DRAFT

Golden West College Vision 2020 Facilities Master Plan Program EIR

SCH No. 2014011015

JULY 2015

PREPARED FOR:

Coast Community College District
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Golden West College Vision 2020 Facilities Master Plan
Draft Program Environmental Impact Report

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TABLE OF CONTENTS

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

APPENDICES

TABLE OF CONTENTS (CONTINUED)

Page No.

FIGURES

TABLE OF CONTENTS (CONTINUED)

Page No.

TABLES

TABLE OF CONTENTS (CONTINUED)

Page No.

TABLE OF CONTENTS (CONTINUED)

Page No.

ACRONYMS/ABBREVIATIONS

Acronym/Abbreviation	Definition
°C	degrees Celsius
°F	degrees Fahrenheit
AB	Assembly Bill
ACCJC	Accrediting Commission for Community and Junior Colleges
ACOE	U.S. Army Corps of Engineers
AIA	American Institute of Architects
AICP	American Institute of Certified Planners
AMSL	above mean sea level
AQMP	Air Quality Management Plan
BECSP	Beach and Edinger Corridors Specific Plan
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CalWORKs	California Work Opportunity and Responsibility to Kids
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDC	California Department of Conservation
CEQA	California Environmental Quality Act
CFC	California Fire Code
CG	Commercial General
CH_4	methane
City	City of Huntington Beach
CMP	Orange County Congestion Management Program
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2E	CO_2 equivalent
CRHR	California Register of Historical Resources
CWA	Clean Water Act
DAMP	Drainage Area Management Plan
dB	decibels
dBA	A-weighted decibel
District	Coast Community College District
DSA	Division of the State Architect
EB	eastbound
EDR	Environmental Data Resources
EHS	Environmental Health and Safety Department
EIR	Environmental Impact Report
EMHS	Emergency Management and Homeland Security

ACRONYMS/ABBREVIATIONS

Acronym/Abbreviation	Definition
EPA	U.S. Environmental Protection Agency
FAIA	Fellow of the American Institute of Architects
FESA	federal Endangered Species Act
g/L	grams per liter
GHG	greenhouse gas
GIS	geographic information system
gpd	gallons per day
GSF	gross square feet
GWC	Golden West College
H_2O	water
HCM	Highway Capacity Manual 2000
HVAC	Heating, Ventilation, and Air Conditioning
ICU	Intersection Capacity Utilization
IFC	International Fire Code
IS/NOP	Initial Study/Notice of Preparation
kWh	kilowatt-hours
lb CO_2/MWh	pounds of CO_2 per megawatt-hour
lb/day	pounds per day
L_{dn}	day/night equivalent sound levels
L_{eq}	equivalent continuous sound level
LOS	level of service
LST	localized significance threshold
LUST	leaking underground storage tank
MLD	Most Likely Descendant
MMT	million metric tons
mpg	miles per gallon
mph	miles per hour
MRF	material recovery facility
MT	metric tons
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NB	northbound
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places

ACRONYMS/ABBREVIATIONS

Acronym/Abbreviation	Definition
O&M	Operations and Maintenance
O_3	ozone
OCC	Orange Coast College
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
OSHA	Occupational Safety and Health Administration
P	Public
Pb	lead
PEIR	Program Environmental Impact Report
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
PS	Public School
QA/QC	Quality Assurance/Quality Check
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
s/v	seconds per vehicle
SB	Senate Bill
SB	southbound
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_x	sulfur oxides
STEM	science, technology, engineering and math
SWPPP	stormwater pollution prevention program
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDL	total maximum daily load
TSF	thousand square feet
UC Irvine	University of California, Irvine
USA	Underground Service Alert
UST	underground storage tank
V/C	volume to capacity
VOC	volatile organic compound
WB	westbound
WLPA	William L. Pereira & Associates
WQMP	Water Quality Management Plan

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CHAPTER 1
EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Coast Community College District (District) has prepared this Draft Program Environmental Impact Report (PEIR) to provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with implementation of the Vision 2020 Facilities Master Plan (proposed project). This Draft PEIR has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

The Draft PEIR is subject to a minimum 45-day public review period by responsible agencies and interested parties. Agency and public comments on the adequacy of the Draft PEIR and the lead agency's compliance with CEQA may be submitted to the District as lead agency, in writing, prior to the end of the public review period. Publication of the Draft PEIR marks the beginning of a 45-day public review period, during which written comments may be submitted to:

Mr. Jerry Marchbank
Senior Director, Facilities, Planning, and Construction
Coast Community College District
1370 Adams Avenue
Costa Mesa, California 92626

Following the public review period, the District will prepare a Final PEIR, which will include responses to all written comments received during the Draft PEIR public review period. The District's Board may use this Draft PEIR to consider approval of the proposed project, make findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts.

1.2 BACKGROUND

The District is updating its Facilities Master Plan for all three of its Orange County campuses: Orange Coast College, Golden West College (GWC), and Coastline Community College. The Vision 2020 Facilities Master Plan provides an analysis of the evolving student body and makes planning recommendations based on their educational needs (District 2011). The District is undertaking a comprehensive improvement and building program to meet increasing enrollment and to make upgrades and repairs to existing buildings, as well as to construct new facilities to improve the safety and educational experience of those attending the colleges in accordance with Measure M. Measure M was passed by Orange County voters in November

2012 and issued $698 million in bonds to fund the expansion of courses and academic buildings in engineering, math, science, and technology, as well as to upgrade technologies, construct and repair facilities, and improve resources for active military personnel and veterans at all three District campuses.

1.3 PROJECT LOCATION

The proposed project is located on the existing GWC campus in the City of Huntington Beach, California, within the northwestern portion of Orange County (Figure 3-1, Regional Location). Primary freeway access to the campus would be via Interstate 405 and State Route 39 (commonly known as Beach Boulevard), which are minutes from the campus. GWC is bounded by McFadden Avenue to the north, Gothard Street to the east, Edinger Avenue to the south, and Goldenwest Street to the west (see Figure 3-2, Local Vicinity).

1.4 PROJECT OBJECTIVES

The overall goal of the proposed project is to provide the optimal physical settings to support the District's academic mission. The intent of the proposed project is to develop modern teaching and learning facilities that would attract students to GWC while providing the physical resources necessary to support the educational process. With this overarching goal in mind, project objectives developed during the Vision 2020 Facilities Master Plan planning process are as follows:

- Support the institutional mission and effectiveness
  - Provide current teaching and learning facilities with space, configuration, and technology adjacencies
  - Enhance and improve academic degree programs
  - Provide long-term (beyond 2024) program flexibility to support the educational mission
- Provide optimal physical settings to support GWC's student learning programs and services
  - Provide an efficient and effective One Stop Student Center to enhance student success
  - Enhance and increase campus student life to improve student success
  - Improve campus zoning (e.g., Student Services, Math and Science, Fine Arts, Athletics)
  - Provide a hierarchy of exterior socialization spaces
  - Construct a nationally recognized criminal justice training facility
  - Provide an efficient and consolidated Language Arts Complex

- Enhance the use of resources
  - Maintain capacity-load ratios that allow the college to remain competitive for state capital dollars
  - Create defensible space (enhance lines of sight and eliminate hiding places) that will foster a sense of safety for campus users
  - Increase navigability of the campus and enhance way finding
  - Accommodate physical growth over the planning horizon (2024)
  - Reduce resource consumption and support environmentally responsible practices Mitigate recurring sinking buildings/spalling concrete issues
  - Improve total cost of ownership (initial cost, operating expenses in staffing and energy efficiency, and replacement cost)
  - Phase construction to minimize student impacts and the need to move staff, faculty, and students more than once
  - Minimize the use and cost of temporary space
  - Increase and enhance visual and physical access to the campus
  - Enhance pedestrian access to the core of the campus
- Support participatory governance and leadership
  - Construct physically flexible spaces to maximize building efficiency and future adaptability
  - Maintain consistency with the Vision 2020 Facilities Master Plan
- Support community engagement
  - Maintain consistency with Measure M/communication to constituents
  - Enhance the presence and connection of the campus within the community
  - Provide joint venture and entrepreneurial opportunities that support the academic needs and mission of the college

1.4.1 Support the Institutional Mission and Effectiveness

GWC was constructed in the 1960s, and many of the buildings no longer meet current needs. The college is seeking opportunities to bring buildings up to current ACCJC standards and to provide modern teaching facilities with the latest technologies.

1.4.2 Provide Optimal Physical Settings to Support the Golden West College's Student Learning Programs and Services

To meet the needs of today's students, the college would like to provide a One Stop Student Center, a consolidated Language Arts Complex, and a nationally recognized criminal justice training facility. The construction of new facilities would also allow the college to enhance the programs and services to students. Improving campus zoning so there are dedicated areas of the campus to certain disciplines such as Student Services, Math and Science, Fine Arts, and Athletics would facilitate student learning programs and help group services to students in a way that is logical and easier. Furthermore, through the Vision 2020 Facilities Master Plan, more outdoor gathering spaces can be provided, which afford opportunities for students to gather between classes or for learning opportunities to occur in exterior spaces.

The Vision 2020 Master Plan also presents an opportunity enhance vehicular and pedestrian circulation on campus. Existing pedestrian walkways on the GWC campus are asphalt roads shared with service vehicles. The development of new pedestrian walkways and three service access roads are proposed to improve campus circulation. New pedestrian walkways would begin at the parking lots on the edges of campus and terminate at the core of campus. Service access roads would begin at the edges of campus and terminate at service vehicle destinations that include the Student Center and Bookstore, Central Warehouse/Corporation Yard, and the One Stop Student Center.

An urban street, quad, garden, community arts plaza, student dining area, and gathering spaces would be developed in the core of the campus to provide places for students, visitors, and employees to gather informally between classes. Lighting, signage, and street furniture would be added to these open spaces to create a welcoming environment. All of this adds to the goal of the College to become a more recognized presence within and for the community.

1.4.3 Enhance the Use of Resources

The Vision 2020 Facilities Master Plan provides an opportunity for the college to maintain capacity-load ratios to remain competitive for state capital dollars. It also helps the campus mitigate recurring sinking buildings and spalling concrete issues by replacing buildings with these issues with structures built with more up-to-date construction methods. This in turn helps improve the total cost of ownership through initial costs, reducing operating expenses including reduced staffing and better energy efficiency and also reduced replacement costs..

1.4.4 Support Participatory Governance and Leadership

GWC seeks to create a campus that can sustain program flexibility over the long term to support its education mission. The goal is to construct physically flexible spaces to maximize building efficiency and future adaptability. One of the challenges that GWC faces currently is that many of the buildings on campus are not as adaptable as the college would like without the expenditure of major sources of capital to retrofit the buildings for new uses. Furthermore, the ability to plan adaptable spaces would allow the college to remain more competitive for state capital dollars in the future. Planning adaptable spaces reduces the need to move students, faculty, and staff, which minimizes disruption to students in the classroom.

1.4.5 Support Community Engagement

GWC would like to increase entrepreneurial activities and attract visitors to the campus through the development of new facilities and by improving programs already in place. A joint venture with the Boys & Girls Club is currently in place that would include the construction of gymnasium facilities. The public would also be encouraged to use the newly renovated athletic facilities and the conferencing facilities housed in the newly constructed Business/Social Sciences/Administrative Office Building. The development of a conference center would be enhanced by the use of existing food service facilities. The college would like to enhance the presence and connection of the campus within the community.

1.5 PROJECT DESCRIPTION

This section describes the various components of the proposed project evaluated in this PEIR. Specific components include buildings and facilities and site improvements.

The proposed project involves demolition of certain existing buildings, renovation of existing buildings, and construction and eventual operation of new buildings and campus facilities.

1.5.1 Buildings and Facilities

New Construction

New Criminal Justice Training Center Complex

The new Criminal Justice Training Center Complex would be located in the southeast corner of campus and would include the following facilities: the Criminal Justice Training Center, scenario village, and traffic stop practice track. The District proposes the demolition of the existing Criminal Justice Building and the Community Center at the southeast corner of campus to accommodate the new complex. The two-story Criminal Justice Training Center would replace the existing, out-of-date Criminal Justice Building and would house classrooms, offices, and training facilities, serving as the hub of the Criminal Justice Training Center Complex. A scenario village would be constructed directly west of the new Criminal Justice Training Center. The scenario village would include multiple one- and two-story structures that would house training exercises. In addition, where there is currently underused open space to the east of the Edinger Avenue parking lot entrance and directly west of the off-site retail center, there would be a traffic stop practice track constructed for criminal justice training activities. When this space is not being used for training activities, it would operate as a parking lot.

New Math/Science Building

The construction of the new building would occur in the southwest corner of campus. This building would replace the Math/Science Building currently located in the center of campus. Replacement of the current building would allow for infrastructure updates and would provide more classroom space. The building would house classrooms for science and math courses.

New Language Arts Complex

The Humanities Building and Health Sciences Building located at the center of campus would be demolished, and a Language Arts Complex would be constructed at the same location. The new building would expand to the west. Classrooms for courses in arts and letters would be offered in the new building.

New Cosmetology Building

Construction of the new Cosmetology Building would occur at the northwest corner of campus, in the northern half of the existing tennis courts. The outdated Cosmetology Building, located in the core of the campus and west of the Fine Arts Building, would be demolished. The new Cosmetology Building would also include retail/salon space. This retail/salon space would support an existing program on campus, which provides haircare to the surrounding community. Its new proposed location would be more convenient for public accessibility. The salon would expand their operating hours to Saturdays during the GWC swap meet. Weekday customer visits are not anticipated to increase with the new retail/salon space.

New Business/Social Sciences/Administrative Office Building

This project would entail the demolition of smaller buildings to build a larger, more efficient multiuse building. The new building would be located on the site of the current Math/Science Building at the center of campus, which is to be demolished. This building would replace the Administrative Building and the Business Building at the southeast corner of campus, both of which would be demolished. Conference facilities would be included; these facilities would meet the need for additional meeting space on campus. Although these facilities would be open for public use and could occasionally house special events, generally, GWC students and staff would be the primary users of these facilities.

One Stop Student Center

This project involves the demolition of the existing Boyce Library to construct new buildings and provide a centralized one-stop location for student services at the core of campus. The proposed project would be located at the center of the campus.

Boys & Girls Club After School Building

This joint venture would be located in the northeast region of the campus, west of the Gothard Street parking lot and south of the athletic fields. This two-story building would house the existing "twilight" after-school program. This program would be available to children of GWC employees and students, as well as the surrounding community.

Boys & Girls Club Gymnasium Facilities

This joint venture would be located in the northeast region of the campus, next to the Boys & Girls Club After School Building. These gymnasium facilities would house recreational activities associated with the "twilight" after-school program.

Renovation

In addition to the new construction of buildings and facilities, the proposed project would involve the renovation of existing buildings. Building renovations could include new lighting; ceilings; paint; flooring; case work; and heating, ventilation, and air conditioning systems. In some cases, interior walls could be removed or modified. Renovations that involve expansion of an existing facility are specified in the following text.

Technology Building

The proposed project involves the renovation of the existing building to correct building deficiencies and support current instructional needs. This project would not involve expansion of the existing building. The building is located in the western portion of the campus. Renovation of the Technology Building would occur during Phase 2.

Central Warehouse/Corporation Yard

This proposed project would involve the expansion of the existing Central Warehouse/Corporation Yard from 12,328 to 31,552 gross square feet. The Central Warehouse/Corporation Yard is located in the northwest corner of campus. Renovation and expansion would occur during Phase 3.

Automotive Technology Building

The proposed project involves the renovation and expansion of the existing building to correct building deficiencies and support current instructional needs. The one-story expansion would occur in the southern half of the existing tennis courts in the western portion of the campus. The proposed project would involve the expansion of the existing Automotive Technology Building from 31,720 to 58,794 gross square feet. Renovation and expansion are currently unscheduled.

Physical Education Outdoor Labs

This proposed project involves renovation of the existing facilities in the northern portion of the campus to provide enhanced, state-of-the-art facilities. Recreational facilities, which would be open for public use, would be included in the renovation. This project would not involve expansion of the existing footprint. Renovation is currently unscheduled.

Interior Modifications

Interior building modifications would be performed for the Music, Technology, Fine Arts, Forums I and II, Physical Education/Recreation, Wellness Center, and the Automotive Technology Buildings. If the Math/Science Building, Humanities Building, Business Building, Auto Body and Design Building, and Administration Building are not demolished, these buildings would also include interior building modifications (e.g., painting, carpeting, the replacement of damaged ceiling tiles, and minor electrical repairs, where applicable) (Flint, pers. comm. 2014a).

The installation of security, access, and surveillance infrastructure would occur in the Business Building, Humanities Building, Administration Building, Boyce Library, Community Center, Graphics Center and Auto Body and Design, Math/Science Building, Cosmetology Building, and Health Science Building if these facilities are not demolished. The Automotive Technology Building, Technology Building, Bookstore, Communications Building, Fine Arts Building, Forums I and II, Physical Education/Recreation Building, Music Building, Central Warehouse/Corporation Yard, and the Theatre would also involve the installation security infrastructure. Security, access, and surveillance infrastructure to be installed would include card readers, surveillance cameras, panic buttons, and emergency notification stations (Flint, pers. comm. 2014a).

