General Plan defines conservation areas in the urban areas of the City as public park areas. The nearest Colton park is Colton Municipal Park, located approximately one mile south of the campus. There are no identified outstanding scenic vistas or visual features in the vicinity of the campus.

3.2.2 Thresholds of Significance

3.2.2.1 Background on Visual Perception

Studies of visual perception have shown that factors such as visual character, visual compatibility, and viewer sensitivity can be used to measure whether a project results in an impact. Visual character can be defined as landscapes composed with a distinctive variety of form, line, color, and/or texture. The visual character of a site may be comprised of a combination of foreground (close in shrubbery or trees), middleground (large facility or natural feature), and background (distant rolling hills) as strong visual elements. The stronger the influence exerted by these elements, the more interesting the landscape.

Visual compatibility (or incompatibility) is determined by the degree to which the introduction of a structure or element into the visual landscape blends in or is compatible with the existing landscape. Proximity and relative scale are factors used in defining compatibility.

The level of significance of modifications to a viewshed is further defined by viewer sensitivity. Viewer sensitivity is a non-economic measure of public concern for scenic quality. It is a measure of the changes in the expectation of viewers and the relative importance of viewsheds to those who have views of a particular site. The level of sensitivity is determined by the number of viewers of a particular viewpoint, the length of time the viewer may see the viewshed, and the proximity (relative scale) or predominance of project elements within that viewshed.

3.2.2.2 Background on Light and Glare

A definition of light and glare is important in determining significance of impacts. Problems of light and glare generally focus on nuisance complaints of areas being too

bright or visually disturbing. In addition, bright lights can create safety hazards when adjacent to roadways.

Increases in lighting conditions within a viewshed generally vary with the distance of the viewer from the light sources. An increase in lighting to a distant viewer may result in that viewer seeing more pinpoints of light, without being affected by an actual increase in light at their location. However, an increase in lighting from a site adjacent to a viewer may result in additional illumination at the location of that viewer.

Glare conditions usually result from nearby lights being too bright, to the point that they are uncomfortable and visually disturbing. For this reason, glare is often more disturbing within a viewshed than pinpoints of lights in the distance. Higher intensity lights, such as stadium lighting, tend to produce more glare impacts than lower intensity lighting, such as street lights.

3.2.2.3 Threshold Criteria

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the aesthetic environment if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.2.3 Environmental Impacts

An architects rendering of the SBVC campus after implementation of the Master Plan (at the end of Horizon 3) is found in Figure 3.2-3.

On-Campus Views. With the implementation of the proposed Master Plan, nine existing campus buildings would be demolished and eleven new buildings would be built. New buildings would be built in different locations from the buildings they are replacing. The placement of buildings would follow geotechnical and structural engineers' recommendations of placing buildings perpendicular or parallel to the fault and folding zones.

The Auditorium will be the only Mission Revival style building that will remain after all the buildings in the fault/folding zones are demolished. Architectural guidelines of the Master Plan are non-prescriptive by design and instead identify particular facades or edges of buildings that have a responsibility to the overall conceptual framework created by the Master Plan. The conceptual framework creates various exterior spaces such as the Glade, Cultural Plaza, and Student Commons, which are ultimately the main focus of the campus. This approach allows for different architectural styles to be used while maintaining building relationships through the spaces created by their arrangement.

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Sorth View of Campus

1	ADMN/STUDENT SERVICES	18	NORTH HALL REPLACEMENT BLDG	27	STADIUM STANDS
2	ART & GALLERY	19	MEDIA/COMMUNICATIONS	28	FIELD IMPROVEMENTS
3	AUDITORIUM	20	STUDENT HEALTH SERVICES	29	CENTRAL PLANT
5	CAMPUS CENTER	21	MAINTENANCE & OPERATION	30	PERFORMING ARTS
6	CHILD DEVELOPMENT CENTER	22	PARKING STRUCTURE 1	31	BUILDING 1
7	HEALTH & LIFE SCIENCES	23	GYMNASIUM 1	32	BUILDING 2
9	LIBRARY	24	GYMNASIUM 2	33	PARKING STRUCTURE 2
11	OBSERVATORY	25	LIBERAL ARTS		
17	CHEMISTRY & PHYSICAL SCIENCES	26	TECHNICAL BUILDING		

Figure 3.2-3
View of Campus at Buildout

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The landscape guidelines of the Master Plan divide the campus into twelve landscape places. The places include the Glade, the San Jacinto Interpretive Walk, Riparian Garden, Campus Walk, North/South Campus Walk, Cultural Plaza, Wellness Garden, Events District, Student Commons, Plaza, Mount Vernon Avenue, and Valley College Streetscape. The implementation of the Master Plan would result in beneficial impacts from improved landscaping.

On-campus views will be improved with implementation of the Master Plan. The overall campus organization and identity, which was interrupted with the discovery of the fault and fold zone and the seismic building replacement projects conducted since the mid-1990s, would be restored. An overall beneficial impact would occur.

Off-Campus Views. The Master Plan would transform the campus edge into a transitional zone between the public and the academic community. Building facades facing the campus edge would present the formal identity of SBVC to the community. The Master Plan would create appropriately scaled facades that are sympathetic to the adjacent streetscape. Three story buildings would be emphasized along Mount Vernon Avenue, which is a commercial street, while buildings of reduced heights and athletic fields would border residential streets (Grant Avenue, Esperanza Street, and K Street). The exception would be the two parking structures. Parking Structure 1 would be approximately 1,250 spaces and approximately 72 feet in height, plus vertical circulation and lighting elements with the potential for a solar photovoltaic system. It would be constructed in Horizon 1 on the south portion of the campus. Parking Structure 2 would be approximately 1,100 spaces and apporximately 47 feet in height plus vertical circulation, tennis courts, lighting elements, and fencing. It would be constructed in Horizon 3 on the north portion of campus. These structures would be in the foreground of views from residential structures on Grant Street and Esperanza Street, respectively. The Master Plan recommends a palette of building materials to guide the design and construction of new campus buildings and the remodeling of existing structures. Additionally, the Master Plan recommends the planting of trees and shrubs along the streetscapes to provide a visual buffer between the existing residential areas and the campus buildings. Impacts from the parking structures would be less than significant.

The campus edge would incorporate landscaping that creates visual consistency along adjacent streets. Landscaping along Mount Vernon Avenue would utilize trees with stature and contain lawn areas in order to convey a campus feel and signal its presence to the community. The added landscaping to the streetscape surrounding the SBVC campus would add an aesthetic value to the community. The improved landscaping would be in conformance with the City of San Bernardino's General Plan goal to attractively design, landscape, and maintain San Bernardino's major corridors (in this case, Mount Vernon Avenue). The views from off-site areas in the City of Colton would also be improved with landscaping. A beneficial impact would occur.

Light and Glare. Existing lighting for streets, parking lots, pedestrian pathways, stairways, building entries, building perimeters, and landscaping would be replaced with modern lighting fixtures. These modern light fixtures would provide increased visibility, and highlight elements of buildings and trees. Light fixtures used at the campus edge would be directed downward and would not exceed a light intensity level of 3 foot-candles (fc) therefore no adverse impacts are expected on the surrounding properties

from these light fixtures. A beneficial impact would occur by replacing the existing, older fixtures that have a high perceived brightness and glare with new fixtures that would be shielded to reduce off campus light and glare.

Higher intensity light fixtures would be employed in the sports fields, which would include fixtures ranging from 50 fc to over 100 fc. The unshielded lighting at the football field would be replaced with modern, shielded fixtures, resulting in a beneficial impact. The soccer, baseball, and softball fields adjacent to residential properties on the east side of K Street would have lighting added as a result of the Master Plan. The adjacent residences may be affected by increased lighting during sporting events. With the incorporation of Mitigation Measure A-1, light and glare impacts from the sport field lights on the adjacent residential properties would be less than significant.

3.2.4 Mitigation Measures

A-1: Lighting fixtures for the sports fields shall be shielded, directed downward, and have sharp cutoff qualities at property lines, in order to minimize light and glare spillover effects that would affect adjacent residential receptors.

3.2.5 Residual Impacts After Mitigation

With implementation of the above mitigation measure, the development proposed by the Master Plan would result in less than significant impacts to visual resources.

3.3 AIR QUALITY

An Air Quality Technical Report was prepared for the Master Plan. This report is summarized below and is included in Appendix B. Impacts related to global climate change and greenhouse gas emissions are discussed in Section 5.5.

3.3.1 Environmental Setting

3.3.1.1 Climate and Meteorology

The SBVC Master Plan area is located in western San Bernardino County in the City of San Bernardino, an area within the South Coast Air Basin (Basin). The Basin includes Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. Air quality conditions in the Basin are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), a regional agency that regulates stationary sources of pollution throughout the Basin.

Terrain and geographical location determine the Basin's climate. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin. The region lies in a semi-permanent high pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extreme hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from low to middle 60 degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in the annual minimum and maximum temperatures than inland areas. The climatological station nearest to the SBVC campus is the San Bernardino Station. The normal daily maximum temperature is 96.6 °F in July, while the normal daily minimum temperature is 39.4 °F in December and January according to the Western Regional Climate Center. Approximately 16 inches of rain falls annually in the San Bernardino area, occurring primarily from November through March.

The nearest meteorological monitoring station to the SBVC campus is located in the City of Fontana. Prevailing winds are from the west-northwest, with occasional strong winds (Santa Anas) from the east-southeast.

3.3.1.2 Regulatory Setting

The Proposed Project would be constructed in the City of San Bernardino in San Bernardino County, within the South Coast Air Basin inland area. The following subsections present a summary of air quality regulatory requirements for the SBVC Master Plan.

Federal Regulatory Setting. Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (EPA) to be of concern with respect to health and welfare of the general public. The EPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the EPA to establish National Ambient Air Quality Standards (NAAQS), which identifies concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the EPA established both primary and secondary standards for six primary air pollutants (called "criteria" pollutants): ozone (O_3), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), and particulate matter equal to or smaller than 10 microns in diameter (PM_{10}). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

Areas that do not meet the NAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The Basin has historically been considered an extreme nonattainment area for the 1-hour NAAQS for O_3, which has been rescinded. On April 15, 2004, the Basin was designated a "severe-17" nonattainment area for the 8-hour NAAQS for O_3. The Basin is also considered a nonattainment area for CO, PM_{10}, and $PM_{2.5}$, and is a maintenance area for NO_2. The Basin is in attainment/unclassifiable for the NAAQS for SO_2 and lead.

Due to its status as a nonattainment area for the 8-hour NAAQS for O_3 and a nonattainment area for the new NAAQS for $PM_{2.5}$, the South Coast Air Quality Management District (SCAQMD) is required to develop and submit a new attainment plan for submittal to EPA in 2007 describing plans and programs for attainment of the NAAQS. The SCAQMD is in the process of preparing its update to the Air Quality Management Plan (AQMP), which will provide the basis for the State Implementation Plan and attainment of the NAAQS.

State Regulatory Setting. The California Air Resources Board (CARB) is the agency responsible for regulation of air quality in the State of California. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. The Basin is currently classified as a nonattainment area under the CAAQS for O_3, $PM_{2.5}$, and PM_{10}.

The CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The CARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The CARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as

well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations.

Local Regulatory Setting. The SCAQMD is the local agency responsible for the administration and enforcement of air quality regulations for the Basin. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county Basin, the Mojave Desert Air Basin, and the Riverside County portions of the Salton Sea Air Basin. The SCAQMD develops and administers local regulations for stationary air pollutant sources within the Basin, and also develops plans and programs to meet attainment requirements for the NAAQS and the CAAQS. In addition, the SCAQMD, along with the CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout the Basin that monitor the ambient air quality.

The SCAQMD is responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the Basin. As discussed above, the SCAQMD is in the process of developing its AQMP for the Basin. The AQMP outlines the SCAQMD's plans and control measures designed to attain the state air quality standards for O_3. The AQMP serves as the air basin's input to the State Implementation Plan (SIP), which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards.

The AQMP includes information from the CARB and the Southern California Association of Governments (SCAG), including mobile and area source emissions, as well as information regarding projected growth in the Basin, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SCAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the AQMP. If a project proposes development that is greater than that anticipated in the AQMP, the project might be in conflict with the AQMP and SIP, and might have a potentially significant impact on air quality.

Table 3.3-1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 3.3-1
Ambient Air Quality Standards

Pollutant	Average Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm[1] (137 μg/m³)		0.075 ppm (147 μg/m³)	0.075 ppm (147 μg/m³)	
Carbon Monoxide	8 hours	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 μg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 μg/m³)	0.053 ppm (100 μg/m³)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 μg/m³)		--	--	
Sulfur Dioxide (SO_2)	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 μg/m³)	--	Pararosaniline
	24 hours	0.04 ppm (105 μg/m³)		0.14 ppm (365 μg/m³)	--	
	3 hours	--		--	0.5 ppm (1300 μg/m³)	
	1 hour	0.25 ppm (655 μg/m³)		--	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 μg/m³	Gravimetric or Beta Attenuation	150 μg/m³	150 μg/m³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation	15 μg/m³	--	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 μg/m³	--	
Sulfates	24 hours	25 μg/m³	Ion Chromatography	--	--	--
Lead	30-day Average	1.5 μg/m³	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 μg/m³	1.5 μg/m³	
	3-Month Rolling Average	--		0.15 μg/m³	0.15 μg/m³	
Hydrogen Sulfide Vinyl Chloride	24 hours	0.010 ppm (26 μg/m³)	Gas Chromatography	--	--	--

ppm= parts per million
μg/m³ = micrograms per cubic meter
mg/m³= milligrams per cubic meter
Source: California Air Resources Board September 2009

Toxic Air Contaminants

Cancer Risk. One of the primary health risks of concern due to exposure to toxic air contaminants (TACs) is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens, that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in a million, from all causes, including diet, genetic factors, and lifestyle choices.

Noncancer Health Risks. Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The California Environmental Protection Agency (CalEPA) and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

3.3.1.3 Existing Ambient Air Quality

The closest ambient air quality monitoring station to the project is the site at 4th Street in San Bernardino. The nearest monitoring station that measures SO_2 is the Riverside-Rubidoux station. Ambient concentrations of criteria pollutants measured at these monitoring stations during the period 2006-2008 are presented in Table 3.3-2. Ambient air concentrations were compared with the CAAQS and NAAQS. The data indicate that the area is in compliance with both CAAQS and NAAQS for CO, NO_2, and SO_2. The state 8-hour CO standard was not exceeded during this three-year period. Exceedances of the NAAQS for ozone were recorded several times per year in the 2006-2008 time period. One exceedance of the NAAQS for PM_{10} was recorded in 2007 during the southern California fire event in October of that year. Exceedances of the CAAQS for ozone PM_{10} and $PM_{2.5}$ standards have been recorded at the San Bernardino monitoring station.

Table 3.3-2
Background Air Quality Data
(2006 – 2008)
ppm (unless otherwise indicated)

Pollutant	Averaging Time	2006	2007	2008	NAAQS	CAAQS	Monitoring Station
Ozone	8 hour	0.126	0.121	0.122	0.075	0.070	San Bernardino
	1 hour	0.154	0.153	0.157	-	0.08	San Bernardino
PM_{10}	Annual Arithmetic Mean	46.0	52.4	42.7	-	20 µg/m^3	San Bernardino
	24 hour	92	219	76	150 µg/m^3	50 µg/m^3	San Bernardino
$PM_{2.5}$	Annual Arithmetic Mean	22.2	21.9	17.4	15 µg/m^3	12 µg/m^3	San Bernardino
	24 hour	73.9	93.4	106.2	35 µg/m^3	-	San Bernardino
NO_2	Annual	0.026	0.026	0.026	0.053	0.030	San Bernardino
	1 hour	0.101	0.118	0.098	-	0.18	San Bernardino
CO	8 hour	4.45	3.24	2.45	9	9.0	San Bernardino
	1 hour	5.1	4.1	3.8	35	20	San Bernardino
SO_2	Annual	0.002	0.003	0.003	0.03	-	Riverside
	24 hour	0.012	0.015	0.011	0.14	0.04	Riverside
	3 hour	0.015	0.016	0.012	0.05[1]	-	Riverside
	1 hour	0.018	0.017	0.024	-	0.25	Riverside

[1]Secondary NAAQS
N/A = not available from current website data
Source: www.arb.ca.gov (all pollutants except 1-hour CO and 1-hour and 3-hour SO_2)
www.epa.gov/air/data/monvals.html (1-hour CO and 1-hour and 3-hour SO_2)

3.3.1.4 Sensitive Receptors

As adopted by the SCAQMD in their CEQA Air Quality Handbook (Chapter 4), a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Hazards and hazardous materials regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions. The closest sensitive receptors to the SBVC campus are the on-site Child Development Center, the on-site Middle College High School (MCHS), Urbita Elementary School, and Richardson Middle School. The Child Development Center provides child care and preschool to infants, toddlers, and children from 4 months to 5 years in age. MCHS, operated by the San Bernardino City Unified School District, allows high school students to take advanced classes in a college setting. Urbita Elementary School is located approximately two city blocks east of the project site. Richardson Middle School is located approximately 0.25 mile north of SBVC.

3.3.2 Thresholds of Significance

The SCAQMD has adopted significance thresholds in its SCAQMD CEQA Air Quality Handbook (SCAQMD 1993) for air quality that define whether or not a project could have a significant impact. These thresholds are arranged in three parts starting with the broadest and narrowing to the most specific. The general thresholds are derived from Appendix G of the state CEQA guidelines, and indicate that a project would have potentially significant impacts if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in 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 release emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors[5] to substantial pollutant concentrations including air toxics such as diesel particulates. As adopted by the SCAQMD in their CEQA Air Quality handbook (Chapter 4), a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large. Sensitive receptors (and the facilities that house them) in proximity to localized CO sources, toxic air contaminants or odors are of particular concern;
- Create objectionable odors affecting a substantial number of people; or
- Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located.

The second level of significance set forth in the SCAQMD's significance thresholds presents quantitative emissions thresholds by which to evaluate whether a project's impacts would have a significant impact on air quality. The quantitative emission thresholds are included in Table 3.3-3.

In addition, the SCAQMD has adopted its Localized Significance Threshold (LST) methodology, which provides guidance for evaluating the significance of impacts associated with construction and operation using a dispersion model-based approach. The LST methodology is based on dispersion modeling used to back-calculate the emissions that would result in an exceedance of an air quality standard. LSTs provide area-specific emission thresholds above which a project could have a significant adverse impact on the ambient air quality.

SBVC is located in Source-Receptor Area 34, the Central San Bernardino Valley area. Table 3.3-4 presents the LSTs for the Central San Bernardino Valley area.

Table 3.3-3
Air Quality Significance Thresholds

Pollutant	Construction	Operation
Criteria Pollutants Mass Daily Thresholds		
NO_x	100 lbs/day	55 lbs/day
ROG	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TAC, AHM, and Odor Thresholds		
Toxic Air Contaminants (TACs)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
PM_{10} 24-hour PM_{10} annual geometric mean	2.5 $\mu g/m^3$ 1.0 $\mu g/m^3$	
Sulfate 24-hour average	1 $\mu g/m^3$	
CO 1-hour average CO 8-hour average	1.1 mg/m^3 0.50 mg/m^3	
$\mu g/m^3$ = microgram per cubic meter; pphm = parts per hundred million; mg/m^3 = milligram per cubic meter; ppm = parts per million; TAC = toxic air contaminant; AHM = Acutely Hazardous Material		

Table 3.3-4
Localized Significance Thresholds
Central San Bernardino Valley

Size of Source	Distance to Receptor, meters				
	25	**50**	**100**	**200**	**500**
Allowable NOx Emissions, lbs/day					
1 acre	172	216	310	495	970
2 acres	251	291	385	558	1,016
5 acres	438	438	550	718	1,154
Allowable CO Emissions, lbs/day					
1 acre	407	653	1,341	3,467	15,541
2 acres	582	883	1,690	3,998	16,474
5 acres	1,155	1,406	2,508	5,311	18,844
Allowable PM_{10} Construction Emissions, lbs/day					
1 acre	4	12	109	206	302
2 acres	7	21	118	215	312
5 acres	14	44	141	239	337
Allowable PM_{10} Operational Emissions, lbs/day					
1 acre	1	3	26	49	73
2 acres	2	5	28	52	75
5 acres	3	11	34	57	81
Allowable $PM_{2.5}$ Construction Emissions, lbs/day					
1 acre	3	5	9	23	98
2 acres	4	6	12	26	104
5 acres	8	10	17	35	120
Allowable $PM_{2.5}$ Operational Emissions, lbs/day					
1 acre	1	2	3	6	24
2 acres	1	2	3	7	25
5 acres	2	3	5	9	29

In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards (shown in Table 3.3-1), including appropriate background levels (shown in Table 3.3-2).

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within one mile and results in a health risk greater than ten in one million would be deemed to have a potentially significant impact. Sensitive receptors in the area include the on-site Child Development Center, the on-site MCHS, Urbita Elementary School, and Richardson Middle School.

3.3.3 Environmental Impacts

3.3.3.1 Construction Impacts

Construction activities, including soil disturbance dust emissions and combustion pollutants from on-site construction equipment and from off-site trucks hauling dirt, cement or building materials, would create a temporary addition of pollutants to the local airshed. Each Horizon of the proposed Master Plan involves demolition of existing campus buildings and the construction of additional buildings to replace those facilities that would be demolished. For the purpose of the air quality analysis, with some exceptions, it was assumed that the demolition would occur following construction of the buildings proposed for each Horizon, so that activities and functions could be moved from the old buildings into new buildings. Some activities and functions would be moved to temporary on- or off-site locations if the replacement building were to be constructed in the same location as the existing building. For conservative purposes, the overall construction horizons were compressed to facilitate evaluation of a maximum emission scenario.

Construction emissions were estimated using the URBEMIS Model, Version 9.2.4 (Rimpo and Associates 2007) and construction equipment estimates based on default values in the model. Tables 3.3-5 through 3.3-7 provide a summary of the emission estimates for the individual construction phases for each Horizon of the Master Plan. It was assumed that dust control measures (watering three times daily) would be employed to reduce emissions of fugitive dust during site grading and cut and fill operations. Comparison with the LSTs was made assuming each site would be five acres and 100 meters from the nearest receptor.

Table 3.3-5
Estimated Construction Emissions – Horizon 1
Lbs/day

Emission Source	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Total Construction Emissions, lbs/day						
Mass Grading						
Fugitive Dust	-	-	-	-	2.13	0.45
Heavy Equipment Exhaust	3.00	24.99	12.46	-	1.25	1.15
Worker Trips	0.03	0.06	1.05	0.00	0.01	0.01
TOTAL	**3.03**	**25.05**	**13.51**	**0.00**	**3.39**	**1.61**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Trenching						
Heavy Equipment Exhaust	2.06	17.69	8.22	0.00	0.88	0.81
Worker Trips	0.03	0.06	1.05	0.00	0.01	0.01
TOTAL	**2.09**	**17.75**	**9.27**	**0.00**	**0.89**	**0.82**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Building Construction						
Building Heavy Equipment Exhaust	3.65	16.55	11.20	0.00	1.19	1.10
Building Vendor Trips	0.17	1.92	1.51	0.00	0.09	0.08
Building Worker Trips	0.28	0.53	9.04	0.00	0.08	0.04
Architectural Coatings Offgassing	21.57	-	-	-	-	-
Architectural Coatings Worker Trips	0.01	0.02	0.26	0.00	0.00	0.00
Asphalt Offgassing	0.03	-	-	-	-	-
Asphalt Heavy Equipment Exhaust	2.64	15.97	9.18	0.00	1.39	1.27
Asphalt On-Road Diesel Emissions	0.01	0.13	0.05	0.00	0.01	0.01
Asphalt Worker Trips	0.07	0.12	2.10	0.00	0.02	0.01
TOTAL	**28.43**	**35.24**	**33.34**	**0.00**	**2.78**	**2.51**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Demolition						
Fugitive Dust - Demolition	-	-	-	-	13.17	2.74
Heavy Equipment Exhaust	1.05	7.22	4.58	0.00	0.55	0.50
On-Road Diesel Emissions	0.96	12.21	4.70	0.02	0.55	0.47
Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00
TOTAL	**2.04**	**19.49**	**10.26**	**0.02**	**14.28**	**3.71**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Maximum Daily Emissions	**30.52**	**61.80**	**44.52**	**0.02**	**5.64**	**3.63**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*

Table 3.3-6
Estimated Construction Emissions – Horizon 2
Lbs/day

Emission Source	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Total Construction Emissions, lbs/day						
Mass Grading						
Fugitive Dust	-	-	-	-	3.36	0.70
Heavy Equipment Exhaust	2.83	23.44	11.96	-	1.17	1.08
Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00
TOTAL	**2.86**	**23.50**	**12.94**	**0.00**	**4.54**	**1.78**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Trenching						
Heavy Equipment Exhaust	1.80	15.24	8.01	0.00	0.73	0.67
Worker Trips	0.03	0.05	0.91	0.00	0.01	0.01
TOTAL	**1.83**	**15.29**	**8.92**	**0.00**	**0.74**	**0.68**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Building Construction						
Building Heavy Equipment Exhaust	2.88	13.91	10.20	0.00	0.93	0.86
Building Vendor Trips	0.15	1.61	1.47	0.00	0.08	0.08
Building Worker Trips	0.34	0.64	11.35	0.02	0.13	0.07
Architectural Coatings Offgassing	34.11	-	-	-	-	-
Architectural Coatings Worker Trips	0.01	0.02	0.34	0.00	0.00	0.00
Asphalt Offgassing	0.05	-	-	-	-	-
Asphalt Heavy Equipment Exhaust	2.19	13.60	8.91	0.00	1.15	1.05
Asphalt On-Road Diesel Emissions	0.01	0.14	0.06	0.00	0.01	0.01
Asphalt Worker Trips	0.05	0.09	1.69	0.00	0.02	0.01
TOTAL	**39.79**	**30.01**	**34.02**	**0.02**	**2.32**	**2.08**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Demolition						
Fugitive Dust - Demolition	-	-	-	-	15.17	3.16
Heavy Equipment Exhaust	0.84	5.95	4.33	0.00	0.39	0.36
On-Road Diesel Emissions	0.82	9.67	3.77	0.02	0.44	0.38
Worker Trips	0.02	0.04	0.79	0.00	0.01	0.01
TOTAL	**1.68**	**15.66**	**8.89**	**0.02**	**16.01**	**3.91**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Maximum Daily Emissions	**39.79**	**30.01**	**34.02**	**0.02**	**16.01**	**3.88**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*

Table 3.3-7
Estimated Construction Emissions – Horizon 3
Lbs/day

Emission Source	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Total Construction Emissions, lbs/day						
Mass Grading						
Fugitive Dust	-	-	-	-	3.19	0.67
Heavy Equipment Exhaust	1.67	11.16	9.17	-	0.49	0.45
Worker Trips	0.01	0.03	0.52	0.00	0.01	0.00
TOTAL	**1.68**	**11.19**	**9.69**	**0.00**	**3.69**	**1.12**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Trenching						
Heavy Equipment Exhaust	1.04	6.18	7.76	0.00	0.29	0.26
Worker Trips	0.01	0.03	0.52	0.00	0.01	0.00
TOTAL	**1.05**	**6.21**	**8.28**	**0.00**	**0.40**	**0.26**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Building Construction						
Building Heavy Equipment Exhaust	1.46	8.36	8.72	0.00	0.39	0.36
Building Vendor Trips	0.06	0.47	0.66	0.00	0.04	0.03
Building Worker Trips	0.11	0.23	4.74	0.02	0.12	0.07
Architectural Coatings Offgassing	29.14	-	-	-	-	-
Architectural Coatings Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00
Asphalt Offgassing	0.05	-	-	-	-	-
Asphalt Heavy Equipment Exhaust	1.38	8.70	8.54	0.00	0.62	0.57
Asphalt On-Road Diesel Emissions	0.00	0.04	0.02	0.00	0.00	0.00
Asphalt Worker Trips	0.02	0.04	0.74	0.00	0.02	0.01
TOTAL	**32.22**	**17.85**	**23.56**	**0.02**	**1.19**	**1.04**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Demolition						
Fugitive Dust - Demolition	-	-	-	-	4.25	0.88
Heavy Equipment Exhaust	0.54	3.74	4.00	0.00	0.18	0.17
On-Road Diesel Emissions	0.10	0.94	0.39	0.01	0.05	0.04
Worker Trips	0.01	0.02	0.37	0.00	0.01	0.01
TOTAL	**0.65**	**4.70**	**4.76**	**0.01**	**4.49**	**1.10**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*
Maximum Daily Emissions	**32.23**	**17.86**	**23.55**	**0.02**	**4.49**	**1.10**
Significance Criteria	75	100	550	150	150	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Localized Significance Threshold		550	2,508		141	17
Above LST?		*No*	*No*		*No*	*No*

As shown in Tables 3.3-5 through 3.3-7, the emissions associated with individual construction phases would be below the significance thresholds and LSTs for all Horizons. A less than significant impact would occur.

Project construction would employ dust control measures (i.e., watering twice daily) and would therefore be in compliance with strategies in the Air Quality Management Plan (AQMP, SCAQMD 2003) for attaining and maintaining the air quality standards. Construction of the Proposed Project would therefore not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP. Emissions would be below the PM_{10} and $PM_{2.5}$ significance thresholds set forth by the SCAQMD. Furthermore, due to the fact that the construction phase of the project is short-term in nature, Proposed Project construction would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, nor result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$. A less than significant impact would occur.

Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Air Pollution Control Officers' Association (CAPCOA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during the 30 months of construction assumed for the Proposed Project from heavy equipment used in the construction process. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts. Because of the short-term nature of project construction and the location of construction some distance away from residences where more frequent exposure would be possible, exposure to diesel exhaust emissions during construction would not be significant.

3.3.3.2 Operational Impacts

Student population is forecasted to increase regardless of Master Plan development. The Traffic Study (Fehr & Peers 2009) estimated increased average daily traffic (ADT) based on projected increases in enrollment whether the Master Plan is implemented or not.

Operational emissions were calculated using the URBEMIS Model, Version 9.2.4, to take into account area sources (energy use, landscaping, maintenance architectural coatings use) and vehicle emissions, for each Horizon.

Because the majority of the emissions are attributable to on-road vehicles, the LST methodology is not appropriate and emissions were not compared with LSTs. Tables 3.3-8 through 3.3-10 present the operational emissions estimated for each Horizon.

Table 3.3-8
Summary of Total Estimated Operational Emissions
Horizon 1

Emission Source	Maximum Daily Emissions (lbs/day)[a]					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Area Sources	1.30	2.09	6.34	0.00	0.02	0.02
Vehicular Emissions	5.85	8.65	63.75	0.07	11.20	2.28
Total	**7.15**	**10.74**	**70.09**	**0.07**	**11.22**	**2.30**
Significance Threshold (lbs/day)	55	55	550	150	150	55
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a]Maximum of summer and winter emissions from URBEMIS Model runs.

Table 3.3-9
Summary of Total Estimated Operational Emissions
Horizon 2

Emission Source	Maximum Daily Emissions (lbs/day)[a]					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Area Sources	1.50	2.05	3.26	0.00	0.01	0.01
Vehicular Emissions	15.57	24.29	177.28	0.23	38.25	7.44
Total	**17.07**	**26.34**	**180.54**	**0.23**	**38.26**	**7.45**
Significance Threshold (lbs/day)	55	55	550	150	150	55
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a]Maximum of summer and winter emissions from URBEMIS Model runs.

Table 3.3-10
Summary of Total Estimated Operational Emissions
Horizon 3

Emission Source	Maximum Daily Emissions (lbs/day)[a]					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Area Sources	1.43	1.95	3.17	0.00	0.01	0.01
Vehicular Emissions	18.18	25.37	201.52	0.42	69.60	13.51
Total	**19.61**	**27.32**	**204.69**	**0.42**	**69.61**	**13.52**
Significance Threshold (lbs/day)	55	55	550	150	150	55
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a]Maximum of summer and winter emissions from URBEMIS Model runs.

As shown in Tables 3.3-8 through 3.3-10, the emissions associated with the Master Plan would be less than the daily significance thresholds, and no significant impacts are anticipated.

Localized CO Impacts. Projects involving increases in traffic and/or traffic congestion may result in localized increases in CO concentrations. To further evaluate whether the project would result in a significant impact, additional modeling to assess whether the increases in traffic attributable to implementation of the SBVC Master Plan would result in localized CO impacts.

The Traffic Study evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the Proposed Project. The potential for CO "hot spots" was evaluated based on the results of the Traffic Study. The Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol should be followed to determine whether a CO "hot spot" is likely to form due to Project-generated traffic. In accordance with the Protocol, CO "hot spots" are typically evaluated when (a) the level of service (LOS) of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment.

The Traffic Study evaluated 14 intersections in the vicinity of the campus to assess the traffic conditions for each Horizon. Because Horizon 3 would result in the most traffic, Horizon 3 traffic was modeled for the intersections for which a degradation in LOS was projected. These intersections were identified in the Traffic Study as intersections for which the LOS would decrease to LOS E or worse, and include the following:

- Esperanza Street and Mt. Vernon Avenue
- Grant Avenue and K Street
- Grant Avenue and J Street
- Grant Avenue and I Street
- Inland Center Drive and I Street

To evaluate the potential for CO "hot spots," the procedures in the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol were used. As recommended in the Protocol, CALINE4 modeling was conducted for the intersections identified above for the scenario without project traffic, and the project scenarios. Inputs to the CALINE4 model were obtained from the Traffic Study (Fehr & Peers 2009). Table 3.3-11 presents a summary of the predicted CO concentrations (impact plus background) for the intersections evaluated. As shown in Table 3.3-11, the predicted CO concentrations would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO shown in Table 3.3-1 of this report. Therefore, no exceedances of the CO standard are predicted. The Proposed Project would not cause or contribute to a violation of this air quality standard. A less than significant impact would occur.