Demolition

The proposed project would involve the demolition of approximately 268,000 gross square feet. Buildings slated for demolition include the following:

- Student Services and Boyce Library
- Administration Building
- Business Building
- Criminal Justice Training Center and Police Academy
- Community Center

- Cosmetology Building
- Child Care Center
- Graphics and Publications
- Health Sciences Building
- Humanities Building
- Math/Science Building

1.5.2 Site Improvement Elements

Vehicular Entryways, Circulation, and Parking. The proposed project includes the enhancement of primary and secondary entries through consistent landscaping and signage. All parking lots would require additions, such as lighting, signage, parking ticket dispensers, and blue emergency phone kiosks.

Pedestrian Entryways and Circulation. Existing pedestrian walkways on the GWC campus are asphalt roads shared with service vehicles. New walkways are proposed to improve pedestrian circulation. New primary and secondary walkways would begin at the parking lots on the west, south, and east sides of campus, and terminate at the core of campus. Walkways would be constructed around buildings so not as to impede students on their route to the core of the campus.

Service Access. Three service access roads are proposed by the District. The first service access road would be from McFadden Avenue to the Central Warehouse/Corporation Yard. An additional road would begin at the primary entryway from the western parking lot and terminate at the Food Service/Printing area in the center of campus. The final road would begin at the primary entryway from the eastern parking lot to the Theatre/Arts area in the center of campus.

Gathering Places. An urban street, quad, garden, community arts plaza, student dining area, and multiple gathering areas would be developed in the core of the campus to provide places for students, visitors, and employees to gather informally between classes. Lighting, signage, and street furniture would be added to these open spaces to create a welcoming environment.

Site Infrastructure. A thermal energy storage unit would be installed just north of the current Heating, Ventilation, and Air Conditioning (HVAC) Building. This system would store energy to be used later for heating, cooling, or power generation. The storage tank volume would be approximately 116,000 cubic feet (Flint, pers. comm. 2014b).

1.6 PROJECT CONSTRUCTION

It is anticipated that planning, design, and construction of the proposed project's buildings and facilities would occur over four phases, which include an unscheduled construction phase. Various construction projects would occur in each of the four phases, including construction of academic buildings and parking facilities, as well as demolition of existing structures. Construction is organized into the following subphases for each phase depending on the type of development: demolition, site preparation, grading, building construction, paving, and architectural coating. A variety of equipment is used during each subphase of construction, such as excavators, crawler tractors, loaders, forklifts, pavers, and air compressors. Construction would be performed by qualified contractors, and construction activities would be in compliance with the applicable permits and contract documents.

1.7 SUMMARY OF IMPACTS

Table ES-1 presents a summary of the environmental impacts that could result from the proposed project, proposed mitigation measures, and the level of significance of each impact after the implementation of the mitigation measures.

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Scenic vista effects	Less-than-significant impact	No mitigation required.	N/A
Scenic resource damage	Less-than-significant impact	No mitigation required.	N/A
Visual quality/character degradation	**Impact AES-1:** Because the existing Central Warehouse/Corporation Yard facility would be renovated and expanded, it is assumed that the bulk and scale of the renovated facilities could be slightly larger, and new walls may be constructed. A substantially larger facility and the construction of monotonous walls lacking any visual interest could increase visual contrast associated with the Central Warehouse/Corporation Yard as viewed from off-site areas. Absent mitigation, impacts resulting from renovation and expansion of the Central Warehouse/Corporation Yard could be potentially significant.	**MM-AES-1:** Architectural and site design of proposed structures shall consider the existing composition and scale of the surrounding area and implement appropriate measures to reduce bulk and scale. Measures to be considered shall include the following: • Setbacks shall be implemented along sides of structures abutting or fronting roadways and shall strive to be consistent with setbacks displayed by existing development in the area. All front and street side setbacks shall incorporate a landscape planter strip (except where necessary driveways and walkways are located). • Architectural design strategies to reduce bulk and scale of new buildings abutting or fronting roadways shall include step-back design for floors above street level to reduce spatial impingement on adjacent roadways, and architectural facades shall be suitably articulated to provide visual interest. In addition, planned fencing/walls abutting or fronting roadways shall be designed to add visual interest and shall incorporate appropriate fence/wall treatments. • A landscape plan featuring drought-tolerant planting material consisting of canopy trees, shrubs, and groundcover shall be implemented to soften the appearance of structure edges and continuous facades, and relieve solid, unbroken elevations. In addition, the landscape plan shall be integrated with all elements of the project, such as buildings and parking areas. Plant materials shall be suitable for the given soil and climatic conditions and shall consider typical species used on campus in the vicinity, as well as species used in the existing streetscape palette to create a consistent landscape theme. The size of installed plant material shall be based on a 5-year time frame to achieve the desired level	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		of visual screening and view modification. • If adequate space is available, streetscape amenities shall be incorporated (or if currently present, enhanced) along sidewalks adjacent to roadways abutting the development site. Landscaping adjacent to and within existing sidewalks shall be increased/enhanced, shall display a consistent theme, and shall be visually compatible with existing landscaping and land uses, as well as with the landscape plan prepared for the proposed development site. Additional streetscape amenities shall include enhanced sidewalk paving, raised and/or cut-out planters suitable for shrubs and street trees, seating, lighting, and other features in a cohesive and visually appealing design that establishes a perceptible thematic image that visually unifies architecture and exterior streetscape spaces. • Future on-campus facilities shall strive to use a unifying architectural style that contributes to a unified campus appearance and reflects a consistent architectural character.	
New source of light or glare	**Impact AES-2:** Because building materials and lighting plans have yet to be prepared for the planned Criminal Justice Training Center Complex, Math/Science Building, Language Arts Complex, and the Business/Social Science/Administrative Office Building, light and glare generated by these elements may adversely affect day- or nighttime views in the surrounding area. As such, lighting and glare are considered potentially significant impacts. If new lighting were to be introduced at buildings/facilities located along the periphery of the GWC campus and	**MM-AES-2:** New sources of exterior lighting shall be shielded and directed downward to avoid light spillover onto adjacent properties. Lighting shall also be of the minimum required intensity to provide for safety and security purposes. Nighttime operation of new sources of lighting shall be consistent with that of existing lighting sources on campus and shall consider potential effects to nighttime views of adjacent motorists and nearby residents. Interior lighting shall be turned off when not in operation or operated in the lowest possible setting. **MM-AES-3:** The use of reflective building materials shall be minimized to the extent practicable. Building materials shall be consistent with the visual character of existing and planned campus facilities and with the overall character of the Golden West College campus.	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	adjacent to campus perimeter roadways, an increase in the intensity of lighting and new fixture types could potentially result in light spillover that would be received by surrounding land uses. As such, new sources of lighting at the central warehouse/corporation yard are considered a potentially significant impact. Renovation of existing athletic fields/facilities would occur where some exterior lighting sources currently operate during evening and nighttime hours. Therefore, new sources of lighting around these areas is assumed for future redevelopment, and because new lighting would be visible to passing motorists on McFadden Avenue and residents to the north because of a lack of intervening elements (i.e., vegetation and structures), development could potential introduce new lighting that could affect existing nighttime views. In addition, because specifics regarding the type and scale of facilities that would be constructed are not known, planned lighting schemes and intensity of exterior fixtures cannot be determined. Therefore, for purposes of this analysis, lighting is considered a potentially significant impact.		

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Cumulative aesthetic and/or lighting impact	**Impact AES-1** and **Impact AES-2**	**MM-AES-1** through **MM-AES-3**	Less than significant with mitigation incorporated
		Air Quality	
Applicable air quality plan	No significant impacts	No mitigation required.	N/A
Projected air quality violation	No significant impacts	No mitigation required; however, mitigation measure MM-AQ-1 would further minimize less-than-significant impacts associated with fugitive dust generation. **MM-AQ-1:** Consistent with South Coast Air Quality Management District Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum, with a goal of retaining dust on the site, by following the dust control measures listed as follows: a) During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease. b) During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour. c) Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation. d) Speeds on unpaved roads shall be reduced to less than 15 miles per hour. e) All grading and excavation operations shall be halted when wind speeds exceed 25 miles.	Less than significant

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		f) Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday. g) Should minor import/export of soil materials be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped or a minimum 2 feet of freeboard shall be maintained. h) At a minimum, at each vehicle egress from the project site to a paved public road, a pad shall be installed consisting of washed gravel (minimum size: 1 inch) maintained in clean condition to a depth of at least 6 inches and extending to a width of at least 30 feet and a length of at least 50 feet (or as otherwise directed by South Coast Air Quality Management District) to reduce trackout and carry out onto public roads. i) Review and comply with any additional requirements of South Coast Air Quality Management District Rule 403.	
Cumulatively considerable net increase	No significant impacts	No mitigation required.	N/A
Exposure of sensitive receptors to substantial pollutant concentrations	No significant impacts	No mitigation required.	N/A
Objectionable odors	No significant impacts	No mitigation required.	N/A
Cumulative air quality impact	No significant impacts	No mitigation required.	N/A
Biological Resources			
Adverse effect, either directly or through habitat modifications, on any species identified as a candidate,	**Impact BIO-1**: Significant impacts to special-status avian species with the potential to nest in ornamental trees.	**MM-BIO-1:** If construction activities are scheduled to take place adjacent to potential bird nesting habitat during the general bird breeding season (i.e., February 1 through August 31), a nesting bird survey shall be conducted by a qualified biologist to determine the presence of nests[1] or nesting birds	Less than significant with mitigation

[1] A "nest" is defined as a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. [2] An "active nest" is defined as a structure or site where birds

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
sensitive, or special-status species		within 300 feet (500 feet for raptors) (given the level of disturbance associated with the project area) of the construction activities. The nesting bird survey shall be completed no more than 72 hours prior to any construction activities. The survey will focus on special-status species known to use the area, as well as other nesting birds that are protected under the Migratory Bird Treaty Act and California Fish and Game Code. If an active nest[2] (defined by the presence of eggs or young) is identified, grading or site disturbance within an appropriate buffer (e.g., 500 feet for raptors and 250 feet for other birds) of the nest shall be monitored by a qualified biologist regularly until project activities are no longer occurring within the required avoidance buffer of the nest or until fledglings become independent of the nest. All staging and construction equipment access routes shall be located away from nesting birds at all times. The monitoring biologist may adjust the buffer radius if he or she determines it is necessary. The monitoring biologist shall halt construction activities determined to be disturbing nesting activities. The monitor shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the nest. This may include recommendations such as (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) working in other areas until the young have fledged, or (3) placing noise barriers to maintain the noise at the nest to 60 A-weighted decibel equivalent continuous sound level hourly or less or to the preconstruction ambient noise level if that exceeds 60 A-weighted decibel equivalent continuous sound level hourly. The on-site biologist will review and verify compliance with these nesting boundaries and will verify that the	incorporated

have begun constructing, preparing, or using a nest for egg-laying. A nest is no longer an active nest if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

2 An "active nest" is defined as a structure or site where birds have begun constructing, preparing, or using a nest for egg-laying. A nest is no longer an active nest if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		nesting effort has finished. Construction activities restricted by this measure can resume when no other active nests are found within the restricted area. *Note: "Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest (California Fish and Game Code, Sections 3503/3503.5).* **MM-BIO-2:** A pre-construction survey or acoustic bat survey will be conducted by a qualified biologist no earlier than 30 days prior to the commencement of construction activities to determine if active bat roosts are present on or within 300 feet of the proposed construction activities. Construction activities will avoid removing identified bat roost trees. If trees must be removed, it is recommended that these trees be removed when the bats are not roosting and between August 1 and March 31 to avoid the breeding season for western yellow bats. Cosmetic removal/trimming of dead palm fronds is the primary conservation threat to this species and will be avoided in areas where this species is known to occur. The use of pesticides will be prohibited within areas identified to have active bat roosts.	
Adverse effect on any riparian habitat or other sensitive natural community	No significant impacts	No mitigation required.	N/A
Adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act	No significant impacts	No mitigation required.	N/A
Interfere with movement of any native resident or migratory fish or	No significant impacts	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
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	No significant impacts	No mitigation required.	N/A
Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	No significant impacts	No mitigation required.	N/A
Cumulative biological resource impact	No significant impacts	No mitigation required.	N/A
Cultural Resources			
Adverse change in the significance of a historical resource	**Impact CUL-1:** The existing setting of the core campus area would be redesigned and reconfigured in a manner that would destroy much of the original semblance of the historic character of the site and those qualities that convey Coast Community College District's historical significance, period of significance, and eligibility for listing in the California Register of Historic Places. The demolition, reconfiguration, and redesign of the District and its contributing resources, as proposed by the current project, would result in significant adverse impacts.	**MM-CUL-1:** Prior to any alteration, relocation, or demolition of any contributing buildings, structures, objects, features, or landscape elements located within the identified Golden West College Campus Historic District a Historic American Buildings Survey Level II-like recordation narrative document shall be prepared by the Coast Community College District. The work shall be completed by a qualified historic preservation professional who meets the requirements of the U.S. Secretary of the Interior's Professional Qualifications for history, architectural history, and/or historic architecture (pursuant to 36 CFR 61). The Historic American Buildings Survey-like document shall record the history of the campus and its associated contributing buildings and features, as well as its contextual relationship to the overall development of the college and community. The physical condition of the Coast Community College District, both historic and current, should	Significant and unavoidable