Table 3.3-11
CO "Hot Spots" Evaluation
Predicted CO Concentrations, ppm

Intersection	Long Term plus Project	
Maximum 1-hour Concentration Plus Background, ppm CAAQS = 20 ppm; NAAQS = 35 ppm; Background 5.1 ppm		
	am	***pm***
Esperanza Street and Mt. Vernon Avenue	5.8	6.0
Grant Avenue and K Street	5.6	5.6
Grant Avenue and J Street	5.5	5.6
Grant Avenue and I Street	5.7	5.8
Inland Center Drive and I Street	6.2	6.2
Maximum 8-hour Concentration Plus Background, ppm CAAQS = 9.0 ppm; NAAQS = 9 ppm; Background 4.45 ppm		
Esperanza Street and Mt. Vernon Avenue	5.08	
Grant Avenue and K Street	4.80	
Grant Avenue and J Street	4.80	
Grant Avenue and I Street	4.94	
Inland Center Drive and I Street	5.22	

Toxic Air Contaminants (TAC). TACs may be emitted from processes at SBVC, including laboratory/classroom chemical use and chemicals used for maintenance purposes. Implementation of the Master Plan would involve movement of laboratory and classroom spaces, but would not likely result in increases in use of chemicals. Increased enrollment may result in some increased use of laboratory chemicals; however, emissions of TACs would be minor and would not result in a significant impact.

3.3.3.3 Odor Impacts

Assessing odor impacts depends upon such variables as wind speed, wind direction, and the sensitivities of receptors to different odors. To have an odor impact, the perception of an odor in ambient air depends on the properties of the substance emitted, its concentration in emissions, and dilution of emissions between the emissions point and the receptors.

Certain amounts of odor emissions would be generated from vehicles and/or equipment tailpipe exhaust emissions during construction and operations associated with implementation of the SBVC Master Plan. Odors are generally attributable to unburned hydrocarbons in exhaust, concentrations of which are small. Small amounts of substances that may have some perceptible odors may be emitted from other on-campus activities such as laboratory uses and combustion of fuels; however, the SBVC community college land use is not considered a category of land use that would generate significant odor impacts. The new developments proposed under the SBVC Master Plan would include institutional land uses and would not be considered major sources of odors that would result in a significant impact to sensitive receptors.

3.3.4 Mitigation Measures

No significant impacts have been identified; therefore, no mitigation measures are required.

3.3.5 Residual Impacts After Mitigation

Proposed Project impacts would be less than significant.

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3.4 BIOLOGICAL RESOURCES

A general biological resources assessment was completed for the SBVC campus. The report is included in the technical appendices: General Biological Resources Assessment for the Master Plan Program Environmental Impact Report for San Bernardino Valley College (Appendix C).

3.4.1 Environmental Setting

3.4.1.1 Applicable Plans, Policies, and Regulations

Biological resources are generally protected under the federal and California Endangered Species Acts and the Migratory Bird Treaty Act (MBTA). Wetlands and Waters of the United States are regulated under Sections 401 and 404 of the federal Clean Water Act. The California Department of Fish and Game (CDFG) Code Section 1600 regulates the alteration of streambeds. Regulations protecting biological resources are summarized below.

Federal Regulations

Endangered Species Act of 1973 (16 United States Code [USC] 1531). The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The U.S. Fish and Wildlife Service maintain the list of endangered and threatened species.

Migratory Bird Treaty Act (16 USC 703-712). This act implements various treaties between the United States and other countries, including Canada, Japan, and Mexico, for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds, their eggs, or their nests is unlawful.

Clean Water Act Section 404. Regulates dredge or fill activities in federally-protected wetlands and/or waters. These activities require a Section 404 Nationwide or Individual Permit from the U.S. Army Corps of Engineers.

Clean Water Act Section 401. Regulates water quality associated with rivers, lakes, and streambeds. The California Regional Water Quality Control Board (RWQCB), Santa Ana Region is the regional regulatory agency for this law. Projects that affect water quality require a Section 401 Certification from the RWQCB.

State Regulations

California Endangered Species Act (California Fish and Game Code [CFGC] Section 2081). Protects species of fish, wildlife, and plants that are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of California. Provides for a state list of endangered and threatened species by the CDFG, and restricts activities that may affect these species.

Streambed Alteration Regulations (CFGC Section 1602). Regulates activities in the State's rivers, lakes, and streambeds. Such activities require a Streambed Alteration Agreement from the CDFG.

Local Regulations

The City of San Bernardino protects biological resources under the Natural Resources and Conservation Element of its General Plan (City of San Bernardino 2005a). The City of San Bernardino's Development Code 19.28 indicates that one of the purposes of the landscaping standards is to enhance the aesthetic appearance of development through the quality and quantity of landscaping. A section of the landscaping standards (19.28.090) is intended to address this purpose, through the requirement for a permit to remove more than 5 trees within a 36 month period.

3.4.1.2 Existing Conditions

The SBVC Master Plan area is located in the City of San Bernardino. The campus is located in an urban setting surrounded by residential and commercial land uses. The biological conditions at SBVC and its vicinity have been highly modified from a pristine environment. All of the SBVC campus has been graded and developed with pavement, buildings, and/or landscaping. The campus features mostly ornamental plant species. The campus contains many large trees including sycamores, redwoods, and dense palms that could provide nesting habitat for birds, which are protected under the Migratory Bird Treaty Act (MBTA), and bats. The buildings on campus may also support breeding birds and bats. The nearest designated area of biological importance is Lytle Creek Wash, located approximately 2.5 miles northwest of the SBVC campus.

Plant Species. The Master Plan area is composed of urban landscaping that includes introduced and native trees, landscaped lawns, and shrubs. The ornamental vegetation on-site supports a diverse species of trees and shrubs. Species observed during the biological assessment survey include: sweetgum (*Liquidambar styraciflua*), silktree (*Albizia julibrissin*), pine trees (*Pinus spp.*), redwood (*Sequoia sempervirenc*), cypress (*Cupressus spp.*), carob (*Ceratonia siliqua*), eucalyptus (*Eucalyptus spp.*), California Sycamore (*Platanus racemosa*), oak trees (*Quercus spp.*), walnut trees (*Julgans spp.*), California fan palm (*Washingtonia filiferia*), ash tree (*Fraxinus spp.*), carrotwood (*Cupaniopsis anacardioides*), cedar (*Cedrus spp.*), and Southern Magnolia (*Magnolia grandiflora*).

Wildlife Species. Wildlife that is found at the SBVC campus is associated with the ornamental trees and shrubs that occur throughout the campus. Wildlife species observed during the biological assessment survey include: American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), and black phoebe (*Sayornis nigricans*).

Raptors and Other Birds with a Potential to Occur. Suitable raptor nesting habitat is present on the large mature trees on campus and in some of the buildings. Raptors such as Cooper's hawk (*Accipiter cooperi*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), peregrine falcon (Falco *peregrinus*), barn owl (*Tyto*

alba), and great horn owl (*Bubo virginianus*) have a moderate potential to occur on the campus. Other birds protected under the MBTA that have a moderate potential to occur include cliff swallows (*Petrochelidon pyrrhonota*) and barn swallows (*Hirundo rustica*).

Special Status Species. No special-status species were documented during the biological resource assessment conducted in January 2009. However, a search of the California Natural Diversity Database (CNDDB) indicated that 44 sensitive plant species and 22 sensitive wildlife species have been documented in the region. Each of these species was assessed for their potential to occur on-site.

Special Status Plants. Of the 44 sensitive plant species that are known to occur within the project vicinity, nine are listed as threatened or endangered. No special status species have a potential to occur on the campus because of the lack of habitat that could support special status plants.

Special Status Wildlife. Of the 22 sensitive wildlife species that are known to occur within the project vicinity, seven are listed as threatened, endangered, or a species of special concern. The western mastiff bat (*Eumops perotis californicus*), a California Species of Concern (CSC), has a high potential to occur; it was previously recorded in the Biological Constraints Analysis of the North Hall Building completed in 2007. The western mastiff bat roosts in crevices in cliff faces, high buildings, trees, and tunnels. There is also a moderate potential for the western yellow bat (*Lasiurus xanthinus*) to occur. The western yellow bat roosts in trees, particularly palms. There is also a low potential for the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) to occur. Limited habitat occurs on the project site and the closest known occurrence occurs 2 miles to the northwest of the project site. None of the previous species were identified during the biological resource assessment survey conducted in January 2009.

Wildlife Movement Corridors. The site does not serve as a wildlife movement corridor. SBVC is located in an urban setting surrounded by developed commercial and residential properties.

3.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish Wildlife Service;

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

- 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;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree, preservation policy or ordinance; or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.3 Environmental Impacts

Impacts to Listed and Special-status Plant Species. No listed or special-status plant species were found to occur during the biological resource assessment survey conducted in 2009. The vegetation on-site consists of native and non native trees, shrubs, and grasses, all of which have been planted there. The project site does not contain undisturbed native habitat that could support listed or special-status plant species. No impact would occur.

Impacts to Listed and Special Status Wildlife Species. No listed or special-status wildlife species were detected during the biological resource assessment survey conducted in 2009. However, the western mastiff bat, a CSC species, was recorded in a biological survey of the North Hall building conducted in 2007. The western mastiff bat and the western yellow bat have a high and moderate potential to occur within the ornamental trees and structures on-site. The development proposed by the Master Plan would result in less than significant impacts to roosting CSC bat species with implementation of Mitigation Measure B-1.

Impacts to Riparian Habitat or Other Sensitive Natural Communities. The SBVC campus does not contain riparian habitat or other sensitive natural communities. No impact would occur.

Impacts to Federal or State Protected Wetlands. There are no wetlands on the SBVC campus. No impact would occur.

Impacts to the Movement of Native Fish or Migratory Wildlife. There is no habitat for fish on the SBVC campus. However, there is suitable habitat on-site for migratory wildlife such as birds. The campus features a diverse set of trees that may provide nesting habitat for birds, which are protected under the MBTA. Suitable raptor nesting habitat is present on the large mature trees on campus and in some of the buildings. The development proposed by the Master Plan could result in a violation of the MBTA through the removal of active nests and by causing nest abandonment if

habitat removal activities occur during the bird breeding season (February 15 through August 31). Compliance with the MBTA would be achieved and impacts to nesting migratory birds would be reduced to a less than significant level with the implementation of Mitigation Measure B-2.

Conflicts with Local Policies or Ordinances Protecting Biological Resources.
The Division of the State Architect is responsible for the approval of building plans for the San Bernardino Community College District projects. The City of San Bernardino landscape standards are used as a guideline for this analysis. The City of San Bernardino's Development Code 19.28 indicates that one of the purposes of the landscaping standards is to enhance the aesthetic appearance of development through the quality and quantity of landscaping. A section of the landscaping standards (19.28.090) is intended to address this purpose, through the requirement for a permit to remove more than 5 trees within a 36 month period. The San Bernardino Valley College Master Plan provides for extensive and enhanced re-landscaping of the campus. Impacts will thus be less than significant.

Conflicts with Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans.
The SBVC campus is not located within the limits of any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, therefore, the development proposed by the Master Plan does not conflict with any existing conservation plan.

3.4.4 Mitigation Measures

B-1: A qualified bat biologist shall conduct a preconstruction survey of potential bat roosting sites prior to removal of mature trees and existing structures. If an active bat roost is detected, bat exclusionary devices shall be installed during the non-breeding season (outside of May 1 – October 1) and after bats voluntarily leave the roost for the night to forage. Demolition shall occur once the biologist deems the structure void of bats.

B-2: Demolition or construction activities that require the removal of occupied trees or shrubs or other disturbances, such as constant noise and dust, shall take place outside of the bird breeding season (February 15 to September 1) to the maximum extent practicable. If construction activity occurs within the bird breeding season then pre-construction nesting surveys shall be conducted in order to ensure compliance with the MBTA and CDFG Code 3503.5. If active nests are found during the breeding season then buffer zones shall be established around the active nest by a qualified biologist (typically 250 feet radius for a songbird and 500 feet radius for a raptor). Demolition and construction activities shall be avoided within the buffer zone until a qualified biologist determines that the nest(s) is no longer active. If the nest(s) must be removed the removal shall take place in the non-breeding season (September 1 to February 14).

3.4.5 Residual Impacts After Mitigation

With implementation of the above mitigation measures, the development proposed by the Master Plan would result in less than significant impacts to biological resources.

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.5.1 Environmental Setting

3.5.1.1 Cultural Resources

Definition of Resources. Cultural resources include prehistoric archaeological sites, historic archaeological sites, and historic structures, and generally consist of artifacts, food waste, structures, and facilities made by people in the past. Prehistoric archaeological sites are places that contain the material remains of activities carried out by the native population of the area (Native Americans) prior to the arrival of Europeans in southern California. Artifacts found in prehistoric sites include flaked stone tools such as projectile points, knives, scrapers, drills, and the resulting waste flakes from tool production; ground stone tools such as manos, metates, mortars, and pestles for grinding seeds and nuts; bone tools, such as awls; ceramic vessels or fragments; and shell or stone beads. Prehistoric features include hearths or rock rings, bedrock mortars and milling slicks, rock shelters, rock art, and burials.

Historic archaeological sites are places that contain the material remains of activities carried out by people during the period when written records were produced after the arrival of Europeans. Historic archaeological material usually consists of domestic refuse, such as bottles, cans, ceramics, food waste, and household items deposited either as roadside dumps or near structure foundations. Archaeological investigations of historic-period sites are usually supplemented by historical research using written records. Historic structures include houses, garages, barns, commercial structures, industrial facilities, community buildings, and other structures and facilities that are more than 50 years old.

Cultural Resources in the Project Area

Archaeological Resources. There are several resources that have been previously documented within or near the SBVC campus. Site CA-SBR-3001 (SBCM-10) was originally recorded in 1938 on the ridge east of Mount Vernon Avenue and south of Mill Street and is described as several burials rumored to have been uncovered by workers during construction. The site is also reported as having been destroyed. Two articles from the *San Bernardino Sun*, dated April 3, 1897 and June 1897 reported that this was the site of an Indian cemetery that was to be ploughed up for an orchard. The articles also noted the concerns of the Indian community regarding the desecration of the graves.

Site P1074-28-H was recorded as the location of a 1840s-era ditch that supplied water from a spring located north of Mill Street and west of Mount Vernon Avenue to the community of Politana. The water ditch bisected the southwest corner of the current SBVC campus. This ditch has been completely destroyed or buried by development within and around the SBVC campus.

It was also reported that local citizens collected Native American artifacts from within what became the campus area. Further when the Auditorium was being constructed in

the 1930s, historic period burials were unearthed. Historic records document a settlement called *Politana,* which was described as located in the vicinity of the present SBVC campus. It is variously described as having Native American, early *Californio*, and Mormon phases of occupation. Late nineteenth and early twentieth century homes were also once located within the project area. These were demolished between the 1930s and 1960s as the SBVC campus was established and expanded.

Native American Resources. A search of the Sacred Lands File (SLF) was requested from the Native American Heritage Commission (NAHC) in Sacramento for the SBVC Master Plan. The SLF did not indicate the presence of any Native American cultural resources within the SBVC campus. The NAHC also provided a list of Native American groups and contacts with traditional and historical ties to the region encompassing the project area. In an effort to further identify Native American resources that could be affected by the implementation of the Master Plan, letters were sent to eight Native American contacts identified by the NAHC. The letters described the Proposed Project and asked for comments. In addition, follow-up phones calls were made to each contact to further solicit their input. Only one written response was received. The Soboba Band of Luiseño Indians recommended contacting the San Manuel Band of Mission Indians for assistance in identifying any issues or concerns that the tribes might have in regards to the implementation of the Master Plan. In a voicemail message from the Pechanga Band of Mission Indians, they also recommended contacting the San Manuel Band of Mission Indians for this project. The only other response received was from Goldie Walker of the Serrano Nation of Indians. Ms. Walker requested to be notified if any artifacts and/or burial sites associated with the Serrano Indians were located during construction associated with the project. No comments were received from the letters or the phone calls to the San Manuel Band of Mission Indians (Appendix E). However, the San Manuel Band of Mission Indians requested to review the Cultural Resources section of the Draft PEIR; accordingly, they were added to the mailing list for the Draft PEIR.

Historic Structures. The Auditorium (1935/1938) is constructed in the Mission Revival style with irregular massing of multiple elevations, arcaded colonnade, tiered tile roofs, and prominent bell tower. It has been determined eligible for inclusion in the National Register of Historic Places (NRHP) (Abeyta 1998), which automatically makes it eligible of the California Register of Historical Resources. The Observatory was constructed in 1931 and, therefore, is historic in age (50 years or older). Several other buildings will become more than 50 years in age during the planning period for the Master Plan (prior to 2030) (Table 3.5-1).

Table 3.5-1
Summary of Buildings that will be 50 Years of Age in Planning Horizon

Building	Year of Construction	Year Building Becomes 50 Years in Age
Business	1961	2011
Technical	1964	2014
Women's Gym	1965	2015
Snyder Gym	1975	2025
Liberal Arts	1970	2020
Planetarium	1977	2027

3.5.1.2 Paleontological Resources

Definition of Resources. Paleontological resources are the recognizable remains of once-living, non-human organisms and early hominids. Identified as fossils, these resources represent a record of history of life on the planet dating as far back as 4 billion years ago. Paleontologic resources can include shells, bones, leaves, tracks, trails, and other fossilized floral or faunal materials (National Research Council 1987). These resources provide valuable information on evolution, climatology, and taxonomy and can provide information for measuring time in earth history, as well as for understanding ancient environments and geographies (National Research Council 1987; Science Applications International Corporation 1994).

Paleontological Resources in the Project Vicinity

In order to determine whether the proposed project will impact significant nonrenewable paleontological resources, a literature and records review was performed by the Division of Geological Sciences of the San Bernardino County Museum. Museum staff consulted geologic maps to determine what formations are present in the project area and then consulted reports of previous investigations and the Regional Paleontologic Locality Inventory (RPLI) on file at the Museum.

The review of the RPLI indicates that one paleontologic locality, portions of fossilized wood, was recovered at depths of 437 to 725 feet below ground surface, approximately 0.5 mile northeast of the SBVC campus. Geologic mapping indicates that the San Bernardino Valley College campus is situated on surface exposures of Quaternary alluvium deposited during the Holocene Epoch (11,000 years ago to present). These sediments overlie older Quarternary alluvial fan deposits dating to the early to middle Pleistocene Epoch (2.58 million to 11,000 years ago). The Pleistocene sediments, which also occur at the surface in some locations of SBVC campus, have a high potential to contain significant non-renewable paleontologic resources. Similar sediments elsewhere in the Inland Empire have been demonstrated to be highly fossilferous, yielding fossils from extinct taxa including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels, and bison. If these older Pleistocene sediments, if not previously disturbed by prior construction or excavation, are exposed during ground-disturbing construction activities within the boundaries of the SBVC campus, they would have a high potential to contain significant nonrenewable paleontologic resources and would, therefore, be assigned high paleontologic sensitivity (Appendix D). Because the SBVC campus is largely developed, paved, or landscaped, intact paleontological resources would not occur on the ground surface; extant fossils are only expected to occur in undisturbed subsurface sediments.

3.5.2 Thresholds of Significance

3.5.2.1 Cultural Resources

The CEQA Guidelines state that a project that causes a substantial adverse change in the significance of a historical resource is considered to have a significant effect on the environment unless mitigated. Historical resources are buildings, structures, districts, sites, or objects that are listed in or considered eligible for listing in the California Register of Historical Resources (CRHR) or is on a local (city or county) inventory of historical resources (California Code of Regulations, Title 14, Section 15064.5).

The CEQA Guidelines (Section 15064.5(a)(3)) define historical resources as any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource has integrity and meets the criteria for listing on the CRHR as follows:

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

Thus, historical resources are cultural resources (as defined in Section 3.4.1) that are eligible for inclusion in the CRHR.

3.5.2.2 Paleontological Resources

CEQA Guidelines indicate that a project that directly or indirectly destroys a unique paleontologic resource or site or a unique geologic feature is considered to have a significant effect on the environment unless mitigated. Unique paleontologic resources are significant, nonrenewable fossils that are rare or unique regionally, diagnostically, or taxonomically. This definition includes vertebrate fossils, invertebrate fossils that are previously unknown within the given context, or fossils that will aid in further scientific interpretations (National Research Council 1987; Science Applications International Corporation 1994).

A fossil may be considered significant if it provides data useful in determining the ages(s) of a rock unit or sedimentary stratum, therefore contributing to an increased knowledge of the depositional history of a region and the timing of geologic events therein. A paleontologic resource may also be considered significant if it provides important information on the evolutionary trends among organisms, particularly relating living inhabitants of the earth to extinct organisms or if it demonstrates unusual or spectacular circumstances in the history of life. The significance of a paleontologic resource may also be determined by its relative abundance, or lack thereof, within a region. For example, if a fossil type is in short supply or is not found in other geologic locations and it is in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, the resource is likely to be considered significant (Science Applications International Corporation 1994).

Adverse impacts to paleontologic resources would include the physical destruction or damage of fossil-bearing geologic formations and the resulting loss of fossil resources. Other adverse impacts could occur within increased public accessibility to known fossil-bearing localities.

3.5.3 Environmental Impacts

3.5.3.1 Cultural Resources

Archaeological Resources. Only impacts to cultural resources that meet the CEQA definition of an historical resource can be considered significant. In CEQA, an historical resource is one which meets the eligibility criteria for the CRHR (see Section 3.5.2.1). Archaeological sites are evaluated under CRHR Criterion D, the potential to yield information important in history or prehistory (California Code of Regulations, Title 14, Section 4852).

None of the previously-documented archaeological resources, described above, remain intact today. All are believed to have been destroyed during development and construction of the campus between the 1930s and 1960s. However, it is possible that subsurface deposits associated with these resources may remain buried underneath existing buildings, parking lots, and landscape elements within SBVC. Impacts to such deposits could occur during ground-disturbing activities associated with construction and/or demolition of buildings, infrastructure improvements, and landscaping. These would be significant if the deposits are determined to be eligible for inclusion in the CRHR. Mitigation Measure CR-1 would reduce these impacts to a less-than-significant level.

Native American Resources. No specific Native American resources were identified within the project area by the NAHC or the Native American groups contacted. However, there is a potential for subsurface resources to occur. Impacts to such resources from ground-disturbing activities would be significant. Mitigation Measure CR-2 would reduce these impacts to a less-than-significant level.

Historic Structures. The Auditorium and Observatory are historic in age (i.e., over 50 years old). The Observatory will not be demolished or renovated as part of the implementation of the Master Plan. Therefore, there would be no impacts to the

Observatory. The Auditorium has been determined eligible for the NRHP, making it eligible for the CRHR. The Master Plan includes renovation of the Auditorium in 2020. Renovations may include architectural finish upgrades and handicap-accessible upgrades. Any renovations that would alter the characteristics of the Auditorium that make it eligible for the NRHP and CRHR would have a significant impact on the Auditorium. Mitigation Measure CR-3 would reduce impacts to the Auditorium to a less than significant level.

Several other buildings would become more than 50 years in age during the implementation of the Master Plan. Because the Master Plan is phased in 10-year Horizons, it is possible that one or more of these buildings will become more than 50 years in age prior to scheduled demolition or renovation in Horizons 2 and 3, and may be considered to be historical resources as defined by CEQA (Table 3.5-2). Historical resources are buildings, structures, districts, sites, or objects that are listed in or considered eligible for listing in the California Register of Historical Resources (CRHR) or are on a local (city or county) inventory of historical resources (CEQA Guidelines, CCR Title 14 Section 15064.5). If a substantial adverse change, including demolition and renovation that would alter the characteristics of the building that make it eligible for listing, occurs to a historical resource, a significant impact would occur. If a building becomes scheduled to be renovated or demolished after it becomes 50 years in age, it would be necessary for a qualified Architectural Historian or a qualified architect with experience with historic buildings to evaluate the building to determine if it is a historical resource according to CEQA (Mitigation Measure CR-4). If the evaluation determines that the structure is not a historical resource, there would be no impact from the Proposed Project and no further work would be required. If the evaluation determines that the structure is a historical resource, Mitigation Measures CR-3 would reduce impacts from renovation of these building to a less-than-significant level. However, according to the CEQA Guidelines (CCR Title 14, Section 15064.5) demolition of a historic resource is a significant impact that cannot be mitigated.

Table 3.5-2
Summary of Buildings that will be 50 Years of Age in Planning Horizon

Building	Year of Construction	Year Building Becomes 50 Years in Age	Proposed Action in Master Plan
Business	1961	2011	Renovated by 2020, Demolished by 2030
Technical	1964	2014	Demolished by 2020
Women's Gym	1965	2015	Demolished by 2020
Snyder Gym	1975	2025	Demolished by 2020
Liberal Arts	1970	2020	Demolished by 2020
Planetarium	1977	2027	Demolished by 2030

3.5.3.2 Paleontological Resources

Excavation or other ground disturbing activities have a high potential to impact significant nonrenewable paleontological resources. These impacts would be significant

without mitigation. Mitigation Measure CR-5 would reduce impacts to a less than significant level.

3.5.4 Mitigation Measures

3.5.4.1 Cultural Resources

CR-1: To avoid inadvertent impacts to subsurface archaeological resources, all ground disturbing activities in undisturbed sediments shall be monitored by a qualified archaeologist. The archaeological monitor shall have the power to temporarily halt or divert equipment to allow for recordation and evaluation of any encountered resources. If evaluated as eligible for the CRHR and determined eligible by the San Bernardino Community College District, the archaeological site must be avoided and preserved. If this is not feasible, an archeological data recovery program shall be developed by a qualified archaeologist. The data recovery report shall be submitted to the San Bernardino Information Center.

CR-2: To avoid inadvertent impacts to Native American resources, all ground disturbing activities in undisturbed sediments shall be observed by a Native American monitor. In the event that subsurface resources are encountered, the Native American monitor shall coordinate with the archaeological monitor to temporarily halt or divert equipment to allow for recordation and evaluation of the resource. If human remains of any kind are found during construction activities, all activities must cease immediately and the San Bernardino County Coroner must be notified, as required by state law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, SBCCD shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Work can continue once the MLD's recommendations have been implemented or the remains have been reburied if no agreement can be reached with the MLD (Section 5097.98 of the Public Resource Code).

CR-3: To mitigate potential impacts to the Auditorium and any other identified historic resource from proposed renovations, a renovation plan shall be developed by a qualified architect with experience with historic buildings or an Architectural Historian. The plans shall include specifications to ensure that the renovations do not alter its significant historic fabric that make it eligible for inclusion in the NRHP and CRHR.

CR-4: In the event that any building is scheduled for demolition or renovation after the building becomes 50 years in age, a qualified architect with experience with historic buildings or an Architectural Historian shall evaluate the building to

determine if it is a historical resource in accordance with the CEQA Guidelines (CCR Title 14 Section 15064.5). If the building is determined not to be a historic resource, then no further work shall be required. If the building is determined to be a historic resource, then Mitigation Measure CR-3 shall apply for renovation work.

3.5.4.2 Paleontological Resources

CR-5: A qualified vertebrate paleontologist, as defined by the County of San Bernardino (Development Code § 82.20.040), shall develop and implement a mitigation program for paleontologic resources. This program shall consist of:

1. Monitoring by a qualified paleontological monitor when previously undisturbed subsurface sediments are excavated, graded, or otherwise disturbed. The monitor will be equipped to recover fossils and sediment samples during excavation, but shall have the power to temporarily halt or divert equipment to allow for recovery of large or numerous fossils.

2. Preparation of recovered specimens to a point of identification and permanent preservation. This includes washing sediments to recover small invertebrate and vertebrate fossils.

3. Identification of the specimens and curation of all specimens into an established accredited museum repository (e.g., San Bernardino County Museum) with permanent retrievable paleontologic storage. Preparation of the mitigation program shall include obtaining a signed curation agreement with the museum repository prior to initiation of mitigation activities.

4. Preparation of a report of findings with an appended itemized inventory of identified specimens. The report and inventory shall be submitted to the San Bernardino Community College District and the museum repository (e.g., San Bernardino County Museum). When the San Bernardino Community College District receives the report, inventory, and verification of acceptance of the specimens by the museum repository, mitigation will be complete.

3.5.5 Residual Impacts After Mitigation

3.5.5.1 Cultural Resources

Implementation of Mitigation Measures CR-1 through CR-4 would reduce the majority of impacts to less than significant. If the evaluation in Mitigation Measure CR-4 determines that a building to be demolished is a historic resource according to CEQA, then the impact would remain significant and unavoidable (CCR Title 14 Section 15064.5).

3.5.5.2 Paleontological Resources

Implementation of the mitigation measure for paleontological resources will reduce impacts to less than significant.

3.6 GEOLOGY AND SOILS

3.6.1 Environmental Setting

3.6.1.1 Geology

The SBVC Master Plan area is located within the San Bernardino Valley, which is a large irregularly-shaped structural depression. The San Bernardino Valley is bounded on the northwest by the San Gabriel Mountains, on the north and east by the San Bernardino Mountains, and by a group of hills on the south. The San Andreas Fault separates the San Gabriel and San Bernardino Mountains. These two mountain ranges are of different composition indicating that they formed at a considerable distance from each other and have since been brought together by the lateral movement on the San Andreas Fault. Compressional forces that developed as these two mountain ranges approached each other probably caused the formation of the San Jacinto Fault. The geologic record suggests that the San Jacinto Fault began to slip about 3 million years ago.

Alluvial fans, formed by ephemeral streams draining the mountains, are the predominant landforms in the valley. Alluvial fans are apron-shaped deposits that are coarse-grained near their source and increasingly finer-grained with increasing distance away from the mountains. The largest alluvial fan in the area is formed by Lytle Creek. Lytle Creek flows in a straight, narrow canyon near the San Jacinto Fault. In the southern part of the fan, near Lytle Creek's mouth, the San Jacinto fault has folded or buckled the stream laid deposits, forming a narrow ridge known as Bunker Hill.

The western one half of the SBVC campus is located on Bunker Hill. Bunker Hill rises approximately 18 feet above the surrounding plain, forcing the channel of Lytle Creek to split into two branches. The general topography of the campus is flat with a gradual descending slope from north to south at approximately one half of one percent with a gradual west to east downward slope of approximately one percent. An elevated ridge traverses the campus in a northwesterly alignment. The ridge represents the approximate location of the San Jacinto Fault zone (Earth Consultants International 2007).

3.6.1.2 Faulting and Seismicity

The San Jacinto Fault bisects the western portion of SBVC. The San Jacinto Fault is one of the most seismically active faults in southern California. The western two thirds of the campus lies within the State-designated Alquist-Priolo Earthquake Fault Zone (Earth Consultants International 2007). The San Jacinto Fault zone consist of a series of closely-spaced faults that extend from near the San Andreas Fault, approximately 60 miles east of Los Angeles, southwest to Imperial Valley. The fault zone forms the western margin of the San Jacinto Mountains. Movement on the San Jacinto Fault zone is predominantly right lateral, similar to the San Andreas Fault, although secondary vertical motion also occurs. The fault zone has been divided into five segments based on fault geometry, earthquake history, and slip rate. The segment that extends through the SBVC campus is the San Bernardino Valley segment.

On the campus, two lines of the San Jacinto Fault run parallel to each other and have required a 50 foot setback on either side, creating a no build zone where structures are not allowed to remain (Figure 2-4 in Section 2.0). A folding zone exists on the northeast side of the fault caused by the relative movement of two tectonic plates underneath the earth's surface. The southern plate is moving upward while the northern plate is moving down causing visible elevation changes on campus.

The entire SBVC campus will experience strong ground shaking when the segment of the San Jacinto Fault that underlies a portion of the campus ruptures during an earthquake. Since 1890, at least seven, and possibly as many as eleven, magnitude 6 to 7 earthquakes have been produced by the San Jacinto Fault. Of these, only the magnitude 6.5 earthquake on February 9, 1890, and the magnitude 6.4 earthquake on July 22, 1899, could plausibly have been generated by the San Bernardino Valley segment. None of these historical earthquakes are known to have been accompanied by rupture of the ground surface in the San Bernardino Valley area. Strong ground shaking can also be expected as a result of an earthquake on other more distant but still relatively near faults such as the San Andreas Fault.

3.6.1.3 Secondary Seismic Hazards

Liquefaction. Liquefaction is the loss of soil strength or stiffness due to a build up of pore-water pressure during severe ground shaking. This condition exists when soils are loose and saturated and lack cohesion. Hazards associated with liquefaction include sand boils, settlement, and bearing capacity failures below structural foundations.

Seismically Induced Settlement. Settlement occurs within loose to moderately dense, dry or saturated granular soils. Seismically induced settlement is usually not distributed uniformly, which can result in differential settlement.

Seismically Induced Landslides. SBVC is located in a relatively flat area with no risks of landslides.

3.6.1.4 Soils

Alluvium sediments underlie the SBVC campus to a considerable depth (Earth Consultants International 2007). These sediments have been deposited by Lytle Creek, Warm Creek, and the Santa Ana River. The entire project area is mapped as Tujunga Gravelly Loamy Sand (0-9 percent sloped), which exhibits low expansive properties and is not considered unstable (USDA 1979; NRCS 2009).

Two different types of sediments are exposed near the ground surface at the SBVC campus, separated by the San Jacinto Fault. The near-surface sediments on the east side of the fault are fine-grained (silts, clays, and fine sand), whereas the near-surface sediments on the west side of the fault are generally coarse grained (gravel, cobbles, and sands). The near surface sediments on the east side are also considerably younger that the sediments on the west side of the fault.

3.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the geology and soils environment if it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction;
- Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

3.6.3 Environmental Impacts

3.6.3.1 Faulting and Seismicity

The principal seismic hazard for the SBVC campus is ground shaking resulting from an earthquake occurring along the San Jacinto Fault or along other distant faults, such as the San Andreas Fault. Development proposed by the Master Plan would adhere to the building standards of the most recent California Building Code (CBC) and Uniform Building Code (UBC), which regulate the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate seismic shaking and adverse soil conditions. Many existing older buildings would be replaced with buildings that would perform better during seismic events resulting in a beneficial impact.

3.6.3.2 Liquefaction

With the occurrence of an earthquake along the San Andreas, San Jacinto, or Cucamonga faults, much of the City is susceptible to liquefaction due to the City's high water table (City of San Bernardino 2005a). The City of San Bernardino's General Plan indicates that the project site is located in an area that is susceptible to liquefaction.

Development proposed by the Master Plan would adhere to the building standards of the most recent CBC and UBC resulting in buildings and structures that would perform better in liquefaction conditions than their current counterparts. A beneficial impact would occur.

3.6.3.3 Landslides

The general topography of the campus is flat with a gradual descending slope from north to south at approximately one half of one percent with a gradual west to east downward slope of approximately one percent. There are no hills in the vicinity of the campus. No impact would occur.

3.6.3.4 Soils

The geology, topography, and soils at the campus have been altered by previous development and no unique geologic features would be disturbed. Short-term effects on local soils would result from construction activities associated with the Proposed Project. Demolition and removal of existing structures would temporarily expose soils and increase erosion at the demolition and construction sites. These impacts would be temporary and Best Management Practices (BMPs) would be in place to minimize such impacts. Impacts would be less than significant.

3.6.3.5 Temporary Excavations and Trench Backfill

Several trenches would be constructed during the implementation of the Master Plan for utilities. In addition, grading and temporary excavation would be required to construct several new buildings and structures which would expose soils. Mitigation Measure G-1 and G-2 would reduce impacts from temporary excavation and trenching activities to a level that is less than significant.

3.6.3.6 Additional Geotechnical Investigation

Because the proposed Master Plan would be implemented over a span of more than 20 years, details of the later development projects are unknown. Additional geotechnical investigation and analysis may be required based on final development plans. As such, Mitigation Measure G-3 shall be implemented to reduce impacts of unknown geotechnical hazards to a less than significant level.

3.6.4 Mitigation Measures

The proposed school improvements are feasible from a geotechnical viewpoint. The mitigation measures presented below are preliminary, based on current civil and architectural plans. These mitigation measures should be reviewed and modified, where appropriate, based on further development of project grading plans and structural plans. Additionally geotechnical investigation may be necessary, based on a review of final civil, structural, and architectural plans, when available.

G-1: All temporary excavations, including utility trenches, retaining wall excavations and other excavations shall be performed in accordance with project plans, specifications, and all OSHA requirements, and the current edition of the California Construction Safety Orders.

G-2: Utility trenches onsite shall be backfilled with the onsite material, provided it is free of debris, significant organic material, and oversized material. Prior to backfilling the trench, pipes shall be bedded in a granular material, backfilled, and compacted as specified by the project engineer.

G-3: A qualified geotechnical firm shall review the site and grading plans for each project as the Master Plan is implemented and comment further on the geotechnical aspects of the project. Geotechnical observations and testing shall be conducted during excavation and all phases of grading operations.

3.6.5 Residual Impacts After Mitigation

With the implementation of the mitigation measures described in this section, residual impacts would be less than significant.

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3.7 HAZARDS AND HAZARDOUS MATERIALS

Prior to 1926, the SBVC campus site was undeveloped. In 1926 thirty acres on the east side of Mount Vernon Avenue were purchased to start the college. In 1957 residential property to the north, east, and south was purchased to expand the campus.

3.7.1 Environmental Setting

3.7.1.1 Regulatory Setting

Hazardous Materials. As defined in Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3, hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are commonly used in commercial, agricultural and industrial applications, as well as residential uses to a limited extent.

Hazardous Waste. Hazardous wastes are any hazardous materials that are discarded, abandoned, or is to be recycled. If improperly handled, hazardous materials and wastes can result in public health hazards if released to the soil or groundwater through airborne releases in vapors, fumes, or dust.

In California, the U.S. Environmental Protection Agency (EPA) has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). Cal EPA's Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Boards (RWQCB) signed a Memorandum of Agreement in March 2005 aimed to avoid duplication of efforts among the agencies involved in the regulatory oversight of investigation and cleanup of hazardous wastes. Under the Memorandum of Agreement, either DTSC or the RWQCB is assigned to be the oversight agency at the beginning of the investigation and cleanup process.

3.7.1.2 Building Material-Related Hazardous Materials

Asbestos-containing materials (ACM) remediation is regulated by the federal and California EPA's and the federal and California Occupational Safety and Health Administration (OSHA). SCAQMD is responsible for carrying out the federal EPA policy. Asbestos fiber emissions into the ambient air are regulated by Section 112 of the Clean Air Act, which established the National Emissions Standards for Hazardous Air Pollutants (NESHAP). NESHAP regulations address the demolition or renovation of buildings with ACM. The Toxic Substances Control Act (TSCA) and the Asbestos Hazard Emergency Response Act (AHERA) provide the regulatory basis for handling ACM in school buildings. AHERA and OSHA regulations cover worker protection for employees who work around or remediate ACM.

ACM is separated into two categories. Friable ACM is defined as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced

to powder by hand pressure. Nonfriable ACM is defined as any material that contains more than 1 percent asbestos, but does not meet the rest of the criteria for friable ACM. SBVC buildings constructed prior to the 1980s are likely to contain ACM.

Lead has been determined to have an adverse health risk in humans, particularly children and the elderly, by OSHA and the EPA. Sources of exposure to lead are through pint, dust, and soil. In 1978, the Consumer Product Safety Commission lowered the allowable lead level in paint to 0.06 percent. SBVC's buildings that were constructed prior to 1978 are likely to contain lead-based paint.

The disposal of debris containing asbestos and lead-based paint is regulated by the TSCA and the Resource Conservation and Recovery Act (RCRA).

Polychlorinated biphenyl (PCB)-containing light fixture ballasts, fluorescent light tubes, and mercury-containing thermostat switches are other building-related hazardous materials that may be present at the SBVC campus.

3.7.1.3 Sensitive Receptors

As adopted by the SCAQMD in their CEQA Air Quality Handbook (Chapter 4), a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Hazards and hazardous materials regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions. The closest sensitive receptors to the SBVC campus are the on-site Child Development Center, the on-site Middle College High School (MCHS), Urbita Elementary School, and Richardson Middle School. The Child Development Center provides child care and preschool to infants, toddlers, and children from 4 months to 5 years in age. MCHS, operated by the San Bernardino City Unified School District, allows high school students to take advanced classes in a college setting. Urbita Elementary School is located approximately two city blocks east of the project site. Richardson Middle School is located approximately 0.25 mile north of SBVC.

3.7.1.4 Emergency Access Routes

Orientation of the campus is towards Mount Vernon Avenue. Vehicular entrances to the campus are along the three streets that surround SBVC, which include: Grant Avenue, Esperanza Street, and K Street. The primary campus entrances are on Grant Avenue. Vehicular access to the center of campus is only available to the fire department and campus maintenance vehicles. Fire lanes are part concrete and part lawn. Some of the lawn sections of the fire lanes have become worn down by campus maintenance vehicles (Steinberg Architects 2009).

There are four fire lanes on the SBVC campus. The northern fire lane starts from parking lot 3 just north of the Auditorium and heads east between the New Art Building and the Operation & Maintenance Building. Once it reaches the Life Science Building it loops around the building until it reaches College Drive. The western fire lane begins at Mount Vernon Avenue between the Liberal Arts Building and the Learning Resource Center.

The lane heads east and then north between the Liberal Arts building and the Campus Center. The southern fire lane begins by the Grant Avenue entrance of Parking Lot 10 and heads northwest towards the Business Building. The eastern fire lane is accessed from Mission Drive along Grant Avenue. This fire lane extends from the end of Parking Lot 8 north towards the tennis courts (Steinberg Architects 2009).

3.7.1.5 Geological Hazards

The SBVC campus is bisected by two segments of the San Jacinto Fault from the northwestern corner of campus to the southeast. The western two thirds of the campus is within the state designated Alquist-Priolo Earthquake Fault Zone. Because of geologic conditions the campus faces significant earthquake hazards. Further information on the geological conditions and hazards of the SBVC campus is discussed in Section 3.6 of this PEIR.

3.7.1.6 Waste Disposal

Solid waste disposal is provided by the City of San Bernardino Refuse & Recycling Division. Further information on solid waste disposal is discussed in Section 3.13.1.3 of this PEIR.

3.7.1.7 Wastewater

Wastewater generated at SBVC is disposed of through the campus sewer system that is connected to the City of San Bernardino municipal sewer system. Further information on the sewer system is discussed in Section 3.13.1.2 of this PEIR.

3.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

3.7.3 Environmental Impacts

3.7.3.1 Impacts Related to the Routine Transport, Use, or Disposal of Hazardous Materials

Replacement laboratory space would be constructed in the new buildings, and the use of hazardous and non-hazardous laboratory chemicals would continue. SBVC would continue to follow its requirements under its County of San Bernardino active hazardous materials handler and generator permit. SBVC would continue to use a licensed hazardous materials contractor to dispose of waste generated on the campus according to all local, state, and federal regulations. A less than significant impact would occur.

3.7.3.2 Impacts Related to Upset and Accident Conditions

Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers. Demolition or renovation of structures constructed prior to these dates has the potential to release lead particles and/or asbestos fibers into the air, where they may affect construction workers and the nearby sensitive receptors, including students and staff. All of the buildings to be demolished were constructed prior to 1978. Due to the age of the buildings it is likely that these buildings contain hazardous materials related to existing building infrastructure, such as asbestos-containing materials, lead-based/bearing substances, lead-containing surface coatings, florescent light fixture tubes, PCB-containing light fixture ballasts, thermostats with mercury capsules, emergency lighting and exits with lead acid batteries, and chlorofluorocarbons.

Demolition activities have the potential to release hazardous materials into the environment. Impacts would be less than significant with the implementation of Mitigation Measures HAZ-1 through HAZ-12.

3.7.3.3 Impacts Related to the Handling of Hazardous Materials within One-Quarter Mile of a School

The existing MCHS operated by the San Bernardino City Unified School District is located on the SBVC campus. The SBVC Master Plan has assumed that the MCHS would be relocated off-campus by 2020 (Horizon 2) to a location to-be-determined (north of Esperanza Street) and continue their relationship with SBVC (Steinberg Architects 2009).The relocated MCHS would potentially be within one-quarter mile of the SBVC campus. There is also an on-site Child Development Center located in the southeastern portion of the campus.

As described in Sections 3.7.3.1 and 3.7.3.2, above, the campus would continue to use licensed hazardous materials contractors to dispose of hazardous and non-hazardous chemicals used in campus maintenance and campus laboratories. Impacts would be less than significant.

3.7.3.4 Impacts Related to Impairment of an Emergency Response/Evacuation Plan

The main route emergency vehicles could take is Mount Vernon Avenue, which can be used to access the campus from both the north and south. At full Master Plan build out, all campus buildings would be accessible from the four surrounding streets. The existing fire lanes would be reconfigured as the campus develops to adequately provide access to emergence vehicles. Impacts would be less than significant.

3.7.4 Mitigation Measures

HAZ-1: Prior to demolition of buildings or structures, a survey for building-related hazardous materials shall be conducted by qualified and properly-certified individuals. Asbestos surveys must be conducted by a California Division of Occupational Safety and Health-certified asbestos consultant or site surveillance technician. Surveys for lead-based/bearing substances and lead-containing surface coatings must be conducted by a California Department of Health Service-certified lead inspector/risk assessor. If present, all recommendations regarding the removal and disposal of hazardous materials in accordance with federal, state, and local regulations shall be observed.

HAZ-2: All asbestos disturbance and/or removal operations shall be conducted by a California Occupational Safety and Health Administration (Cal/OSHA) registered and State licensed asbestos removal contractor. All disturbance and/or abatement operations shall be under the direction of a California Certified Asbestos Consultant. At no time shall identified or suspect asbestos-containing materials be drilled, cut, sanded, scraped, or otherwise disturbed by untrained personnel.

HAZ-3: All construction activities that may affect asbestos-containing materials shall be conducted in accordance with Title 8 of the California Code of Regulations, Section 1529.

HAZ-4: For all abatement activities that will involve the removal of 100 square feet or more of identified asbestos-containing materials, notification shall be made to the South Coast Air Quality Management District in accordance to SCAQMD Rule 1403 and to Cal/OSHA. Notification to both entities shall occur 10 working days prior to the initiation of such activities.

HAZ-5: Notification to employees and contractors working within the buildings shall be made in accordance with the California Health and Safety Code Section 25915 *et seq.* and Proposition 65.

HAZ-6: All demolition involving potential and identified lead-containing surfaces shall be conducted in accordance with 8 CCR 1532.1 and 29 CFR 1926.62. In addition, all activities involving identified lead-based paints shall be conducted in accordance with 17 CCR, Division 1, Chapter 8, Sections 35001 through 36100.

HAZ-7: Any welding, cutting, or heating of interior metal surfaces containing lead surface coating shall be conducted in accordance with 29 CFR 1926.354.

HAZ-8: Proper waste characterization and disposal of lead contaminated debris shall be conducted in accordance with Title 22 of the California Code of Regulations and the California Health and Safety Code.

HAZ-9: All identified and potential PCB-containing light fixture ballasts shall be handled, collected, transported, and disposed in accordance with the requirements of 22 CCR 67426.1.

HAZ-10: All fluorescent light tubes, mercury containing thermostat switch capsules, batteries, and other Universal Waste Rule components shall be handled in accordance with 22 CCR 66273.

HAZ-11: All identified and potential refrigerants shall be captures and recycled in accordance with requirements of the South Coast Air Quality Management District and the California Air Resources Board.

HAZ-12: Prior to demolition or construction activities in existing buildings, a follow-up inspection shall be performed to identify and sample potential environmental hazards located beneath finishes and/or enclosed in wall voids, pipe chases, etc.

3.7.5 Residual Impacts After Mitigation

After implementation of the Mitigation Measures listed in Section 3.7.4, impacts would be less than significant.

3.8 HYDROLOGY AND WATER QUALITY

3.8.1 Environmental Setting

3.8.1.1 Hydrology and Drainage

The City of San Bernardino lies within the Santa Ana River Basin of the Regional Water Quality Control Board, Santa Ana Region. The Santa Ana River is the largest stream system in southern California and it's also the region's main surface water body. The Santa Ana River has multiple tributaries in the San Bernardino area including Lytle Creek, East Twin Creek, East Warm Creek, and San Timoteo Creek.

SBVC is located within an area that is drained by the Lytle Cajon Channel and the East Branch of Lytle Creek, which eventually flow into the Santa Ana River. The northern portion of the campus drains via surface flows to catch basins, conveyed through storm drains to the City of San Bernardino storm drain system located along K Street. The southern portion of the campus drains in gutters and swales. Small diameter drains and outlets discharge surface drainage to Mount Vernon Avenue and Grant Avenue.

3.8.1.2 Flooding

The project site is not located within a 100-year floodplain, according to the FEMA Flood Insurance Rate Map (FIRM) for the area (City of San Bernardino 2005a).

3.8.1.3 Groundwater

The project area is underlain by the Bunker Hill Subbasin of the Upper Santa Ana Valley Groundwater Basin. The Bunker Hill Subbasin consists of the alluvial materials that underlie the San Bernardino Valley. The Basin is bounded by contact with consolidated rocks of the San Gabriel Mountains, San Bernardino Mountains, Crafton Hills, and by several faults. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributary streams in the Basin. Recharge of the Bunker Hill Subbasin has historically resulted from infiltration from runoff from the San Gabriel and San Bernardino Mountains. The subbasin is also replenished by deep percolation of water from precipitation and resulting runoff, percolation from delivered water, and water spread in streambeds and spreading grounds (CDWR 2008). The total amount of groundwater storage of the basin is 5,976,000 acre feet (City of San Bernardino 2005b).

3.8.1.4 Water Quality

The San Bernardino Municipal Water Department (SBMWD) pumps all of its water from the Bunker Hill basin. To monitor the quality of the water supplies, SBMWD collects over 6,000 samples of water throughout the year resulting in over 30,000 tests for more than 130 possible contaminants (SBMWD 2005).

Between 2005 and 2007 groundwater samples were taken throughout the City of San Bernardino that tested for different substances such as organic and inorganic contaminants, radionuclides, chemical disinfectants, and microbiological bacteria. SBMWD was in compliance with all of the maximum contaminant levels (MCLs) for domestic drinking water (City of San Bernardino 2007).

Even though SBMWD has been in compliance with all contaminants regulated by state and federal agencies there are several contamination plumes with high concentrations of trichloroethylene (TCE) and tetrachloroethylene (PCE) within the Bunker Hill basin. The Redlands plume, located between Judson Street and Mountain Avenue in Redlands, is primarily composed of TCE, with lower levels of PCE and Dibromochloropropane (DBCP), and contaminates approximately 150,000 acre-feet of groundwater. The Norton Air Force Base plume consists of TCE and PCE. This plume stretches 2.5 miles long, and contaminates 100,000 acre-feet of groundwater. The Newark and Muscoy plumes are spread around the east and west sides of the Shandon Hills in northern San Bernardino. These plumes consist of TCE and PCE, and are designated Superfund sites (CDWR 2008).

3.8.1.5 Applicable Plans, Policies, and Regulations

California Regional Water Quality Control Board

Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the federal Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the U.S. The State of California is authorized to administer various aspects of the NPDES permit under Section 402 of the Clean Water Act. The General Construction Permit treats any construction activity over one acre as an industrial activity, requiring a permit under the State's General NPDES permit. The State Water Resource Control Board (SWRCB), through the RWQCB Santa Ana Region, administers these permits. The project will be required to have a Notice of Intent (NOI) for stormwater discharge filed with the SWRCB prior to start of construction.

3.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- 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);

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

- 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 a flooding on- or off-site;

- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff; or

- Otherwise substantially degrade water quality.

3.8.3 Environmental Impacts

Hydrology and water quality impacts associated with the development proposed by the Master Plan are related to earthmoving (grading) activities. Earthmoving activities would result from the demolition and construction of new buildings and structures, from upgrading the campus infrastructure, and re-landscaping the open spaces on campus. Earthmoving associated with construction would increase the potential for soil erosion and sedimentation. Furthermore, new development on the campus would increase the amount of impervious surface coverage and would increase surface runoff above existing conditions.

Development at SBVC is expected to occur in three phases, referred to as Horizons in the Master Plan. Infrastructure improvements, demolition, and the construction of buildings and structures would occur in every Horizon. The activities would require some level of earthmoving. As a result, impacts to hydrology and water quality could occur in every Horizon.

Hydrology and water quality impacts generally fall into these categories:

- Construction-related erosion and sedimentation;
- Increased stormwater runoff and flow rates;
- Altered drainage patterns;
- Project-related (post construction) erosion; and
- Water quality issues.

3.8.3.1 Construction-Related Erosion and Sedimentation

The proposed Master Plan would require grading activities in all three Horizons. The exposed soils would be vulnerable to erosion during construction and could result in sedimentation impacts on downstream water courses. This is a potentially significant impact without mitigation. Implementation of Mitigation Measure H-1 would reduce impacts to less than significant levels.

Horizon 1. Grading activities in Horizon 1 would include grading for the construction of five new buildings and one parking structure. The five buildings and the parking structure are located throughout the campus. Horizon 1 also proposes various infrastructure and landscaping improvements that would require earthwork.

Horizon 2. Grading would be required for the construction of four new buildings and two new sports fields. Infrastructure and landscaping improvements are also proposed for Horizon 2, which would require earthwork.

Horizon 3. Grading would be required for the construction of three new buildings and one parking structure. Infrastructure and landscaping improvements would also occur in Horizon 3.

3.8.3.2 Increased Stormwater Runoff and Flow Rates

Development proposed by the Master Plan would increase the amount of impervious surfaces on-site. This would change the amount of runoff and the rate at which it flows off the site. The Master Plan would account for these changes by upgrading the site's storm drainage system. The storm drainage infrastructure would be upgraded over the first two Horizons.

With the infrastructure improvements proposed by the Master Plan impacts associated with the increased stormwater runoff are less than significant.

3.8.3.3 Altered Drainage Patterns

The existing drainage pattern of the site would not be significantly altered by the development proposed by the Master Plan. A less than significant impact would occur.

3.8.3.4 Project-Related (Post Construction) Erosion

After grading and construction, soils at finish grade would be covered by impervious surfaces, such as concrete or asphalt, or with landscaping that provides protection from erosion. Therefore, a less than significant impact would occur.

3.8.3.5 Water Quality Issues

The development proposed by the Master Plan would change the use of portions of the SBVC campus. Stormwater runoff from the site after development would be affected by the increased development and use of the site. In particular, the use of fertilizers and chemicals associated with gardening and landscaping, as well as oil and grease associated with vehicles on-site, could potentially contaminate surface runoff. Impacts would be less than significant with the incorporation of Mitigation Measure H-1.

No impacts to groundwater are expected as a result of the Proposed Project. The structures and buildings on the SBVC campus would be connected to municipal water systems.

3.8.4 Mitigation Measures

H-1: Prior to ground disturbing activities related to grading or any activity affecting federal or state waters, SBCCD shall submit for approval to the State Water Resources Control Board, a Notice of Intent (NOI) to be covered under a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (General Permit) in compliance with Section 402 of the Clean Water Act. As part of the General Permit, the SBCCD shall prepare a Storm Water Pollution Prevention Plan (SWPPP) which will: (1) require implementation of Best Management Practices (BMPs) so as to prevent a net increase in sediment load in stormwater discharges relative to preconstruction levels; (2) prohibit discharges of stormwater or non-stormwater at levels which would cause or contribute to an exceedance of any applicable water quality standard contained in the regional basin plan; (3) discuss in detail the BMPs for the project related to control of sediment and erosion, non-sediment pollutants, and potential pollutants in non-stormwater discharges; (4) describe post-construction BMPs for the project; (5) explain the monitoring and maintenance program for the project's BMPs; (6) require reporting of violations to the RWQCB; and (7) list the parties responsible for SWPPP implementation and BMP maintenance both during and after construction. Upon acceptance of the NOI by the State Board, the SBCCD shall implement the SWPPP and will modify the SWPPP as directed by the Storm Water Permit.

3.8.5 Residual Impacts After Mitigation

All impacts would be reduced to less than significant levels with the implementation of the mitigation measure identified above.

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3.9 LAND USE AND PLANNING

3.9.1 Environmental Setting

3.9.1.1 Existing Land Uses

The SBVC Master Plan area is located at 701 South Mount Vernon Avenue in the City of San Bernardino, San Bernardino County, California. SBVC is an 87-acre community college campus. The existing campus includes 21 academic and support buildings, twelve parking lots, a baseball field, a track/football field, a softball field, and landscaped open space.

Surrounding land uses include residential to the north, commercial and residential to the south, residential and industrial to the east, and commercial and residential to the west.

3.9.1.2 Land Use Designations

SBVC is in a developed area surrounded by a mix of residential, commercial, and industrial land uses in the City of San Bernardino bordering the City of Colton (Figure 3.9-1). The land uses and land use designations are summarized in Table 3.9-1.

Table 3.9-1
Summary of Existing Land Use Designations

	Land Use	Zoning	General Plan Designations
SBVC	Community College Campus	PF (Public Facilities) *SB*	Public Facilities (PF) *SB*
North	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
		RU (Residential Urban – 9 du/ac) *SB*	Residential Urban (RU) *SB*
	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
South	Commercial	C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R3 (Multi Family Residential) *C*	High Density Residential (HD) *C*
		R2 (Duplex Residential) *C*	Medium Density Residential (MD) *C*
		RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
East	Industrial	IL (Industrial Light) *SB*	Industrial Light (IL) *SB*
	Residential	RS (Residential Suburban – 4.5 du/ac) *SB*	Residential Suburban (RS) *SB*
West	Commercial	CG-1 (Commercial General) *SB*	Commercial General (CG-1) *SB*
		C2 (General Commercial) *C*	Multi-Use Area (MU) *C*
	Residential	R1 (Single Family Residential) *C*	Low Density Residential (LD)/ Multi-Use Area (MU) *C*

Notes: *SB* = City of San Bernardino
C = City of Colton
du/ac = dwelling units per acre

3.9.2 Thresholds of Significance

The project would have a significant adverse land use and planning impact if it would:

- Introduce new land uses that are incompatible with surrounding uses; or
- 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.

3.9.3 Environmental Impacts

With the proposed SBVC Master Plan, additional educational and related facilities would be developed on the SBVC campus. As described in greater detailed in Section 2.0, Project Description, the Master Plan estimates that various academic buildings, infrastructure improvements, and associated parking are required to meet the geotechnical and planning challenges of the campus. The project would increase the development of the campus from 426,550 ASF to 526,731 ASF by 2030. All of the development would take place within the existing SBVC campus; no additional land acquisition is proposed. The additional development proposed by the Master Plan would take into account the 18-acre no build zone created by the folding zone of the San Jacinto Fault. The Master Plan would be consistent with the existing City of San Bernardino General Plan designation of Public Facilities. No impact would occur.

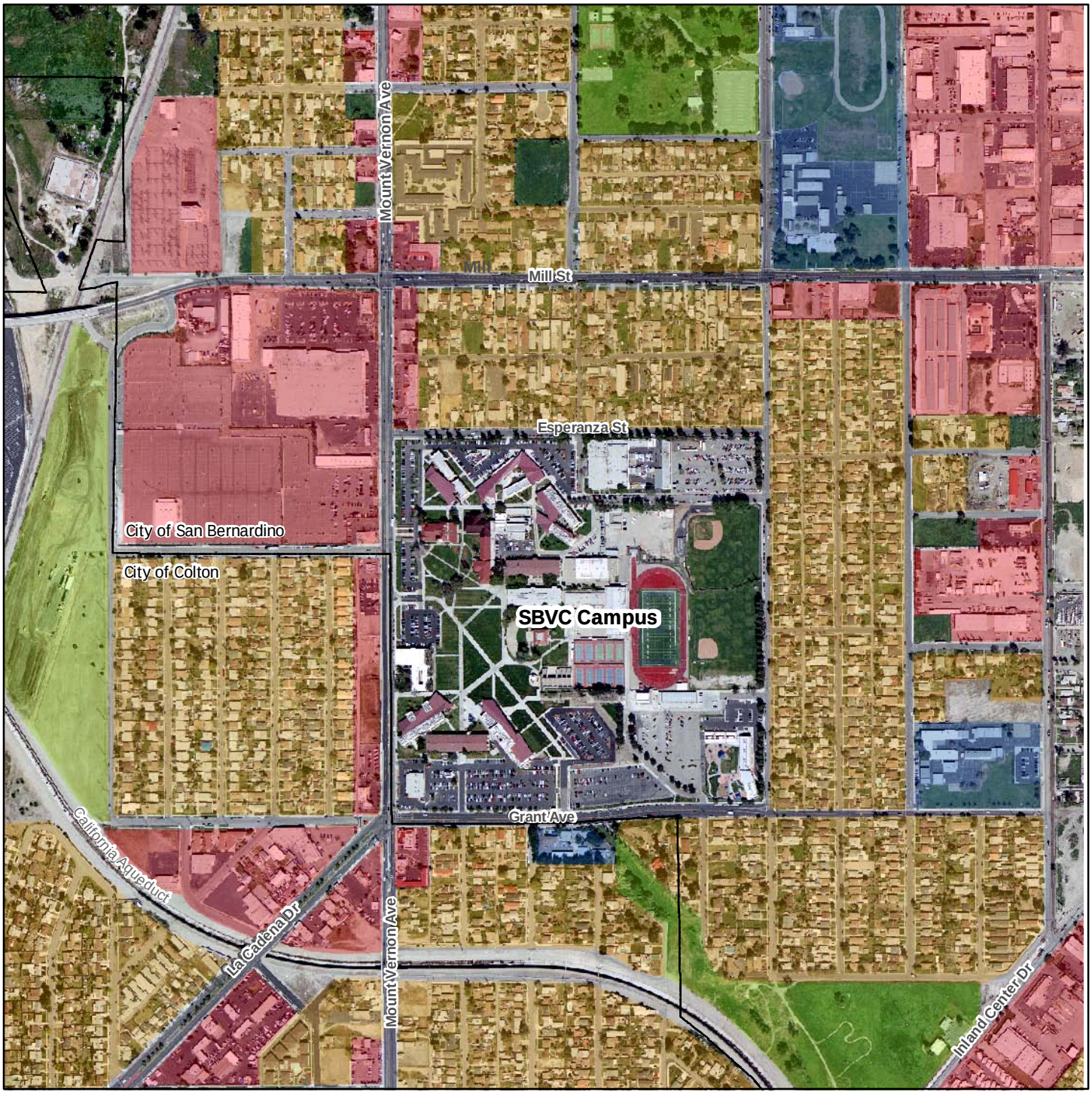
The proposed on-campus development would result in an improvement of educational and related uses at an existing college campus. The Master Plan does not propose a land use change, therefore no incompatibility issues would arise with existing and allowed land uses surrounding the campus.

3.9.4 Mitigation Measures

No significant impacts have been identified; therefore, no mitigation measures are required.

3.9.5 Residual Impacts After Mitigation

The Proposed Project's land use impacts would be less than significant.



Open Green Space

Residential

Educational Facilities

Commercial/Industrial

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.9-1
Surrounding Land Uses

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3.10 NOISE

A Noise Study was prepared for the Proposed Project (Wieland Acoustics 2009). The following section summarizes that study, which can be found in Appendix F.

3.10.1 Environmental Setting

3.10.1.1 Noise Descriptors

The following paragraphs briefly define the noise descriptors used throughout this section.

Decibels. Sound pressures can be measured in units called microPascals (μPa). However, expressing sound levels in terms of µPa would be very cumbersome since it would require a wide range of very large numbers. For this reason, sound pressure levels are described in logarithmic units of ratios of actual sound pressures, called decibels (dB). Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB.

A-Weighting. Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on response. While the intensity of the sound is a purely physical response, the loudness or human response depends on the characteristics of the human ear. In general, the healthy human ear is most sensitive to sounds between 1,000 Hertz (Hz) and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude as being less loud. In order to better relate noise to the frequency response of the human ear, a frequency-dependent rating scale, known as the A-Scale, is used to adjust (or "weight") the sound level measured by a sound level meter. The resulting sound pressure level is expressed in A-weighted decibels or dBA. When people make relative judgments of the loudness or annoyance of most ordinary everyday sounds, their judgments correlate well with the A-weighted sound levels of those sounds. A range of noise levels associated with common indoor and outdoor activities is shown in Figure 3.10-1.

Community Noise Equivalent Level (CNEL). The CNEL noise metric is based on 24 hours of noise measurement. CNEL applies a time-weighted factor to account for the increased sensitivity of humans to noise events in the evening and nighttime hours. Noise produced in the evening time period (7:00 p.m. to 10:00 p.m.) receives a 5 dBA penalty. Noise in the nighttime period of 10:00 p.m. to 7:00 a.m. receives a 10 dBA penalty. A range of CNEL for various activities is shown on Figure 3.10-2.