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		also be addressed in the document through the use of site plans; original as-built drawings, as available; historical maps and photographs, including aerial photos and digital photography; and written data and text. Any field photos and notes should also be included as supporting exhibit material. This documentation shall include at a minimum: • A written historic and descriptive report completed in narrative format, including an architectural data form for each contributing resource. • A site plan showing the location of each building. This site plan shall include a photo key. • A sketch floor plan shall accompany each architectural data form. • Digital format photographs in accordance with Historic American Buildings Survey guidelines and standards. Views shall include contextual views, all exterior elevations, details views of significant exterior architectural features, and interior views of significant historical architectural features or spaces. Such photographs shall be logged, tagged, and collected onto a media storage device for safe archiving and copies provided to those repositories receiving the Historic American Buildings Survey-like finished document. • Available historic photographs and historic and/or current as-built plans of the site and its contributing resources shall be reproduced digitally or photographically and included in the recordation document. One original copy of the documentation reproduced on archival paper as specified previously shall be assembled and offered to each of the following entities: • One set shall be sent to the Southern California Information Center at California State University, Fullerton. • One set shall be offered to and, if accepted, deposited in the archives of the Los Angeles Conservancy.	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• One set shall be offered to and, if accepted, deposited in the archives of the University of California, Irvine. • One set shall be offered to and, if accepted, deposited in the archives of the City of Huntington Beach Public Library. • One set shall be offered to and, if accepted, deposited in the archives of the Huntington Library, Art Collections, and Botanical Gardens. • One set shall be offered to and, if accepted, deposited with the William L. Pereira and Associates Records archives at the University of Southern California Libraries, Special Collections. • One set shall be offered to and, if accepted, deposited in the archives of the Orange County Archives. **MM-CUL-2:** To assist the students, faculty, parents, and other interested parties in understanding the early history of the Golden West College campus, an interpretive multimedia educational program and 3-D public art display shall be incorporated into the development of the reconfigured campus quad area and/or campus library. This interpretive program and public art work shall be developed with the assistance of a qualified architectural historian or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications. Content and design of the interpretive program should be specific to the initial planning and design of the Golden West College campus by William L. Pereira in association with the Coast Community College District; specifically, the architecture and historical development of the campus. The program/display may include but not be limited to commemorative signage; plaques; enlarged and framed historic photographs; representative statues; salvaged materials; models; displays of as-built plans and drawings; an educational, interactive CD software program; other relevant displays and exhibits; tours or events; and published information in the form of brochures, pamphlets, videos, electronic media, and campus website.	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Adverse change in significance of an archaeological resource	**Impact CUL-2:** The northernmost section of the project area is considered to have a low to moderate potential for encountering cultural resources based on its proximity to two prehistoric sites with sensitive and well developed cultural deposits, limited ground surface visibility within grassy areas, and a lack of information relating to the depth and character of past disturbances. Construction activities could directly or indirectly destroy archeological resources and impacts could be potentially significant.	**MM-CUL-3:** If unexpected, potentially significant archaeological materials are encountered during construction, ground-disturbing activities shall be temporarily redirected or suspended until a qualified archaeologist is retained to evaluate the significance of the find. Unanticipated discoveries of significant cultural features would require handling in accordance with California Public Resources Code, Section 5097.	Less than significant with mitigation incorporated
Destroy a unique paleontological resource or site or geologic feature	**Impact CUL-3:** Excavations into undisturbed Pleistocene-age deposits may unearth scientifically significant fossils at an indeterminate depth below the alluvial fan deposits during construction; impacts would be potentially significant.	**MM-CUL-4:** If any subsurface fossils are found by construction personnel, activity in the immediate area should be suspended, and the fossils should be left in place untouched. A qualified paleontologist should then evaluate the significance of the discovery and make further recommendations. Fossils that are considered unique under CEQA Guidelines, Section V(c) of Appendix G (14 CCR 15000 et seq.), should be collected, prepared, analyzed, reported, and curated. **MM-CUL-5:** Paleontological monitoring of earthmoving activities below 5 feet (an arbitrary depth below which Holocene-age sediments are anticipated) will be conducted on an as-needed basis by the paleontological monitors under the supervision of an Orange County qualified paleontologist (principal investigator) during all earthmoving activities that may expose sensitive strata. If fossils are unearthed at a shallower depth, the monitoring program should be adjusted accordingly. Earthmoving activities in sections of the project area where previously undisturbed strata will be buried but not otherwise disturbed will not be monitored. The principal investigator or his/her assignee will have the authority to reduce monitoring once he/she	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		determines the probability of unearthing fossils is lower than anticipated. If the excavations in undisturbed sediments will exceed 5 feet in depth, a qualified paleontological monitor should be present to observe earthmoving activities in these areas. Five feet is the general dividing point in this area, after which monitoring should be initiated in sediments of high sensitivity, as determined by mapping and in compliance with County of Orange guidelines. In areas of disturbed sediments on campus, a paleontological monitor should spot-check construction activities until such a time that it becomes possible to determine the depth of undisturbed native sediments or that no undisturbed sediments have been or will be impacted. Monitoring during any brushing or vegetation removal activities in artificial fill is not recommended. **MM-CUL-6:** If a fossil is discovered by a monitor during construction, the monitor must immediately notify the equipment operator and the construction manager to stop work and then delineate the discovery area with flagging until it can be fully explored and evaluated. The paleontological monitor shall immediately notify the construction manager and the principal investigator. Construction activities in the immediate vicinity of the project area shall be immediately redirected away from the vicinity of the discovery to allow room for the recovery of the resources as necessary. Earthmoving will be allowed to proceed within the discovery site when the principal investigator determines the fossil discovery has been adequately documented and recovered. **MM-CUL-7:** All scientifically significant fossils collected during monitoring and salvage should be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, should be reposited (as a donation) at the John D. Cooper Archaeological and	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Paleontological Center at California State University, Fullerton. Donation of the fossils should be accompanied by financial support for initial specimen storage. A final summary report that outlines the results of the mitigation program should be completed. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	
Disturbance of human remains	No significant impacts.	No mitigation required.	N/A
Cumulative cultural resource impact	**Impact CUL-4:** The proposed project would contribute to a cumulatively considerable impact associated with cultural resources due to the fact that demolition or removal of any historically designated building would impact the potential historic district.	No feasible mitigation.	Significant and unavoidable
Geology and Soils			
Structures exposed to adverse effects			
i. Faulting	Less-than-significant impact	No mitigation required.	N/A
ii. Strong seismic ground shaking			
iii. Seismic related ground failure including liquefaction			
iv. Landslides			
Soil erosion or loss of topsoil	Less-than-significant impact	No mitigation required.	N/A
Located on or would cause unstable soil	Less-than-significant impact	No mitigation required.	N/A
Located on expansive soil	Less-than-significant impact	No mitigation required.	N/A
Cumulative geological resource or soil impact	No significant impact	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Greenhouse Gases and Climate Change			
Generate direct or indirect greenhouse gas emissions	Less-than-significant impact	No mitigation required.	N/A
Conflict with a plan, policy, or regulation adopted to reduce greenhouse gas emissions	Less-than-significant impact	No mitigation required.	N/A
Hazards and Hazardous Materials			
Transport, use, disposal of hazardous materials	**Impact HAZ-1:** Due to the age of the buildings, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. Transport or disposal of soils from the project site could create a significant hazard to the public or the environment.	**MM-HAZ-1:** Prior to demolition permit issuance, a lead-based paint and asbestos survey shall be conducted by a California Occupational Safety and Health Administration-certified asbestos assessor and California Department of Health Services-certified lead-based paint assessor. The survey shall determine whether any on-site abatement of lead-based paint or asbestos containing materials is necessary. In addition, the survey shall include an abatement work plan prepared in compliance with local, state, and federal regulations for any necessary removal of such materials. The work plan shall include a monitoring plan to be conducted by a qualified consultant during abatement activities to ensure compliance with the work plan requirements and abatement contractor specifications. Demolition plans and contract specifications shall incorporate any necessary abatement measures for the removal of materials containing lead-based paint and asbestos. . The measures shall be consistent with the abatement work plan prepared for the proposed project and conducted by a licensed lead/asbestos abatement contractor. If the survey and abatement plans have already been conducted/prepared, then these documents need to be reviewed and implemented prior to demolition of any buildings. In addition to an asbestos and lead paint survey, a qualified environmental specialist shall inspect the site buildings for the presence of polychlorinated biphenyls, mercury, and other hazardous building materials prior to demolition. If found, these materials shall be	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		managed in accordance with the Metallic Discards Act of 1991 (Public Resources Code, Sections 42160 et seq.) and other state and federal guidelines and regulations. Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with the Metallic Discards Act, particularly Section 42175, Materials Requiring Special Handling, for the removal of mercury switches, polychlorinated biphenyl-containing ballasts, and refrigerants. **MM-HAZ-2:** In the event that grading, construction, or operation of proposed facilities encounters evidence of contamination, underground storage tanks, or other environmental concerns, a hazardous materials contingency plan shall be followed. The plan shall (1) specify measures to taken to protect worker and public health and safety, and (2) specify measures to be taken to manage and remediate wastes. Although there is potential for soil contamination elsewhere on the property, the plan should highlight the current and former underground storage tank areas as potential areas of soil contamination. The plan should include the following: • Identification of the current and former underground storage tank locations and identification of the known soil contamination left in place near the former underground storage tank(s) • Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern • Procedures for limiting access to the contaminated area to properly trained personnel • Procedures for notification and reporting, including internal management and local agencies (Huntington Beach Fire Department, County Environmental Health Department, air pollution control district, and others), as needed • A worker health and safety plan for excavation of contaminated soil • Procedures for characterizing and managing excavated soils	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Procedures for certification of completion of remediation. In addition to awareness of the contingency plan, grading and excavation staff shall be qualified or undergo training on how to identify suspected contaminated soil and underground storage tanks.	
Release of hazardous materials into environment	**Impact HAZ-1**	Same as above (MM-HAZ-1 and MM-HAZ-2).	Less than significant with mitigation incorporated
Exposing school to hazardous materials	**Impact HAZ-1**	Same as above (MM-HAZ-1 and MM-HAZ-2).	Less than significant with mitigation incorporated
Located on a hazardous materials site	**Impact HAZ-1**	Same as above (MM-HAZ-1 and MM-HAZ-2).	Less than significant with mitigation incorporated
Near an airport or within an airport land use plan	No significant impacts	No mitigation required.	N/A
Within vicinity of private airstrip	No significant impacts	No mitigation required.	N/A
Impair emergency response	No significant impacts	No mitigation required.	N/A
Wildland fires	No significant impacts	No mitigation required.	N/A
Cumulative hazards or hazardous materials impact	No significant impacts	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Hydrology and Water Quality			
Violate water quality standards Degrade water quality	**Impact HYD-1:** Significant impacts could occur if contaminants are not identified and handled properly.	See MM-HAZ-1 and MM-HAZ-2. **MM-HYD-1: Water Quality Management Plans:** Prior to the Division of the State Architect review and approval of building and development plans, the Coast Community College District shall submit for review and approval a project Water Quality Management Plan that does the following: • Discusses regional or watershed programs including the North Orange County Integrated Regional Water Management Plan • Addresses site design best management practices (as applicable), such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas • Incorporates the applicable source control best management practices as defined in the Drainage Area Management Plan • Incorporates treatment control best management practices as defined in the Drainage Area Management Plan • Generally describes the long-term operation and maintenance requirements for the treatment control best management practices • Identifies the entity that will be responsible for long-term operation and maintenance of the treatment control best management practices • Describes the mechanism for funding the long-term operation and maintenance of the treatment control best management practices Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, Coast Community College District shall perform the following: • Demonstrate that all structural best management practices described in the project Water Quality Management Plan have	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		been constructed and installed in conformance with approved plans and specifications • Demonstrate that Coast Community College District is prepared to implement all nonstructural best management practices described in the project Water Quality Management Plan • Demonstrate that an adequate number of copies of the proposed project's approved final project Water Quality Management Plan are available for the future occupiers • Submit for review and approval an Operations and Maintenance Plan for all structural best management practices **MM-HYD-2: Chemical Management Plans:** Prior to issuance of certificates of use and occupancy or building permits uses shall be identified, and for specified uses, the applicant shall propose plans and measures for chemical management (including storage, emergency response, employee training, spill contingencies, and disposal). The chemical management measures shall be incorporated as an element of a project Water Quality Management Plan and shall be subject to the approval of the Division of the State Architect and other specified agencies such as the Orange County Fire Authority, the Orange County Health Care Agency, and sewer agencies (as appropriate) to ensure implementation of each agency's respective requirements. Occupancy certificates or permits may be withheld if features needed to properly manage chemicals cannot be incorporated into a previously completed building, center or complex.	
Deplete groundwater supplies	Less-than-significant impact	No mitigation required.	N/A
Alter drainage pattern causing erosion Alter drainage pattern causing flooding	**Impact HYD-2:** Construction and operation of the proposed project could result in the alternation of the existing drainage pattern within the project site	**MM-HYD-1: Water Quality Management Plans:** Prior to the Division of the State Architect review and approval of building and development plans, the Coast Community College District shall submit for review and approval a project Water Quality Management Plan	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	resulting in flooding or erosion.	that does the following: • Discusses regional or watershed programs including the North Orange County Integrated Regional Water Management Plan • Addresses site design best management practices (as applicable), such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas • Incorporates the applicable source control best management practices as defined in the Drainage Area Management Plan • Incorporates treatment control best management practices as defined in the Drainage Area Management Plan • Generally describes the long-term operation and maintenance requirements for the treatment control best management practices • Identifies the entity that will be responsible for long-term operation and maintenance of the treatment control best management practices • Describes the mechanism for funding the long-term operation and maintenance of the treatment control best management practices Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, Coast Community College District shall perform the following: • Demonstrate that all structural best management practices described in the project Water Quality Management Plan have been constructed and installed in conformance with approved plans and specifications • Demonstrate that Coast Community College District is prepared to implement all nonstructural best management practices described in the project Water Quality Management Plan • Demonstrate that an adequate number of copies of the proposed project's approved final project Water Quality Management Plan	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		are available for the future occupiers • Submit for review and approval an Operations and Maintenance Plan for all structural best management practices	
Excess runoff water	**Impact HYD-3:** Construction and operation of the proposed project could result in excess runoff water from the project site.	**MM-HYD-1: Water Quality Management Plans:** Prior to the Division of the State Architect review and approval of building and development plans, the Coast Community College District shall submit for review and approval a project Water Quality Management Plan that does the following: • Discusses regional or watershed programs including the North Orange County Integrated Regional Water Management Plan • Addresses site design best management practices (as applicable), such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas • Incorporates the applicable source control best management practices as defined in the Drainage Area Management Plan • Incorporates treatment control best management practices as defined in the Drainage Area Management Plan • Generally describes the long-term operation and maintenance requirements for the treatment control best management practices • Identifies the entity that will be responsible for long-term operation and maintenance of the treatment control best management practices • Describes the mechanism for funding the long-term operation and maintenance of the treatment control best management practices Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, Coast Community College District shall perform the following: • Demonstrate that all structural best management practices described in the project Water Quality Management Plan have	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		been constructed and installed in conformance with approved plans and specifications • Demonstrate that Coast Community College District is prepared to implement all nonstructural best management practices described in the project Water Quality Management Plan • Demonstrate that an adequate number of copies of the proposed project's approved final project Water Quality Management Plan are available for the future occupiers • Submit for review and approval an Operations and Maintenance Plan for all structural best management practices	
Introduction of housing within flood hazard area	Less-than-significant impact	No mitigation required.	N/A
Introduction of structures to redirect flood flows	Less-than-significant impact	No mitigation required.	N/A
Loss, injury, or death due to dam inundation	No significant impacts	No mitigation required.	N/A
Seiche, tsunami, mudflow	Less-than-significant impact	No mitigation required.	N/A
Cumulative hydrology or water quality impact	**Impact HYD-4:** Significant cumulative impacts could occur if water is used in a wasteful manner.	**MM-HYD-3: Water Conservation:** Vision 2020 Facilities Master Plan shall be designed, constructed, and operated in compliance with the City of Huntington Beach's water conservation programs. The Golden West College Maintenance and Operations Department, as well as commercial tenants of leased property, shall be required to become familiar with and enforce, to the extent feasible and as applicable, the following restrictions and requirements: • Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited between the hours of 8:00 a.m. and 5:00 p.m. Pacific Standard Time on any day. If necessary, and for very short periods of time for the express purpose of adjusting or repairing it, one may operate an irrigation system during the otherwise restricted period.	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• No person shall cause or allow watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive runoff from the property. • Washing down hard or paved surfaces, including sidewalks, walkways, driveways, parking areas, tennis courts, and patios or alleys, is prohibited, except when necessary, to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a fully functioning, a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume, high-pressure water broom. • Excessive use, loss, or escape of water through breaks, leaks, or other malfunctions in Coast Community College District's (or a leasee's) plumbing or distribution system, for any period of time after such escape of water should have reasonably been discovered and corrected, and in no event more than 7 days of receiving notice from the City, is prohibited. • Operating a water fountain or other decorative water feature that does not use recirculated water shall be prohibited. • Using water to wash or clean a vehicle shall be prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a fully functioning, positive self-closing water shut-off nozzle or device. • Eating or drinking establishments are encouraged not to provide drinking water to any person unless expressly requested. • Installation of single-pass cooling systems shall be prohibited in buildings requesting new water service. • Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Food preparation establishments, such as restaurants or cafes, are prohibited from using non-water-conserving dish-wash spray valves. • After the City of Huntington Beach has provided to the user an analysis demonstrating that recycled water is available, cost effective, and safe for the intended use, and the user has been given a reasonable time to make the conversion to recycled water, the use of potable water shall be prohibited. • Prior to the connection of any new commercial, industrial, or multiresidential water service, the City shall perform an evaluation to determine whether recycled water is available, cost effective, and safe for the intended use to supply all or some of the water needed by the new user. If available, cost effective, and safe for the intended use, recycled water must be used.	
Noise			
Noise in excess of established standards	**Impact NOI-1:** The proposed project could generate noise from construction that would be audible and would temporarily elevate the local ambient noise level to some degree at on-site distances greater than 100 feet from construction, and potentially significant impacts could result.	**MM-NOI-1:** Prior to initiation of campus construction, the Coast Community College District shall approve a construction noise mitigation program including but not limited to the following: • Construction equipment shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise. • Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses if feasible. • Laydown and construction vehicle staging areas shall be located away from noise-sensitive land uses if feasible. • Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project. • All construction projects pursuant to the proposed project would be required to implement the mentioned measures for control of	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		construction noise.	
Excessive groundborne vibration or groundborne noise levels	Less-than-significant impact	No mitigation required.	N/A
Permanent increase in ambient noise levels	Less-than-significant impact	No mitigation required.	N/A
Temporary or periodic increase in ambient noise levels	**Impact NOI-1:** The proposed project could generate noise from construction that would be audible and would temporarily elevate the local ambient noise level to some degree at on-site distances greater than 100 feet from construction, and potentially significant impacts could result.	**MM-NOI-1:** Prior to initiation of campus construction, the Coast Community College District shall approve a construction noise mitigation program including but not limited to the following: • Construction equipment shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise. • Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses if feasible. • Laydown and construction vehicle staging areas shall be located away from noise-sensitive land uses if feasible. • Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project. • All construction projects pursuant to the proposed project would be required to implement the mentioned measures for control of construction noise.	Less-than-significant impact with mitigation incorporated
Exposing people residing or working in airport land to excessive noise	No significant impacts	No mitigation required.	N/A
Exposing people residing or working in private airstrip to excessive noise	No significant impacts	No mitigation required.	N/A
Cumulative noise impact	Less-than-significant impact	No mitigation required.	N/A
Population and Housing			
Induce substantial population growth	Less-than-significant impact	No mitigation required.	N/A
Displace existing housing	Less-than-significant impact	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Displace existing people	Less-than-significant impact	No mitigation required.	N/A
Cumulative population and housing impacts	Less-than-significant impact	No mitigation required.	N/A
Public Services			
Expansion of government facilities including:			
i. Fire	Less-than-significant impact	No mitigation required.	N/A
ii. Police	Less-than-significant impact	No mitigation required.	N/A
iii. Schools	Less-than-significant impact	No mitigation required.	N/A
iv. Parks	Less-than-significant impact	No mitigation required.	N/A
v. Libraries	Less-than-significant impact	No mitigation required.	N/A
Cumulative public service impacts	Less-than-significant impact	No mitigation required.	N/A
Traffic and Circulation			
Conflict with applicable traffic performance standard	**Impact TRA-1:** The proposed project would impact the intersections of Goldenwest Street at Driveway No. 11 and Driveway No. 4 at Edinger Avenue under the existing plus project scenario. Under the Year 2024 Plus Project traffic scenario, the proposed project would cumulatively impact 9 of the 26 key study intersections. The proposed project would result in a potentially significant impact to three state controlled intersections under the Year 2024 Plus Project traffic scenario.	The following mitigation measures would be required to reduce the existing plus project traffic impacts: **MM-TRA-1:** The Coast Community College District shall restrict westbound left turns out of the project site during the AM peak period (7:00 a.m.–9:00 a.m.) and PM peak period (4:00 p.m.–6:00 p.m.) on Goldenwest Street at Driveway No. 11. **MM-TRA-2:** Coast Community College District shall restrict southbound left turns out of the project site during the AM peak period (7:00 a.m.–9:00 a.m.) and PM peak period (4:00 p.m.–6:00 p.m.) on Edinger Avenue at Driveway No. 4. The following mitigation measures would be required to reduce the Year 2024 Cumulative impacts:	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRA-3: Coast Community College District shall widen and/or restripe Goldenwest Street at Bolsa Avenue to provide a second southbound left-turn lane, and shall modify the existing traffic signal. **MM-TRA-4:** Coast Community College District shall widen and/or restripe McFadden Avenue at Goldenwest Street to formalize the existing westbound de facto right-turn lane. The District shall modify the existing traffic signal by installing a westbound right-turn overlap phase. Implementation of the westbound right-turn overlap phase will require the installation of a no U-turn sign for southbound left-turning vehicles. **MM-TRA-5:** Coast Community College District shall widen and/or restripe Edinger Avenue at Goldenwest Street to provide an exclusive westbound right-turn lane, and shall modify the existing traffic signal. **MM-TRA-6:** Coast Community College District shall modify the existing traffic signal by installing a northbound right-turn overlap phase on McFadden Avenue at Vermont Street/Gothard Street. **MM-TRA-7:** Coast Community College District shall restripe the westbound approach to provide dual left-turn lanes and a shared through/right-turn lane on Gothard Street at Driveway No. 2/Center Avenue. Coast Community College District shall modify the existing traffic signal to provide protected left-turn phasing in the eastbound and westbound directions. **MM-TRA-8:** Coast Community College District shall widen and/or restripe Edinger Avenue at Gothard Street to provide an exclusive westbound right-turn lane, and shall modify the existing traffic signal.	

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		The following mitigation measures would be required to reduce the Year 2024 Plus Project Cumulative impact at three state-controlled intersections: **MM-TRA-9:** Coast Community College District shall contribute its fair or appropriate share toward the modification of the existing traffic signal to install a westbound right-turn overlap phase at the Interstate 405 southbound ramps at Center Avenue. **MM-TRA-10:** Coast Community College District shall contribute its fair or appropriate share toward improvement of the intersection of Beach Boulevard at McFadden Avenue. The identified improvements are to (1) widen and/or restripe Beach Boulevard to provide an exclusive northbound right-turn lane and an exclusive southbound right-turn lane, and (2) modify the existing traffic signal. **MM-TRA-11:** Coast Community College District shall contribute its fair or appropriate share toward improvement of the intersection of Beach Boulevard at Edinger Avenue. The identified improvements are to (1) widen and/or restripe Beach Boulevard to provide a fourth northbound through lane, and (2) modify the existing traffic signal.	
Conflict with applicable congestion management program	The proposed project would result in a potentially significant impact to three state controlled intersections under the "Year 2024 Plus Project" traffic scenario	**MM-TRA-9** through **MM-TRA-11**	Less than significant with mitigation incorporated
Change in air traffic patterns	No significant impacts	No mitigation required.	N/A
Design feature hazards	Less-than-significant impact	No mitigation required.	N/A
Inadequate emergency access	Less-than-significant impact	No mitigation required.	N/A
Conflict with alternative	Less-than-significant impact	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
transportation			
Cumulative impacts to transportation	Under the "Year 2024 Plus Project" traffic scenario the proposed project will cumulatively impact 9 of the 26 key study intersections. The proposed project would result in a potentially significant impact to three state controlled intersections under the "Year 2024 Plus Project" traffic scenario.	The following mitigation measures would be required to reduce the year 2024 cumulative impacts: **MM-TRA-3** through **MM-TRA-11**	Less than significant
Utilities and Service Systems			
Exceed wastewater treatment requirements	Less-than-significant impact	No mitigation required.	N/A
Require construction of new water or wastewater facilities	**Impact UTL-1:** Coordination with the City of Huntington Beach and a hydraulic study to analyze the proposed project's impacts to the City's water and sewer lines is required to avoid potentially significant impacts.	See **MM-HYD-3**. **MM-UTL-1:** Prior to the Department of State Architects design review approval, and when building specific plans are available, Coast Community College District shall coordinate with the City of Huntington Beach's water and sewage department to conduct a hydraulic analysis to determine the specific impacts to the city's water and sewer infrastructure. . The analysis shall demonstrate to the satisfaction of the City engineer that adequate on-site water and sewer infrastructure will be available to support the proposed facilities. The hydraulic analysis shall include the following information: a) Existing pipeline locations, size, and capacity b) Proposed system and points of connection c) Estimated water demands and and/or sewer flow calculations d) Huntington Beach Fire Department flow requirements.	Less than significant with mitigation incorporated
Require construction of new drainage facilities	**Impact UTL-2:** If design features are not implemented to slow and retain stormwater runoff, potentially significant	See **MM-HYD-1**.	Less than significant with mitigation incorporated

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
	impacts could result.		
Insufficient water supplies	**Impact UTL-3:** In the event that the proposed project uses water in a wasteful manner, potentially significant impacts could result.	See **MM-HYD-3**.	Less than significant with mitigation incorporated
Adequate wastewater treatment capacity	Less-than-significant impact	No mitigation required.	N/A
Sufficient landfill capacity	**Impact UTL-4:** The County of Orange Waste & Recycling will require the completion and submittal of a construction and demolition waste reduction and recycling application to the County for approval prior to issuance of the final Certificate of Occupancy permit for the site.	**MM-UTL-2:** Prior to issuance of the final Certificate of Occupancy permit, the Coast Community College District (District) shall complete a construction and demolition waste reduction and recycling application and submit the application to the County of Orange (County) Waste & Recycling for approval. The construction and demolition waste reduction and recycling application will identify and estimate the materials to be recycled during construction and demolition activities and will name the County-approved facility used to recycle the waste. Compliance with the plan will be a requirement in all construction contracts. The County-approved application will be attached to all construction plans and distributed to all construction contractors. Once construction is complete, Coast Community College District will be responsible for preparing a tonnage report that demonstrates that the proposed project recycled a minimum of 50% of its construction and demolition waste. The tonnage report must be submitted to and approved by the County prior to issuance of the final Certificate of Occupancy permit. Since this proposed project will be developed in phases over time, review and approval of the construction and demolition waste reduction and recycling application can be submitted by phase or building. However, for each demolition waste reduction and recycling application submitted and approved, a corresponding tonnage report should also then be submitted for approval.	Less than significant with mitigation incorporated
Conflict with solid waste regulations	Less-than-significant impact	No mitigation required.	N/A
Excessive use of fuel/energy	Less-than-significant impact	No mitigation required.	N/A

Table ES-1
Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Excessive use of power	Less-than-significant impact	No mitigation required.	N/A
Cumulative utilities and service systems impacts	**IMPACT UTL -5**: Significant cumulative impacts could occur if water is used in a wasteful manner. Coordination with the City of Huntington Beach and a hydraulic study to analyze the proposed project's impacts to the City's water and sewer lines are required to avoid cumulative impacts. If design features are not implemented to slow and retain stormwater runoff, cumulative impacts could result. The County of Orange Waste & Recycling will require the completion and submittal of a construction and demolition waste reduction and recycling application to the County for approval prior to issuance of the final Certificate of Occupancy permit for the site.	See **MM-HYD-1**, **MM-HYD-3**, **MM-UTL-1**, and **MM-UTL-2**.	Less than significant with mitigation incorporated

1.8 ANALYSIS OF ALTERNATIVES

Alternatives Considered

Four alternatives to the proposed project, including the No Project/Existing Master Plan Alternative and the No Project/No Development Alternative, were considered in Chapter 6, Alternatives. The No Project Alternative is a required element of an Environmental Impact Report (EIR), pursuant to Section 15126.6(e) of the CEQA Guidelines, that examines the environmental effects that would occur if the proposed project were not to proceed. The other alternatives are discussed as part of the "range of reasonable alternatives" selected by the District. The four alternatives addressed in Chapter 6 are listed in the following text, followed by a description of each:

1. No Project/Existing Master Plan Alternative
2. No Project/No Development Alternative
3. Full Preservation
4. Majority Reuse

1.9 AREAS OF CONTROVERSY

Section 15123(b)(2) of the CEQA Guidelines requires the executive summary of an EIR to disclose areas of controversy known to the lead agency that have been raised by the agencies and the public. The District circulated a Notice of Preparation (NOP) to solicit agency and public comments on the scope and environmental analysis to be included in the EIR. Seven comment letters were received during the NOP public review period. Copies of the NOP and the NOP comment letters received by the District are included in Appendix A to this EIR.

1.10 ISSUES TO BE RESOLVED BY LEAD AGENCY

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved. With respect to the proposed project, the key issues to be resolved include decisions by the District, as lead agency, as to the following:

- Whether this environmental document adequately describes the environmental impacts of the proposed project
- Whether the recommended mitigation measures should be modified and/or adopted
- Whether there are other mitigation measures or alternatives that should be considered for the proposed project besides those identified in the Draft PEIR

1.11 REFERENCES

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Public Resources Code, Section 21000–21177. California Environmental Quality Act (CEQA), as amended.

District (Coast Community College District). 2011. *Vision 2020 Facilities Master Plan*. Prepared by Cambridge West Partnership LLC and Hill Partnership Inc. May 2011.

Flint, R. 2014a. Proposed facility interior modifications and security, access, and surveillance infrastructure improvements. Email from R. Flint (GWC Project Manager, Measure M Capital Projects) to C. Munson (Dudek). June 27, 2014.

Flint, R. 2014b. Parking lot square footage and thermal energy storage. Email from R. Flint (GWC Project Manager, Measure M Capital Projects) to C. Munson (Dudek). May 23, 2014.

CHAPTER 2
INTRODUCTION

2.1 PROJECT BACKGROUND

The Coast Community College District (District) is updating its Vision 2020 Facilities Master Plan for all three of its Orange County campuses: Orange Coast College, Golden West College (GWC), and Coastline Community College. The Vision 2020 Facilities Master Plan provides an analysis of the evolving student body and makes planning recommendations based on their educational needs. The District is undertaking a comprehensive improvement and building program to accommodate increasing enrollment and improve the safety and educational experience of those attending the colleges in accordance with Measure M by making upgrades and repairs of existing buildings as well as constructing new facilities. Measure M was passed in November 2012; as a result, $698 million in bonds were issued to fund the expansion of courses and academic buildings in engineering, math, science, and technology, as well as to upgrade technologies, construct and repair facilities, and improve resources for active military personnel and veterans at all three District campuses.

GWC is proposing to implement the Vision 2020 Facilities Master Plan to meet the space needs of the projected on-campus enrollment more effectively through the next decade and beyond while constructing and renovating facilities in order to meet the District's instructional needs. The construction of new classroom and laboratory buildings would accommodate the projected increase in students. Improved circulation in and around campus would increase accessibility to existing and new development, improve pedestrian and bicycle safety, and enhance the overall connectivity of campus uses. By pursuing joint venture and entrepreneurial opportunities, the District could generate revenue and support the academic needs and mission of the campus.

This Program Environmental Impact Report (PEIR) evaluates the potential short-term, long-term, and cumulative impacts of the proposed Golden West College Vision 2020 Facilities Master Plan (proposed project). This PEIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.). Environmental impact reports (EIRs) are informational documents "which inform public agency decision makers and the public of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" (14 CCR 15121). The purpose of this PEIR is to evaluate the environmental effects of the proposed project.

This PEIR is intended for use by both decision makers and the public. It provides relevant information concerning the potential environmental effects associated with the construction and operation of the project.

2.2 ENVIRONMENTAL PROCEDURES

2.2.1 CEQA Compliance

CEQA (California Public Resources Code, Section 21000 et seq.) requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This PEIR has been prepared in compliance with all criteria, standards, and procedures of the CEQA Guidelines (14 CCR 15000 et seq.). This document represents the independent judgment of the District's Board of Trustees as lead agency (14 CCR 15050).

2.2.2 Notice of Preparation and Scoping

CEQA establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed and the extent and types of impacts that the project and its alternatives would have on the environment should the project or alternatives be implemented. Pursuant to Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) dated January 9, 2014, was circulated to interested agencies, organizations, and individuals. The NOP was also sent to the State Clearinghouse at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2014011015) to this PEIR.

The NOP is intended to encourage interagency communication regarding the proposed project so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. Pursuant to Section 15082 of the CEQA Guidelines, recipients of the NOP were requested to provide responses within 30 days after their receipt of the NOP. A public scoping meeting was held on the GWC campus on January 23, 2014, to gather additional public input on the scope of the environmental document. Approximately 10 persons attended the scoping meeting. The 30-day public scoping period ended on February 7, 2014. All comments received during the NOP public notice period and scoping meeting were considered during the preparation of this PEIR. Copies of the comment letters are included in Appendix A and summarized in Table 2-1.

Table 2-1
Summary of Comments Received in Response to the NOP and Scoping Meeting

Commenting Agency or Property Owner	Written or Verbal Comment	Summary of Comment	PEIR Chapter Where Comment is Addressed
NOP Letters			
State Agencies			
California Department of Transportation, District 12	Written	Impacts on state highways and freeways, including ramps, should be analyzed using the Caltrans "Guide for the Preparation of Traffic Impact Studies." The two facilities under Caltrans' jurisdiction that could be impacted are I-405 and SR-39 (Beach Boulevard).	Section 4.12, Traffic and Circulation
Native American Heritage Commission	Written	Requested an appropriate records search to determine known traditional cultural resource, and preparation of an archaeological inventory survey if required. A list of appropriate Native American contacts for consultation concerning the project site should be contacted. Mitigation plans should be included in the PEIR to identify and evaluate accidentally discovered archaeological resources pursuant to California Health and Safety Code Section 7050.5 and CEQA Section 15064.5(f). In addition, a mitigation plan for the discovery of Native American human remains should be included.	Section 4.4, Cultural Resources
South Coast Air Quality Management District	Written	Recommends that the CEQA Air Quality Handbook (1993) be used for all air quality analysis and California Emissions Estimator Model land use emissions software be used to estimate pollutant emissions from typical land use developments. Air quality impacts from project operations and construction should be calculated. The South Coast Air Quality Management District has developed regional and localized significance thresholds for criteria pollutants that should be compared to estimated proposed project emissions. A mobile source health risk assessment should be performed in the event that the proposed project generates or attracts vehicular trips. The California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective* is recommended as guidance for siting incompatible land uses. Several resources are recommended to assist in the drafting of mitigation measures in the event that the project generates significant adverse air quality impacts. CEQA requires that all feasible mitigation measures that go beyond what is required by the law be utilized during project construction and operation to minimize or eliminate these impacts. Any impacts resulting from mitigation measures must be discussed pursuant to CEQA Guidelines Section 15126.4(a)(1)(D).	Section 4.2, Air Quality Section 4.6, Greenhouse Gas Emissions

Table 2-1
Summary of Comments Received in Response to the NOP and Scoping Meeting