Day-Night Sound Level (L_{dn}). Much like CNEL, L_{dn} is also a measure of the cumulative 24-hour noise exposure that considers not only the variation of the A-weighted noise level but also the duration and the time of day of the disturbance. The L_{dn} is derived in exactly the same way as CNEL, except that no "penalty" is applied to the evening hours of 7 p.m. to 10 p.m. It is noted that various federal, state, and local agencies have

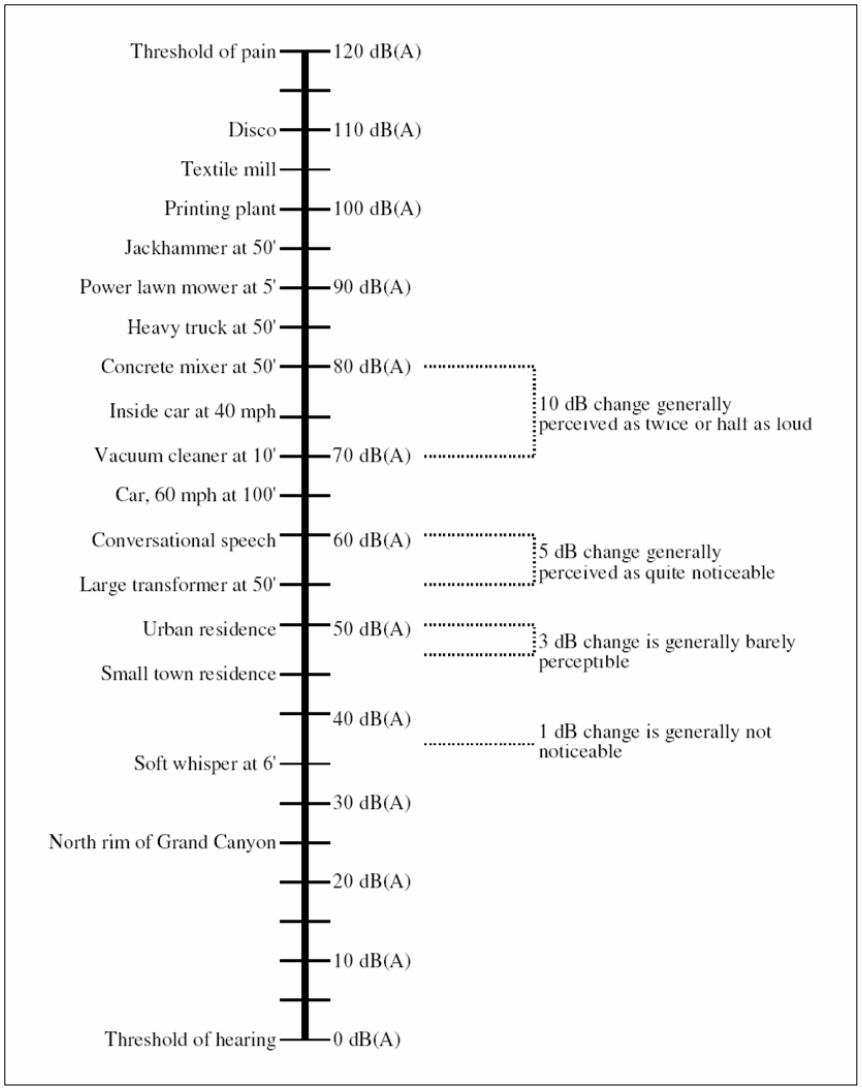

Figure 3.10-1 Common Noise Sources and A-Weighted Noise Levels

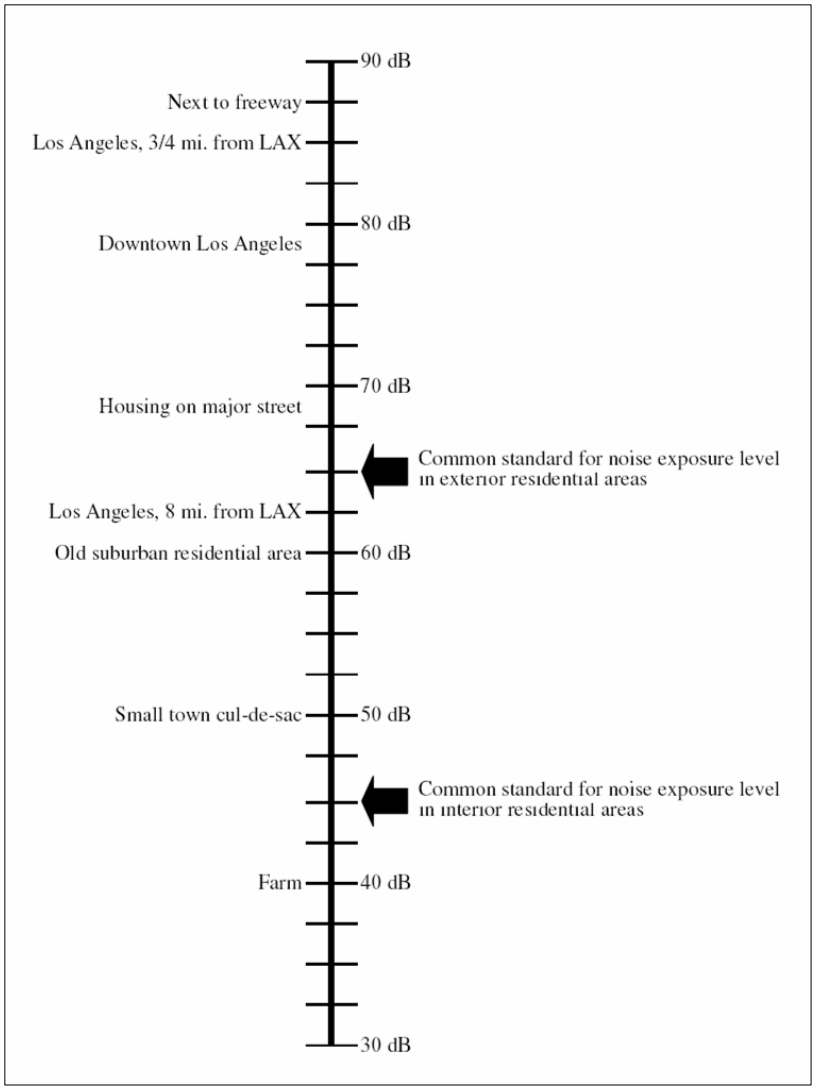

Figure 3.10-2 Common CNEL and L_{dn} Exposure Levels at Various Locations

adopted L_{dn} as the measure of community noise, including the United States Environmental Protection Agency (USEPA). For many common noise sources the levels measured in L_{dn} are very similar to those measured in CNEL.

3.10.1.2 Vibration Descriptors

The following paragraphs briefly define the vibration descriptors used throughout this section.

Peak Particle Velocity (PPV). Vibration consists of rapidly fluctuating motions with an average motion of zero. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The accepted unit for measuring PPV in the United States is inches per second (in/s). PPV is only applicable to this project in the assessment of potential building damage due to ground-borne vibration from construction activities (PPV is related to the stresses that are experienced by buildings subjected to ground-borne vibration).

Vibration Velocity Level (L_v). Although PPV is appropriate for evaluating the potential for building damage, it is not suitable for evaluating human response to ground-borne vibration. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to an "average" vibration amplitude. However, the actual average level is not a useful measure of vibration because the net average of a vibration signal is zero. Instead, vibration velocity level (L_v) is used for evaluating human response. L_v describes the root mean square (rms) velocity amplitude of the vibration. This rms value may be thought of as a "smoothed" or "magnitude-averaged" amplitude. The rms of a vibration signal is typically calculated over a 1 second period. The maximum L_v describes the maximum rms velocity amplitude that occurs during a vibration measurement.

L_v can be measured in inches per second (in/s). However, expressing these levels in terms of in/s would be very cumbersome since it would require a very wide range of numbers. For this reason, L_v is stated in terms of decibels. Although it is not a universally accepted notation, the abbreviation "VdB" is used to denote vibration velocity level decibels in order to reduce the potential for confusion with sound level decibels. Since decibels are logarithmic units, vibration velocity levels cannot be added or subtracted by ordinary arithmetic means.

When groundborne vibration exceeds 72 to 80 VdB, it is usually perceived as annoying to occupants of residential buildings. For institutional land uses, the threshold is 75 to 83 VdB. The degree of annoyance is dependent upon individual sensitivity to vibration, and the frequency of the vibration events. Typically, vibration levels must exceed 100 VdB before building damage occurs.

3.10.1.3 Noise Criteria

City of San Bernardino. The Division of the State Architect is responsible for the approval of building plans for the San Bernardino Community College District projects. The City of San Bernardino noise ordinance is used as a guideline for this noise analysis.

General Plan. The City of San Bernardino has an adopted Noise Element in its General Plan were it specifies goals and policies to address the generation, mitigation, avoidance, and the control of excessive noise (City of San Bernardino 2005). The following polices are relevant to the Proposed Project:

- Policy 14.1.1 – Minimize, reduce, or prohibit, as may be required, the new development of housing, health care facilities, schools, libraries, religious facilities, and other noise sensitive uses in areas where existing or future noise levels exceed an L_{dn} of 65 dB exterior and an L_{dn} of 45 dB interior if the noise cannot be reduced to these levels.

- Policy 14.1.4 – Prohibit the development of new or expansion of existing industrial, commercial, or other uses that generate noise impacts on housing, schools, health care facilities or other sensitive uses above an L_{dn} of 65 dB.

- Policy 14.2.3 – Require that development that increases the ambient noise level adjacent to noise-sensitive land uses provide appropriate mitigation measures.

- Policy 14.2.19 – As may be necessary, require acoustical analysis and ensure the provision of effective noise mitigation measures for sensitive land uses, especially residential uses, in areas significantly impacted by noise.

- Policy 14.3.1 – Require that construction activities adjacent to residential units be limited as necessary to prevent adverse noise impacts.

- Policy 14.3.2 – Require that construction activities employ feasible and practical techniques that minimize the noise impacts on adjacent uses.

Municipal Code. The City regulates excessive and annoying noise through its Municipal Code. Relevant chapters of the Municipal Code are listed below.

- Chapter 8.54.020, Prohibited Acts – Paragraph L of this chapter prohibits "[t]he operation or use between the hours of 10:00 p.m. and 8:00 a.m. of any pile driver, steam shovel, pneumatic hammers, derrick, steam or electric hoist, power driven saw, or any other tool or apparatus, the use of which is attended by loud and excessive noise, except with the approval of the City".

- Chapter 8.54.050, Controlled Hours of Operation – This chapter makes it unlawful for any person to engage in certain activities other than between the hours of 7:00 a.m. and 8:00 p.m. in non-residential zones. These activities include operating compressors, fans, and other similar devices; and repairing, rebuilding, reconstructing, or dismantling any motor vehicle or other mechanical equipment or devices in a manner so as to be plainly audible across property lines.

- Chapter 8.54.060, Exemptions – This chapter exempts certain activities and noise sources from the provisions of the noise ordinance, including activities conducted on the grounds of any public school during regular hours of operation; outdoor

gatherings, public dances, shows, and sporting and entertainment events provided said events are authorized by the City; and construction, repair, or excavation work performed pursuant to a valid written agreement with the City which provides for noise mitigation measures.

- Chapter 8.54.070, Disturbances from Construction Activity – This chapter prohibits any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 a.m. and 8:00 p.m.

- Chapter 9.48.20, Unlawful Noises – This chapter makes it unlawful for any person to create any loud or raucous noise from any sound-making or sound-amplifying device upon any private property, or in any public park or other public place or property.

- Chapter 19.20.030, General Standards – This chapter prohibits any loudspeaker, bells, gongs, buzzers, mechanical equipment or other sounds, attention-attracting, or communication device that is discernible beyond any boundary line of the parcel.

- Chapter 19.20.030 prohibits any vibration that is discernible beyond the boundary line of the property.

City of Colton. The SBVC Master Plan area is located near the border of the City of San Bernardino and the City of Colton. The City of Colton General Plan Noise Element and Municipal Code specify indoor and outdoor noise standards for various types of land uses (City of Colton 1987).

General Plan. Noise standards from the City of Colton General Plan are as follows:

- Residential structures should be constructed to maintain interior noise levels of not greater than 45 dBA.
- Residential growth in community noise exposure areas greater than 70 dBA should be discouraged unless on-site noise levels can be reduced to 60 dBA or lower.
- Exterior noise levels should not exceed 65 dBA during the day or 55 dBA at night for commercial land uses, including general business and general merchandising.
- Exterior noise levels should not exceed 60 dBA at any time for such areas important to public need, and where the preservation of serenity and quietness is essential for the areas intended purpose.

The Noise Element also identifies land use compatibility guidelines for various community noise environments. These guidelines are adjusted to account for a number of environmental factors to arrive at an acceptability standard for a particular land use.

Municipal Code. Relevant chapters of the Municipal Code are listed below.

- Chapter 9.16.010 prohibits the generation of any noise that disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity.

- Chapter 18.42.040 states that "[t]he maximum sound level radiated by any use of facility (sic), when measured at the boundary line of the property on which the sound is generated, shall not be obnoxious by reason of its intensity, pitch or dynamic characteristics as determined by the city, and shall not exceed 65 dBA".

- Chapter 18.42.050 states that "[a]ll activities shall be operated so as not to generate ground vibration by equipment other than motor vehicles, trains or by temporary construction or demolition, which is perceptible without instruments by the average person at or beyond any lot line of the lot containing the activities".

3.10.1.4 Existing Noise Environment

There are two main types of noise sources that currently affect the study area. The first is traffic on local streets; the second is on-site activities. Traffic on Mount Vernon Avenue near the project site is the dominant source contributing to the areas' ambient noise levels. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust system. On-site noise sources include: parking activities, athletic fields (including football, soccer, and softball), tennis courts, activities at the Technical Building, and mechanical equipment. Ongoing demolition and construction throughout the SBVC campus generates temporary noise that contributes to the ambient noise levels of the area. Activities at the campus are passive and do not generate ground-borne vibration or noise levels.

Noise Measurements. In order to document the existing noise environment, measurements were obtained at three locations throughout the study area (Figure 3.10-3). At two locations the measurement was obtained for a continuous period of 24 hours; at the third location the measurement was obtained for a period of about 20 minutes. At each location the microphone was positioned at a height of five feet above the ground. The results of the noise measurements are provided in Appendix F, and summarized in

Table 3.10-1
Summary of Noise Measurements

Location #	Location Description	Measurement Period	Measured 1-Hour L_{eq}, dBA	L_{dn}, dB
1	Alley immediately east of 1662 Virginia Dr.	4:00 PM to 4:24 PM	55.8	Not measured
2	Side yard of 707 K St.	7:00 AM to 8:00 PM 8:00 PM to 7:00 AM	53.9 - 59.4 48.4 - 55.3	59.5
3	Side yard of 958 Grant Ave.	7:00 AM to 8:00 PM 8:00 PM to 7:00 AM	57.9 - 62.5 50.5 - 58.3	62.1

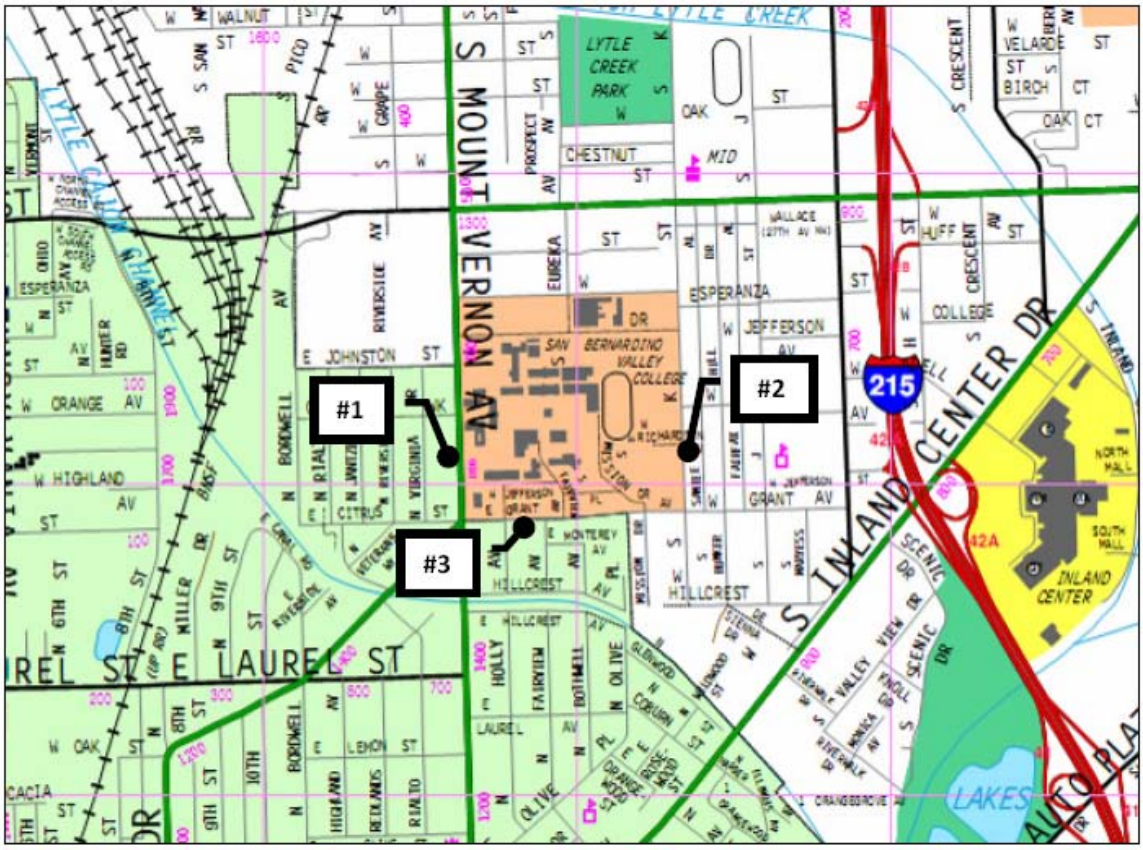

Figure 3.10-3. Noise Measurement Locations

Traffic Noise Exposures. The Traffic Noise Model (TNM) lookup tables developed by the Federal Highway Administration (FHWA) were used to estimate existing traffic noise levels adjacent to various segments of street in the study area based on traffic volumes, speeds, truck mix, site conditions, and distance from the roadway to the receptor. Traffic data for the model was obtained from the Traffic Study (Fehr & Peers 2009). The results of the modeling effort are provided in Appendix F and summarized in Table 3.10-2. At locations that are buffered from the traffic noise by existing block walls, the L_{dn} is about 5 to 6 dB less than the values indicated in the table.

Table 3.10-2
Existing Traffic Noise Levels

Arterial / Segment	Average Daily Traffic (ADT)	Unmitigated L_{dn} @ Nearest Sensitive Receptor*	Distance to L_{dn} Contour from Roadway Centerline	
			60 dB	65 dB
N. Colton Avenue				
Mt. Vernon Ave. to I St.	3,806	>62.0 dB	49'	--
Esperanza Street				
Mt. Vernon Ave. to Eureka Ave.	1,469	53.4 dB	--	--
Eureka Ave. to K St.	1,719	>55.9 dB	--	--
Grant Avenue				
Mt. Vernon Ave. to Fairview Ave.	4,069	59.5 dB	--	--
Fairview Ave. to K St.	3,566	58.8 dB	--	--
K St. to J St.	3,694	>59.2 dB	--	--
J St. to I St.	3,719	>59.3 dB	--	--
I Street				
Inland Center Dr. to Grant Ave.	4,984	61.2 dB	57'	--
Grant Ave. to Mill St.	1,281	55.9 dB	--	--
Inland Center Drive				
I St. to I-215 SB ramps	7,838	47.4 dB	72'	36'
I-215 SB ramps to I-215 NB ramps	7,066	<38.8 dB	68'	--
East of I-215 NB ramps	8,350	<39.5 dB	75'	38'
J Street				
South of Grant Ave.	131	42.2 dB	--	--
Grant Ave. to Mill St.	825	50.7 dB	--	--
K Street				
South of Grant Ave.	150	43.2 dB	--	--
Grant Ave. to Esperanza St.	2,625	>57.7 dB	--	--
Esperanza St. to Mill St.	4,244	>59.8 dB	--	--
Mill Street				
Mt. Vernon Ave. to Eureka Ave.	5,831	60.3 dB	62'	--
Eureka Ave. to K St.	6,094	63.4 dB	63'	--
Mt. Vernon Avenue				
South of Colton Ave.	8,906	**66.3 dB**	89'	50'
Colton Ave. to Grant Ave.	9,172	**66.0 dB**	90'	51'
Grant Ave. to Esperanza St.	9,331	54.8 dB	91'	51'
Esperanza St. to Mill St.	9,666	55.6 dB	92'	52'
North of Mill St.	8,975	62.3 dB	78'	40'

Notes:
"—" signifies that the contour is located less than 35 feet from the roadway centerline
* The TNM Lookup tables only address receptors at distances of between 32 and 980 feet from the roadway centerline. Therefore, where the distance to the nearest sensitive receptor is less than 32 feet, the L_{dn} at the receptor is shown as being greater than (">") the L_{dn} at 32 feet. Likewise, where the distance to the nearest sensitive receptor is greater than 980 feet, the L_{dn} at the receptor is shown as being less than ("<") the L_{dn} at 980 feet.
BOLD type indicates exceedance of exterior noise standard.

As shown in Table 3.10-2, it is noted that the exterior noise threshold of 65 dB L_{dn} is currently exceeded at residences on Mount Vernon Avenue from south of Colton Avenue to Grant Avenue.

On-site Noise Sources. Existing on-site noise sources include: parking activities, athletic fields (including football, soccer, and softball), tennis courts, and activities at the Technical Building. In order to analyze the existing noise levels due to these sources, it was necessary to simplify the activities into a number of representative operational scenarios. Three operational scenarios were developed: (1) daytime campus activities; (2) Spring afternoon sports activities; and (3) Fall afternoon sports activities. For each scenario, assumptions were made regarding which activities would occur simultaneously over a 1-hour period under "worst-case" conditions. Table 3.10-3 identifies the noise sources and assumptions considered in each scenario.

Table 3.10-3
Scenarios Considered in the Analysis of On-Site Activities

	Scenario		
Noise Source	**Daytime Campus**	**Spring Afternoon Sports**	**Fall Afternoon Sports**
Parking lots	1,596 movements	1,596 movements	1,596 movements
Technical Building	Small aircraft engine running for 15 minutes. Large air extraction unit running for entire hour. Repairs occurring on 4 vehicles simultaneously at exterior areas.	Not used	Not used
Softball field	Not used	Crowd size of 50.	Not used
Football field	Not used	Not used	Crowd size of 700. PA system in use.
Soccer field	Not used	Not used	Crowd size of 100.
Tennis courts	Games taking place on 8 courts.	Games taking place on 8 courts.	Games taking place on 8 courts.

Based on the assumptions presented in Table 3.10-3, each scenario was analyzed using a computer noise model developed with SoundPLAN software (version 6.5) and the Horizon 1 site layout (Horizon 1 was used as the basis for the cumulative impacts analysis). SoundPLAN takes a number of significant variables into account, including the distance from sources to the receptors, the heights of sources and receptors, the directivity of the noise sources, ground conditions, barrier effects provided by walls or buildings, and reflection of noise off hard surfaces. Table 3.10-4 summarizes the range of worst-case noise levels at off-site properties due to on-site operations.

Table 3.10-4
Summary of Existing Worst-Case Noise Levels Due to On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north of SBVC	75 dBA	47 dBA	58 dBA
Closest properties to the east of SBVC	63 dBA	53 dBA	64 dBA
Closest properties to the south of SBVC	55 dBA	48 dBA	58 dBA
Closest properties to the west of SBVC	50 dBA	< 45 dBA	51 dBA
Property immediately adjacent to southwest corner of SBVC	< 45 dBA	< 45 dBA	49 dBA

As shown on Table 3.10-4, the estimated worst-case 1-hour L_{eq} currently exceeds the threshold of 65 dBA at some of the homes to the north of SBVC during daytime campus activities. The estimated 1-hour L_{eq} at all other receivers is below the threshold of 65 dBA.

3.10.2 Thresholds of Significance

The Proposed Project is located within the City of San Bernardino and is also adjacent to the City of Colton. Of these, only the City of Colton has a quantitative noise ordinance standard; therefore, to provide a consistent noise analysis, the Colton standard has been applied in assessing impacts of non-transportation noise sources in both jurisdictions. Based on this application of the standard, and the CEQA guidelines, a significant impact would be assessed if the project would result in:

- 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. This impact will occur if: (1) the exterior L_{dn} due to traffic exceeds 65 dB at new activity areas at SBVC; (2) the interior L_{dn} due to traffic exceeds 45 dB within new buildings at SBVC; (3) project traffic increases the L_{dn} at off-site noise-sensitive properties above 65 dB; (4) construction activities occur outside the hours of 7:00 a.m. to 8:00 p.m.; or (5) project activities generate a 1-hour L_{eq} exceeding 65 dBA at off-site properties.

- Exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels. This impact will occur if project construction causes the vibration velocity level (L_V) to exceed 72 VdB at an adjacent residential building or 75 VdB at an adjacent college building. Because of the potential for damage, a significant impact will also be assessed if the PPV exceeds 0.2 in/s at any existing residential building or 0.3 in/s at any existing college or commercial building.

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. This impact will occur if: (1) project traffic increases the L_{dn} at any off-site sensitive receptor by an audible amount of 3 dB or more; or (2) the existing ambient 1-hour L_{eq} is less than 65 dBA at any

off-site sensitive receptor and new activity levels at SBVC increase the 1-hour L_{eq} above 65 dBA; or, (3) the existing ambient 1-hour L_{eq} is 65 dBA or greater at any off-site sensitive receptor and new activity noise levels at SBVC increase the 1-hour L_{eq} by 3 dBA or more.

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The only source of temporary or periodic noise associated with the project is construction. This impact will occur if: (1) the existing ambient 1-hour L_{eq} is less than 65 dBA at any off-site sensitive receptor and construction activity levels at SBVC increase the 1-hour L_{eq} above 65 dBA; or (2) the existing ambient 1-hour L_{eq} is 65 dBA or greater at any off-site sensitive receptor and construction activity noise levels at SBVC increase the 1-hour L_{eq} by 3 dBA or more.

- Exposure of persons residing or working in the project area to excessive noise levels as a result of activities at an airport. Since the project site is located well outside the planning boundaries for San Bernardino International Airport, this threshold will not be considered further.

3.10.3 Environmental Impacts

The discussion of noise impacts has been divided into two sections: construction and operation.

3.10.3.1 Construction Impacts

Construction of the Proposed Project would occur only between 7:00 a.m. and 8:00 p.m. Construction noise levels in the vicinity of the Proposed Project would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The exposure of persons to the periodic increase in noise levels would be short-term.

Construction of the Proposed Project can be divided into two parts: (1) demolition, site clearing, and grading, and (2) construction. An analysis was conducted to estimate the noise levels that would be experienced at the nearest residential property lines. This analysis is provided in Table 3.10-5.

Table 3.10-5
Analysis of Estimated Construction Noise Levels

Nearest Residential Property Line to the Master Plan Area	Construction Phase	Estimated Avg. Level @ 50', dBA	Attenuation Due to Distance, dBA[a]	Estimated Avg. Level @ Sensitive Location, dBA	Ambient Noise Level, 7am to 8pm, dBA	Estimated Construction Noise + Ambient, dBA	Estimated Increase due to Construction, dBA
North	Site Clearing Construction	81.2 84.6	-12.0 (200')	69.2 72.6	53.9- 59.4[b]	69.3-69.6 72.7-72.8	10-15 13-19
East	Site Clearing Construction	81.2 84.6	-12.9 (220')	68.3 71.7	53.9- 59.4[b]	68.5-68.8 71.8-71.9	9-15 13-18
South	Site Clearing Construction	81.2 84.6	-11.6 (190')	69.6 73.0	57.9- 62.5[c]	69.9-70.4 73.1-73.4	8-12 11-15
West	Site Clearing Construction	81.2 84.6	-16.3 (325')	64.9 68.3	55.8[d]	65.4 68.5	10 13

Note:
a. Attenuation is based on a reduction of 6 dB for every doubling of distance from the source. Distance is calculated from the center of the nearest construction site.
b. Based on measured noise levels at Location #2 (see Table 3.10-1 for measurement details).
c. Based on measured noise levels at Location #3 (see Table 3.10-1 for measurement details).
d. Based on measured noise levels at Location #1 (see Table 3.10-1 for measurement details).

According to Table 3.10-5, the average noise level produced by construction of the Proposed Project is expected to increase the ambient noise level above the significance threshold of 65 dBA at all residences in the vicinity of the campus. This is a substantial temporary increase and, therefore, the impact is significant and unavoidable. Mitigation measures N-1 through N-9 have been proposed that would control construction noise to the extent practicable. However, even with these measures, construction noise would continue to exceed the threshold of significance.

Vibration Impacts. The primary vibratory sources during the construction of the Proposed Project are expected to be large bulldozers during grading and the drill rig for the poured-in-place piles during building foundation construction. Both of these generate an approximate vibration level of 87 VdB and a peak particle velocity (PPV) of 0.089 in/s at a distance of 25 feet. At the distance of the nearest residences to the project site (across Esperanza Street, approximately 75 feet away from the nearest building site) the estimated vibration level would be 73 VdB and the estimated PPV would be 0.017 in/s. The vibration level is marginally above the impact criterion of 72 VdB for residential properties, meaning that ground vibration may be perceptible at times to the residents. However, the impact at these locations is not considered to be significant because of the short duration of the vibration and because the PPV of 0.017 in/s would be well below the level at which damage can occur (0.20 in/s). A less than significant impact would occur.

On the SBVC campus itself, it is possible that vibration would be perceived by occupants of the existing buildings if bulldozers or drill rigs operate within approximately 63 feet of the structures. However, the impact is not considered significant because of the short duration of the activity, and because the campus administration would have the authority to stop the construction during classroom hours if the vibration is affecting

educational activities. The possibility of affecting existing campus buildings or to the existing commercial building at the northeast corner of Mount Vernon Avenue and Grant Avenue would occur if bulldozers or drill rigs operate within approximately 11 feet of them. Implementation of Mitigation Measure N-10 would reduce impacts to a less than significant level.

3.10.3.2 Operational Impacts

Permanent noise sources introduced by the Proposed Project would include traffic on local streets and on-site activities.

Traffic. Based on data from the Traffic Study (Fehr & Peers 2009), analyses were conducted to identify the future traffic noise exposures that would occur in the study area, both with and without the Proposed Project. The results of the analyses are provided in Appendix F. The Noise Study found that the Proposed Project would increase the traffic-generated L_{dn} by at most 2 dB at off-site sensitive receptors. This is less than the 3 dB threshold of significance; impacts would be less than significant. In addition, traffic associated with the Proposed Project would not increase the L_{dn} above the 65 dB threshold of significance at any residential properties in the study area. Therefore, impacts would be less than significant.

On-site Noise Sources. In order to analyze future on-site noise sources, the three operational scenarios described in Table 3.10-3 (daytime campus activities, spring afternoon sports activities, and fall afternoon sports activities) were revised to reflect future conditions under each of the project Horizons. The scenarios were revised based on the referenced Master Plan documents and information provided by College staff (Appendix F). The SoundPLAN computer noise model discussed in Section 3.10.1.4 was revised and re-run to analyze each of the future scenarios under each Horizon. The results of the analyses are presented below for each Horizon.

Horizon 1. Table 3.10-6 summarizes the estimated worst-case noise levels at off-site properties due to on-site operations for Horizon 1.

Table 3.10-6
Summary of Worst-Case Noise Levels Due to Horizon 1 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	75 dBA	47 dBA	58 dBA
Closest properties to the east	63 dBA	53 dBA	64 dBA
Closest properties to the south	55 dBA	47 dBA	57 dBA
Closest properties to the west	50 dBA	< 45 dBA	51 dBA
Property immediately adjacent to southwest corner of SBVC	< 45 dBA	< 45 dBA	49 dBA

According to Table 3.10-6, Horizon 1 noise levels would exceed the 1-hour L_{eq} threshold of 65 dBA at some of the homes to the north of SBVC during daytime campus activities. However, this is not a significant impact because the estimated noise level of 75 dBA is

associated with existing campus activities (refer to Table 3.10-4) and not with the Horizon 1 project (i.e., Parking Structure 1). The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA. Therefore, Horizon 1 activities would not result in the generation of noise levels in excess of local standards and the impact would be less than significant.

Table 3.10-7 summarizes the estimated worst-case noise increases at off-site properties due to on-site operations for Horizon 1 (the increases were estimated by calculating the difference between the Horizon 1 noise levels with and without Parking Structure 1 for each scenario).

Table 3.10-7
Summary of Worst-Case Noise Increases Due to Horizon 1 On-Campus Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	0 dBA	0 dBA	0 dBA
Closest properties to the east	1 dBA	1 dBA	1 dBA
Closest properties to the south	1 dBA	1 dBA	1 dBA
Closest properties to the west	0 dBA	0 dBA	1 dBA
Property immediately adjacent to southwest corner of SBVC	0 dBA	0 dBA	1 dBA

Note: The increases identified above are not obtained by subtracting the values indicated in Table 3.10-4 from the values indicated in Table 3.10-6. While Table 3.10-4 identifies the highest (i.e., worst-case) existing noise level that occurs at any residence to the north (for example), and Table 3.10-6 provides the same information for Horizon 1 with the parking structure, the location at which the highest noise level occurs is not necessarily the same. This is because the barrier effects of the existing buildings are different at different residences. For this reason, the values indicated above in Table 3.10-7 are the largest (i.e., worst-case) increases that will occur at any residence to the north (for example), and do not necessarily represent the same locations considered in Tables 3.10-4 and 3.10-6.

Table 3.10-8 summarizes the assessment of impact for the noise increases due to Horizon 1 on-site activities. According to the table, Horizon 1 on-site activities would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project and the impact would be less than significant.

Table 3.10-8
Assessment of Impact for Noise Increases Due to Horizon 1 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	No Impact[a]	No Impact[a]	No Impact[a]
Closest properties to the east	Less than significant[b]	Less than significant[b]	Less than significant[b]
Closest properties to the south	Less than significant[b]	Less than significant[b]	Less than significant[b]
Closest properties to the west	No Impact[a]	No Impact[a]	Less than significant[b]
Property immediately adjacent to southwest corner of SBVC	No Impact[a]	No Impact[a]	Less than significant[b]

Notes:
a. No impact because there is no noise increase.
b. Impact is less than significant because the noise increase does not result in noise levels above 65 dBA.

Horizon 2. Table 3.10-9 summarizes the estimated worst-case noise levels at off-site properties due to on-site operations for Horizon 2.

Table 3.10-9
Summary of Worst-Case Noise Levels Due to Horizon 2 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	55 dBA	57 dBA	64 dBA
Closest properties to the east	**79 dBA**	54 dBA	**68 dBA**
Closest properties to the south	59 dBA	47 dBA	50 dBA
Closest properties to the west	55 dBA	46 dBA	59 dBA
Property immediately adjacent to southwest corner of SBVC	47 dBA	< 45 dBA	51 dBA

According to Table 3.10-9, Horizon 2 activities would increase the 1-hour L_{eq} above the threshold of 65 dBA at some of the homes to the east of SBVC during both daytime campus activities and fall afternoon sports activities. Therefore, Horizon 2 activities would result in the generation of noise levels in excess of local standards and the impact is significant at these locations under these two scenarios.

The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA and less than significant.

Table 3.10-10 summarizes the estimated worst-case noise increases at off-site properties due to on-site operations for Horizon 2 (the increases were estimated by calculating the difference between the Horizon 1 noise levels and the Horizon 2 noise levels for each scenario).