Commenting Agency or Property Owner	Written or Verbal Comment	Summary of Comment	PEIR Chapter Where Comment is Addressed
California Department of Fish and Wildlife	Written	Mentions that under the California Endangered Species Act, take of an endangered, threatened, or candidate species is prohibited, and if any proposed project activities result in the take of any of these species, the project proponent must seek appropriate take authorization prior to implementation. It is recommended that a discussion of the purpose and need for the project; a description of the proposed project, including construction staging areas and access routes; and a range of feasible project alternatives be discussed in the PEIR. Makes recommendations of information to include in the PEIR in order to provide a complete assessment of the flora and fauna within and adjacent to the project area. Makes recommendations of information to include in the PEIR in order to provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources. Makes recommendations on how to draft mitigation for proposed project-related biological impacts.	Chapter 3, Project Description Section 4.3, Biological Resources
State Clearinghouse	Written	Acknowledges receipt of the NOP.	N/A
		Local Agencies	
City of Huntington Beach Fire Department	Written	Per the Division of State Architect, the local fire authority has jurisdiction over all fire apparatus access lanes, access gates, fire hydrant/fire pump/fire department connections/post indicator valve/double check valve assembly locations.	Section 4.11, Public Services
City of Huntington Beach	Written	The City of Huntington Beach would like proposed project phasing to be included in the project description. Edinger and Goldenwest Streets as Minor Urban Scenic Corridors and Gothard Street as a Landscape Corridor should be addressed. Removal of mature healthy trees should be mitigated. PEIR should discuss and analyze impacts with respect to the Beach and Edinger Corridors Specific Plan. There is an exemption in the Huntington Beach Municipal Code for construction provided these activities occur during certain hours/days of the week. The traffic impact	Chapter 3, Project Description Section 4.1, Aesthetics Section 4.3, Biological Resources Section 4.9, Noise Section 4.12, Traffic and Circulation Section 4.13, Utilities and Service Systems

Table 2-1
Summary of Comments Received in Response to the NOP and Scoping Meeting

Commenting Agency or Property Owner	Written or Verbal Comment	Summary of Comment	PEIR Chapter Where Comment is Addressed
		analysis should evaluate traffic impacts on the adjacent street system. The PEIR should include a hydraulic analysis of the proposed project to assess impacts to the City's water lines.	
Organizations			
United Coalition to Protect Panhe	Written	In the event that archaeological resources are discovered, we request that serious consideration be given to preservation measures such as avoidance and site burial.	Section 4.4, Cultural Resources
Scoping Meeting Notes			
Bud Benneman	Verbal	"An impressive list of projects. Four year universities currently have to review their carbon footprint. Are we considering the possibility that community colleges may have to fall in line with requirements about emissions and carbon footprint? We should include plans for alternative transportation such as bike rack stations. We have a problem where we do lose bikes to theft. Consideration for this bike rack compound should be given." *Response: "We will review impacts of emissions and greenhouse gas emissions over time. I can't speak to whether this will be a new requirement for community colleges."* "There is a new Math/Science building. Because of the delays at the State, there will be some interim work done. Is that on the list?" *Response: "There are certain projects that are handled more as allocations or appropriations vs. construction. There are some projects that require a detailed project analysis where as other projects don't have detailed plans, so we have to make some general decisions. The challenges to campus planning are that it's not static. Things change on a campus over the years. Planning is usually done on a cycle that is constantly changing. We are trying to capture things at a point in time but things will continue to change."*	Section 4.2, Air Quality Section 4.6, Greenhouse Gas Emissions

Table 2-1
Summary of Comments Received in Response to the NOP and Scoping Meeting

Commenting Agency or Property Owner	Written or Verbal Comment	Summary of Comment	PEIR Chapter Where Comment is Addressed
Phil Questke	Verbal	"The list includes renovation and new buildings. Are those determinations already made?" *Response: "There will be a review conducted to determine which method is more efficient. It's not to say that we can't change the decision to new or renovated. There is some flexibility. We break it down within the plan because the impact is different for renovation vs. new construction. We are trying to nail down all of those determinations so that we can be transparent."* "One thing I didn't see detailed was the infrastructure on campus. We have the central plant, and there is an inference of thermal storage, which is great, but what about becoming grid neutral efforts? We need to look at ways to support the campus as a micro grid and become self-supporting..." (He went on to share some experiences he had related to the review of other campuses and their efficiencies.) *Response: "The facility master plan is posted on the District website. It includes an allocation for energy efficiency projects, which we are maximizing with Prop 39 dollars. There is currently an interior lighting retrofit being completed. These projects wouldn't necessarily impact CEQA. The campus is working towards identifying other projects that may be determined as energy efficient."*	Chapter 3, Project Description

2.3 CONTENTS OF THE PEIR

In order to describe the direct, indirect, and cumulative impacts, as well as mitigation measures and alternatives for the proposed project, this PEIR is organized as follows:

- Chapter 1, Executive Summary, outlines the conclusions of the environmental analysis and provides a summary of the project as compared to the alternatives analyzed in the PEIR. This section also includes a table summarizing all environmental impacts identified in this PEIR along with the associated mitigation measures proposed to reduce or avoid each impact.

- Chapter 2, Introduction, serves as a foreword to the PEIR, introducing the project background, the applicable environmental review procedures, and the format of the PEIR.
- Chapter 3, Project Description, provides a thorough description of the proposed project components and required discretionary approvals.
- The introduction to Chapter 4, Environmental Analysis, includes a discussion of the approach to the analysis of potentially significant impact areas and an overview of the organization of each of these categories.
- Sections 4.1 through 4.13 in Chapter 4, Environmental Analysis, provide an analysis of the potentially significant environmental impacts identified for the proposed project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The following impact areas are discussed:
  - 4.1 Aesthetics
  - 4.2 Air Quality
  - 4.3 Biological Resources
  - 4.4 Cultural Resources
  - 4.5 Geology and Soils
  - 4.6 Greenhouse Gas Emissions
  - 4.7 Hazards and Hazardous Materials
  - 4.8 Hydrology and Water Quality
  - 4.9 Noise
  - 4.10 Population and Housing
  - 4.11 Public Services
  - 4.12 Traffic and Circulation
  - 4.13 Utilities and Service Systems
- Chapter 5, Other CEQA Considerations, includes a summary of effects found not to be significant, which is a discussion of potential environmental topics that have been found, through the Initial Study process, to have a less-than-significant effect or no effect on the environment. This section also includes a summary of significant irreversible environmental changes, which addresses environmental areas where significant environmental effects cannot be avoided and any significant irreversible environmental changes that would result from implementation of the proposed project. The growth-inducing impacts associated with the proposed project are also discussed.

- Chapter 6, Alternatives, discusses four alternatives to the proposed project, including the No Project/No Development Alternative and the No Project/Existing Master Plan Alternative, which would entail buildout of the (current) 2007 Master Plan, a Full Preservation Alternative and a Majority Reuse Alternative.
- Chapter 7, List of Preparers, provides the names of those who helped write this PEIR and specifies their contributions.
- Appendices include various technical studies prepared for the proposed project, as listed below:
  - Appendix A – Initial Study/NOP and Comments
  - Appendix B – Air Quality and GHG Emissions Calculations
  - Appendix C – Biological Resources Letter Report
  - Appendix D – Historic Resources Technical Report
  - Appendix E – Cultural Inventory Memorandum
  - Appendix F – Paleontological Resources Survey
  - Appendix G – Noise Calculations
  - Appendix H – Hazards Assessment
  - Appendix I – Traffic Impact Analysis

2.4 REFERENCES

California Public Resources Code, Sections 21000–21177. California Environmental Quality Act (CEQA), as amended.

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

CHAPTER 3
PROJECT DESCRIPTION

This chapter includes a description of the existing Golden West College (GWC) campus, relevant history and background of the campus's planning efforts, and the planning principles and objectives developed for implementation of the Vision 2020 Facilities Master Plan (proposed project). This chapter also provides a detailed description of the purpose and need for the project, the major components and characteristics proposed, and a summary of the discretionary approvals required for implementation.

3.1 PROJECT LOCATION

The proposed project is located on the existing GWC campus in the City of Huntington Beach, California, within the northwestern portion of Orange County (Figure 3-1, Regional Location). Primary freeway access to the campus would be via Interstate 405 and State Route 39 (commonly known as Beach Boulevard), which are minutes from the campus. GWC is bounded by McFadden Avenue to the north, Gothard Street to the east, Edinger Avenue to the south, and Goldenwest Street to the west (see Figure 3-2, Local Vicinity).

3.2 DESCRIPTION OF EXISTING CAMPUS

GWC occupies an approximately 109-acre site in the City of Huntington Beach (City) in northwestern Orange County. The City is surrounded by the Cities of Seal Beach and Westminster to the north, Fountain Valley and Costa Mesa to the east, and the Pacific Ocean to the west and south. Although the campus is located in Huntington Beach, the City of Westminster is located immediately north of GWC.

GWC, like most of Huntington Beach, is located on flat terrain (City of Huntington Beach 1996). The Santa Ana River passes 0.75 mile south of the campus and drains into the Pacific Ocean, located 3.4 miles southwest of the campus. The Bolsa Chica Ecological Preserve (a wetland estuary) and the Seal Beach National Wildlife Refuge (a saltwater marsh in the Anaheim Bay estuary), located 2.7 miles southwest and 3.5 miles west of the campus, respectively, also drain into the Pacific Ocean. Several lakes exist south of the campus, including the lakes associated with Central Park, which are located approximately 2 miles away from GWC.

The campus is located in an urbanized setting. The City of Westminster is immediately north of the campus across McFadden Avenue, and is characterized by low-density housing near the campus. More low-density neighborhoods are located to the west of Goldenwest Street (south of Edinger Avenue), and east of Gothard Street (on the south side of the Bella Terra Shopping Center) are commercial/retail neighborhoods that the City identified as a mixed-use area on the General Plan Map (City of Huntington Beach 2011). A CVS Pharmacy is located within the northwest corner of the campus, on land owned by the Coast Community

College District (District). A retail center, not owned by the District, is next to the southeast edge of the campus.

GWC is one of three colleges in the District. The majority of the GWC campus is designated as Public (P) in the City's General Plan and has a zoning designation of Public School (PS). The northwest corner of the campus, where the CVS Pharmacy is located, is designated as Commercial General – 0.35 Floor Area Ratio (CG-F1) in the Huntington Beach General Plan and has a zoning designation of Commercial General (CG) (City of Huntington Beach 2011, 2014a). Currently, GWC houses more than 30 buildings, which occupy approximately 654,000 gross square feet (District 2011; Flint, pers. comm. 2014a). Parking lots are located along the perimeter of the campus and occupy most of the western, southern, and eastern edges of the campus. The north side of campus houses athletic fields and facilities. Classrooms and other learning facilities make up the center of the site. A 9-acre retail site not owned by the District is located on the southeast corner, next to the intersection of Gothard Street and Edinger Avenue (see Figure 3-3, Existing Campus Land Uses).

3.3 BACKGROUND AND PROJECT HISTORY

The District is updating its Vision 2020 Facilities Master Plan for all three of its Orange County campuses: GWC, Orange Coast College, and Coastline Community College. The Vision 2020 Facilities Master Plan provides an analysis of the evolving student body and makes planning recommendations based on their educational needs. The District is undertaking a comprehensive improvement and building program to accommodate increasing enrollment and to improve the safety and educational experience of those attending the colleges in accordance with Measure M by upgrading and repairing existing buildings as well as constructing new facilities. Measure M was passed in November 2012; as a result, $698 million in bonds were issued to fund the expansion of courses and academic buildings in engineering, math, science, and technology, as well as to upgrade technologies, construct and repair facilities, and improve resources for active military personnel and veterans at all three District campuses.

GWC had an enrollment of 12,746 students in 2013 (Flint and Nguyen, pers. comm. 2014), which is projected to grow to 15,391 students in 2020, representing a 1.14% annual average growth rate from the fall 2009 enrollment of 13,673 students as illustrated in Table 3-1 (District 2011).

Table 3-1
GWC Planning Projections

Timing	Headcount Student Enrollment
Fall 2013	12,746
Fall 2020	15,391

Sources: District 2011; Flint and Nguyen, pers. comm. 2014.
Note: Headcount student enrollment represents the total number of students attending GWC, including online, day, and night classes.

GWC offers career and technical education courses but primarily focuses on transfer and general education, as 78% of weekly student contact hours were associated with courses in arts and letters, mathematics and sciences, and business and social sciences in the 2009 fall semester (District 2011).

The Vision 2020 Facilities Master Plan examined enrollment trends for the fall semesters of the years 2001 and 2013 and concluded that there was an overall increase in the percentage of in-district students, from 53.5% to 64.6%, in comparison to out-of-district students, which saw a decrease from 44.7% to 34.1%, as illustrated in Table 3-2. The increase in headcount student enrollment and in-district students, as described in Table 3-1, suggests an increase in commuting students.

Table 3-2
GWC Enrollment Trends by Location

Source/Location	Fall 2001	Fall 2013
In-District Students	53.5 %	64.6%
Out-of-District Students	44.7 %	34.1%
Unknown	0.00 %	1.3%

Sources: District 2011; Flint and Nguyen, pers. comm. 2014.

For the fall semester of 2013, the majority of course enrollment can be attributed to attendance in traditional class types, as presented in Table 3-3 (Flint and Nguyen, pers. comm. 2014). This indicates that the majority of enrolled students commute to the GWC campus.

Table 3-3
GWC Enrollment in Traditional, Online, and Mixed Classes – Fall 2013

Class Type	Percentage of Course Enrollment
Traditional	85%
Online	13%
Mixed	2%
Total Enrollments	**100%**

Sources: Flint and Nguyen, pers. comm. 2014.
Notes: "Traditional" Class Types include courses that involve face-to-face instruction.
"Online" Class Types offer courses in which instruction is based online.
"Mixed" Class Types offer face-to-face instruction in addition to an online component.
"Course Enrollment" refers to the total number of courses enrolled in by students for the fall 2013 semester.

3.4 VISION 2020 FACILITIES MASTER PLAN

Provided in this section is a description of the purpose and need of the proposed project, the planning concepts and objectives guiding development of the project, and an overview of the major characteristics proposed as part of the Vision 2020 Facilities Master Plan, which has a planning horizon of 2015 to 2024.

3.4.1 Project Purpose and Need and Project Objectives

3.4.1.1 Purpose and Need

GWC is proposing to implement the project to meet the space needs of the projected on-campus enrollment more effectively through the year 2024 and beyond while constructing and renovating facilities in order to meet the District's instructional needs. The construction of new academic buildings, the renovation of existing buildings, and vehicular circulation enhancements would accommodate the projected increase in headcount student enrollment. New pedestrian walkways, service access roads, and open space areas in and around campus would improve access to the core of the campus.

3.4.1.2 Project Objectives

The overall goal of the proposed project is to provide the optimal physical settings to support the District's academic mission. The intent of the proposed project is to develop modern teaching and learning facilities that would attract students to GWC while providing the physical resources necessary to support the educational process. With this overarching goal in mind, project objectives developed during the Vision 2020 Facilities Master Plan planning process are shown in the Table 3-4.

Table 3-4
Golden West College Project Objectives and Ranking of the Proposed Project and Alternatives

Planning Criteria Objectives	Objective Weight	Strategic Reuse (Proposed Project)		Majority Reuse		Full Preservation	
		Score	*Value*	*Score*	*Value*	*Score*	*Value*
Support the Institutional Mission and Effectiveness							
Provide current teaching and learning facilities with space, configuration, and technology adjacencies	3	1	3	1	3	0	0
Enhance and improve academic degree programs	3	1	3	1	3	0	0
Provide long-term (beyond 2024) program flexibility to support the educational mission	3	1	3	0	0	0	0
Provide Optimal Physical Settings to Support GWC's Student Learning Programs and Services							
Provide an efficient and effective One Stop Student Center to enhance student success	3	1	3	1	3	0	0
Enhance and increase campus student life to improve student success	3	1	3	0	0	0	0
Improve campus zoning (e.g. Student, Math and Science, Fine Arts, Athletics)	3	1	3	0	0	0	0
Provide hierarchy of exterior socialization spaces	3	1	3	0	0	0	0
Construct a nationally recognized criminal justice training facility	3	1	3	1	3	0	0
Provide an efficient and consolidated Language Arts Complex	3	1	3	1	3	0	0
Enhance the Use of Resources							
Maintain capacity-load ratios that allow the college to remain competitive for state capital dollars	3	1	3	1	3	0	0
Create defensible space (enhance lines of sight and eliminate hiding places)that will foster a sense of safety for campus users	3	1	0	0.5	1.5	0	0
Increase navigability of the campus and enhance way finding	3	1	3	0	0	0	0
Accommodate physical growth over the planning horizon (2024)	2	1	2	1	2	1	2
Reduce resource consumption and support environmentally responsible practices	3	1	3	0.5	1.5	0	0
Mitigate recurring sinking buildings/spalling concrete issues	3	1	3	0	0	0	0
Improved total cost of ownership (initial cost, operating expenses in staffing and energy efficiency, and replacement cost)	2	1	2	0	0	0	0
Phase construction to minimize student impacts and the need to move staff, faculty, and students more than once	2	1	2	1	2	0	0
Minimize the use and cost of temporary space	2	1	2	1	2	0.5	1
Increase and enhance visual and physical access to the campus	3	1	3	0.5	1.5	0	0
Enhance pedestrian access to the core of the campus	2	1	2	0.5	1	0	0
Support Participatory Governance and Leadership							
Construct physically flexible spaces to maximize building efficiency and future adaptability	3	1	3	0	0	0	0
Maintain consistency with the Vision 2020 Facilities Master Plan	2	1	2	0.5	1	0	0
Support Community Engagement							
Maintain consistent with Measure M /communication to constituents	3	1	3	1	3	0	0
Enhance the presence and connection of the campus within the community	2	1	2	1	2	0	0
Provide joint venture and entrepreneurial opportunities that support the academic needs and mission of the college	1	1	1	0	0	1	1
	Total		**63**		**35.5**		**4**

Objective Weight:
1 = Lowest Priority Objective
2 = Intermediate Priority Objective
3 = Highest Priority Objective
Score:
1 = Acceptable/Meets Objective
0 = Deficient/Does Not Meet Objective

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As shown in the table, the college ranked the proposed project and the alternatives in terms of how well they met the project objectives. The table reveals that the proposed project (Strategic Reuse) received the highest score from faculty and staff in meeting project objectives and the full preservation alternative received the lowest score.