Table 3.10-10
Summary of Worst-Case Noise Increases Due to Horizon 2 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	4 dBA	> 15 dBA	15 dBA
Closest properties to the east	>15 dBA	13 dBA	9 dBA
Closest properties to the south	>15 dBA	7 dBA	10 dBA
Closest properties to the west	9 dBA	10 dBA	6 dBA
Property immediately adjacent to southwest corner of SBVC	6 dBA	8 dBA	4 dBA

Note: The increases identified above are not obtained by subtracting the values indicated in Table 3.10-6 from the values indicated in Table 3.10-9. While Table 3.10-6 identifies the highest (i.e., worst-case) noise level that will occur at any residence to the north (for example) with Horizon 1, and Table 3.10-9 provides the same information for Horizon 2, the location at which the highest noise level occurs for each Horizon is not necessarily the same. This is because noise sources are relocated, new noise sources are included, and/or buildings that once acted as barriers to some of the noise sources are demolished in Horizon 2. For these reasons, the values indicated above in Table 3.10-10 are the largest (i.e., worst-case) increases that will occur at any residence to the north (for example), and do not necessarily represent the same locations considered in Tables 3.10-6 and 3.10-9.

Table 3.10-11 summarizes the assessment of impact for the noise increases due to Horizon 2 on-site activities. As shown in the table, Horizon 2 on-site activities would result in a substantial permanent increase in ambient noise levels above levels existing without the project at some of the homes to the east of SBVC; this impact would be significant and unavoidable. At all other locations, the impact is less than significant.

Table 3.10-11
Assessment of Impact for Noise Increases Due to Horizon 2 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	Less than significant[a]	Less than significant[a]	Less than significant[a]
Closest properties to the east	**Significant Impact[b]**	Less than significant[a]	**Significant Impact[b]**
Closest properties to the south	Less than significant[a]	Less than significant[a]	Less than significant[a]
Closest properties to the west	Less than significant[a]	Less than significant[a]	Less than significant[a]
Property immediately adjacent to southwest corner of SBVC	Less than significant[a]	Less than significant[a]	Less than significant[a]

Notes:
a. Impact is less than significant because the noise increase does not result in noise levels above 65 dBA.
b. Impact is significant because noise is increased from below 65 dBA to above 65 dBA.

Noise related to operation of the Technical Building and central plant have the potential for significant impacts to noise receptors. The specific design of these buildings is not currently known. Potential noise impacts from the proposed Technical Building and central plant would be mitigated to a less than significant level with the implementation of Mitigation Measures N-11 and N-12, respectively. Noise related to future sporting events would also increase noise levels at offsite receptors. Mitigation Measure N-13 would reduce, to the extent feasible, the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to exceed the threshold of significance.

Horizon 3. Table 3.10-12 summarizes the estimated worst-case noise levels at off-site properties due to on-site operations for Horizon 3.

Table 3.10-12
Summary of Worst-Case Noise Levels Due to Horizon 3 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	54 dBA	57 dBA	60 dBA
Closest properties to the east	**79 dBA**	54 dBA	**68 dBA**
Closest properties to the south	58 dBA	47 dBA	59 dBA
Closest properties to the west	55 dBA	46 dBA	51 dBA
Property immediately adjacent to southwest corner of SBVC	53 dBA	< 45 dBA	48 dBA

According to Table 3.10-12, Horizon 3 noise levels would exceed the 1-hour L_{eq} threshold of 65 dBA at some of the homes to the east of SBVC during both daytime campus activities and fall afternoon sports activities. However, this is not a significant

impact because the estimated noise levels of 79 and 68 dBA are associated with Horizon 2 activities (refer to Table 3.10-9) and not with the Horizon 3 project. The noise levels at all other receivers and for all other scenarios would be below the threshold of 65 dBA. Therefore, Horizon 3 activities would not result in the generation of noise levels in excess of local standards and the impact would be less than significant.

Table 3.10-13 summarizes the estimated worst-case noise increases at off-site properties due to on-site operations for Horizon 3 (the increases were estimated by calculating the difference between the Horizon 2 noise levels and the Horizon 3 noise levels for each scenario).

Table 3.10-13
Summary of Worst-Case Noise Increases Due to Horizon 3 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	8 dBA	4 dBA	1 dBA
Closest properties to the east	1 dBA	3 dBA	1 dBA
Closest properties to the south	1 dBA	1 dBA	1 dBA
Closest properties to the west	9 dBA	3 dBA	2 dBA
Property immediately adjacent to southwest corner of SBVC	9 dBA	5 dBA	1 dBA

Note: The increases identified above are not obtained by subtracting the values indicated in Table 3.10-9 from the values indicated in Table 3.10-12. While Table 3.10-9 identifies the highest (i.e., worst-case) noise level that will occur at any residence to the north (for example) with Horizon 2, and Table 3.10-12 provides the same information for Horizon 3, the location at which the highest noise levels occurs for each Horizon is not necessarily the same. This is because noise sources are relocated, new noise sources are included, and/or buildings that once acted as barriers to some of the noise sources are demolished in Horizon 3. For these reasons, the values indicated above in Table 3.10-13 are the largest (i.e., worst-case) increases that will occur at any residence to the north (for example), and do not necessarily represent the same locations considered in Tables 3.10-9 and 3.10-12.

Table 3.10-14 summarizes the assessment of impact for the noise increases due to Horizon 3 on-site activities. According to the table, Horizon 3 on-site activities would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts would be less than significant.

Table 3.10-14
Assessment of Impact for Noise Increases Due to Horizon 3 On-Site Activities

Receiver location	Scenario		
	Daytime Campus	Spring Afternoon Sports	Fall Afternoon Sports
Closest properties to the north	Less than significant[a]	Less than significant[a]	Less than significant[a]
Closest properties to the east	Less than significant[b,c]	Less than significant[a]	Less than significant[b,c]
Closest properties to the south	Less than significant[a]	Less than significant[a]	Less than significant[a]
Closest properties to the west	Less than significant[a]	Less than significant[a]	Less than significant[a]
Property immediately adjacent to southwest corner of SBVC	Less than significant[a]	Less than significant[a]	Less than significant[a]

Notes:
a. Impact is less than significant because the noise increase does not result in noise levels above 65 dBA.
b. Impact is less than significant because the noise increase does not result in noise levels above 65 dBA at any locations that previously experienced noise levels below 65 dBA.
c. Impact is less than significant because the 1-hour L_{eq} does not increase by 3 dBA or more at any locations with previous noise levels of 65 dBA or higher.

3.10.3.3 Future Noise Impacts On Campus

The discussion of future noise impacts at SBVC has been divided into two sections: exterior and interior noise levels.

Exterior Noise Levels. Based on data in the Traffic Study (Fehr & Peers 2009), an analysis was conducted to identify the future traffic noise exposures that would occur at the campus for Horizon 3 (Year 2030). The results of the analysis are provided in Appendix F and summarized in Table 3.10-15. According to the table, the L_{dn} is expected to be less than the threshold of 65 dB for a school site at all proposed buildings and outdoor activity areas except at Building 25 (Liberal Arts) adjacent to Mount Vernon Avenue, where the L_{dn} would be marginally higher at about 65.2 dB. However, because there are no outdoor activity areas associated with Building 25, the impact is not significant.

Table 3.10-15
Horizon 3 (Year 2030) Traffic Noise Exposure Levels at SBVC

Arterial / Segment	Average Daily Traffic (ADT)	Unmitigated L_{dn} @ Nearest Sensitive Receptor*	Distance to L_{dn} Contour from Roadway Centerline	
			60 dB	65 dB
Esperanza Street				
Mt. Vernon Ave. to Eureka Ave.	2,091	50.7 dB	--	--
Eureka Ave. to K St.	2,034	56.3 dB	--	--
Grant Avenue				
Mt. Vernon Ave. to Fairview Ave.	6,713	54.0 dB	48'	--
Fairview Ave. to K St.	6,328	56.4 dB	46'	--
K Street				
Grant Ave. to Esperanza St.	4,250	>59.8 dB	--	--
Mt. Vernon Avenue				
Grant Ave. to Esperanza St.	15,088	65.2 dB	114'	66'

Notes:
"--" signifies that the contour is located less than 35 feet from the roadway centerline
* The TNM Lookup tables only address receptors at distances of between 32 and 980 feet from the roadway centerline. Therefore, where the distance to the nearest receptor is less than 32 feet, the L_{dn} at the receptor is shown as being greater than (">") the L_{dn} at 32 feet. Likewise, where the distance to the nearest receptor is greater than 980 feet, the L_{dn} at the receptor is shown as being less than ("<") the L_{dn} at 980 feet.

Interior Noise Levels. It has been assumed in the Noise Study that standard construction provides at least 20 dB of noise reduction with windows and doors closed. As indicated above, Building 25 (Liberal Arts Building) would be exposed to an L_{dn} of approximately 65.2 dB. Based on the assumption identified above, it is estimated that the interior L_{dn} would be approximately 45.2 dB with windows and doors closed. This marginally exceeds the threshold of 45 dB. Implementation of Mitigation Measure N-14 would reduce impacts to a less than significant level. At all other proposed buildings the interior L_{dn} would be less than 45 dB; impacts would be less than significant. Mitigation Measure N-15 would help ensure that the 45 dB interior noise threshold is not exceeded for future buildings.

3.10.4 Mitigation Measures

N-1: Construction and demolition shall be confined, to the extent practicable, between the hours of 7:00 a.m. and 8:00 p.m.

N-2: Notice shall be posted prior to construction identifying the location and dates of construction, and the name and phone number of a contact person at SBVC in case of complaints. The notice shall encourage the residents to call SBVC's contact person rather than the police in case of complaint. The notice shall inform residents of any changes to the schedule, including instances where construction may take place outside of the hours of between 7:00 a.m. and 8:00 p.m. The designated contact person shall be available throughout project construction with a mobile phone. If a complaint is received, SBVC's contact person shall take whatever reasonable steps are necessary to resolve the complaint.

N-3: Where feasible, temporary solid noise barriers or berms shall be erected between construction equipment and sensitive off-site receptors.

N-4: Construction storage areas shall be located away from sensitive receptors to the extent possible. Where this is not possible, the storage of waste materials, earth, and other supplies shall be positioned in a manner that will function as a noise barrier to the closest sensitive receivers.

N-5: All construction equipment shall be equipped with properly operating mufflers of a type recommended by the manufacturer.

N-6: Noisy construction equipment items shall be located as far as practicable from the surrounding residential properties and campus buildings.

N-7: The quietest construction equipment owned by the contractor shall be used. The use of electric powered equipment is typically quieter than diesel, and hydraulic powered equipment is quieter than pneumatic power. If compressors powered by diesel or gasoline engines are to be used, they shall be contained or have baffles to help abate noise levels.

N-8: All construction equipment shall be properly maintained. Poor maintenance of equipment typically causes excessive noise levels.

N-9: Noisy construction equipment shall be operated only when necessary, and shall be switched off when not in use.

N-10: To avoid potential building damage due to vibration from heavy construction equipment (bulldozers or drill rigs), the following measures shall be implemented when use of such equipment will take place within 11 feet of existing buildings:

a. Qualified structural and geotechnical engineers shall review the peak vibration velocities estimated in this report, and determine if there are any risks to the building, including possible risks from dynamic soil settlement induced by the vibration. If the structural or geotechnical engineers identify any potential risks, they shall take all necessary steps to protect the building including, but not limited to, photographing and/or videotaping the building in order to provide a record of the existing conditions before construction.

b. If considered appropriate by a qualified structural engineer or geotechnical engineer, an engineer shall be on-site during the construction activities and perform such tests and observations as are necessary to ensure the structural stability of the building. This may include vibration measurements obtained inside or outside of the building.

N-11: An acoustical analysis shall be required for the future Technical Building to verify that noise from the facility (including auto maintenance and repair, aircraft engine testing, fans and other mechanical equipment) does not exceed a 1-hour L_{eq} of 65 dBA at noise-sensitive offsite receptors. The design features required to achieve this requirement may include one or more of the following elements, as verified by the acoustical study: noise barriers, locating activities inside the building, upgrading the design of the building to increase noise reduction, locating noisy activities away from the nearby homes, and providing silencers for air extraction fans.

N-12: An acoustical analysis shall be required for the future central plant to verify that the overall noise levels generated by the mechanical equipment (i.e., air conditioners, heat pumps, refrigeration equipment, etc.) do not exceed a 1-hour L_{eq} of 65 dBA at noise-sensitive offsite receptors. The design features required to achieve this requirement may include one or more of the following elements, as verified by the acoustical study: selecting quieter equipment, adding or upgrading silencers, improving the design of mechanical penthouses, raising the height of rooftop parapet walls, placing equipment inside a building, and/or installing screen walls around individual equipment items.

N-13: Bleacher seating on the east side of the football field may be closed-backed to provide a barrier to crowd noise. The backing material may extend at least 5 feet above the level of the highest seats in each bleacher so that a barrier is also provided for noise from the higher seating levels.

N-14: An acoustical study shall be required for Building 25 (Liberal Arts) to verify that the building has been properly designed to comply with the L_{dn} threshold of 45 dB for interior areas. The design features required to achieve the noise standard may include one or more of the following elements, as verified by the acoustical study: sound-rated windows and doors, orientation of windows relative to Mount Vernon Avenue, upgraded exterior wall and/or roof construction, insulation batts, and/or forced air ventilation.

N-15: Mechanical ventilation shall be installed at all new SBVC buildings since the interior threshold of 45 dB L_{dn} is to be met with windows and doors closed.

3.10.5 Residual Impacts After Mitigation

It is not considered feasible to mitigate construction noise levels such that they would not increase the 1-hour L_{eq} from less than 65 dBA to more than 65 dBA at all sensitive receptors in the project vicinity. However, it is noted that Mitigation Measures N-1 through N-9 would control construction noise to the extent practicable. Even with these measures, construction noise would continue to be significant and unavoidable. Construction noise would be temporary, would diminish over the course of construction, and would cease entirely at the completion of the Proposed Project.

It is not considered feasible to mitigate the noise impacts associated with future sporting events at the project site because, by their nature, these are outdoor events that are intended to attract large crowds. These facilities cannot be readily enclosed; shielding them would require significant solid noise barriers (both in terms of height and length). While the Master Plan provides reconfiguration and/or upgrade to sports facilities, it is noted that these noise sources already exist at SBVC and would continue with or without the Master Plan Project. Nevertheless, during future sporting events there would be a substantial permanent increase in ambient noise levels above levels existing without the project at some of the homes to the east of SBVC. Mitigation Measure N-13 would provide some reduction in the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to be significant and unavoidable.

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3.11 PUBLIC SERVICES

3.11.1 Environmental Setting

3.11.1.1 Fire Protection

Fire protection is provided by the San Bernardino City Fire Department (SBFD). SBFD serves a resident population of 199,225 and covers a diverse area or approximately 60 square miles. The service area includes approximately 19 miles of wildland interface area, a major rail yard, an international airport, the County seat, a correctional facility, two major mall complexes, and two major interstate freeways. SBFD is headquartered at 200 E 3rd Street. The total number of emergency operation personnel is 161 divided among three platoons. The current number of on-duty fire personnel per shift is 53 (City of San Bernardino 2008a). SBFD has twelve fire engine companies, one hazardous material response rig, and one medic squad housed in 12 stations in the city.

The closest fire station to SBVC is Station 230, located at 502 S. Arrowhead Avenue, approximately one mile east of the campus. Fire Station 230 has a medic engine, a brush engine, and a heavy rescue unit with a four person staff.

In addition to these 12 fire stations, the City Fire Department has joint response agreements with the neighboring cities including the City of Rialto, Colton, and Loma Linda and has signed a mutual aid agreement with San Bernardino County and Cal Fire.

3.11.1.2 Police Protection

Police Protection is provided by the SBVC Police Department. SBVC police operate between the hours of 8 a.m. and 5 p.m. Monday through Friday. On weekday evenings and on weekends the officers will work in conjunction with the San Bernardino County Sheriffs Department. The SBVC Police Department has a total of five patrol vehicles that are also shared with the Crafton Hills College campus (Shen Milsom & Wilke, Inc. 2006).

Additional agreements are in place with the San Bernardino Police Department (SBPD) and the Colton Police Department for assistance and support. SBVC Police act as first responders to any campus incident. The SBPD has 312 sworn officers with an additional 150 civilian staff members (City of San Bernardino 2008b). The nearest SBPD station is located at 1292 W. Mill Street, approximately two blocks north of the corner of Esperanza Street and Mount Vernon Avenue.

3.11.1.3 Schools

The City of San Bernardino is served by the San Bernardino City Unified School District (SBCUSD). SBCUSD provides K-12 education for the City of San Bernardino, part of the City of Highland, and the unincorporated communities of Muscoy and Devore.

The district includes forty-six elementary schools, nine middle schools, and seven high schools. Middle College High School is located on the SBVC campus and allows high school students to take advanced classes in a college setting.

3.11.1.4 Parks and Recreation Facilities

Campus Recreational Facilities. The SBVC campus offers various recreational facilities including a track, athletic fields, gymnasiums, two swimming pools, and tennis courts. The swimming pools were originally open for community use in addition to student programs. The community use of the pools has been discontinued for many years and the pools are currently only being used for curriculum/educational programs.

Off Campus Recreational Facilities. The Parks Division of the City of San Bernardino Community Services Department provides maintenance, construction, and inspection services for the parklands and facilities within the City (City of San Bernardino 2009a). The Recreation Division provides a wide range of recreation and social services to the community. The nearest community center is the Lytle Creek Community Center, located at Lytle Creek Park.

Several parks exist in the vicinity of the project area in the cities of San Bernardino and Colton. These include:

- Lytle Creek Park, located approximately 0.5 mile north of the campus;
- San Bernardino Golf Course, located approximately 2 miles south east;
- Nuñez Park, located approximately 2 miles northwest; and
- Colton Municipal Park, located approximately 1 mile south.

3.11.1.5 Public Libraries

Library services in the area are provided by the City of San Bernardino Public Library System. The San Bernardino Public Library System operates four libraries throughout the city; including the Norman F. Feldheym Central Library, the Dorothy Inghram Branch Library, the Howard M. Rowe Branch Library, and the Paul Villaseñor Branch Library. The Norman F. Feldheym Central Library, the main library of the Public Library System, is located at 555 West 6th Street approximately 1.5 miles to the northwest of the campus. The library facility closest to the project site is the Paul Villaseñor Branch Library, located at 525 N. Mount Vernon Avenue approximately one mile north of the campus.

In addition to the City libraries, there are several libraries in the region including the SBVC campus library. The SBVC library contains over 100,000 titles that are accessible through an online catalog that displays both the SBVC collection and the Crafton Hills College Library collection. The Colton City Library is located at 656 N. 9th Street in the City of Colton (one mile to the southwest of the project site).

3.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant adverse impact on public services if it would 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:

- Fire protection;
- Police protection;
- Schools;
- Parks; and
- Other public facilities.

3.11.3 Environmental Impacts

3.11.3.1 Fire Protection

The development proposed by the Master Plan on the SBVC campus would create the need for additional infrastructure in order to meet SBFD requirements. The development proposed by the Master Plan would meet the previous requirements and includes additional fire safety infrastructure which would create a beneficial impact to campus fire safety.

3.11.3.2 Police Protection

Although there is a projected increase in the enrollment at SBVC, there would not be a resident population on the campus. The 2008 estimate enrollment was 12,561; projected future total student enrollment is expected to reach 13,300 for Horizon 1, 15,000 for Horizon 2, and 17,000 for Horizon 3. This increase in enrollment would proportionately increase the number of responses from the San Bernardino Police Department. SBCCD public safety personnel and services on the campus would increase proportionately with growing enrollment, reducing the need for the San Bernardino Police Department's response to minor public safety incidences. It is unlikely that the increase in students, which is small relative to the overall population of the City of San Bernardino, would require the construction of new police facilities in order to reduce response times. A less than significant impact would occur.

3.11.3.3 Schools

No increases in the number of school age children requiring construction of new schools are anticipated as a result of this project because there would be no resident population on the campus. The SBVC Master Plan has assumed that the Middle College High School will be relocated off-campus by 2020 (Horizon 2) to a location to-be-determined (north of Esperanza Street) and continue their relationship with the SBVC. As such, impacts would be less than significant.

3.11.3.4 Parks and Recreation Facilities

The development proposed by the Master Plan would result in beneficial impacts to the recreational facilities on-campus. Horizon 2 would include the demolition of both gymnasiums, the renovation of the baseball field, and the construction of two new gymnasiums, a new softball field, a new soccer field, tennis courts, and new home and visitor stands for the track/football field. Student enrollment is projected to grow from 12,561 to 17,000 by Horizon 3. The Master Plan does not include student housing. Implementation of the Master Plan would not result in the expansion or the need to build additional parks or recreational facilities. No impacts to off-campus recreational facilities are expected.

3.11.3.5 Public Libraries

There would be no resident population increases as a result of the Proposed Project that would generate increased library demand. No impact would occur.

3.11.4 Mitigation Measures

As there are no significant impacts to public services associated with the Proposed Project, no mitigation measures are required.

3.11.5 Residual Impacts After Mitigation

Impacts would be less than significant.

3.12 TRAFFIC AND PARKING

A Transportation Impact Study was prepared for the Master Plan (Fehr and Peers 2009; Appendix G). The results of the study are summarized below.

3.12.1 Environmental Setting

3.12.1.1 Existing Campus Roadway Network

San Bernardino Valley College is located in the City of San Bernardino. The study area contains intersections located in both the City of San Bernardino and the City of Colton (Figure 3.12-1). The project study area is generally bounded by Mill Street to the north, Colton Avenue to the south, Mount Vernon Avenue to the west and the Interstate 215 (I-215) to the east. Major roadways within the study area include:

I-215 is a north-south freeway, which provides access to Riverside and San Diego counties. I-215 has limited access, and varies between four- and eight- lanes in width. I-215 begins at its junction with I-15 North in San Bernardino, approximately 12 miles north of the project site, and terminates at its junction with I-15 South in Murrieta, approximately 42 miles south of the project site. Near the project site, I-215 has three lanes of travel in each direction. Freeway entrances and exits near the project site are along Inland Center Drive and Mill Street.

Mount Vernon Avenue is classified as a Major Arterial by the City of San Bernardino General Plan, which serves as a thoroughfare linking San Bernardino to adjacent cities. Mount Vernon Avenue begins in San Bernardino with its intersection at I-215, approximately 4 miles north of the project site, and terminates in Grand Terrace at its intersection with Pigeon Pass Road, approximately 6 miles south of the project site. Near the project site, Mount Vernon Avenue is a four-lane, north-south road and provides direct access to San Bernardino Valley College.

Colton Avenue/Inland Center Drive is classified as a Major Arterial by the City of Colton General Plan. Colton Avenue/Inland Center Drive begins at its intersection with Mill Street in San Bernardino, 1.5 miles northeast of the project site, and terminates at its intersection with N 10th Street in Colton, 1.5 miles southwest of the project site. Near the project site, it is a four-lane northeast-southwest road.

La Cadena Drive is classified as a Major Arterial by the City of Colton General Plan. La Cadena Drive begins at its intersection with Mount Vernon Avenue, at the southwest corner of the project site, and terminates at its intersection with I-215 in Colton, approximately 4.5 miles south of the project site. Near the project site, it is a four-lane northeast-southwest road.

Mill Street is classified as a Secondary Arterial by the City of San Bernardino General Plan. Mill Street begins at its intersection with Tippecanoe Avenue, approximately 3 miles east of the project site, and terminates at its intersection with Pepper Avenue in Rialto, 2.5 miles west of the project site. Near the project site, it is a four-lane east-west road, and links to major arterials within the City of San Bernardino.

Minor roadways within the study area include:

Grant Avenue is classified as a collector street for most of its length, according to the City of San Bernardino General Plan. Grant Avenue begins at its intersection with I Street, approximately .25 miles east of the project site, and terminates at its intersection with Mount Vernon Avenue at the southwest corner of the project site, when it becomes Citrus Avenue. It is generally a two-lane east-west street, although it widens to a four-lane road near its intersection with Mount Vernon Avenue. Grant Avenue provides direct access to four parking lots at San Bernardino Valley College.

K Street is classified as a collector street, according to the City of San Bernardino General Plan. K Street begins at its intersection with 3rd Street, approximately one mile north of the project site, and terminates at its intersection with Hillcrest Avenue, just south of the project site. It is a two-lane, north-south street, and provides direct access to College Drive and the Child Development Center parking lots.

J Street is classified as a collector street, according to the City of San Bernardino General Plan. J Street begins at its intersection with 3rd Street, approximately one mile north of the project site, and terminates at its intersection with Hillcrest Avenue, just south of the project site. It is a two-lane, north-south street near the project site.

I Street is classified as a collector street, according to the City of San Bernardino General Plan. I Street begins at its intersection with I-215, approximately one mile north of the project site, and terminates at its intersection with Inland Center Drive just south of the project site. It is a two-lane, north-south street near the project site.

Esperanza Street is classified as a collector street, according to the City of San Bernardino General Plan. Esperanza Street begins at its intersection with I Street, approximately 0.25 miles east of the project site and terminates at its intersection with Mount Vernon Avenue, on the northwest corner of the project site. Esperanza Street is a two-lane, east-west street.

Eureka Avenue is classified as a collector street, according to the City of San Bernardino General Plan. Eureka Avenue begins at its intersection with Walnut Street, approximately 0.5 miles north of the project, and terminates at its intersection with Esperanza Street, on the northern boundary of the project site. Eureka Avenue is a two-lane, north-south street.

Within the study area, the following intersections were selected for analysis based on a review of the roadway network, the likely approach and departure routes for the project traffic, their proximity to the project site, and initial input received from adjacent intersections (Figure 3.12-2):

- W. Mill Street/S. Mount Vernon Avenue
- W. Mill Street/S. K Street
- Esperanza Street/S. Mount Vernon Avenue

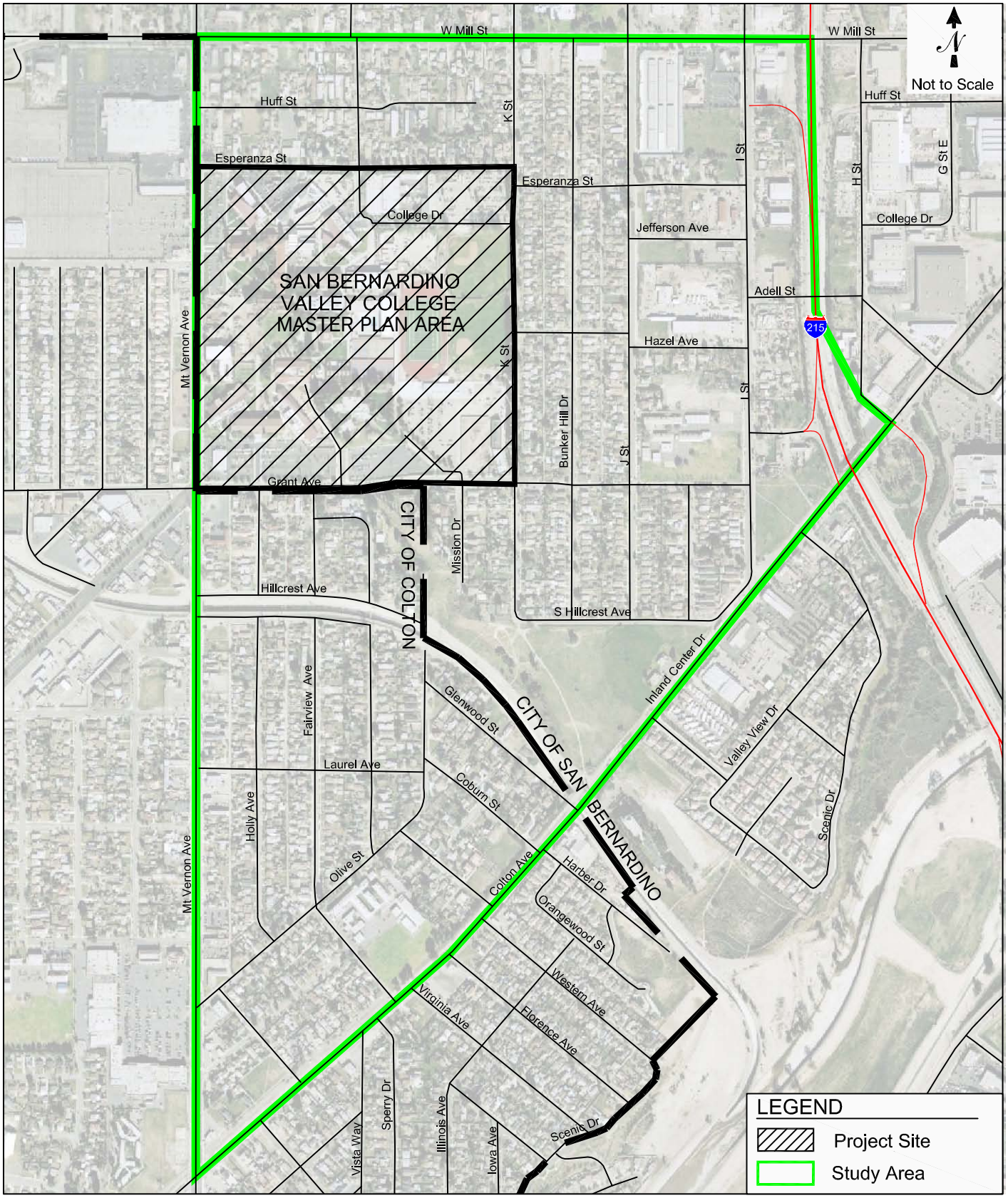

Figure 3.12-1
Project Study Area

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Source: Fehr & Peers 2009

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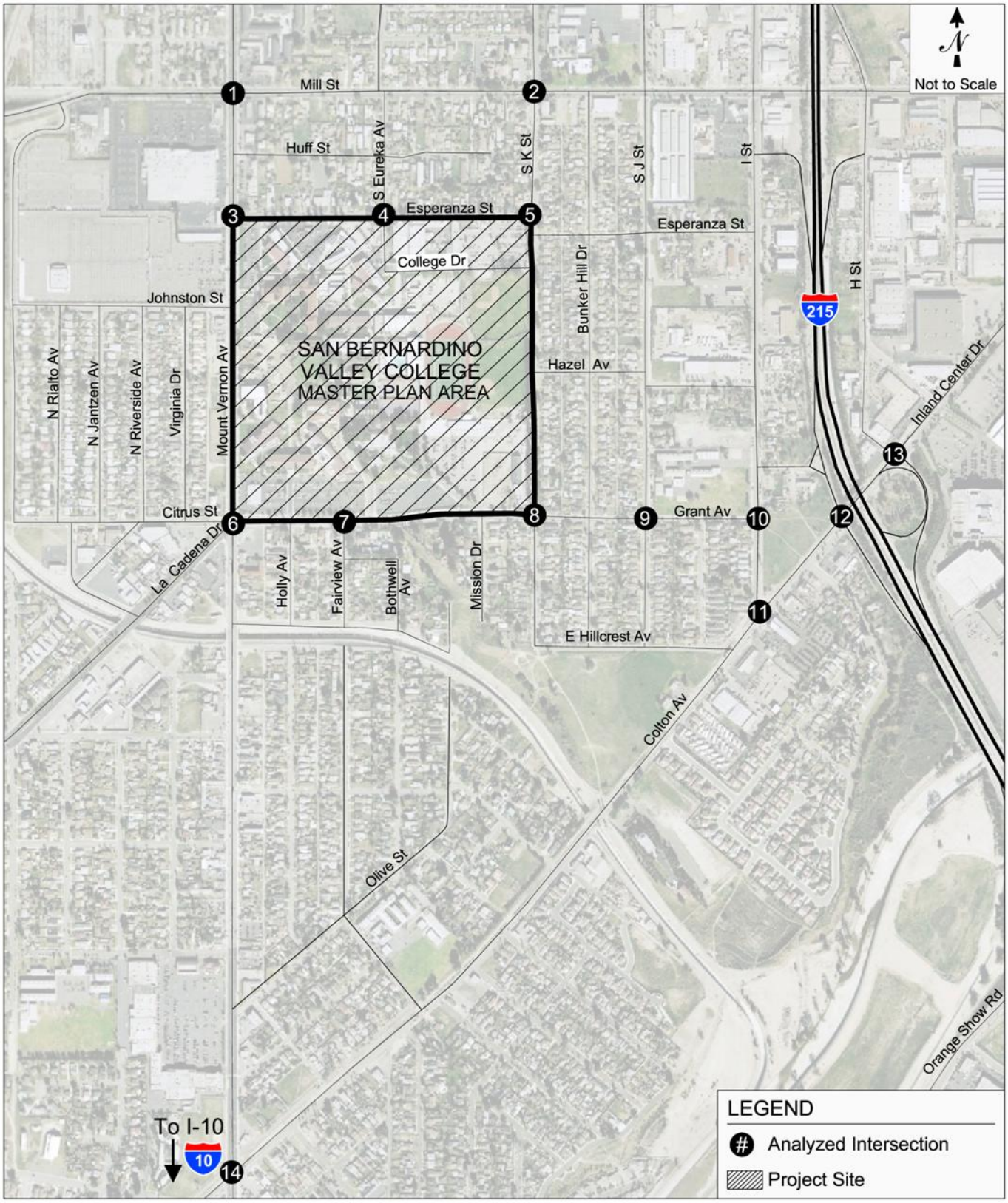

Figure 3.12-2
Study Intersections

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Source: Fehr & Peers 2009

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- Esperanza Street/S. Eureka Avenue
- Esperanza Street/S. K Street
- Grant Avenue/S. Mount Vernon Avenue/N. La Cadena Drive
- Grant Avenue/Fairview Avenue
- Grant Avenue/S. K Street
- Grant Avenue/S. J Street
- Grant Avenue/S. I Street
- Inland Center Drive/S. I Street
- Inland Center Drive/I-215 Southbound Ramps
- Inland Center Drive/I-215 Northbound Ramps
- Colton Avenue/Mount Vernon Avenue

There are currently nine driveways providing access to SBVC. Vehicles can access the college along Grant Avenue, Mount Vernon Avenue, Esperanza Street, College Drive, and K Street. Each driveway leads to one or more parking areas (Figure 3.12-3).