3.4.1.2.1 Support the Institutional Mission and Effectiveness

GWC was constructed in the 1960s, and many of the buildings no longer meet current needs. The college is seeking opportunities to bring buildings up to current Accrediting Commission for Community and Junior Colleges standards and to provide modern teaching facilities with the latest technologies.

3.4.1.2.2 Provide Optimal Physical Settings to Support the Golden West College's Student Learning Programs and Services

To meet the needs of today's students, the college would like to provide a One Stop Student Center, a consolidated Language Arts Complex, and a nationally recognized Criminal Justice Training Center. The construction of new facilities would enhance the programs and services to students. Improving campus zoning so that there are dedicated areas of the campus to certain disciplines, such as Student Services, Math and Science, Fine Arts, and Athletics, would facilitate student learning programs and help group services to students in a way that is logical and easier. Furthermore, through the Facilities Master Plan, more outdoor gathering spaces can be provided, which affords opportunities for students to gather between classes or for learning opportunities to occur in exterior spaces.

The Vision 2020 Facilities Master Plan also presents an opportunity to enhance vehicular and pedestrian circulation on campus. Existing pedestrian walkways on the GWC campus are asphalt roads shared with service vehicles. The development of new pedestrian walkways and three service access roads are proposed to improve campus circulation. New pedestrian walkways would begin at the parking lots on the edges of campus and terminate at the core of campus. Service access roads would begin at the edges of campus and terminate at service vehicle destinations that include the Student Center and Campus Bookstore, Central Warehouse/ Corporation Yard, and the One Stop Student Center.

An urban street, quad, garden, community arts plaza, student dining area, and gathering spaces would be developed in the core of the campus to provide places for students, visitors, and employees to gather informally between classes. Lighting, signage, and street furniture would be added to these open spaces to create a welcoming environment. All of this adds to the goal of the college to become a more recognized presence within and for the community.

3.4.1.2.3 Enhance Use of Resources

The Vision 2020 Facilities Master Plan provides an opportunity for the college to maintain capacity-load ratios to remain competitive for state capital dollars. It also helps the campus mitigate recurring sinking buildings and spalling concrete issues by replacing buildings with these issues with structures built with more up-to-date construction methods. This in turn helps improve the total cost of ownership through initial costs, reducing operating expenses including reduced staffing and better energy efficiency and also reduce replacement costs.

3.4.1.2.4 Support Participatory Governance and Leadership

GWC seeks to create a campus that can sustain program flexibility over the long-term to support its education mission. The goal is to construct physically flexible spaces to maximize building efficiency and future adaptability. One of the challenges that GWC faces now is that many of the buildings on campus are not as adaptable as the college would like without the expenditure of major sources of capital to retrofit the buildings for new uses. Furthermore, the ability to plan adaptable spaces would allow the college to remain more competitive for state capital dollars in the future. Planning adaptable spaces reduces the need to move students, faculty, and staff, which minimizes disruption to students in the classroom.

3.4.1.2.5 Support Community Engagement

GWC would like to increase entrepreneurial activities and attract visitors to the campus through the development of new facilities and by improving programs already in place. A joint venture with the Boys & Girls Club is currently in place that would include the construction of gymnasium facilities. The public would also be encouraged to use the newly renovated athletic facilities and the conferencing facilities housed in the newly constructed Business/Social Sciences/Administrative Office Building. The development of a conference center would be enhanced by the use of existing food service facilities. The college would like to enhance the presence and connection of the campus within the community.

3.4.2 Vision 2020 Facilities Master Plan Overview

Proposed project maps are shown in Figures 3-4 through 3-7. The proposed project involves the demolition of certain existing buildings, the renovation of other existing buildings, and the construction and eventual operation of new buildings and campus facilities. The proposed project would also involve improvements to the pedestrian circulation network and service access roads in and around campus and the enhancement of open space areas through landscape and pedestrian plaza improvements.

Prominent building characteristics include the demolition of approximately 268,000 gross square feet of existing buildings and facilities and the construction of approximately 476,000 gross square feet of new academic, administrative, residential, and recreational uses.

3.4.3 Relationship to Existing Conditions and Vision 2020 Facilities Master Plan

The GWC campus currently has approximately 654,000 gross square feet of building space. Table 3-5 summarizes the buildings and facilities proposed as part of the project, as compared to what currently exists on campus.

Table 3-5
Buildings and Facilities – Plan to Ground Comparison (gross square feet)

Category	Existing Conditions	Proposed Construction	Proposed Demolition	Net Difference Proposed
Academic	398,625	373,003	165,373	207,630
General Administrative	127,998	78,215	91,595	−13,380
Auxiliary* (Gym)	0	9,794	0	9,794
Auxiliary* (Child Care Center)	13,110	14,990	4,360	10,630
Auxiliary* (Wellness Center, Nursing, Community Center, Campus Bookstore)	42,596	0	5,205	−5,205
Recreational	71,616	0	1,920	-1,920
Subtotals	*653,945*	*476,002*	*268,453*	*207,549*
Public-Private Partnerships	13,110	24,784	4,360	20,424

Source: Flint, pers. comm. 2014a.
Notes: The gross square footage is the total area of building measured to the outside of exterior walls, including outdoor covered areas at 50%.
***** Auxiliary (Gym) facilities proposed for construction include the Boys & Girls Club Gymnasium expansion. Auxiliary (Child Care Center) facilities proposed for construction include the two-story Boys & Girls Club After School Building. Auxiliary (Child Care Center) facilities proposed for demolition include the existing Child Care Center in the southwest corner of the campus. Other Auxiliary facilities proposed for demolition include the existing Community Center.

Existing Public-Private Partnerships include the Boys & Girls Club–Robert Mayer Child Development Preschool and the Child Care Center, which occupies 13,110 gross square feet and has childcare programs available to GWC staff and the general public. Parking lots on campus currently total 1,209,375 square feet of space (Flint, pers. comm. 2014b). The total number of parking spaces on campus would not change as a result of the proposed project.

3.5 VISION 2020 FACILITIES MASTER PLAN PEIR COMPONENTS

Provided in this section is a description of the various components of the proposed project evaluated in this Program Environmental Impact Report (PEIR). Specific components include buildings and facilities and site improvements. Project elements are depicted on Figures 3-4 and 3-6. The description of each of the components is provided in this section and includes general information about the existing parcel proposed for development, detailed information regarding the development proposed, and information about how the project may relate to other components of the PEIR.

3.5.1 Buildings and Facilities

The PEIR evaluates the renovation of existing buildings, the construction of new buildings and facilities on campus, and the demolition of existing buildings and facilities. A map identifying the building and facility projects proposed for new construction or renovation and evaluated in this PEIR is provided on Figure 3-4.

3.5.1.1 Buildings and Facilities (New Construction)

Table 3-6 summarizes buildings and facilities proposed for new construction as part of the proposed project and included in this PEIR evaluation. Further detail is provided in the following sections according to the category of building or facility proposed.

Table 3-6
Vision 2020 Facilities Master Plan PEIR – New Construction of Buildings and Facilities

Building/Area	Category	Acres	Size (gross square feet)
Phase 1 (2015–2017)			
Criminal Justice Training Center	Academic	0.88	38,465
One Stop Student Center	General administrative	1.35	58,991
Math/Science Building	Academic	2.55	110,990
Phase 2 (2017–2020)			
Cosmetology Building	Academic	0.61	26,713
Language Arts Complex	Academic	1.56	67,807
Phase 3 (2020–2024)			
Business/Social Science/Administrative Office Building	Academic/general administrative	2.34	101,954
Unscheduled Projects			
Boys & Girls Club Gymnasium Facilities	Auxiliary	0.22	9,794
Boys & Girls Club After School Building	Auxiliary	0.17	14,990

Source: Flint, pers. comm. 2014a.
Note: Gross square feet is the total area of building measured to the outside of exterior walls, including outdoor covered areas at 50%.

New Criminal Justice Training Center Complex

The new Criminal Justice Training Center Complex would be located in the southeast corner of campus and include the following facilities: the Criminal Justice Training Center, scenario village, and traffic stop practice track. The District proposes the demolition of the existing

Criminal Justice Building and the Community Center at the southeast corner of campus to accommodate the new Complex. The two-story Criminal Justice Training Center would replace the existing out-of-date Criminal Justice Building and would house classrooms, offices, and training facilities, serving as the hub of the Criminal Justice Training Center Complex. A scenario village would be constructed directly west of the new Criminal Justice Training Center. The scenario village would include multiple one- and two-story structures that would house training exercises. In addition, where there is currently underused open space to the east of the Edinger Avenue parking lot entrance and directly west of the off-site retail center, there would be a traffic stop practice track constructed for criminal justice training activities. When this space is not being used for training activities, it would operate as a parking lot.

New Math/Science Building

The construction of the new building would occur in the southwest corner of campus. This building would replace the Math/Science Building currently located in the center of campus. Replacement of the current building would allow for infrastructure updates and provide more classroom space. The building would house classrooms for science and math courses.

New Language Arts Complex

The Humanities Building and Health Sciences Building located at the center of campus would be demolished and a Language Arts Complex would be constructed at the same location. The new building would expand to the west. Classrooms for courses in arts and letters would be offered in the new building.

New Cosmetology Building

Construction of the new Cosmetology Building would occur at the northwest corner of campus, in the northern half of the existing tennis courts. The outdated Cosmetology Building, located in the core of the campus and west of the Fine Arts Building, would be demolished. The new Cosmetology Building would also include retail/salon space. This retail/salon space would support an existing program on campus, which provides haircare to the surrounding community. Its new proposed location would be more convenient for public accessibility. The salon would expand their operating hours to Saturdays during the GWC swap meet. Weekday customer visits are not anticipated to increase with the new retail/salon space.

New Business/Social Sciences/Administrative Office Building

This project would entail the demolition of smaller buildings to build a larger, more efficient, multiuse building. The new building would be located on the site of the current Math/Science Building at the center of campus, which is to be demolished. This building would replace the

Administration Building and the Business Building at the southeast corner of campus, both of which would be demolished. Conference facilities would be included; these facilities would meet the need for additional meeting space on campus. Although these facilities would be open for public use and could occasionally house special events, generally, GWC students and staff would be the primary users of these facilities.

One Stop Student Center

This project involves the demolition of the existing Boyce Library to construct new buildings and provide a centralized one-stop location for student services at the core of campus. The project would be located at the center of the campus.

Boys & Girls Club After School Building

This joint venture would be located in the northeast region of the campus, west of the Gothard Street parking lot and south of the athletic fields. This two-story building would house the existing "twilight" after-school program. This program would be available to children of GWC employees and students, as well as the surrounding community.

Boys & Girls Club Gymnasium Facilities

This joint venture would be located in the northeast region of the campus, next to the Boys & Girls Club After School Building. These gymnasium facilities would house recreational activities associated with the "twilight" after-school program.

3.5.1.2 Buildings and Facilities (Renovation)

In addition to the new construction of buildings and facilities, the proposed project would involve the renovation of existing buildings (see Table 3-7). Building renovations could include new lighting; ceilings; paint; flooring; case work; and heating, ventilation, and air conditioning systems. In some cases, interior walls could be removed or modified. Renovations that involve expansion of an existing facility are specified below.

Table 3-7
Vision 2020 Facilities Master Plan PEIR– Renovation of Buildings and Facilities

Building/Area	Category	Current Acres	Current Size (gross square feet)	Proposed Acreage	Proposed Size (gross square feet)
Phase 2 (2017–2020)					
Technology Building	Academic	0.59	25,773	0.59	25,773

Table 3-7
Vision 2020 Facilities Master Plan PEIR– Renovation of Buildings and Facilities

Building/Area	Category	Current Acres	Current Size (gross square feet)	Proposed Acreage	Proposed Size (gross square feet)
Phase 3 (2020–2024)					
Central Warehouse/ Corporation Yard	General Administrative	0.28	12,328	0.72	31,552
Unscheduled Projects					
Automotive Technology Building	Academic	0.73	31,720	1.35	58,794
Physical Education Outdoor Labs	Recreational	13.19	574,625	13.19	574,625

Source: Flint, pers. comm. 2014a.
Note: The gross square footage is the total area of building measured to the outside of exterior walls, including outdoor covered areas at 50%.

Technology Building

The project involves the renovation of the existing building to correct building deficiencies and support current instructional needs. This project would not involve expansion of the existing building. The building is located in the western portion of the campus. Renovation of the Technology Building would occur during Phase 2.

Central Warehouse/Corporation Yard

This project would involve the expansion of the existing Central Warehouse/Corporation Yard from 12,328 to 31,552 gross square feet. The Central Warehouse/Corporation Yard is located in the northwest corner of campus. Renovation and expansion would occur during Phase 3.

Automotive Technology Building

The project involves the renovation and expansion of the existing building to correct building deficiencies and support current instructional needs. The one-story expansion would occur in the southern half of the existing tennis courts in the western portion of the campus. The project would involve the expansion of the existing Automotive Technology Building from 31,720 to 58,794 gross square feet. Renovation and expansion are currently unscheduled.

Physical Education Outdoor Labs

This project involves renovation of the existing facilities in the northern portion of the campus to provide enhanced, state-of-the-art facilities. Recreational facilities, which would be open for public use, would be included in the renovation. This project would not involve expansion of the existing footprint. Renovation is currently unscheduled.

3.5.1.3 Buildings and Facilities (Demolition)

Table 3-8 summarizes buildings and facilities proposed for demolition. The proposed project would involve the demolition of 268,000 gross square feet.

Table 3-8
Vision 2020 Facilities Master Plan PEIR – Demolition of Buildings and Facilities

Building/Area	Category	Acres	Size (gross square feet)
Phase 1 (2015–2017)			
Student Services and Boyce Library	General administrative	1.35	58,991
Administration Building	General administrative	0.75	32,604
Business Building	Academic	0.36	15,687
Criminal Justice Training Center and Police Academy	Academic	0.27	11,583
Community Center	Auxiliary	0.12	5,205
Phase 2 (2017–2020)			
Cosmetology	Academic	0.28	12,243
Child Care Center	Auxiliary	0.10	4,360
Graphics and Publications	Academic	0.53	23,182
Health Sciences Building	Academic	0.43	18,590
Humanities Building	Academic	0.92	39,944
Phase 3 (2020–2024)			
Math/Science	Academic	1.01	44,144

Source: Flint, pers. comm. 2014a.
Note: The gross square footage is the total area of building measured to the outside of exterior walls, including outdoor covered areas at 50%.

3.5.2 Site Improvement Elements

Site improvements include parking and vehicular entry, pedestrian circulation, and site infrastructure improvements.

3.5.2.1 Vehicular Entryways, Circulation, and Parking

The proposed project includes the enhancement of primary and secondary entries through consistent landscaping and signage. All parking lots would require additions such as lighting, signage, parking ticket dispensers, and blue emergency phone kiosks. See Figure 3-6 for proposed vehicular entryways, circulation, parking, and service access road improvements.

3.5.2.2 Pedestrian Entryways and Circulation

Existing pedestrian walkways on the GWC campus are asphalt roads shared with service vehicles. New walkways are proposed to improve pedestrian circulation. New primary and secondary walkways would begin at the parking lots on the west, south, and east sides of campus and terminate at the core of campus. Walkways would be constructed around buildings so not as to impede students on their route to the core of the campus. See Figure 3-7 for proposed pedestrian entryway and circulation improvements.

3.5.2.3 Service Access

Three service access roads are proposed by the District. The first service access road would be from McFadden Avenue to the Central Warehouse/Corporation Yard. An additional road would begin at the primary entryway from the western parking lot and terminate at the Food Service/Printing area in the center of campus. The final road would begin at the primary entryway from the eastern parking lot to the Theatre/Arts area in the center of campus. See Figure 3-6 for service access roads.

3.5.2.4 Open Space

An urban street, a quad, garden, a community arts plaza, a student dining area, and gathering spaces would be developed in the core of the campus to provide places for students, visitors, and employees to gather informally between classes. Lighting, signage, and street furniture would be added to these open spaces to create a welcoming environment. See Figure 3-4 for proposed open space areas.

3.5.2.5 Site Infrastructure

A thermal energy storage unit would be installed just north of the current HVAC Building. This system would store energy to be used later for heating, cooling, or power generation. The storage tank volume would be approximately 116,000 cubic feet (Flint, pers. comm. 2014b).