3.12.1.2 Existing Traffic Conditions

Level of Service. Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow at intersections. The levels of service range from excellent conditions at LOS A to overloaded conditions at LOS F. Table 3.12-1 documents the relationship between the various volume-to-capacity (V/C) ratios, Delay, and LOS for signalized intersections, while Table 3.12-2 provides the LOS value at various levels of delay for unsignalized intersections. Please note that V/C ratios are provided as they are used in the impact assessment based on requirements set forth by the San Bernardino County Congestion Management Program (CMP).

Existing Intersection Conditions. Intersection traffic counts were collected in October 2008 from 7 am to 9 am and from 4 pm to 6 pm. Existing signal timings were obtained from the jurisdiction maintaining the signals. All peak hour factors used in the assessment were field measured. As shown in Table 3.12-3, most of the intersections currently operate at an acceptable LOS of D or better during peak periods. Only the Inland Center Drive/S. I Street intersection currently operates at a deficient LOS during one or more peak period.

Table 3.12-1
Signalized Intersection LOS Criteria

Level of Service	Description	V/C Ratio	Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0.000-0.600	≤ 15.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	0.601-0.700	> 15.0 to 25.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	0.701-0.800	> 25.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	0.801-0.900	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	0.901-1.000	> 55.0 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Over 1.000	> 80.0

Note: The San Bernardino CMP guidelines consider all intersections with a V/C ratio above 1.0 to be operating at LOS F, regardless of delay LOS.

Source: Transportation Research Board 2000

Table 3.12-2
Unsignalized Intersection LOS Criteria

Level of Service	Description	Delay (seconds)
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: Transportation Research Board 2000

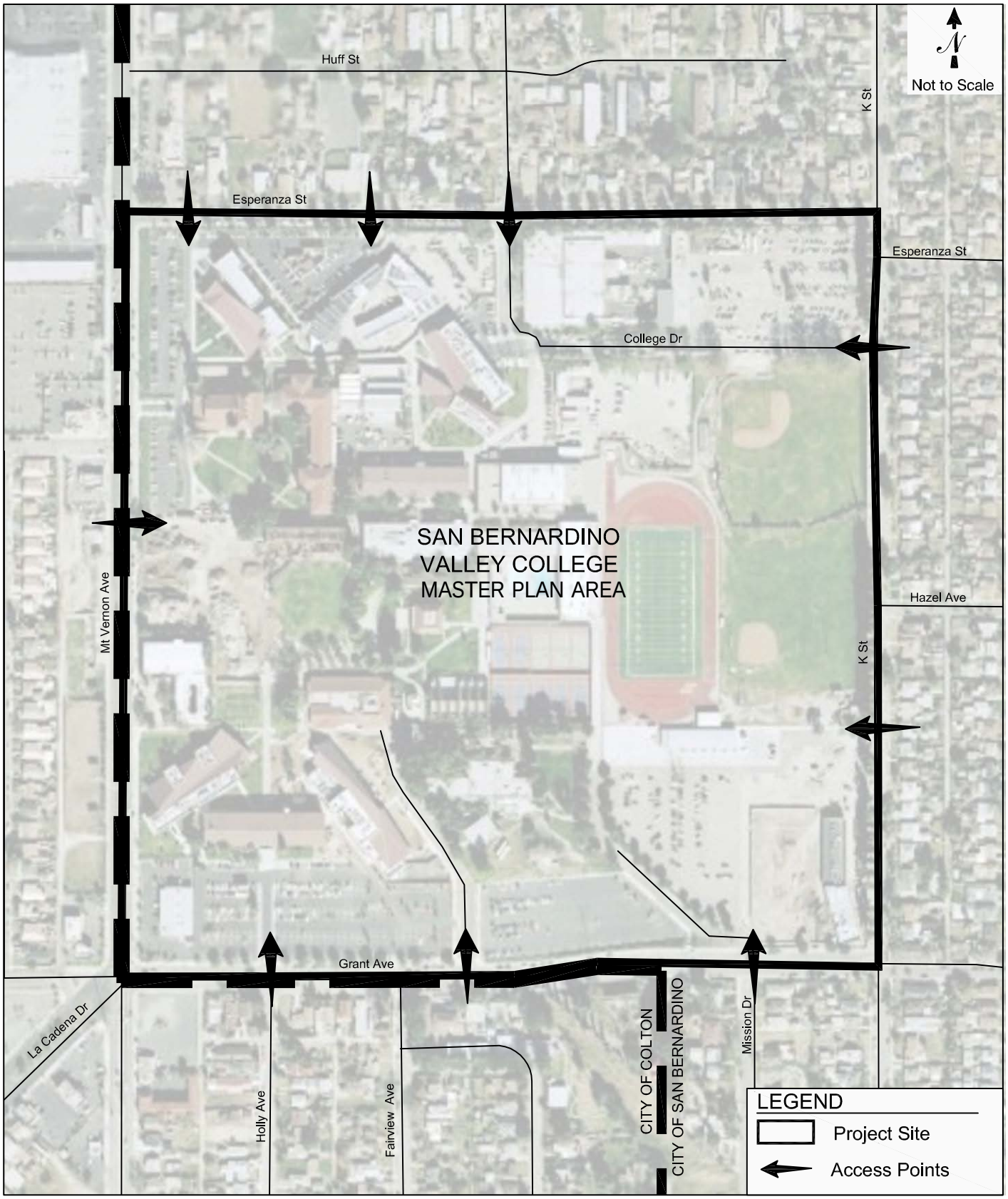

Figure 3.12-3
Existing Access Points

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Source: Fehr & Peers 2009

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Table 3.12-3
Intersection Levels of Service – Existing Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay	LOS
W. Mill Street/S. Mt. Vernon Avenue[2]	Signalized	26.1	C	26.8	C
W. Mill Street/S. K Street	Signalized	19.4	B	16.5	B
Esperanza Street/S. Mt. Vernon Avenue	SSSC	25.5	D	26.5	D
Esperanza Street/S. Eureka Avenue	SSSC	13.5	B	14.1	B
Esperanza Street/S. K Street	SSSC	9.4	A	10.1	B
Grant Avenue/S. Mt. Vernon Avenue/N. La Cadena Drive[2]	Signalized	17.9	B	24.9	C
Grant Avenue/Fairview Avenue	AWSC	8.1	A	8.2	A
Grant Avenue/S. K Street	AWSC	14.9	B	10.6	B
Grant Avenue/S. J Street	SSSC	12.8	B	14.4	B
Grant Avenue/S. I Street	SSSC	11.1	B	13.6	B
Inland Center Drive/S. I Street	AWSC	22.8	C	**73.3**	**F**
Inland Center Drive/I-215 Southbound Ramps	Signalized	21.2	C	23.8	C
Inland Center Drive/I-215 Northbound Ramps	Signalized	41.8	D	25.4	C
Colton Avenue/Mt. Vernon Avenue[2]	Signalized	36.8	D	33.4	C

Notes:
[1]Delay for signalized intersections based on application of *2000 Highway Capacity Manual* Methodology (Transportation Research Board 2000). Delay was calculated using Synchro 6.0 software. **BOLD** type indicates unacceptable operations.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
Source: Fehr and Peers 2009

3.12.1.3 Existing Parking Conditions

Parking at SBVC is provided by a combination of surface parking lots located throughout the campus. There are currently nine driveways providing access to SBVC. Vehicles can access the college along Grant Avenue, Mount Vernon Avenue, Esperanza Street, College Drive, and K Street (Figure 3.2-3). Each driveway leads to one or more parking areas. A total of 2,715 parking spaces are available for use, including on-campus parking, street parking, and spaces leased by the college at the swap meet parking area on the west side of Mount Vernon Avenue. In September and October 2008, hourly parking occupancy counts were collected. A peak hour of parking demand, which occurred from 10:30 am to 11:30 am, utilized approximately 74 percent of available parking spaces. On campus, the northern parking lots were more heavily utilized than the southern lots, with the lowest occupancy at lots near K Street.

3.12.1.4 Existing Transit Conditions

The City of San Bernardino General Plan has several statements regarding transit in the Circulation Element. Some examples include:

- Policy 6.6.1 – Support the efforts of regional, state, and federal agencies to provide additional local and express bus service in the City.
- Policy 6.6.2 – Create a partnership with Omnitrans to identify public transportation infrastructure needs that improve mobility.
- Policy 6.6.3 – In cooperation with Omnitrans, require new development to provide transit facilities, such as bus shelters and turnouts, as necessary and warranted by the scale of the development.
- Policy 6.6.4 – Ensure accessibility to public transportation for seniors and persons with disabilities.
- Policy 6.6.5 – In cooperation with Omnitrans, explore methods to improve the use, speed, and efficiency for transit services. These methods might include dedicated or priority lanes/signals, reduced parking standards for selected core areas, and incorporating Intelligent Transportation System architecture.
- Policy 6.6.6 – Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.
- Policy 6.6.7 – Encourage measures that will reduce the number of vehicle-miles traveled during peak periods, including the following examples of these types of measures:
    - Incentives for car-pooling and vanpooling
    - Incentives for car-pools and vanpools
    - An adequate, safe, and interconnected system of pedestrian and bicycle paths
    - Conveniently located bus stops with shelters that are connected to pedestrian/bicycle paths
- Policy 6.6.8 – Promote the use of car-pools and vanpools by providing safe, convenient park-and-ride facilities.
- Policy 6.6.9 – Work with Omnitrans to create transit corridors, such as the one currently being explored on E Street linking California State University San Bernardino (CSUSB) to Hospitality Lane, to increase transit ridership, reduce traffic congestion, and improve air quality.
- Policy 6.6.10 – Consider the provision of incentives, such as reduced parking standards and density/intensity bonuses, to those projects near transit stops that include transit-friendly uses such as child care, convenience retail, and housing.

Bus Transit Facilities. There are two transit lines which operate within the project study area. The lines are operated by Omnitrans, which provides service within San Bernardino County.

Omnitrans Line 1. Line 1 provides service between the cities of Colton and San Bernardino. Near the study area, Line 1 travels along Valley Boulevard, Mount Vernon Avenue, and 3rd Street. There is a marked stop on Mount Vernon Avenue at the western entrance to the project site. There is also a transfer point with Line 15 at the intersection of Mill Street and Mount Vernon Avenue. Line 1 operates at 15- minute to 30-minute headways (interval times) during peak periods Monday through Friday, and at 30-minute headways on Saturdays and Sundays.

Omnitrans Line 15. Line 15 provides service between the cities of Fontana, Rialto, San Bernardino and Redlands. Proximate to the study area, Line 15 travels along Rancho Avenue, Mill Street, and E Street. There is a marked stop at Mill Street and Mount Vernon Avenue, where it connects with Line 1. Line 15 operates at 30-minute headways Monday through Saturday, and at one-hour headways on Sunday.

Bicycle/Pedestrian Network. All of the roadways within the project study area, with the exception of Eureka Avenue, have sidewalks. There are marked crosswalks along the following intersections:

- W. Mill Street/S. Mount Vernon Avenue
- W. Mill Street/S. K Street
- Grant Avenue/S. Mount Vernon Avenue/N. La Cadena Drive
- Grant Avenue/S. K Street
- Grant Avenue/S. J Street
- Grant Avenue/S. I Street
- Inland Center Drive/S. I Street
- Inland Center Drive/I-215 Northbound Ramps
- Colton Avenue/Mount Vernon Avenue

Additionally, there are pedestrian “walk/don’t walk” indicators at all of the signalized intersections.

There is a bicycle route along Mount Vernon Avenue from Colton Avenue to Grant Avenue. However, there are no lane markings on the roadway along the bicycle route. There is also an off-street bicycle and pedestrian trail along Colton Avenue/Inland Center Drive from I Street to west of Mount Vernon Avenue.

3.12.2 Thresholds of Significance

The lead agency for this project study area is the San Bernardino Community College District (SBCCD). As lead agency, SBCCD can establish its own significance criteria for the community colleges in its jurisdiction. However, at present, SBCCD does not have significance criteria for conducting traffic studies. Therefore, because the SBVC Master Plan area is located in the City of San Bernardino, the City of San Bernardino’s

significance criteria coupled with standard engineering guidelines for conducting analysis were used.

1) The project, including project driveways, will disrupt existing traffic operations. Traffic operations were assessed using both quantitative (Level of Service (LOS)) and qualitative criteria. A disruption of traffic operations is defined as any of the following:

   a) The addition of project traffic causes a roadway segment's volume-to-capacity ratio to increase by 0.04 if the signalized intersection is operating at LOS C prior to the introduction of project trips.

   b) The addition of project traffic causes a roadway segment's volume-to-capacity ratio to increase by 0.02 if the signalized intersection is operating at LOS D prior to the introduction of project trips.

   c) The addition of project traffic causes a roadway segment's volume-to-capacity ratio to increase by 0.01 if the signalized intersection is operating at LOS E or F prior to the introduction of project trips.

   d) The project adds 10 or more trips at an unsignalized intersection already operating at LOS E or F, if the intersection meets signal warrants.

   e) The addition of 10 or more project trips at an unsignalized intersection causes the intersection to operate at LOS E or F, if the intersection meets signal warrants.

   f) A project interferes with, conflicts with or precludes other planned improvements such as roadway extensions/expansions, planned trail facilities, proposed creek restoration projects, etc.

   g) A project conflicts or creates inconsistencies with adopted traffic plans, guidelines, policies or standards.

   h) The construction of a project creates a temporary but prolonged impact due to lane closures, need for temporary signals, emergency vehicles access, traffic hazards to bikes/pedestrians, damage to roadbed, truck traffic on roadways not designated as truck routes, etc.

2) For CMP intersections, a V/C ratio of 1.0 or greater is considered to be LOS F, regardless of intersection delay LOS. The significance criteria for intersection operations are summarized in Tables 3.12-4 and 3.12-5.

Table 3.12-4
City of San Bernardino Signalized intersection Significance Criteria

Level of Service	ΔV/C
C	>0.04
D	>0.02
E	>0.01
F	>0.01
Source: City of San Bernardino Traffic Impact Study Guidelines 2004.	

Table 3.12-5
Unsignalized Intersection Significance Criteria

Level of Service	Project Trips
E	10 or More
F	10 or More
Source: Fehr & Peers 2009.	

3) Transit impacts are considered significant if:

   a) A project or project-related mitigation disrupts existing transit services or facilities. This includes disruptions caused by proposed-project driveways on transit streets and impacts to transit stops/shelters; and impacts to transit operations from traffic improvements proposed or resulting from a project.

   b) A project interferes with planned transit services or facilities.

   c) A project conflicts or creates inconsistencies with adopted transit system plans, guidelines, policies or standards.

   d) A project creates demand for public transit services above the capacity which is provided, or planned.

4) Bicycle impacts are considered significant if:

   a) A project disrupts existing bicycle facilities.

   b) A project interferes with planned bicycle facilities. This includes failure to dedicate right-of-way for planned on- and off-street bicycle facilities included in an adopted Bicycle Master Plan or to contribute toward construction of planned bicycle facilities along the project's frontages.

   c) A project conflicts or creates inconsistencies with adopted bicycle system plans, guidelines, policies or standards.

5) Pedestrian impacts are considered significant if:

   a) A project disrupts existing pedestrian facilities. This can include adding new vehicular, pedestrian or bicycle traffic to an area experiencing pedestrian safety concerns such as an adjacent crosswalk or school, particularly if the added traffic reduces the number of pedestrian acceptable gaps at unsignalized crossings or cause queues to spillback through pedestrian crossings.

   b) A project interferes with planned pedestrian facilities. In existing and/or planned urbanized areas, main streets or pedestrian districts, this can include impacts to the quality of the walking environment.

   c) A project conflicts or creates inconsistencies with adopted pedestrian system plans, guidelines, policies or standards.

6) Project site plans and proposed off-site improvements, including mitigation, were reviewed for consistency with local design standards, parking codes, and other adopted guidelines. Project impacts were considered significant if:

   a) Project designs for on-site circulation, access and parking areas fail to meet industry standard design guidelines.

b) A project fails to provide a sufficient quantity of on-site parking for vehicles. This analysis will consider both the anticipated parking demand and the parking.

c) A project fails to provide a sufficient quantity of on-site parking for bicycles.

d) A project fails to provide accessible and safe pedestrian connections between buildings and to adjacent streets and transit facilities.

e) A project fails to provide adequate accessibility for service and delivery trucks on-site including access to truck loading areas.

f) A project violates access management standards (e.g., driveway spacing, signal spacing, sight distance, etc.) in a way that causes an adverse effect on the environment or reduction in public safety

3.12.3 Environmental Impacts

3.12.3.1 Traffic

Horizon 1 Traffic Impact Assessment. This section documents the project impacts during Horizon 1 of Master Plan development, targeted for 2010.

To identify growth along project roadways, the Southern California Association of Governments (SCAG) Travel Demand Forecast (TDF) model buildout volumes in San Bernardino with the SCAG TDF model base year volumes were compared. Based on this information, a growth rate of approximately two percent per year, or four percent ambient growth between the base year and Horizon 1, was projected. This growth rate was applied to the redistributed existing volumes to account for completion of the I-215 improvements. Table 3.12-6 documents the LOS results for the Horizon 1 (2010) No Project scenario and Table 3.12-7 documents the LOS results for the Horizon 1 (2010) With Project scenario.

Table 3.12-8 compares the V/C ratios for the No Project and With Project scenarios to identify significant impacts at signalized intersections. Table 3.12-9 documents whether unsignalized intersections would meet significant impact criteria. As shown in these tables, all intersections would operate at LOS D or better in both scenarios.

As shown in Tables 3.12-6 through 3.12-9, the Proposed Project is expected to result in a less-than-significant impact to area intersections at the end of Horizon 1 in accordance with the significance criteria described in Section 3.12.2.

Table 3.12-6
Intersection Levels of Service – Horizon 1 (2010) No Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay[1]	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	25.6	C	0.51	29.9	C	0.66
Mill St./K St.	Signalized	21.5	C	0.35	18.8	B	0.30
Esperanza St./Mt. Vernon Ave.	SSSC	19.4	C		30.4	D	
Esperanza St./Eureka Ave.	SSSC	11.5	B		12.1	B	
Esperanza St./K St.	SSSC	9.6	A		10.2	B	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	20.2	C	0.33	24.5	C	0.58
Grant Ave./Fairview Ave.	AWSC	7.8	A		8.1	A	
Grant Ave./K St.	AWSC	10.9	B		10.2	B	
Grant Ave./J St.	AWSC	10.1	B		10.3	B	
Grant Ave./I St.	SSSC	10.5	B		10.9	B	
Inland Center Dr./I St.	AWSC	16.5	C		24.0	C	
Inland Center Dr./I-215 Southbound Ramps	Signalized	20.2	C	0.28	23.9	C	0.43
Inland Center Dr./I-215 Northbound Ramps	Signalized	28.7	C	0.26	24.8	C	0.33
Colton Ave./Mt. Vernon Ave. [2]	Signalized	35.8	D	0.35	34.9	C	0.46

Notes:
[1]Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
Source: Fehr & Peers 2009

Table 3.12-7
Intersection Levels of Service – Horizon 1 (2010) With Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay[1]	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	25.5	C	0.51	29.9	C	0.66
Mill St./K St.	Signalized	21.1	C	0.34	18.6	B	0.30
Esperanza St./Mt. Vernon Ave.	SSSC	18.9	C		28.5	D	
Esperanza St./Eureka Ave.	SSSC	11.3	B		12.0	B	
Esperanza St./K St.	SSSC	9.5	A		10.2	B	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	20.4	C	0.33	24.5	C	0.58
Grant Ave./Fairview Ave.	AWSC	7.7	A		8.1	A	
Grant Ave./K St.	AWSC	11.1	B		10.2	B	
Grant Ave./J St.	AWSC	10.2	B		10.5	B	
Grant Ave./I St.	SSSC	10.7	B		10.9	B	
Inland Center Dr./I St.	AWSC	16.8	C		24.0	C	
Inland Center Dr./I-215 Southbound Ramps	Signalized	20.3	C	0.28	23.9	C	0.43
Inland Center Dr./I-215 Northbound Ramps	Signalized	28.7	C	0.26	24.8	C	0.33
Colton Ave./Mt. Vernon Ave. [2]	Signalized	35.8	D	0.35	34.9	C	0.46

Notes:
[1]Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
Source: Fehr & Peers 2009

Table 3.12-8
Summary of Impacts for Signalized Intersections – Horizon 1 (2010)

Intersection	LOS AM(PM)	Allowable ΔV/C AM(PM)	AM Peak Hour			PM Peak Hour		
			No Project	With Project	Δ V/C	No Project	With Project	Δ V/C
Mill St./Mt. Vernon Ave.	C(C)	0.04(0.04)	0.51	0.51	0.00	0.66	0.66	0.00
Mill St./K St.	C(B)	0.04(N/A)	0.35	0.34	-0.01	0.30	0.30	0.00
Grant Ave./Mt. Vernon Ave./La Cadena Dr.	C(C)	0.04(0.04)	0.33	0.33	0.00	0.58	0.58	0.00
Inland Center Dr./I-215 Southbound Ramps	C(C)	0.04(0.04)	0.28	0.28	0.00	0.43	0.43	0.00
Inland Center Dr./I-215 Northbound Ramps	C(C)		0.26	0.26	0.00	0.33	0.33	0.00
Colton Ave./Mt. Vernon Ave.	C(C)		0.35	0.35	0.00	0.46	0.46	0.00

Source: Fehr & Peers, 2009

Table 3.12-9
Summary of Impacts for Unsignalized Intersections – Horizon 1 (2010)

Intersection	Control	AM Peak Hour			PM Peak Hour		
		LOS E or F?	>10 Trips	Meets Signal Warrants	LOS E or F?	>10 Trips	Meets Signal Warrants
Esperanza St./Mt. Vernon Ave.	SSSC	No			No		
Esperanza St./Eureka Ave.	SSSC	No			No		
Esperanza St./K St.	SSSC	No			No		
Grant Ave./Fairview Ave.	AWSC	No			No		
Grant Ave./K St.	AWSC	No			No		
Grant Ave./J St.	AWSC	No			No		
Grant Ave./I St.	SSSC	No			No		
Inland Center Dr./I St.	AWSC	No			No		

Notes:
SSSC = Side Street Stop Controlled Intersection
AWSC = All Way Stop Controlled Intersection
Source: Fehr & Peers 2009

Horizon 2 Traffic Impact Assessment. To identify growth along project roadways, the SCAG TDF model buildout volumes in San Bernardino with the SCAG TDF model base year volumes were compared. Based on this information, a growth rate of approximately two percent per year, or 27 percent ambient growth between the base year and Horizon 2 (2020) was projected. There are no planned or programmed construction projects related to roadways in the study area during Horizon 2. Table 3.12-10 documents the LOS results for the Horizon 2 (2020) No Project scenario and Table 3.12-11 documents the LOS results for the Horizon 2 (2020) With Project scenario.

Table 3.12-10
Intersection Levels of Service – Horizon 2 (2020) No Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	27.7	C	0.65	38.9	D	0.82
Mill St./K St.	Signalized	24.0	C	0.44	19.8	B	0.36
Esperanza St./Mt. Vernon Ave.	SSSC	**37.2**	**E**		**219.6**	**F**	
Esperanza St./Eureka Ave.	SSSC	13.0	B		14.4	B	
Esperanza St./K St.	SSSC	11.3	B		11.6	B	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	22.0	C	0.43	30.0	C	0.75
Grant Ave./Fairview Ave.	AWSC	8.6	A		9.2	A	
Grant Ave./K St.	AWSC	17.6	C		14.6	B	
Grant Ave./J St.	AWSC	14.4	B		15.1	C	
Grant Ave./I St.	SSSC	13.3	B		14.6	B	
Inland Center Dr./I St.	AWSC	**49.6**	**E**		**67.4**	**F**	
Inland Center Dr./I-215 Southbound Ramps	Signalized	21.2	C	0.34	24.8	C	0.51
Inland Center Dr./I-215 Northbound Ramps	Signalized	32.5	C	0.34	25.7	C	0.44
Colton Ave./Mt. Vernon Ave. [2]	Signalized	36.9	D	0.42	38.8	D	0.57

Notes:
[1]Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
BOLD type indicates unacceptable operations
Source: Fehr & Peers 2009

Table 3.12-11
Intersection Levels of Service – Horizon 2 (2020) With Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	27.7	C	0.65	38.9	D	0.82
Mill St./K St.	Signalized	22.8	C	0.43	19.5	B	0.35
Esperanza St./Mt. Vernon Ave.	SSSC	31.2	D		**95.9**	**F**	
Esperanza St./Eureka Ave.	SSSC	12.0	B		13.1	B	
Esperanza St./K St.	SSSC	10.8	B		11.9	B	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	22.7	C	0.44	30.8	C	0.76
Grant Ave./Fairview Ave.	AWSC	8.4	A		9.2	A	
Grant Ave./K St.	AWSC	20.0	C		14.4	B	
Grant Ave./J St.	AWSC	15.5	C		14.9	B	
Grant Ave./I St.	SSSC	14.2	B		14.9	B	
Inland Center Dr./I St.	AWSC	**53.8**	**F**		**67.4**	**F**	
Inland Center Dr./I-215 Southbound Ramps	Signalized	21.6	C	0.34	24.9	C	0.51
Inland Center Dr./I-215 Northbound Ramps	Signalized	32.4	C	0.34	25.7	C	0.45
Colton Ave./Mt. Vernon Ave. [2]	Signalized	36.9	D	0.42	38.8	D	0.57

Notes:
[1]Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
BOLD type indicates unacceptable operations
Source: Fehr & Peers 2009

Without the project, the following intersections would operate at an unacceptable LOS during one or more peak hours:

- Esperanza St./Mount Vernon Ave. (AM and PM)
- Inland Center Dr./I St. (AM and PM)

With the project, the following intersections would operate at an unacceptable LOS during one or more peak hours:

- Esperanza St./Mount Vernon Ave. (PM)
- Inland Center Dr./I St. (AM and PM)

Table 3.12-12 compares the V/C ratios for the No Project and With Project scenarios to identify significant impacts at signalized intersections. Table 3.12-13 documents whether unsignalized intersections meet significant impact criteria. As shown in Table 3.12-12, there are no significant impacts at signalized intersections. At unsignalized intersections, documented in Table 3.12-13, a significant impact at Inland Center Drive/I Street occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection.

As shown in Tables 3.12-10 through 3.12-13, the Proposed Project is expected to result in a significant impact to area intersections at the end of Horizon 2 in accordance with the significance criteria described in Section 3.12.2. Implementation of Mitigation Measure T-1 would reduce this impact to a less than significant level.

Table 3.12-12
Summary of Impacts for Signalized Intersections – Horizon 2 (2020)

Intersection	LOS AM(PM)	Allowable ΔV/C AM(PM)	AM Peak Hour			PM Peak Hour		
			No Project	With Project	Δ V/C	No Project	With Project	Δ V/C
Mill St./Mt. Vernon Ave.	C(D)	0.04(0.02)	0.65	0.65	0.00	0.82	0.82	0.00
Mill St./K St.	C(B)	0.04(N/A)	0.44	0.43	-0.01	0.36	0.35	-0.01
Grant Ave./Mt. Vernon Ave./La Cadena Dr.	C(C)	0.04(0.04)	0.43	0.44	0.01	0.75	0.76	0.01
Inland Center Dr./I-215 Southbound Ramps	C(C)	0.04(0.04)	0.34	0.34	0.00	0.51	0.51	0.00
Inland Center Dr./I-215 Northbound Ramps	C(C)	0.04(0.04)	0.34	0.34	0.00	0.44	0.45	0.01
Colton Ave./Mt. Vernon Ave.	D(D)	0.02(0.02)	0.42	0.42	0.00	0.57	0.57	0.00
Source: Fehr & Peers 2009								

Table 3.12-13
Summary of Impacts for Unsignalized Intersections – Horizon 2 (2020)

Intersection	Control	AM Peak Hour			PM Peak Hour		
		LOS E or F?	>10 Trips	Meets Signal Warrants	LOS E or F?	>10 Trips	Meets Signal Warrants
Esperanza St./Mt. Vernon Ave.	SSSC	No			**Yes**	No	
Esperanza St./Eureka Ave.	SSSC	No			No		
Esperanza St./K St.	SSSC	No			No		
Grant Ave./Fairview Ave.	AWSC	No			No		
Grant Ave./K St.	AWSC	No			No		
Grant Ave./J St.	AWSC	No			No		
Grant Ave./I St.	SSSC	No			No		
Inland Center Dr./I St.	AWSC	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
BOLD type indicates unacceptable operations
Source: Fehr & Peers 2009

Horizon 3 Traffic Impact Assessment. To identify growth along project roadways, the SCAG TDF model buildout volumes in San Bernardino with the SCAG TDF model base year volumes were compared. Based on this information, a growth rate of approximately two percent per year, or 55 percent ambient growth between the base year and Horizon 3 was projected. There are no planned or programmed construction projects related to roadways in the study area for 2030. Table 3.12-14 documents the LOS results for the Horizon 3 (2030) No Project scenario and Table 3.12-15 documents the LOS results for the Horizon 3 (2030) With Project scenario.

Table 3.12-14
Intersection Levels of Service – Horizon 3 (2030) No Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	34.4	C	0.84	**68.9**	**E**	**1.02**
Mill St./K St.	Signalized	32.2	C	0.57	22.1	C	0.46
Esperanza St./Mt. Vernon Ave.	SSSC	**313.8**	**F**		**OFL**	**F**	
Esperanza St./Eureka Ave.	SSSC	15.9	C		18.3	C	
Esperanza St./K St.	SSSC	15.3	C		15.6	C	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	28.1	C	0.58	**51.4**	**D**	**1.02**
Grant Ave./Fairview Ave.	AWSC	9.8	A		10.6	B	
Grant Ave./K St.	AWSC	**49.7**	**E**		25.6	D	
Grant Ave./J St.	AWSC	31.9	D		29.4	D	
Grant Ave./I St.	SSSC	24.1	C		31.5	D	
Inland Center Dr./I St.	AWSC	**125.9**	**F**		**137.8**	**F**	
Inland Center Dr./I-215 Southbound Ramps	Signalized	24.6	C	0.46	27.9	C	0.59
Inland Center Dr./I-215 Northbound Ramps	Signalized	48.4	D	0.44	30.2	C	0.57
Colton Ave./Mt. Vernon Ave. [2]	Signalized	38.8	D	0.50	**55.3**	**E**	**0.69**

Notes:
[1]Delay for intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software. [2]CMP intersection.
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection; OFL = overflow; the delay at the worst approach is very long, to the point that the analysis methodology or software is not able to calculate a specific delay. **BOLD** type indicates unacceptable operations.
Source: Fehr & Peers 2009

Table 3.12-15
Intersection Levels of Service – Horizon 3 (2030) With Project

Intersection	Control	AM Peak Hour			PM Peak Hour		
		Delay[1]	LOS	V/C	Delay	LOS	V/C
Mill St./Mt. Vernon Ave.[2]	Signalized	32.7	C	0.81	**69.5**	**E**	**1.02**
Mill St./K St.	Signalized	28.2	C	0.55	21.6	C	0.45
Esperanza St./Mt. Vernon Ave.	SSSC	**164.6**	**F**		**997.0**	**F**	
Esperanza St./Eureka Ave.	SSSC	12.2	B		14.4	B	
Esperanza St./K St.	SSSC	14.2	B		16.4	C	
Grant Ave./Mt. Vernon Ave./ La Cadena Dr. [2]	Signalized	28.5	C	0.57	**51.2**	**D**	**1.01**
Grant Ave./Fairview Ave.	AWSC	8.9	A		9.8	A	
Grant Ave./K St.	AWSC	**73.2**	**F**		34.1	D	
Grant Ave./J St.	AWSC	**46.1**	**E**		**38.2**	**E**	
Grant Ave./I St.	SSSC	**45.8**	**E**		**62.3**	**F**	
Inland Center Dr./I St.	AWSC	**143.3**	**F**		**156.2**	**F**	
Inland Center Dr./I-215 Southbound Ramps	Signalized	25.4	C	0.48	28.9	C	0.63
Inland Center Dr./I-215 Northbound Ramps	Signalized	52.1	C	0.45	30.2	C	0.59
Colton Ave./Mt. Vernon Ave. [2]	Signalized	38.7	D	0.50	**56.1**	**E**	**0.70**

Notes:
[1]Delay for signalized intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
[2]CMP intersection
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
BOLD type indicates unacceptable operations
Source: Fehr & Peers 2009

Table 3.12-16 compares the V/C ratios for the No Project and With Project scenarios to identify significant impacts at signalized intersections. Table 3.12-17 documents whether unsignalized intersections meet significant impact criteria.