Interior building modifications would be performed for the Music, Technology, Fine Arts, Forum I and II, Physical Education Outdoor Labs, and the Automotive Technology Buildings. If the Math/Science, Humanities, Business, Automotive, and Administration Buildings are not demolished, these buildings would also include interior building modifications (e.g., painting, carpeting, the replacement of damaged ceiling tiles, and minor electrical repairs where applicable) (Flint, pers. comm. 2014c).

The installation of security, access, and surveillance infrastructure would occur in the Business Building, Humanities Building, Administration Building, Boyce Library, Community Center, Graphics and Publications Building, Math/Science Building, Cosmetology Building, and Health Science Building, if these facilities are not demolished. The Automotive Technology Building, Technology Building, Bookstore, Communications Building, Fine Arts Building, Forums I and II, Physical Education Outdoor Labs, Music Building, Central Warehouse/Corporation Yard, and the Theater would also involve the installation security infrastructure. Security, access, and surveillance infrastructure to be installed would include card readers, surveillance cameras, panic buttons, and emergency notification stations (Flint, pers. comm. 2014c).

3.6 CONSTRUCTION ACTIVITIES

It is anticipated that planning, design, and construction of the proposed project's buildings and facilities would occur over four phases, which includes an unscheduled phase.

Various construction projects would occur in each of the four phases, including construction of academic buildings and parking facilities, as well as demolition of existing structures. Construction is further broken down into subphases for each phase, depending on the type of development: demolition, site preparation, grading, building construction, paving, and architectural coating. A variety of equipment is used during each subphase of construction, such as excavators, crawler tractors, loaders, forklifts, pavers, and air compressors. Construction would be performed by qualified contractors, and construction activities would be in compliance with the applicable permits and contract documents. Table 3-9 provides a summary of standard construction practices that would be implemented throughout proposed project buildout and would help reduce environmental effects.

Table 3-9
Summary of Standard Construction Procedures

Issue	Standard Construction Procedure
Water Quality and Hydrology	• Construction projects greater than 1 acre shall prepare a stormwater pollution prevention plan which conforms to the California Storm Water Quality Association's stormwater pollution prevention plan template and shall include appropriate best management practices related to the specific project. The following list includes examples of treatment control best management practices to employ during construction (these features shall appear as notes on final design plans): o Silt fences installed along limits of work and/or the project construction site o Stockpile containment (e.g., visqueen, fiber rolls, gravel bags) o Hillside stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms) o Street sweeping o Tire washes for equipment o Runoff control devices (e.g., drainage swales, gravel bag barriers/chevrons, velocity check dams) to be used during construction phases conducted during the rainy season.

Table 3-9
Summary of Standard Construction Procedures

Issue	Standard Construction Procedure
Air Quality	• Water trucks and/or sprinkler systems shall be used during construction (including clearing, rock crushing, grading, earth moving, excavation, or transportation of cut/fill materials) to prevent dust from leaving the site. At a minimum, the site is watered in the late morning and at the end of the day and/or during wind events of over 15 miles per hour. • Any haul vehicle leaving the project site shall be covered to prevent dust/particulate flyoff. • Haul vehicles equipped with bedliners shall be used as much as possible. • Low-emitting coatings must be used and would be applied via an electrostatic spray gun to reduce paint overspray.
Noise[1]	• Any construction activities shall be conducted between the hours of: o Monday–Friday: 7:00 a.m.–8:00 p.m. o Saturday: 7:00 a.m.–8:00 p.m. • Construction activities would not occur on Sundays or during federal holidays. • Construction would not occur during nighttime hours.

Source: [1] City of Huntington Beach 2012.

3.7 CUMULATIVE PROJECTS

Section 15130(b)(1)(A) of the CEQA Guidelines allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. Table 3-10, Cumulative Projects, presents development proposals within the City. Several development proposals and City projects in proximity to the proposed project have been submitted for consideration or have been recently approved that together with the project may result in an increase in construction-related environmental impacts. The projects listed in Table 3-10 serve as the foundation on which the cumulative analysis approach has been based for each of the environmental topics discussed within this PEIR. This analysis is provided in the Cumulative Impacts subsection of each environmental topic section in Chapter 4, Environmental Analysis.

Table 3-10
Cumulative Projects

Project/Description	Address/Location	Phase/Estimated Buildout
Approved Projects		
Beach and Ellis – Elan Apartments: 274 apartment units 8,500 square feet commercial space 48,546 square feet open space	18502, 18508, and 18552 Beach Boulevard, Huntington Beach	Under construction
Beach Walk: 173 multifamily apartment units 5 level parking structure	19891 and 19895 Beach Boulevard, Huntington Beach	Under construction

Table 3-10
Cumulative Projects

Project/Description	Address/Location	Phase/Estimated Buildout
Brightwater: 347 single-family units 37 acres of trails and habitat restoration	Upper bench portion of Bolsa Chica Mesa (105.3 acres), Huntington Beach	Under construction
Former Lamb School Site Residential Subdivision: 81 single-family units 2.6 acres open space	10251 Yorktown Avenue, Huntington Beach	Under construction
Former Wardlow School Site Residential Subdivision: 49 single-family units	9191 Pioneer Drive, Huntington Beach	Under construction
Huntington Beach Senior Center: 45,000 square feet 227 parking spaces	5-acre area in Central Park (southwest of Goldenwest Street and Talbert Avenue), Huntington Beach	Construction beginning late 2014 to early 2015
The Boardwalk (Murdy Commons Mixed-Use): 487 dwelling units 14,500 square feet commercial space 0.5 acre public park	Edinger Avenue and Gothard Street (northeast corner), Huntington Beach	Under construction
Oceana Apartments: 4-story building 78 affordable housing units	18151 Beach Blvd, Huntington Beach	Building permits issued
Pacific City : 8-story, 400-room hotel 516 condominiums 191,100 square feet commercial space	31 acres bounded by Pacific Coast Highway, First Street, Atlanta Avenue, and Huntington Street, Huntington Beach	Under construction; portions in plan check
Pedigo Apartments: 4-story building 510 apartment dwelling units 81,211 square feet open space 862 space parking structure	7262, 7266, 7280 Edinger Avenue and 16001, 17091 Gothard Street, Huntington Beach	Entitlements approved
Parkside Estates: 111 single-family units 23 acres preserved and restored open space 1.6 acre neighborhood park and public trails	West side of Graham Street, south of Warner Avenue, along the East Garden Grove Wintersburg Flood Control Channel, Huntington Beach	Construction beginning 2015
Projects in Review		
Airport Circle Residential Project: 45 townhome units	16911 Airport Circle, Huntington Beach	In review
Ascon Landfill Site: Site cleanup	Southwest corner of Magnolia Street and Hamilton Avenue, Huntington Beach	Final EIR to be released in 2015
Gun Range EIR: Site cleanup and reuse as open space/park	Central Park (Proximate to Gothard Street and Talbert Avenue), Huntington Beach	Developing Plans to reuse the site as open space park

Table 3-10
Cumulative Projects

Project/Description	Address/Location	Phase/Estimated Buildout
Harmony Cove: 23 boat marina Eating and drinking establishment	3901 Warner Avenue, Huntington Beach	In review
Hilton Waterfront Beach Resort Expansion: 9-story tower 156 guestrooms 13,700 square feet of meeting space	21100 Pacific Coast Highway, Huntington Beach, 92648	Plan check submittal
Huntington Beach Lofts: 385 apartment units 10,000 square feet of commercial/retail space	7302-7400 Center Avenue, Huntington Beach	Building permits in plan check
Pierside Pavilion Expansion: 4-story, 27,772 square feet mixed use space 9,401 square feet infill expansion	300 Pacific Coast Highway, Huntington Beach	Submitted for plan review
Poseidon Desalination Plant: 50-million gallon per day seawater desalination facility	21730 Newland Street, Huntington Beach	Securing permits

Source: City of Huntington Beach 2014b.

3.8 DISCRETIONARY ACTIONS

Implementation of the proposed project would require discretionary approvals by state and local agencies, as shown in Table 3-11. Discretionary approvals include, but are not limited to, certification of the Final PEIR under CEQA.

Table 3-11
Vision 2020 Facilities Master Plan PEIR Project Approvals

Agency	Jurisdiction	Permit Regulatory Requirement
State		
Regional Water Quality Control Board, Region 8 (Santa Ana)	Clean Water Act, Section 402; Porter–Cologne Water Quality Control Act; California Water Code Division 7, Water Quality	• Stormwater Construction General Permit 2009-0009-DWQ National Pollution Discharge Elimination System Permit
Division of the State Architect	Compliance with Title 24 of the California Code of Regulations • Structure Safety • Fire and Life Safety • Access Compliance • Energy	• Plan review and approval
Local		
South Coast Air Quality Management District	South Coast Air Quality Management District Regulation II, Rules 201 and 203	• Authority to Construct and Permit to Operate

Table 3-11
Vision 2020 Facilities Master Plan PEIR Project Approvals

Agency	Jurisdiction	Permit Regulatory Requirement
City of Huntington Beach	• Local/City roads and rights-of-way • Facility Fire and Life Safety Program	• Road Encroachment Permit • Huntington Beach Fire Department

3.9 REFERENCES

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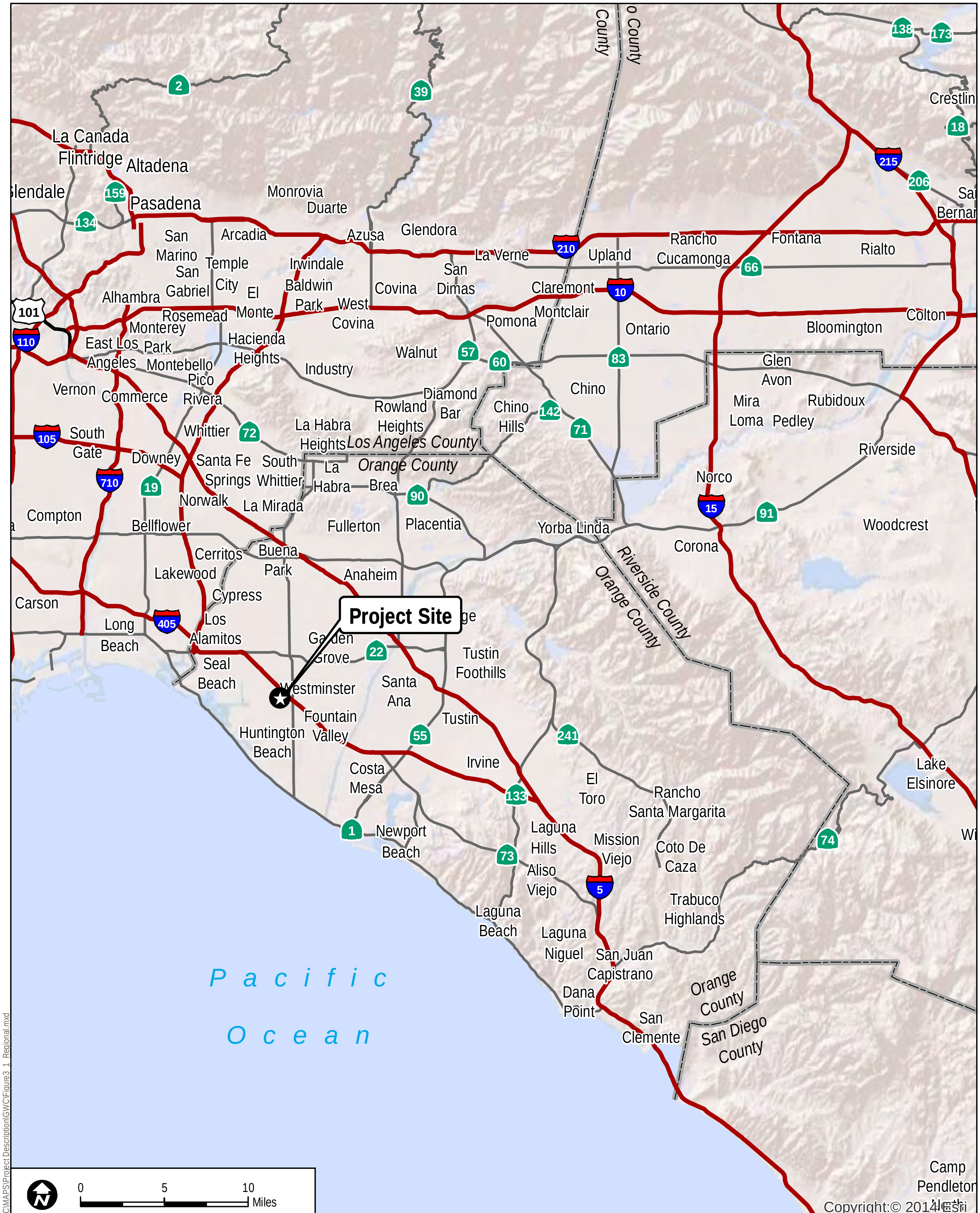

SOURCE: ESRI 2013

FIGURE 3-1

Regional Location

GOLDEN WEST COLLEGE
GWC
HUNTINGTON BEACH, CA

7910.0001

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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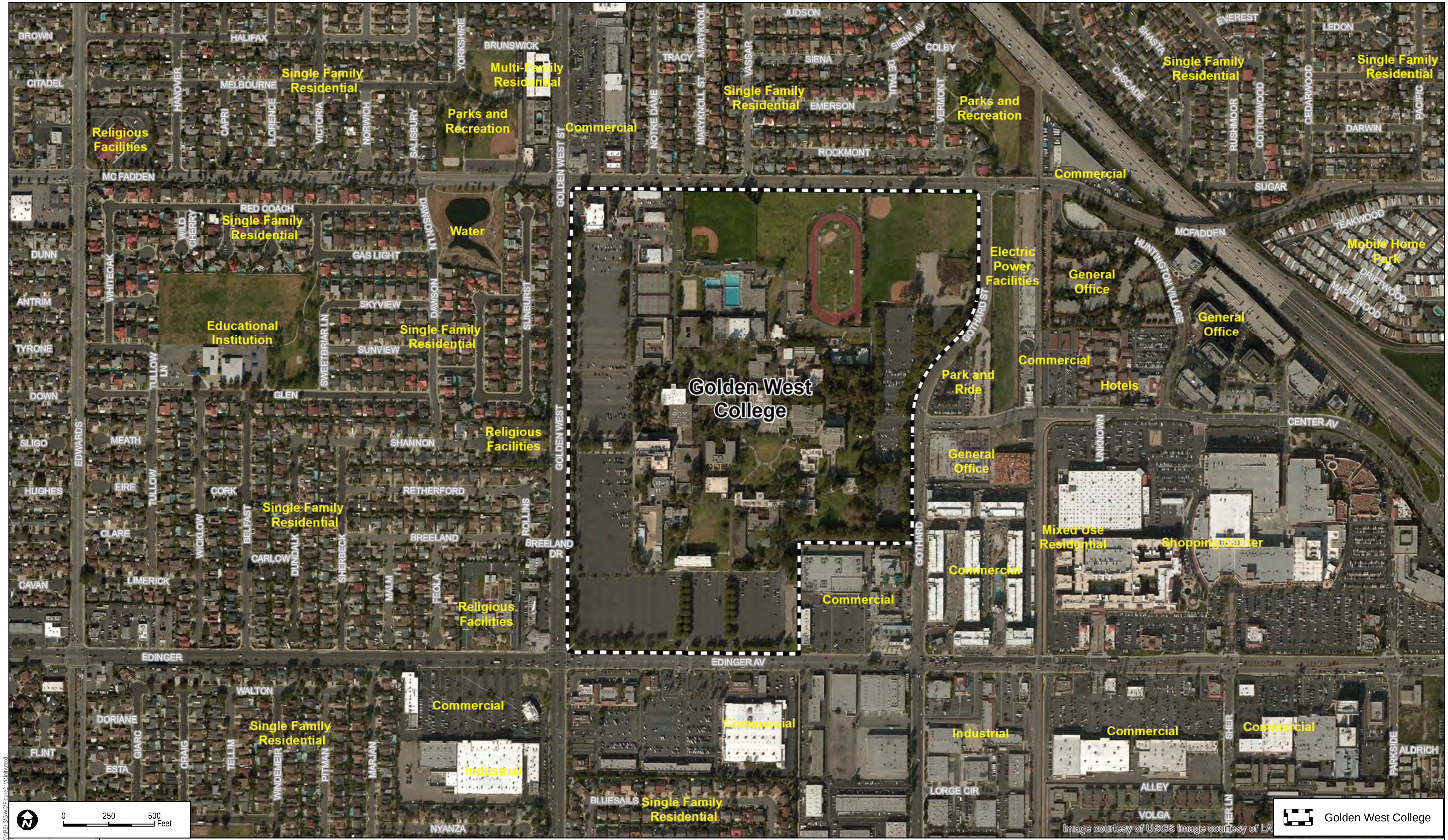

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; SCAG, 2008; County of Orange, 2015.