Table 3.12-16
Summary of Impacts for signalized intersections – Horizon 3 (2030)

Intersection	LOS AM(PM)	Allowable ΔV/C AM(PM)	AM Peak Hour			PM Peak Hour		
			No Project	With Project	Δ V/C	No Project	With Project	Δ V/C
Mill St./Mt. Vernon Ave.	C(F)	0.04(0.01)	0.84	0.81	-0.03	1.02	1.02	0.00
Mill St./K St.	C(C)	0.04(0.04)	0.57	0.55	-0.02	0.46	0.45	-0.01
Grant Ave./Mt. Vernon Ave./La Cadena Dr.	C(F)	0.04(0.01)	0.58	0.57	-0.01	1.02	1.01	-0.01
Inland Center Dr./I-215 Southbound Ramps	C(C)	0.04(0.04)	0.46	0.48	0.02	0.59	0.63	0.04
Inland Center Dr./I-215 Northbound Ramps	C(C)	0.04(0.04)	0.44	0.45	0.01	0.57	0.59	0.02
Colton Ave./Mt. Vernon Ave.	D(E)	0.02(0.01)	0.50	0.50	0.00	0.69	0.70	0.01

Source: Fehr and Peers 2009

Table 3.12-17
Summary of Impacts for Unsignalized Intersections – Horizon 3 (2030)

Intersection	Control	AM Peak Hour			PM Peak Hour		
		LOS E or F?	>10 Trips	Meets Signal Warrants	LOS E or F?	>10 Trips	Meets Signal Warrants
Esperanza St./Mt. Vernon Ave.	SSSC[1]	**Yes**	No		**Yes**	No	
Esperanza St./Eureka Ave.	SSSC	No			No		
Esperanza St./K St.	SSSC	No			No		
Grant Ave./Fairview Ave.	AWSC	No			No		
Grant Ave./K St.	AWSC	**Yes**	**Yes**	**Yes**	No		
Grant Ave./J St.	AWSC	**Yes**	**Yes**	No	**Yes**	**Yes**	No
Grant Ave./I St.	SSSC	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Inland Center Dr./I St.	AWSC	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Notes:
[1]Delay for signalized intersections based on application of *2000 Highway Capacity Manual* Methodology. Delay was calculated using Synchro 6.0 software.
SSSC = Side Street Stop Controlled Intersection; AWSC = All Way Stop Controlled Intersection
BOLD type indicates unacceptable operations
Source: Fehr and Peers 2009

In the No Project scenario, the following intersections operate at an unacceptable LOS during one or more peak hours:

- Mill St./Mount Vernon Ave. (PM)
- Esperanza St./Mount Vernon Ave. (AM and PM)
- Grant Ave./Mount Vernon Ave./La Cadena Dr. (PM)
- Grant Ave./K St. (AM)
- Inland Center Drive/ I St. (AM and PM)
- Colton Ave./Mount Vernon Ave. (PM)

In the With Project scenario, the following intersections operate at an unacceptable LOS during one or more peak hours:

- Mill St./Mount Vernon Ave. (PM)
- Esperanza St./Mount Vernon Ave. (AM and PM)
- Grant Ave./Mount Vernon Ave./La Cadena Dr. (PM)
- Grant Ave./K St. (AM)
- Grant Ave./J St. (AM and PM)
- Grant Ave./I St. (AM and PM)
- Inland Center Drive/ I St. (AM and PM)
- Colton Ave./Mount Vernon Ave. (PM)

As shown in Table 3.12-16, there are no significant impacts at signalized intersections with the addition of project trips. However, as shown on Table 3.12-17, there are significant impacts at the following unsignalized intersections:

- Grant Ave./K St. (AM)
- Grant Ave./I St. (AM and PM)
- Inland Center Drive/ I St. (AM and PM)

A significant impact at an unsignalized intersection occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection. This analysis assumes that the unsignalized intersection of Inland Center Drive/I Street is not signalized in Horizon 2, as a worst-case scenario. Implementation of Mitigation Measures T-1 and T-2 would reduce impacts to a less-than-significant level. Although the SBCCD would pay its fair share toward the construction of traffic signals at these intersections, signal construction is ultimately under the control of the City of San Bernardino. If the traffic signals that are required as part of Mitigation Measure T-2 for the unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street are not constructed by the City, this impact would remain significant.

Grant Avenue/J Street is an all-way stop controlled intersection that is forecasted to operate unacceptably in Horizon 3. Since the project would add more than 10 peak hour trips, a signal warrant analysis was conducted. The analysis found that this intersection does not meet signal warrants. Impacts at this intersection would therefore be less than significant.

3.12.3.2 Parking

Using existing parking enrollment data, a parking demand rate of 0.16 spaces/student, and a recommended parking supply rate of 0.18 spaces/student was calculated. Based on anticipated student enrollment in each Horizon Year, the following parking supply is recommended:

- 2,433 spaces in Horizon 1
- 2,744 spaces in Horizon 2
- 3,110 spaces in Horizon 3

The following spaces are proposed in the Master Plan:

- 3,182 spaces in Horizon 1
- 3,055 spaces in Horizon 2
- 3,349 spaces in Horizon 3

The Proposed Project plans to construct an approximate 1,250 space parking structure in Horizon 1, and an approximate 1,100 space parking structure in Horizon 3.

With the inclusion of an approximate 1,250 space parking structure, there are more than sufficient spaces on-site in Horizon 1 to accommodate the identified parking demand without use of either the Swap Meet parking area or the on-street parking spaces (which are both currently utilized).

Under Horizons 2 and 3, the parking assessment indicates that it is necessary to use a portion of on-street parking or the Swap Meet site to accommodate projected parking demand. However, the demand for off-campus spaces would be less than with current conditions. Therefore, the Proposed Project is not expected to exacerbate a parking demand beyond what is occurring under existing conditions. The parking impact is considered to be less than significant and no mitigation is required.

3.12.3.3 Transit

The Proposed Project does not conflict with the City of San Bernardino's transit policies or other policies related to transit. The impact is therefore less than significant and no mitigation is required.

Bus Transit Facilities. Currently there are transit lines with stops along Mount Vernon Avenue and Mill Street. SBVC currently has an access point along Mount Vernon Avenue. The access point would remain with the project development; however, the parking lot connected to the driveway would be reduced. As a result, fewer vehicles would be utilizing this driveway. Development of the project site would not disrupt existing transit services or facilities on either Mount Vernon Avenue or Mill Street. Additionally, there are no significant impacts along either of these roadways. Therefore, the project would not affect access to existing transit service; the impact is less than significant.

According to the *2000 United States Decennial Census*, less than two percent of trips in the City of San Bernardino are by transit. Based on the assumption that this percentage of persons using transit remains the same for both analysis years, that the incremental transit trips associated with the project would only increase in Horizon 3 by two transit riders. Given the existing transit service in proximity to SBVC, the incremental transit trips produced by the project would not generate a demand beyond the capacity already provided. A less than significant impact would occur.

Bicycle/Pedestrian Network. There is a Class I bicycle trail along Inland Center Drive/Colton Avenue proximate to the project site. Because this facility is off-street, it would not be affected by any increase in project traffic along this roadway. Additionally, there is a Class III bicycle route along Mount Vernon Avenue. Because the driveway along Mount Vernon Avenue proximate to the project site would be less utilized than it currently is, the bicycle route would not be affected with the development of the Proposed Project. Therefore, the impact is less than significant.

There are currently existing sidewalks along Mill Street, Esperanza Street, Mount Vernon Avenue, Grant Avenue, K Street, I Street, and Colton Avenue/Inland Center Drive. Additionally, most intersections have one or more crosswalks, and all signalized intersections have pedestrian phases. With the addition of project traffic, existing

pedestrian facilities would remain intact. Therefore, the project impact is less than significant and no mitigation is required.

3.12.4 Mitigation Measures

T-1: The installation of a traffic signal at the unsignalized intersection of Inland Center Drive/I Street by 2020 will improve operations to an acceptable level of service. Given the close spacing of this intersection with the interchange improvements at the Inland Center Drive/I-215 interchange, a signal interconnect system shall be required to ensure that the corridor is coordinated. Also, because the impact occurs in 2030 and is a result of both project-related traffic and cumulative growth, the SBCCD shall be responsible for a fair-share contribution toward the improvement.

T-2: The installation of a traffic signal at these unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street by 2030 would improve operations to an acceptable level of service. Since this occurs in a future scenario and is associated with both project traffic and cumulative growth assumptions, the SBCCD shall be required to make a fair-share contribution toward these improvements.

3.12.5 Residual Impacts After Mitigation

Mitigation Measures T-1 and T-2 require the fair-share contribution toward the construction of traffic signals at three unsignalized intersections. However, the SBCCD does not have control over these intersections (they are under the City of San Bernardino and/or Caltrans control) and therefore cannot guarantee that the signals would be constructed. Even with a fair-share contribution toward the improvement, the SBCCD cannot guarantee that Caltrans and/or the City would implement the improvement.

The City of San Bernardino has indicated that the intersection of Inland Center Drive/I Street will be signalized by 2020, resulting in a reduction of impacts to this intersection to a less than significant level with the implementation of Mitigation T-1 (Tim Porter, personal communication, 2009).

The City of San Bernardino has not indicated that the unsignalized intersections at Grant Street/K Street and Grant Street/I Street are scheduled to receive signals by 2030 (Tim Porter, personal communication, 2009). If the traffic signals at these intersections are constructed by 2030, Mitigation Measure T-2 would reduce impacts at these intersections to a less than significant level. If the signals are not constructed, the impact would remain significant.

3.13 UTILITIES

3.13.1 Environmental Setting

3.13.1.1 Water Service

The San Bernardino Municipal Water Department (SBMWD) provides water service to residents of the City of San Bernardino including SBVC. The SBMWD gets its water from a natural underground aquifer called Bunker Hill Basin. Water is produced by 54 groundwater wells. SBMWD has more than 122 million gallons of water storage in 39 covered reservoirs. Water is delivered through more than 560 miles of water mains to homes and businesses throughout the City. The water consumption rate for SBMWD is 250 gallons of water per person per day (City of San Bernardino 2007).

The City system includes mains located within the campus perimeter streets and within the campus interior. Two twelve-inch mains run north from Grant Street through the southern portion of campus. The two mains converge in the vicinity of the Planetarium Building and continue as a single twelve-inch main that connects to the six-inch main located in College Drive. East-west mains tie the twelve-inch main to the water main located within Mount Vernon Avenue. Additionally, an eight-inch main loops the Business Building and New Campus Center facilities connecting to the main within Grant Street. A recently constructed eight-inch main further ties the system between College Drive and Esperanza Street (Snypes-Dye Associates 2006).

Reclaimed Water. SBMWD operates a Water Reclamation Plant and Rapid Infiltration and Extraction Facility (RIX), which reclaims millions of gallons of water a day (City of San Bernardino 2008c). The reclaimed water can be used for many commercial and agricultural applications. Currently the City discharges the reclaimed water into the Santa Ana River where it contributes to existing water flow and adds to the habitat for several kinds of fish and birds.

Senate Bill 610. Senate Bill 610 (SB 610), codified in the Water Code starting at Section 10910, requires local agencies, such as cities and counties, to prepare Water Supply Assessments for projects that plan to build more than 500 residential units, or that will use an equivalent amount of water that would be used by the 500 residential units. Because the SBCCD is a state agency, SB 610 does not apply to the San Bernardino Valley College Master Plan, and a Water Supply Assessment was not prepared for this PEIR.

3.13.1.2 Sewer Service

SBVC's sanitary sewer system is approximately 75 years old and in an antiquated condition. The aged mains are cracked and failing, manholes are in disrepair, and the existing mains are undersized for current campus flow.

The system consists of vitrified clay pipe laterals, mains, and brick and concrete manholes (Snypes-Dye Associates 2006). The system conveys sewage through the

mains by means of gravity. Main sizes are six-inches in diameter. Recent redevelopment on campus has included the installation of new sections of sanitary sewer that incorporate current materials and design standards. The campus sewer system consists of two systems, which collect sanitary sewage from the eastern and western portions of the campus. The two systems flow through campus converging at the intersection of K and Grant Streets, at the southeastern corner of campus. From this intersection the sewage flows offsite easterly through the City of San Bernardino sewer system.

Sewer service is provided by the SBMWD. SBMWD operates the San Bernardino Water Reclamation Plant (SBWRP). The SBWRP is a secondary treatment facility with the ability to process 33 million gallons per day (City of San Bernardino 2005a). The SBWRP service area includes the City of San Bernardino, City of Loma Linda, East Valley, San Bernardino International Airport, Patton State Hospital, and parts of San Bernardino County. In addition, the City of San Bernardino and the City of Colton jointly operate the Rapid Infiltration and Extraction (RIX) facility, where secondary treated water undergoes the final filtering and disinfecting process to produce wastewater that is superior or equivalent to that produced by conventional filtration systems (City of San Bernardino 2005a).

3.13.1.3 Solid Waste

Solid waste services are provided to SBVC by the City of San Bernardino Refuse and Recycling Division of the Department of Public Services. Solid waste collected is disposed of at the San Timoteo and Mid-Valley Landfills, owned and operated by the County of San Bernardino. The San Timoteo Sanitary Landfill and Mid-Valley can accept a combined total of 8,500 tons of solid waste. The Mid-Valley Landfill is projected to have approximately 40 years of capacity left (City of San Bernardino 2005a).

Recycling. Assembly Bill 939 (AB 939) was signed into law on September 29, 1989. AB 939 established integrated waste management goals which include: recycling and composting, source reduction, and environmentally safe transformation and land disposal of solid wastes. AB 939 was established in an effort to reduce the quantities of solid waste disposed of in the landfill system. As such, each county and city in California was required to prepare a source reduction and recycling element (SRRE). The SRRE describes how each city or county will meet solid waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000 and every year after.

In 2002 the City of San Bernardino diverted 45 percent of their solid waste, 5 percent less than the 50 percent diversion rate required by the State of California (California Integrated Waste Management Board 2008). Local governments are subject to fines of up to $10,000 per day if the waste diversion goals are not met. Since 1995, the City of San Bernardino has received either a Board Approved or Good Faith Effort in reaching waste diversion goals required by law. The latest diversion rate calculated by the California Integrated Waste Management Board (CIWMB) for the City of San Bernardino was 54 percent in 2006.

3.13.1.4 Other Utilities

Electrical Service. Electricity is provided to SBVC by Southern California Edison (SCE). SCE owns, operates, and maintains both aboveground and underground facilities. Most of SCE's facilities are located in the street right-of-way.

The main high voltage (HV) switchgear is located at the new Central Plant Facility (CP-1). This HV switchgear replaced the old utility connection at the existing North Hall Building, which remains in operation to serve substations in North Hall as well as existing buildings in the central portion of campus. The circuits to existing buildings from this old switchgear will need to be intercepted and reconnected to the HV switchgear circuit in CP-1 when the North Hall Building is demolished.

The main HV switchgear in CP-1 has four distribution switches, each fused at 400 amps (A). Switch 1 serves the southern portion of the campus including the Child Development Center. Switch 2 serves the central portion of the campus via connection to old HV switchgear in the North Hall Building. Switch 3 serves the north eastern portion of the campus including the Life Science Building. Switch 4 serves the north western portion of the campus including CP-1 (Steinberg Architects 2009).

Natural Gas Service. Natural gas service is provided to SBVC by the Southern California Gas Company (Gas Company).The natural gas distribution system is a mixture of recently installed mains and older aged mains. Campus natural gas distribution is fed from multiple locations including gas mains located in Mount Vernon Avenue, College Drive, Grant Avenue, and K Street. The Gas Company is responsible for maintenance of gas mains from the public right-of-way to the meter. SBCCD is responsible for maintenance of all gas mains and services beyond the meters. (Steinberg Architects 2009).

Telephone/Telecommunications Services. Telephone and internet service is provided to SBVC by Verizon. The Verizon entrance facilities are routed through two conduits that originate from the corner of Mount Vernon Avenue and Esperanza Street and parallel the conduit system on the west side of campus.

A new primary and secondary ductbank system was installed between 2002 and 2005, allowing interconnectivity between buildings. The ductbank system originates at the Computer Services Building on the south side of campus and runs on the perimeter of campus on the west and on the east to form a loop. Digital communication services are distributed on a campus wide gigabit backbone system using single-mode and multimode optical fibers via an air blown fiber system. Analog communications services are distributed via a high pair count 24 American Wire Gauge (AWG) outside plant rated category 3 copper cabling system, with lightning protection. This analog system supports analog devices such as alarms and facsimile machines (Vantage Technologies 2006).

3.13.1.5 Storm Water

The storm drainage system at SBVC is comprised of surface flow to catch basins and inlets. Stormwater is conveyed through small diameter storm drains that connect to either curb outlets or large diameter storm drains. The storm drains either discharge to adjacent city streets or to the City of San Bernardino storm drain system located on K Street. The northern one-third of the campus surface drains to a 36-inch storm drain which flows east from the Administrative Building parking lot adjacent to Mount Vernon Avenue, and connects to the City of San Bernardino storm drain system located in K Street. The southern two-thirds of the campus surface drains south, discharging to Grant Street on both the west and east side of the fault ridge. Offsite drainage from Grant Street flows along developed streets, eventually discharging into the Santa Ana River (Snypes-Dye Associates 2006).

3.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant adverse utilities impact if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- 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;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- 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;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Comply with federal, state, and local statutes and regulations related to solid waste;
- Require or result in the construction or expansion of electrical, natural gas, and telephone services, which could cause significant environmental impacts.

3.13.3 Environmental Impacts

3.13.3.1 Water Service

The current campus water distribution system functions adequately and is well maintained. The proposed Master Plan would accommodate an increase of 4,439 additional students by 2030 (total = 17,000 students). Improvements to the water distribution systems would occur in all three Horizons. All new water main improvements would be designed and constructed in accordance with City of San Bernardino Water Department requirements. Construction of the water distribution system would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* of this PEIR, and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, impacts would be less than significant.

3.13.3.2 Sewer Service

The current sewer system is antiquated, in disrepair, with a need for upgrade. The proposed Master Plan would improve the sanitary sewer system. The proposed improvements to the sanitary sewer system would be designed and constructed to meet current standards. Construction of the sewer system would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* of this PEIR, and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, impacts would be less than significant.

The Proposed Project would not result in a significant increase in student enrollment. Student enrollment would increase from the 2008 estimate of 12,561 to 17,000 by 2030 (SBCCD 2009). The existing San Bernardino Water Reclamation Plant (SBWRP) would be able to accommodate the development proposed by the Master Plan. The SBWRP has a capacity of 32 MG (million gallons) per day and it currently processes 28 MG per day (City of San Bernardino 2005a). Given the available capacity of the treatment plant, the Proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. In addition, the Proposed Project would not exceed wastewater treatment requirements; a less than significant impact would occur.

3.13.3.3 Solid Waste

The development proposed by the Master Plan would generate additional solid waste. Several buildings and structures would be demolished, renovated, or constructed. In addition, site improvements, such as new landscaping and infrastructure improvements, would take place under the proposed Master Plan. There would also be an expected increase in on-campus population resulting in the generation of additional solid waste. However, the increase in solid waste produced by the Proposed Project would take place gradually from project implementation through 2030, such that the expansion of the permitted capacity of the regional landfill would not be expected. A less than significant impact would occur.

The Proposed Project would not result in the failure of compliance with federal, state, and local statutes and regulations related to solid waste. No impacts would occur.

3.13.3.4 Other Utilities

Electrical Service. The development outlined in the proposed Master Plan would improve the existing electrical distribution system where possible or replace it. Due to the proposed development and the expected increase in student enrollment the electricity needs of the campus would increase.

An analysis was completed by Steinberg Architects of the existing and future loads to determine if the existing capacity of the high voltage (HV) switchgear is sufficient to accommodate the increase electrical needs. New buildings proposed in Horizon 1 and 2 are to replace existing ones and it is anticipated that there would not be an increase in circuit load as old buildings are demolished (Steinberg Architects 2009). Wherever capacity permits the existing HV circuits would be used. The proposed Master Plan would build new buildings through Horizon 3 on the southern portion of the campus. Switch 1, which currently serves the southern part of the campus, would not have enough capacity to pick up the additional buildings. The Master Plan proposes to add an additional switch and circuit to the main HV switchgear in CP-1. This new HV circuit feeder would be routed through existing underground infrastructure to the southern portion of the campus in order to service the proposed new buildings in the area. CP-1 would need to be expanded to fit this new HV switch.

The Proposed Project would not require or result in the construction of new City power plants or the expansion of existing plants. A less than significant impact would occur. Construction of new electrical infrastructure would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* of this PEIR, and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, impacts would be less than significant.

Natural Gas Service. The development proposed by the Master Plan would reorganize the buildings on campus requiring the relocation of gas mains. Impacts from trenching, backfilling, and traffic control would occur during construction. Construction would require trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* of this PEIR, and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, impacts would be less than significant.

Telephone/Telecommunications Services. The campus features a ductbank and manhole system, built between 2002 and 2005, which would facilitate the routing of digital communication cables to the proposed buildings. Impacts are considered less than significant.

3.13.3.5 Storm Water

As part of the Master Plan additional stormwater facilities would be built and improvements to the existing stormwater facilities would occur in all three of the Horizons. Work on stormwater infrastructure would create impacts from trenching, backfilling, and traffic control. With implementation of Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* of this PEIR, and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, impacts would be less than significant. The improvements and added stormwater infrastructure would reduce flood spots on campus during wet weather thus a beneficial impact would occur during operation.

3.13.4 Mitigation Measures

Mitigation Measures G-1 and G-2 as described in *Section 3.6, Geology and Soils* and Mitigation Measures CR-1, CR-2, and CR-5 as described in *Section 3.5, Cultural and Paleontological Resources* of this PEIR, are repeated here for convenience.

G-1: All temporary excavations, including utility trenches, retaining wall excavations and other excavations shall be performed in accordance with project plans, specifications, and all OSHA requirements, and the current edition of the California Construction Safety Orders.

G-2: Utility trenches onsite shall be backfilled with the onsite material, provided it is free of debris, significant organic material, and oversized material. Prior to backfilling the trench, pipes shall be bedded in a granular material, backfilled, and compacted as specified by the project engineer.

CR-1: To avoid inadvertent impacts to subsurface archaeological resources, all ground disturbing activities in undisturbed sediments shall be monitored by a qualified archaeologist. The archaeological monitor shall have the power to temporarily halt or divert equipment to allow for recordation and evaluation of any encountered resources. If evaluated as eligible for the CRHR and determined eligible by the San Bernardino Community College District, the archaeological site must be avoided and preserved. If this is not feasible, an archeological data recovery program shall be developed by a qualified archaeologist. The data recovery report shall be submitted to the San Bernardino Information Center.

CR-2: To avoid inadvertent impacts to Native American resources, all ground disturbing activities in undisturbed sediments shall be observed by a Native American monitor. In the event that subsurface resources are encountered, the Native American monitor shall coordinate with the archaeological monitor to temporarily halt or divert equipment to allow for recordation and evaluation of the resource. If human remains of any kind are found during construction activities, all activities must cease immediately and the San Bernardino County Coroner must be notified, as required by state law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC

will then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, SBCCD shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Work can continue once the MLD's recommendations have been implemented or the remains have been reburied if no agreement can be reached with the MLD (Section 5097.98 of the Public Resource Code).

CR-5: A qualified vertebrate paleontologist, as defined by the County of San Bernardino (Development Code § 82.20.040), shall develop and implement a mitigation program for paleontologic resources. This program shall consist of:

1. Monitoring by a qualified paleontological monitor when previously undisturbed subsurface sediments are excavated, graded, or otherwise disturbed. The monitor will be equipped to recover fossils and sediment samples during excavation, but shall have the power to temporarily halt or divert equipment to allow for recovery of large or numerous fossils.

2. Preparation of recovered specimens to a point of identification and permanent preservation. This includes washing sediments to recover small invertebrate and vertebrate fossils.

3. Identification of the specimens and curation of all specimens into an established accredited museum repository (e.g., San Bernardino County Museum) with permanent retrievable paleontologic storage. Preparation of the mitigation program shall include obtaining a signed curation agreement with the museum repository prior to initiation of mitigation activities.

4. Preparation of a report of findings with an appended itemized inventory of identified specimens. The report and inventory shall be submitted to the San Bernardino Community College District and the museum repository (e.g., San Bernardino County Museum). When the San Bernardino Community College District receives the report, inventory, and verification of acceptance of the specimens by the museum repository, mitigation will be complete.

3.13.5 Residual Impacts After Mitigation

With the implementation of mitigation measures, impacts from the on-campus installation of utilities would be less than significant.

SECTION 4.0

ALTERNATIVES TO THE PROPOSED PROJECT

4.1 INTRODUCTION

In accordance with the requirements of CEQA, this section analyzes the environmental impacts of alternatives to the Proposed Project. CEQA Guidelines Section 15126.6(a) states:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibility attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*

For convenience, the Master Plan's objectives are repeated below.

The Master Plan will create connections that link and unify the campus and community to foster a positive memorable experience and identity through the following planning principles:

- **Student-centered Culture**
  - Large central gathering place
  - Distinct districts
  - Sufficient parking
  - Serve the West Valley population

- **Hierarchy of Elements**
  - Campus edges/transitions from the campus to the community
  - Delineation of primary and secondary campus entrances
  - Variety of exterior spaces

- **Access**
  - Vehicular/pedestrian circulation
  - Accessible paths and buildings
  - Wayfinding

- **Sustainable Design**
  - Respond to natural environment
  - Flexibility of space (long-term use)
  - Energy efficiency

- **Functional Integration**
  - Consolidate instructional divisions
  - Active and passive exterior spaces
  - Interior/exterior connections

This section also provides an analysis of a No Project Alternative, which is required by CEQA Guidelines (Section 4.3). The Guidelines define the No Project Alternative as "the circumstance under which the project does not proceed" (Guidelines Section 15126.6(e)(3)(B)).

The environmentally superior alternative is also identified, as provided in the State CEQA Guidelines (Section 4.4). The Guidelines state that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

4.2 ALTERNATIVES CONSIDERED BUT REJECTED

As described above, alternatives were identified and evaluated as to whether the alternative would attain most of the project objectives, avoid or substantially lessen significant effects identified for the Proposed Project, and would be feasible. The only significant unavoidable impacts from the Proposed Project would be to potentially historic structures, noise, and traffic.

Historic Resources. Several buildings would become historic in age during the implementation of the Master Plan. Because the Master Plan is phased in 10-year Horizons, it is possible that one or more of these buildings will become historic in age prior to scheduled demolition or renovation in Horizons 2 and 3, and may be considered to be historical resources as defined by CEQA. According to the CEQA Guidelines (CCR Title 14, Section 15064.5) demolition of a historic resource is a significant impact that cannot be mitigated.

Noise. It is not considered feasible to mitigate construction noise levels such that they would not increase the 1-hour L_{eq} from less than 65 dBA to more than 65 dBA at all sensitive receptors in the project vicinity. Furthermore, construction noise would be temporary, would diminish over the course of construction, and would cease entirely at the completion of the project. Impacts would be significant and unavoidable.

It is not considered feasible to mitigate the noise impacts associated with future sporting events at the project site because, by their nature, these are outdoor events that are intended to attract large crowds. These facilities cannot be readily enclosed; shielding them would require significant solid noise barriers (both in terms of height and length). During future sporting events there would be a substantial permanent increase in ambient noise levels above levels existing without the project. This impact would occur at some of the homes to the east of SBVC due to reconfiguration and/or upgrade to the sports facilities. Impacts would be significant and unavoidable.

Traffic. Significant traffic impacts would occur at the Grant Avenue/K Street and Grant Avenue/I Street intersection in Horizon 3. The SBCCD does not have control over these intersections and the City of San Bernardino has indicated that it cannot guarantee the improvements will be constructed by 2030. The SBCCD will pay its fair share towards the improvements, but if the City does not construct them this impact will remain significant and unavoidable.

These impacts are described in detail in Sections 3.5, 3.10, and 3.12, respectively. The Legislature has defined "feasible" for the purposed of CEQA review as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (PRC Section 21061.1 and CEQA Guidelines Section 15364). The following sections describe alternatives that were considered and rejected, and the reasons why they were determined not to be within the reasonable range of alternatives.

4.2.1 Expansion of Off-Site Locations

The SBCCD currently has two other learning locations: the Crafton Hills College, located in the City of Yucaipa, and the Professional Development Center, located at the former Norton Air Force Base in the City of San Bernardino (see Figure 2-1 in Section 2.0). This alternative would expand facilities at Crafton Hills College and the Professional Development Center and would not expand facilities at SBVC. The property at the Professional Development Center is too small (approximately 4.5 acres) to accommodate a sufficient amount of building space. Providing expansion at Crafton Hills College would likely result in more severe air quality impacts because students living in the West Valley, currently served by SBVC, would be require to commute to this distant location. This alternative would not meet the goal of providing service to West Valley residents.

4.2.2 Alternative Parking Structure Timing

The Master Plan proposes the construction of two parking structures: one in Horizon 1 containing approximately 1,250 parking spaces and the other in Horizon 3 containing approximately 1,100 parking spaces. Parking Structure 1 would be built in the southern end of campus, south of the football field and west of the Child Development Center. Parking Structure 2 would be built in the north side of campus, adjacent to the west side of the new Technical Building. It was alternatively proposed that Parking Structure 1 would not be built until Horizon 2. However, this alternative was rejected because it was determined that the parking structure should meet parking needs sooner than 2020.

4.2.3 Vacation of Esperanza Street

During scoping, the San Bernardino City Unified School District (SBCUSD) requested that an alternative examining the partial vacation of Esperanza Street to facilitate pedestrian access from the proposed MCHS campus to the SBVC campus. The design and construction of the vacation of Esperanza Street are outside of control of the SBCCD. The street vacation is not necessary to meet the goals of the Master Plan and would create its own access and traffic affects.

4.3 NO PROJECT ALTERNATIVE

4.3.1 Description

With the No Project Alternative, the proposed Master Plan would not be implemented. The construction of four buildings that replace buildings within or near the San Jacinto

fault folding zone (North Hall, Physical Science, Chemistry, and Maintenance and Operations) occurs. The replacement of these buildings was initially funded by Measure P and State funding prior to the development of the Master Plan. Therefore, a CEQA IS/MND was prepared for this building replacement project in 2007 (SBCCD 2007).

With this alternative, new educational/recreational buildings would not be constructed, parking structures would not be built, campus infrastructure would not be upgraded, and the existing buildings would not be renovated. Parking would remain at 2,715 spaces which includes on-site, on-street, and Swap Meet parking. Enrollment would continue to increase according to projected growth rates and temporary classroom facilities may be added.

4.3.2 Impacts

4.3.2.1 Aesthetics

With the No Project Alternative, the views from off-campus and on-campus would not change. Beneficial impacts related to improved campus landscaping and lighting would not occur. Impacts would be less than significant.

4.3.2.2 Air Quality

With the No Project Alternative, air quality impacts related to construction of the proposed Master Plan projects would not occur. However, regional air quality impacts related to student traffic would likely be worse than with the proposed Master Plan. Student enrollment would continue to increase per projected growth rates. SBVC would not be able to accommodate the increase, causing students living in the West San Bernardino Valley to commute a greater distance to community colleges outside of the SBCCD.

4.3.2.3 Biological Resources

Potential impacts to raptors/nesting birds and bats would not occur. The existing campus landscaping and buildings would remain resulting in a less than significant impact.

4.3.2.4 Cultural and Paleontologic Resources

With the No Project Alternative, potential impacts to unknown subsurface resources would not occur. Over time, the existing SBVC buildings are expected to reach 50 years in age or older. The potentially historic buildings would not be demolished or renovated. The Auditorium would not be renovated. Since no substantial grading of the project area would occur and buildings would not be demolished or renovated, the potential for disturbance of cultural or potentially historic resources would not be significant.

4.3.2.5 Geology and Soils

Potential impacts to local geology and soils related to grading and facility construction would not occur. The beneficial impacts related to building renovation and seismic safety would not occur with the No Project Alternative.

4.3.2.6 Hazards and Hazardous Materials

With the No Project Alternative, the use of hazardous materials for campus maintenance and laboratory use would remain the same. Beneficial impacts from fire system improvements would not occur.

4.3.2.7 Hydrology and Water Quality

Potential impacts to hydrology from grading and increased impervious surface area on the campus would not occur.

4.3.2.8 Land Use and Planning

With the No Project Alternative, the property would continue as a community college campus. No impact would occur.

4.3.2.9 Noise

Under the No Project Alternative, no construction would occur. As such, no impacts would occur either off- or on-site and no mitigation would be required. Operational noise is anticipated to be less than with the Proposed Project. Noise sources from outdoor sporting and entertainment events already exist at the SBVC campus and would continue with or without the Proposed Project. Impacts would be less than significant.

4.3.2.10 Public Services

With the No Project Alternative, student enrollment would continue according to projected growth rates. The need for public services would continue. The beneficial impact on fire safety from creation of additional fire safety infrastructure would not occur.

4.3.2.11 Traffic and Parking

Impacts to area intersections would occur with or without the project. In the No Project scenario, the following intersections would operate at an unacceptable LOS during one or more peak hours:

- Mill St./Mt. Vernon Ave. (PM);
- Esperanza St./Mt. Vernon Ave. (AM and PM);
- Grant Ave./Mt. Vernon Ave./La Cadena Dr. (PM);
- Grant Ave./K St. (AM);
- Inland Center Drive/ I St. (AM and PM); and
- Colton Ave./Mt. Vernon Ave. (PM).

Parking would remain at approximately 2,715 spaces which includes on-site, on-street, and Swap Meet parking. Parking demand would increase over time as with the Proposed Project, resulting in a deficit in available parking spaces and a potentially significant impact.

4.3.2.12 Utilities

With the No Project Alternative, increases in the demand for utilities would not occur. However, the beneficial impacts of improved utilities to the campus would also not occur.

4.3.3 Feasibility of the No Project Alternative

The No Project Alternative is feasible. However, the positive effects of the Proposed Project and its objectives, as mentioned above, would not be realized; in particular, the demolition/renovation of structures for seismic reasons, student traffic, and parking.

4.4 ENVIRONMENTALLY PREFERRED ALTERNATIVE

CEQA Guidelines require that an EIR identify the environmentally preferred alternative. The No Project Alternative would be the environmentally preferred alternative, because it would create fewer environmental impacts than the proposed Master Plan. However, it should be noted that the No Project Alternative would not eliminate the significant, unmitigable impacts associated with student traffic.

According to CEQA Guidelines, if the environmentally preferred alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives. The Proposed Project is the only other feasible alternative, and would be the environmentally superior alternative because it would mitigate the majority of the identified impacts to a less than significant level, provide necessary parking, and would likely have fewer air quality emissions associated with student traffic. In addition, the Proposed Project would result in beneficial impacts.

SECTION 5.0

OTHER CEQA CONSIDERATIONS

5.1 CUMULATIVE IMPACTS

This section discusses the cumulative effects of the Proposed Project. Section 15130(e) of the CEQA Guidelines requires a discussion of cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." The CEQA Guidelines, Section 15355, defines a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulatively considerable impacts are defined in Section 15065 (c) of the CEQA Guidelines as the "incremental effects of an individual 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."

The Proposed Project is located in the City of San Bernardino. Cumulative impacts, as they relate to City's General Plan and the local area, are discussed below.

5.1.1 Cumulative Impacts Analysis

5.1.1.1 Aesthetics

The proposed Master Plan would change public viewpoints of the SBVC campus. New buildings, structures, and landscaping would be added to the campus that would be visible from public viewpoints. New landscaping proposed in the Master Plan includes the Mount Vernon Avenue Landscape and Valley College Streetscape, which would enhance the transition from the campus to the surrounding residential and commercial areas. The Master Plan would create buildings with appropriately scaled facades and use landscaping that is sympathetic to the adjacent streetscape. The edges of the campus would be dramatically transformed enhancing the aesthetics of the campus and its surroundings.

Future development in the area would benefit from a more aesthetically pleasing streetscape, which has the potential to enhance business activity and residential values. The implementation of the Proposed Project along with future cumulative projects would result in beneficial impacts to the visual character of the area.

5.1.1.2 Air Quality

Air emissions can travel well outside of the local area. Therefore, from an air quality standpoint, the geographic area of potential cumulative effects is the South Coast Air Basin (Basin). In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the Basin is listed as "non-attainment" for the State AAQS. A project that has a significant impact on air quality with regard to emissions of PM_{10}, NOx and/or ROCs as

determined by the threshold criteria outlined in Section 3.3, Air Quality, would have a significant cumulative effect. In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the project, in combination with the emissions from other proposed, or reasonably foreseeable future projects are in excess of screening levels, and the project's contribution accounts for more than an insignificant proportion of the cumulative total emissions.

With regard to past and present projects, the background ambient air quality, as measured at the monitoring stations maintained and operated by the SCAQMD, measures the concentrations of pollutants from existing sources. Past and present project impacts are therefore included in the background ambient air quality data.

The potential for cumulative impacts exists during both construction and following implementation of the Master Plan. Construction of Horizon 2 would occur while Horizon 1 operations occur; construction of Horizon 3 would occur while Horizon 1 and 2 operations occur. The maximum daily emissions would occur during construction of Horizon 3 and operation of Horizons 1 and 2. In this analysis, "operations" means project activities such as building use, on-campus recreation, maintenance, and traffic. Emissions for this scenario are presented in Table 5-1.

Table 5-1
Summary of Total Estimated Construction and Operational Emissions

Emission Source	Maximum Daily Emissions (lbs/day)					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Horizon 3 Construction	32.23	17.86	23.55	0.02	4.49	1.10
Horizon 1 Operations	7.15	10.74	70.09	0.07	11.22	2.30
Horizon 2 Operations	17.07	26.34	180.54	0.23	38.26	7.45
Total	**56.45**	**54.94**	**274.18**	**0.32**	**53.97**	**10.85**
Significance Threshold (lbs/day)	75	100	550	150	150	55
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

As shown in Table 5-1, maximum daily emissions during simultaneous construction and operations would be below the SCAQMD's significance thresholds and would therefore not contribute to a violation of an ambient air quality standard. Impacts would not be cumulatively considerable.

Global climate change issues are discussed in detail in Section 5.5 below.

5.1.1.3 Biological Resources

Typical cumulative impacts on biological resources from urban development are habitat fragmentation and the loss of wildlife foraging habitat. Habitat fragmentation by urbanization creates isolated islands of wildlife habitat and negatively affects wildlife movement corridors that connect water, food, and cover sources. As fragmentation continues, connectivity between habitats is lost. The loss of wildlife foraging habitat

occurs when native habitat is converted for urban land use, and the cumulative amount of wildlife foraging habitat, especially for raptors, decreases.

No cumulative impacts on biological resources would occur from implementation of the Master Plan with mitigation. The SBVC campus is located in an urban setting where there exists no undisturbed native habitats. No wildlife habitat would be fragmented or lost because of the development proposed by the Master Plan.

5.1.1.4 Cultural and Paleontologic Resources

There would be a potentially cumulative impact to historic structures, as some of the existing buildings on the SBVC campus will reach 50 years in age during the life of the Master Plan. In addition, over the next 20 years buildings in the surrounding area would also reach historic age if they are not already 50 years of age or older. This PEIR contains mitigation measures that would reduce potential impacts to a less than significant level. It is anticipated that similar mitigation measures would be implemented for projects in surrounding jurisdictions that may affect historical, archaeological, or palentological resources.

Implementation of Mitigation Measures CR-1 through CR-4 would reduce the majority of impacts to less than significant. If the evaluation in Mitigation Measure CR-4 determines that a building to be demolished is a historic resource according to CEQA, then the impact would remain significant and unavoidable (CCR Title 14 Section 15064.5).

5.1.1.5 Geology and Soils

As cumulative projects are constructed in accordance with adopted General Plans, more people and structures would be exposed to seismic hazards due to earthquakes. Other geotechnical constraints, such as expansive soil, landslides, and liquefaction, may present hazards to cumulative development. However, adherence to mitigation measures contained in site-specific geotechnical reports, building codes, and grading ordinances would reduce cumulative geotechnical impacts to a less than significant level.

5.1.1.6 Hazards and Hazardous Materials

It is anticipated that future growth in the City of San Bernardino and the adjacent City of Colton would result in incremental increase in the amount of hazardous materials used, treated, transported, and disposed area wide, which would create a hazard to the public and increase the potential for an accident to occur. However, while each development site has potentially unique hazardous materials considerations, all future growth, including the proposed Master Plan, must comply with federal, state, and local hazardous materials statutes and regulations, as enforced by the appropriate regulatory agencies. Therefore, cumulative impacts resulting from the use, transport, and disposal of hazardous materials, or risk of upset from a release of hazardous materials would not be cumulatively considerable.

Future development in the area may involve demolition activities that could subject construction worker to health and/or safety risks through exposure to building-related hazardous materials. It is anticipated that future development projects, including the proposed Master Plan, would adhere to the applicable federal, state, and local requirements that regulate worker safety and exposure. Therefore, cumulative impacts would not be considerable.

5.1.1.7 Hydrology and Water Quality

Overall hydrology and water quality impacts associated with project implementation are related to earthmoving (grading) associated with construction and new building development on the property. Earthmoving associated with construction would increase the potential for erosion and sedimentation. In addition, new development on site would increase surface runoff above existing conditions. Of these, the earthmoving activities pose the greatest risk for adverse impacts to local hydrology and water quality.

The proposed Master Plan, along with cumulative development in the regional area, would increase the amount of impervious surfaces in the area. The increase in impervious surface would reduce groundwater recharge and increase the potential of flooding. Drainage patterns would not be significantly altered with the proposed Master Plan. With implementation of regional drainage plans, cumulative impacts on drainage and flood control would be less than significant.

The cumulative impacts on water quality can be reduced through proper landscaping design and maintenance methods, adherence to waste disposal requirements, and implementation of National Pollutant Discharge Elimination System (NPDES) best management practices (BMPs).

5.1.1.8 Land Use and Planning

The implementation of the proposed Master Plan is consistent with the site's existing City of San Bernardino General Plan land use and zoning designations. The Proposed Project would not conflict with the City of San Bernardino General Plan. Cumulative impacts would not occur.

5.1.1.9 Noise

Because off site cumulative development projects are spaced apart, their stationary noise is not measurably additive. Any cumulative impact would stem from the incremental addition of traffic associated with the various projects and from additional development. The Proposed Project would result in temporary noise impacts due to construction. Noise impacts associated with future outdoor sporting and entertainment activities would continue with or without the Proposed Project. This PEIR contains mitigation measures that would reduce potential impacts to a less than significant level. Noise impacts would not be cumulatively considerable.

5.1.1.10 Public Services

The Proposed Project would not result in cumulatively considerable impacts. The implementation of the proposed Master Plan would result in less than significant impacts to public services. Some new employment opportunities would be available as portions of the Proposed Project are completed. However, this would not affect the demand for schools, parks, or other facilities. The Proposed Project would not result in the need for new or physically altered government facilities, nor affect response time or other performance objectives.

5.1.1.11 Traffic and Parking

The implementation of SBVCs proposed Master Plan would take approximately 20 years. The project's traffic study evaluated the impacts of non-project growth as well as the contribution of the Proposed Project.

The Proposed Project and cumulative projects would contribute their fair share cost toward implementing cumulative-level signalization improvements. A less than significant cumulative impact would occur with such mitigation. However, if the City of San Bernardino does not implement the signalization improvements, impacts would remain significant.

5.1.1.12 Utilities

Demand for water and sewer service would increase with the Proposed Project and cumulative development. Implementation of local and State water master plans and wastewater collection system plans would reduce these impacts to a less than significant level.

Cumulative development would produce additional amounts of solid waste that would be disposed of in the regional landfill system. However, with continued adherence to AB 939 and continued diversion and recycling programs in place, cumulative impacts from solid waste would be less than significant.

In regards to electrical, natural gas, and telephone/telecommunications service, a beneficial cumulative impact would occur because outdated systems would be replaced with more efficient ones and the facilities would comply with fire and safety codes.

5.2 GROWTH-INDUCING IMPACTS

The CEQA Guidelines Section 15126.2(d) require that an EIR "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can occur in a variety of ways, including the construction of new homes and businesses, and the extension of urban services, such as utilities and improved roads, to previously undeveloped areas.

The implementation of the SBVC Master Plan is not expected to generate growth. The project's construction would result in an increase in short-term construction jobs. It is anticipated that this minor, temporary increase in local jobs would be accommodated from the local labor force. The implementation of the SBVC Master Plan would create new job opportunities, including professional-level teaching jobs, professional-level support jobs, and a range of support service jobs for security, maintenance, and other functions. It is anticipated that these jobs can be filled from the local labor force, and that large numbers of new workers would not move to the area to support the expansion of the campus. SBVC's proposed Master Plan would expand its facilities to accommodate a growth of students to 17,000 by 2030. The expansion of SBVC facilities would accommodate the population growth anticipated by the cities in the western San Bernardino Valley. Student housing does not exist and is not proposed as part of the SBVC Master Plan. It is not anticipated that substantial numbers of students would move to the area to attend SBVC.

5.3 SIGNIFICANT IRREVERSIBLE EFFECTS

The CEQA Guidelines require that an EIR identify and focus on significant environmental effects, including significant irreversible environmental changes that would be caused by the project should the project be implemented.

The CEQA Guidelines Section 15126.2 (c) state that "uses of nonrenewable resources during the initial and continued phases of the Proposed Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area), generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitment of resources should be evaluated to assure that such current consumption is justified."

Implementation of the Proposed Project would result in an irretrievable commitment of renewable and nonrenewable resources including land, water, energy resources, and construction materials. As land is developed in the region, the commitment of these resources to this project removes these resources from other uses. However, the amount of resources to be committed is not considered to be significant given the size of the project and the availability of the resources in the project area.

5.4 UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS

The CEQA Guidelines section 151262(b) requires that the EIR "describe any significant impacts, including those which can be mitigated but reduced to a level of insignificance. Where there are impacts that cannot be alleviated without proposing an alternative design, their implications and the reason why the project is being proposed, notwithstanding their effect, should be described."

Based on the analysis in Section 3.0 of this PEIR, implementation of the proposed Master Plan would have significant, unavoidable adverse effects to historic resources, noise, and traffic as described below.

Historic Resources. Several buildings would become historic in age (i.e., over 50 years old) during the implementation of the Master Plan. Because the Master Plan is phased in 10-year Horizons, it is possible that one or more of these buildings will become historic in age prior to scheduled demolition or renovation in Horizons 2 and 3, and may be considered to be historical resources as defined by CEQA. If a building becomes scheduled to be renovated or demolished after it becomes 50 years in age, it would be necessary for a qualified Architectural Historian or a qualified architect with experience with historic buildings to evaluate the building to determine if it is a historical resource according to CEQA (Mitigation Measure CR-4). If the evaluation determines that the structure is not a historical resource, there would be no impact from the Proposed Project and no further work would be required. If the evaluation determines that the structure is a historical resource, Mitigation Measures CR-3 would reduce impacts from renovation of these buildings to a less-than-significant level.

If it is determined after the evaluation in Mitigation Measure CR-4 that a building to be demolished is a historic resource according to CEQA, then the impact would remain significant and unavoidable (CCR Title 14 Section 15064.5).

Noise. It is not considered feasible to mitigate construction noise levels such that they would not increase the 1-hour L_{eq} from less than 65 dBA to more than 65 dBA at all sensitive receptors in the project vicinity. However, it is noted that Mitigation Measures N-1 through N-9 would control construction noise to the extent practicable. Even with these measures, construction noise would continue to be significant and unavoidable. Construction noise would be temporary, would diminish over the course of construction, and would cease entirely at the completion of the Proposed Project.

It is not considered feasible to mitigate the noise impacts associated with future sporting events at the project site because, by their nature, these are outdoor events that are intended to attract large crowds. These facilities cannot be readily enclosed; shielding them would require significant solid noise barriers (both in terms of height and length). During future sporting events there would be a substantial permanent increase in ambient noise levels above levels existing without the project. This impact would occur at some of the homes to the east of SBVC due to reconfiguration and/or upgrade to the sports facilities. Mitigation Measure N-13 would reduce, to the extent feasible, the noise levels associated with outdoor sporting events. However, even with this measure, noise from outdoor sporting events would continue to be significant and unavoidable.

Traffic. There are significant impacts at the following unsignalized intersections:

- Grant Ave./K St. (AM)
- Grant Ave./I St. (AM and PM)
- Inland Center Drive/ I St. (AM and PM)

A significant impact at an unsignalized intersection occurs when the intersection is operating below LOS D, meets signal warrants, and the project adds more than 10 trips to the intersection. The traffic analysis assumes that the unsignalized intersection of Inland Center Drive/I Street is not signalized in Horizon 2, as a worst-case scenario. Implementation of Mitigation Measures T-1 and T-2 would reduce impacts to a less-

than-significant level. Although the SBCCD would pay its fair share toward the construction of traffic signals at the impacted intersections, signal construction is ultimately under the control of the City of San Bernardino. If the traffic signals that are required as part of Mitigation Measure T-2 for the unsignalized intersections of Grant Avenue/K Street and Grant Avenue/I Street are not constructed by the City, this impact would remain significant.

5.5 GLOBAL CLIMATE CHANGE

Recognizing public interest and concern regarding climate change and recent California legislation on this topic, this section provides information and analysis on climate change related to the Proposed Project.

5.5.1 Introduction to Global Climate Change Issues

Global Climate Change (GCC) refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), which are known as greenhouse gases (GHGs). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Gases that trap heat in the atmosphere are often called greenhouse gases, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without these natural GHGs, the Earth's temperature would be about 61 degrees Fahrenheit cooler (USEPA 2006). Emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

GHGs have been at the center of a widely contested political, economic, and scientific debate surrounding GCC. Although the conceptual existence of GCC is generally accepted, the extent to which GHGs contribute to it remains a source of debate. The State of California has been at the forefront of developing solutions to address GCC. GCC refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. GCC may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land.

Global climate change attributable to anthropogenic (human) emissions of GHGs (mainly CO_2, CH_4 and N_2O) is currently one of the most important and widely debated scientific, economic and political issues in the United States. Historical records indicate that global climate changes have occurred in the past due to natural phenomena (such as during previous ice ages). Some data indicate that the current global conditions differ from past climate changes in rate and magnitude.

The United Nations Intergovernmental Panel (Panel) on Climate Change constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The Panel concluded that a stabilization of GHGs at 400 to 450

parts per million (ppm) CO_2 equivalent concentration is required to keep global mean warming below 35.6 degrees Fahrenheit (2 degrees Celsius), which is assumed to be necessary to avoid dangerous climate change (Association of Environmental Professionals 2007).

State law defines greenhouse gases as any of the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) (California Health and Safety Code Section 38505(g)). CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity.

5.5.2 Sources and Global Warming Potentials of GHG

The State of California GHG Inventory performed by the California Air Resources Board (CARB), compiled statewide anthropogenic GHG emissions and sinks. It includes estimates for CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs. The current inventory covers the years 1990 to 2004, and is summarized in Table 5-2. Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the Intergovernmental Panel on Climate Change (IPCC). The 1990 emissions level is the sum total of sources and sinks from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include: Agriculture; Commercial; Electricity Generation; Forestry; Industrial; Residential; and Transportation.

Table 5-2
State of California GHG Emissions by Sector

Sector	Total 1990 Emissions ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2004 Emissions ($MMTCO_2e$)	Percent of Total 2004 Emissions
Agriculture	23.4	5%	27.9	6%
Commercial	14.4	3%	12.8	3%
Electricity Generation	110.6	26%	119.8	25%
Forestry (excluding sinks)	0.2	<1%	0.2	<1%
Industrial	103.0	24%	96.2	20%
Residential	29.7	7%	29.1	6%
Transportation	150.7	35%	182.4	38%
Forestry Sinks	(6.7)		(4.7)	

When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2e) and are typically quantified in metric tons (MT) or millions of metric tons (MMT).

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (USEPA 2006). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main greenhouse gases that have been attributed to human activity include CH_4, which has a GWP of 21, and N_2O, which has a GWP of 310. Table 5-3 presents the GWP and atmospheric lifetimes of common GHGs.

Table 5-3
Global Warming Potentials and Atmospheric Lifetimes of GHGs

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (Years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	21	12 ± 3
Nitrous Oxide	N_2O	310	120
Sulfur Hexafluoride	SF_6	23,900	3,200

Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline and wood). Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO_2 have increased in the atmosphere since the industrial revolution.

CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure, and cattle farming. Human-caused sources of N_2O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid.

Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses. The sources of GHG emissions, GWP, and atmospheric lifetime of GHGs are all important variables to be considered in the process of calculating CO_2e for discretionary land use projects that require a climate change analysis.

5.5.3 Regulatory Framework

All levels of government have some responsibility for the protection of air quality, and each level (Federal, State, and regional/local) has specific responsibilities relating to air quality regulation. GHG emissions and the regulation of GHGs is a relatively new component of air quality.

5.5.3.1 International and Federal Legislation

International and Federal legislation have been enacted to deal with GCC issues. In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential

impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

In October 1993, President Clinton announced his Climate Change Action Plan (CCAP), which had a goal of returning GHG emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in GHG emissions. On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the Convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of GCC. Recently, the United States Supreme Court declared in the court case of Massachusetts et al. vs. the Environmental Protection Agency et al., 549 C.S. 497 (2007) that the EPA does have the ability to regulate GHG emissions. In addition to the national and international efforts described above, many local jurisdictions have adopted climate change policies and programs.

Proposed Endangerment Finding. On April 17, 2009, EPA issued its proposed endangerment finding for GHG emissions. EPA is proposing to find that greenhouse gases in the atmosphere endanger the public health and welfare of current and future generations. Concentrations of greenhouse gases are at unprecedented levels compared to the recent and distant past. EPA has stated that these high atmospheric levels are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes. The effects of climate change observed to date and projected to occur in the future – including but not limited to the increased likelihood of more frequent and intense heat waves, more wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea level rise, more intense storms, harm to water resources, harm to agriculture, and harm to wildlife and ecosystems – are effects on public health and welfare within the meaning of the Clean Air Act.

Proposed Mandatory GHG Reporting Rule. On March 10, 2009, in response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), EPA proposed a rule that requires mandatory reporting of GHG emissions from large sources in the United States. The proposed rule would collect accurate and comprehensive emissions data to inform future policy decisions.

Corporate Average Fuel Economy Standards. The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009,

President Obama announced plans to increase CAFE standards to require light-duty vehicles to meet an average fuel economy of 35.5 miles per gallon by 2016.

5.5.3.2 California Regulations and Standards

Assembly Bill 32, the California Global Warming Solutions Act of 2006. In September 2006, Governor Schwartzenegger signed California Assembly Bill 32 (AB 32), the global warming bill, into law. AB 32 required that by January 1, 2008, CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB adopted its Scoping Plan in December 2008, which provided estimates of the 1990 GHG emissions level and identified sectors for the reduction of GHG emissions. The CARB has estimated that the 1990 GHG emissions level was 427 MMT net CO_2e (CARB 2008). The CARB estimates that a reduction of 173 MMT net CO_2e emissions below business-as-usual would be required by 2020 to meet the 1990 levels (CARB 2008). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected business-as-usual levels in 2020 (CARB 2008).

Senate Bill 97. Senate Bill 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs OPR to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010.

Executive Order S-3-05. Executive Order S-3-05, signed by Governor Schwartzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80 percent reduction in GHG emissions by 2050. Executive Order S-3-05 also calls for the California EPA (CalEPA) to prepare biennial science reports on the potential impact of continued GCC on certain sectors of the California economy. The first of these reports, "Our Changing Climate: Assessing Risks to California", and its supporting document "Scenarios of Climate Change in California: An Overview" were published by the California Climate Change Center in 2006.

California Code of Regulations Title 24. Although not originally intended to reduce greenhouse gas emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The GHG emission inventory was based on Title 24 standards as of October 2005; however, Title 24 has been updated as of 2008 and standards are set to be phased in in summer 2009. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

State Standards Addressing Vehicular Emissions. California Assembly Bill 1493 (Pavley) enacted on July 22, 2002, required the CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030 (AEP 2007).

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: 1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and 2) that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California. It is assumed that the effects of the LCFS would be a 10 percent reduction in GHG emissions from fuel use by 2020. On April 23, 2009, CARB adopted regulations to implement the LCFS.

Senate Bill 375. Senate Bill 375 requires that regions within the state which have a metropolitan planning organization must adopt a sustainable communities strategy as part of their regional transportation plans. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so "it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to "encourage developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

5.5.4 Existing Conditions

Background. SBVC is currently a source of GHG emissions. These emissions include indirect emissions from energy use and water use, and direct emissions from natural gas combustion and vehicles. In addition, the undeveloped portions of the site contains natural vegetation and soils. Natural vegetation and soils temporarily store carbon as part of the terrestrial carbon cycle. Carbon is assimilated into plants and animals as they grow and then dispersed back into the environment when the die. There are two existing sources of carbon storage at the SBVC project site: natural vegetation and soils.

Natural Vegetation. Living vegetation stores carbon; however, it is difficult to assess net changes in carbon storage associated with the SBVC Master Plan. The key issue is the balance between the loss of natural vegetation and future carbon storage associated with development. For example, the Prpposed Project's landscaping palette would feature shrubs and trees which may provide equal or greater carbon storage on a per acre basis. The situation is further complicated by changes in fire regime. Carbon in natural vegetation is likely to be released into the atmosphere through wildfire every 20 to 150 years. Carbon in landscaped areas would be protected from wildfire. The balance between these factors would influence the long-term carbon budget on the site.

Soils. The majority of carbon within the site is stored in the soil. Soil carbon accumulates from inputs of plant and animal matter, roots, and other living components of the soil ecosystem (e.g., bacteria, worms, etc.). Soil carbon is lost through biological respiration, erosion, and other forms of disturbance. Overall, soil carbon moves more slowly through the carbon cycle, and it offers greater potential for long-term carbon storage. Field observations suggest that urban soils can sequester relatively large amounts of carbon. Observations from across the United States suggest that cities in warmer and drier climates (such as San Bernardino County) may have slightly higher soil organic matter levels when compared to equivalent areas before development.

5.5.5 Guidelines for the Determination of Significance

Since GCC is a global phenomenon, no direct impact would be identified for an individual land development project. The following criterion is considered to establish a significance threshold for GCC impacts:

- *The project will conflict with the goals and strategies of AB 32 to reduce GHGs to 1990 levels by 2020.*

According to the CARB's Scoping Plan, AB 32's goal of reducing GHGs to 1990 levels by 2020 would amount to a 30 percent reduction in emissions below "business as usual" levels, accounting for growth in the state of California. "Business as usual" is defined as the emissions that would have occurred in the absence of reductions mandated under AB 32. Based on the latest guidelines and baseline emission calculations, for energy efficiency, "business as usual" is considered to be the equivalent of being as energy efficient as Title 24 requires as of 2005. The potential for significant impacts to global climate for the project were therefore evaluated on the basis of the project's consistency with the goals of AB 32 to reduce GHG emissions to 1990 levels by 2020, and to implement those programs that will be required under AB 32 that are applicable to the SBVC Master Plan.

Global climate impacts are by nature cumulative; direct impacts cannot be evaluated because the impacts themselves are global rather than localized impacts. The analysis therefore addresses cumulative impacts.

5.5.6 Proposed Project Impacts on Global Climate Change

Construction Emissions. GHG emissions associated with Proposed Project construction were estimated using the URBEMIS Model, Version 9.2.4, which estimates emissions of CO_2. While the URBEMIS Model does not provides estimates of N_2O or CH_4, emissions of these GHG would be much lower than emissions of CO_2 and would not be anticipated to contribute substantially to emissions overall. Based on emission factors from the URBEMIS Model for heavy construction equipment and on-road vehicles, total greenhouse gases associated with construction are summarized in Table 5-4.

Table 5-4
Greenhouse Gas Emissions - Construction

Horizon	CO_2 Emissions, metric tons
Horizon 1	802
Horizon 2	1,245
Horizon 3	1,272

The total emissions are estimated at 3,319 metric tons of CO_2 total for the duration of construction. Amortized over 30 years, the annual CO_2 emissions would be 397.5 metric tons per year.

Electricity. Baseline energy use was calculated as a function of kilowatt hour (kWh) per square foot based on average performance for southern California buildings compliant with 2006 Title 24 standards. Electricity usage rates for the buildings were calculated based on estimated annual rates of 12.95 kilowatt-hours (kWh) per square foot, (SCAQMD 1993). Emissions associated with natural gas usage were calculated based on the SCAQMD's estimated natural gas usage per square foot (SCAQMD 1993) of 2.0 therms per square foot of space per month. Emissions were calculated based on emission factors in the California Climate Action Registry General Reporting Protocol, Version 3.0 (CCAR 2008).

Water. Water use and energy use are often closely linked. The provision of potable water to commercial users consumes large amounts of energy associated with five stages: source and conveyance, treatment, distribution, end use, and wastewater treatment. This inventory estimated that delivered water for the project would have an embodied energy of 3,519 kWh/acre foot or 0.0108 kWh/gallon (Wilkinson and Wolfe 2005).

Water usage was estimated based on an estimated water usage of 35 gallons per year per square foot (Dziegielewski 2000). Business as usual water usage, without water management strategies implemented, is estimated at 156,275,000 gallons per year.

Emissions of GHGs were calculated assuming a "business as usual" scenario, which does not account for any GHG reduction measures. Operational GHG emissions under the business as usual scenario are summarized in Table 5-5.

Table 5-5
GHG Emissions from the Project (metric tons)
Business as Usual Scenario

Emission Source	Annual Emissions (Metric tons/year)		
	CO_2	CH_4	N_2O
Operational Emissions			
Electricity Use Emissions	517	0.004	0.002
Natural Gas Use Emissions	50	0.007	0.0001
Water Usage	15	0.0001	0.00006
Vehicle Emissions	5,217	0.20	0.39
Total	**5,799**	**0.21**	**0.39**
Global Warming Potential Factor	**1**	**21**	**310**
CO_2 Equivalent Emissions	5,799	4	121
TOTAL CO_2 Equivalent Emissions	**5,924**		

According to the CARB, transportation accounts for approximately 38 percent of California's 2004 greenhouse gas emissions. Growth in California has resulted in vehicle miles traveled by California residents increasing three-fold during the period from 1975 to 2004. As shown in Table 5-5, the main source of operational greenhouse gas emissions associated with the SBVC Master Plan would be vehicular emissions. As discussed in Section 5.5.3, both the state of California and the federal government have adopted GHG emission reduction measures that are designed to reduce the amount of GHGs emitted from vehicles. The U.S. Congress has recently adopted legislation to require Corporate Average Fuel Economy (CAFE) standards to reach 35 miles per gallon (mpg) by the year 2020; the default EMFAC2007 average miles per gallon for vehicles traveling at 45 miles per hour is 27 miles per gallon; other speeds are less efficient and miles per gallon decreases. Thus the new CAFE standards would lead to approximately 23 percent greater fuel efficiency, which would lower GHG emissions. All of these measures would contribute to reductions in emissions of GHG from vehicle travel below the levels presented in Table 5-5.

In addition to vehicle emission reduction programs, the San Bernardino Community College District (SBCCD) has developed an Energy Action Plan (SBCCD 2009). The Energy Action Plan outlines the SBCCD's strategies to reduce energy consumption on its campuses, which would in turn reduce operational greenhouse gas emissions. The goals of the Energy Action Plan are as follows:

- Maximizing energy efficiencies to reduce both electrical consumption and peak demand;
- Minimizing operational and maintenance costs;
- Promoting renewable power sources for offsetting campus peak demand and reducing greenhouse gas emissions;
- Minimizing the operating fiscal impact from electrical rate escalation in the future; and
- Reducing the District's exposure to future carbon emission charges.

The Energy Action Plan includes developing a Central Cooling Plant anticipated to reduce CO_2e such that increases associated with campus growth would only be 80 metric tons additional; use of 500 kW of photovoltaic solar power; and use of solar heating for pools. Additional measures may be considered in the future as the campus develops.

According to the Traffic Study, the SBVC Master Plan also incorporates access to mass transit (local buses), a bicycle network, and a pedestrian network, all of which are consistent with the goals of AB 32.

With implementation of the Energy Action Plan and state and federal vehicle emission reduction programs, plus continued access to mass transit, bicycle networks, and pedestrian access, the Proposed Project would be consistent with the goals of AB 32 and would not result in a significant impact on global climate.

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SECTION 6.0

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SECTION 7.0
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SECTION 8.0

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SECTION 9.0

ACRONYMS AND ABBREVIATIONS

A	Amps
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACM	Asbestos Containing Materials
ADT	Average Daily Trips
AHERA	Asbestos Hazard Emergency Response Act
AHM	Acutely Hazardous Materials
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ASF	Assignable Square Feet
AWSC	All Way Stop Controlled Intersection
BMP	Best Management Practice
CARB	California Air Resources Board
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CAPCOA	California Air Pollution Control Officers' Association
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDC	Child Development Center
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHC	Crafton Hills College
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base

CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CH_4	Methane
CRHR	California Register of Historical Resources
CSC	California Species of Concern
CSUSB	California State University San Bernardino
dB	decibel
dBA	A-weighed decibel scale
DBCP	Dibromochloropropane
DSA	California Division of the State Architect
DTSC	Department of Toxic Substances Control
e.g.	Example given
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
°F	degrees Fahrenheit
fc	Foot Candles
FDC	Fire Department Connection
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GCC	Global Climate Change
GHG	Green House Gases
HAP	Hazardous Air Pollutants
HI	Hazard Index
Hz	Hertz
HV	High Voltage
I	Interstate
in/s	inches per second
IS/MND	Initial Study/Mitigated Negative Declaration
L_{dn}	day-night noise level
LOS	Level of Service
LST	localized significance threshold

L_v	Vibration Velocity Level
$\mu g/m^3$	micrograms per cubic meter
µPa	microPascals
mg/ m^3	milligrams per cubic meter
MBTA	Migratory Bird Treaty Act
MCHS	Middle College High School
MCLs	Maximum contaminant levels
ML	Million Gallons
MLD	most likely descendants
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NESHAP	National Emissions Standards for Hazardous Air Pollutants
N_2O	Nitrous Oxide
NO_2	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	United States Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OFL	overflow
Pb	Lead
PCBs	Polychlorinated Biphenyls
PCE	tetrachloroethylene
PEIR	Program Environmental Impact Report
PM_{10}	Fine Particulate Matter Equal to or Less Than 10 Microns in Size
$PM_{2.5}$	Fine Particulate Matter Equal to or Less Than 2.5 Microns in Size
pphm	parts per hundred million
ppm	Parts per million
PPV	Peak Particle Velocity
PSI	Pounds Per Square Inch

RCRA	Resource Conservation and Recovery Act
REL	Relative Exposure Level
RIX	Rapid Infiltration and Extraction Facility
rms	root mean square
RPLI	Regional Paleontologic Locality Inventory
ROG	Reactive Organic Gases
RWQCB	California Regional Water Quality Control Board
SB	Senate Bill
SBCCD	San Bernardino Community College District
SBFD	San Bernardino City Fire Department
SBPD	San Bernardino Police Department
SBCUSD	San Bernardino City Unified School District
SBMWD	San Bernardino Municipal Water Department
SBPD	San Bernardino Police Department
SBVC	San Bernardino Valley College
SBWRP	San Bernardino Water Reclamation Plant
SCAB	south coast air basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SLF	Sacred Lands File
SO_2	Sulfur Dioxide
SRRE	Source Reduction and Recycling Element
SSSC	Side Street Stop Controlled Intersection
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCE	trichloroethylene
TDF	Travel Demand Forecast
TNM	Traffic Noise Model
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
USEPA	United States Environmental Protection Agency

USGS	United States Geological Survey
V/C	volume-to-capacity
VdB	vibration velocity level
WRP	Water Reclamation Plan

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