FIGURE 3-2

Local Vicinity

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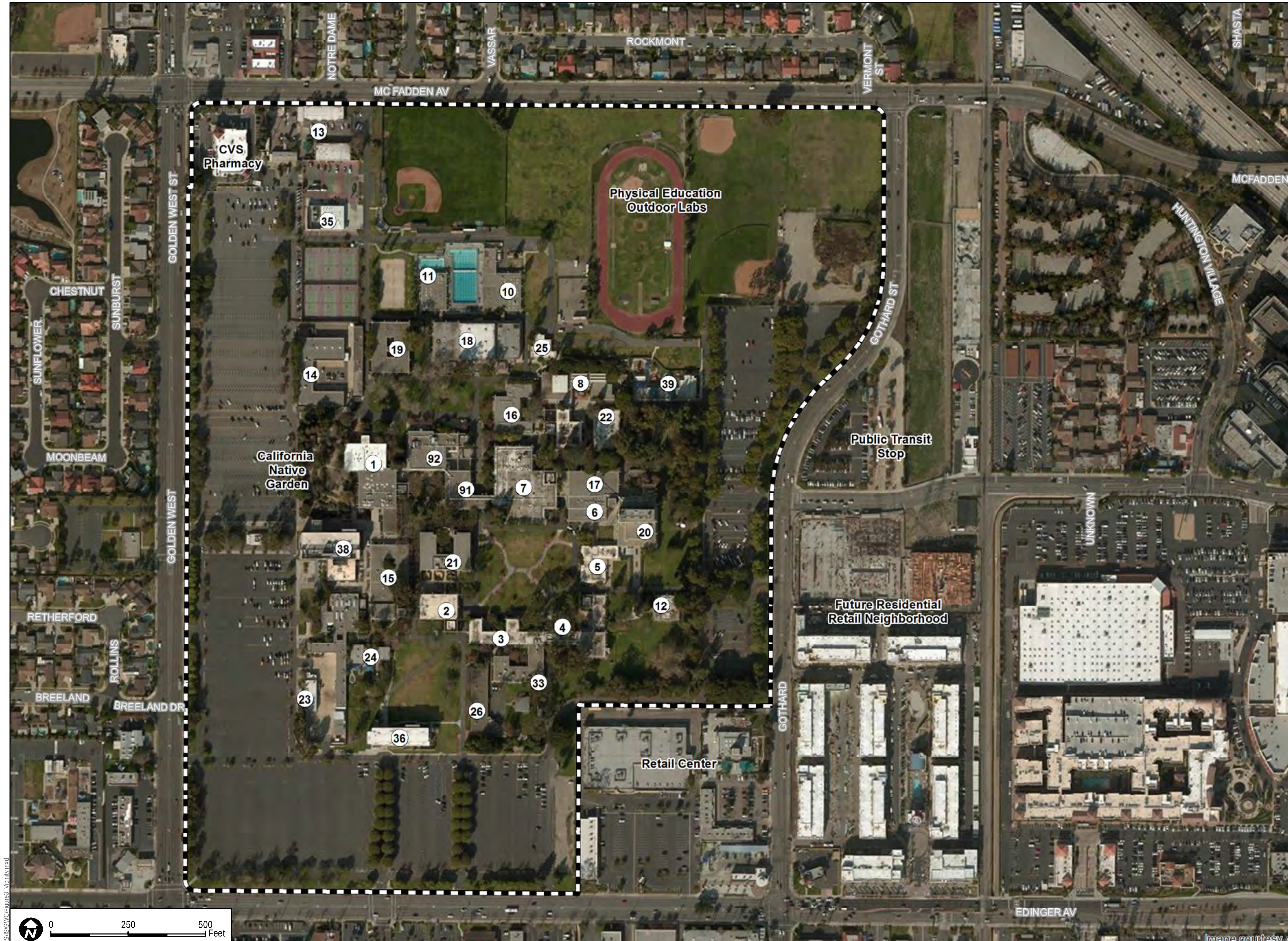

Project Boundary

Existing Land Use

1, Math/Science Buidling
2, Forum I
3, Business Building
4, Administration Building
5, Communications Building
6, Music Building
7, Student Services and Boyce Library
8, Fine Arts Building
10, Men's PE
11, Women's PE
12, Community Center
13, Central Warehouse/Corporation Yard
14, Automotive Technology Building
15, Health Sciences Building
16, Cosmetology Building
17, Forum II
18, Physical Education/Gymnasium
19, Technology Building
20, Theater
21, Humanities Building
22, KOCE Building
23, Auto Body and Design and Graphics/Publications
25, Wellness Center
26, Criminial Justice Training Center
33, Criminal Justice Training Center Annex
35, HVAC Building
36, Nursing and Health Services
38, Library/LRC
91, Bookstore
92, Student Center
24, 39, Child Care Center

Note: Building numbers are non-consecutive to match the campus map and building inventory.

GOLDEN WEST COLLEGE GWC HUNTINGTON BEACH, CA

7910.0001

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; Cuonty of Orange, 2015.

FIGURE 3-3

Existing Campus Land Uses

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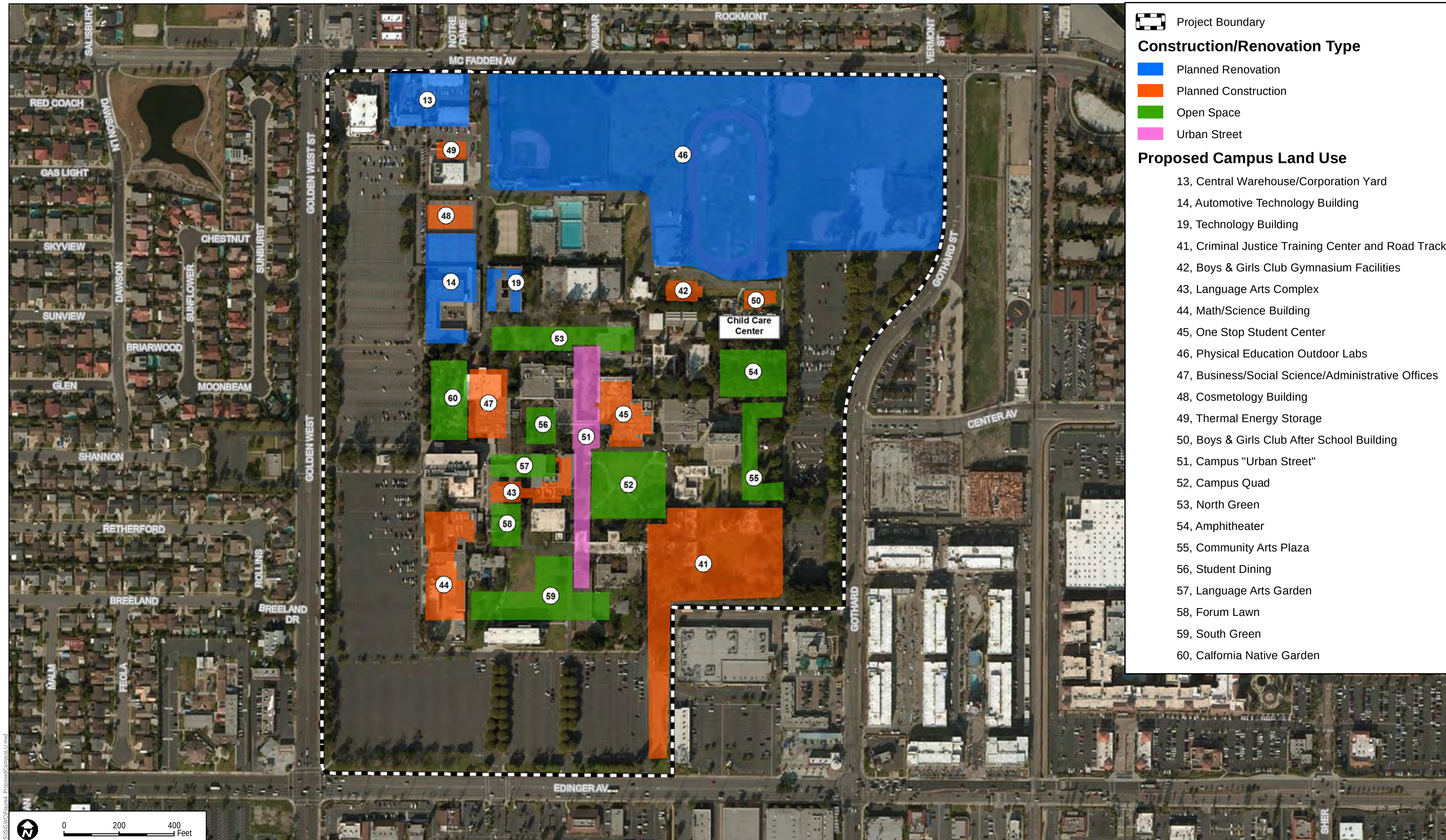

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 3-4

Proposed Campus Land Uses

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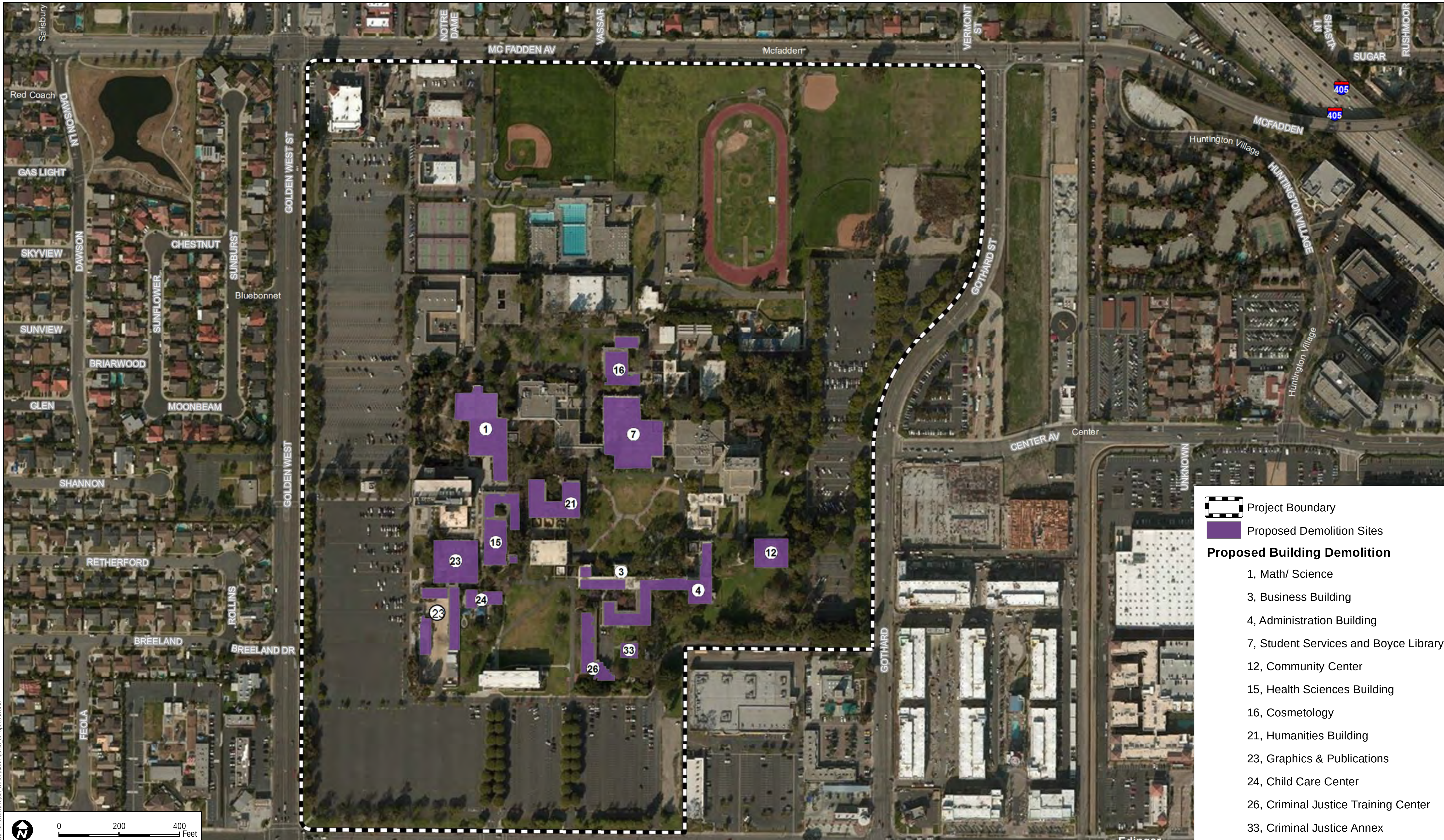

GOLDEN WEST COLLEGE GWC HUNTINGTON BEACH, CA

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SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 3-5
Proposed Demolition

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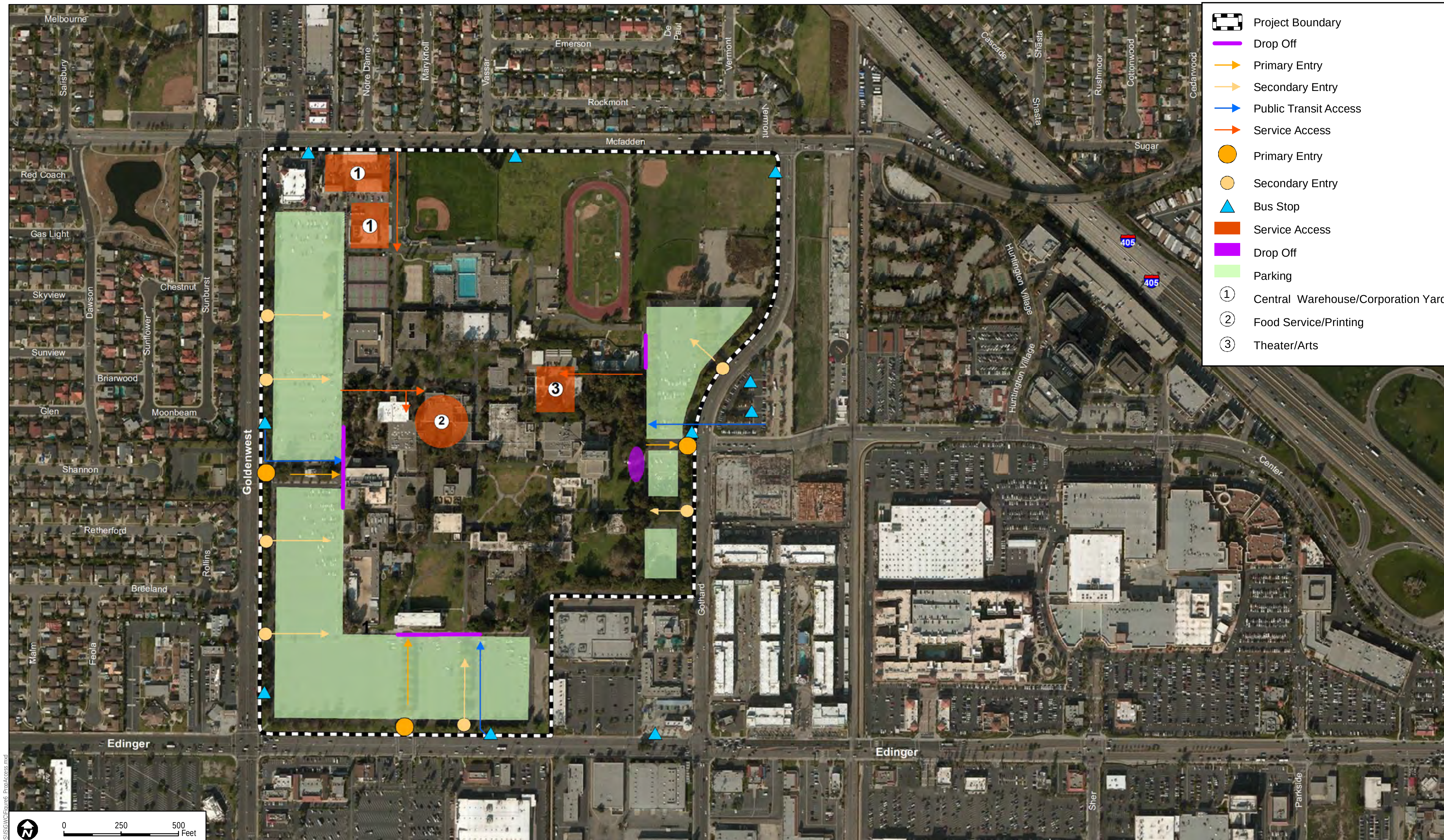

GOLDEN WEST COLLEGE
GWC
HUNTINGTON BEACH, CA

7910.0001

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 3-6

Proposed Vehicular Entryways, Circulation, Parking, and Service Access Road Improvements

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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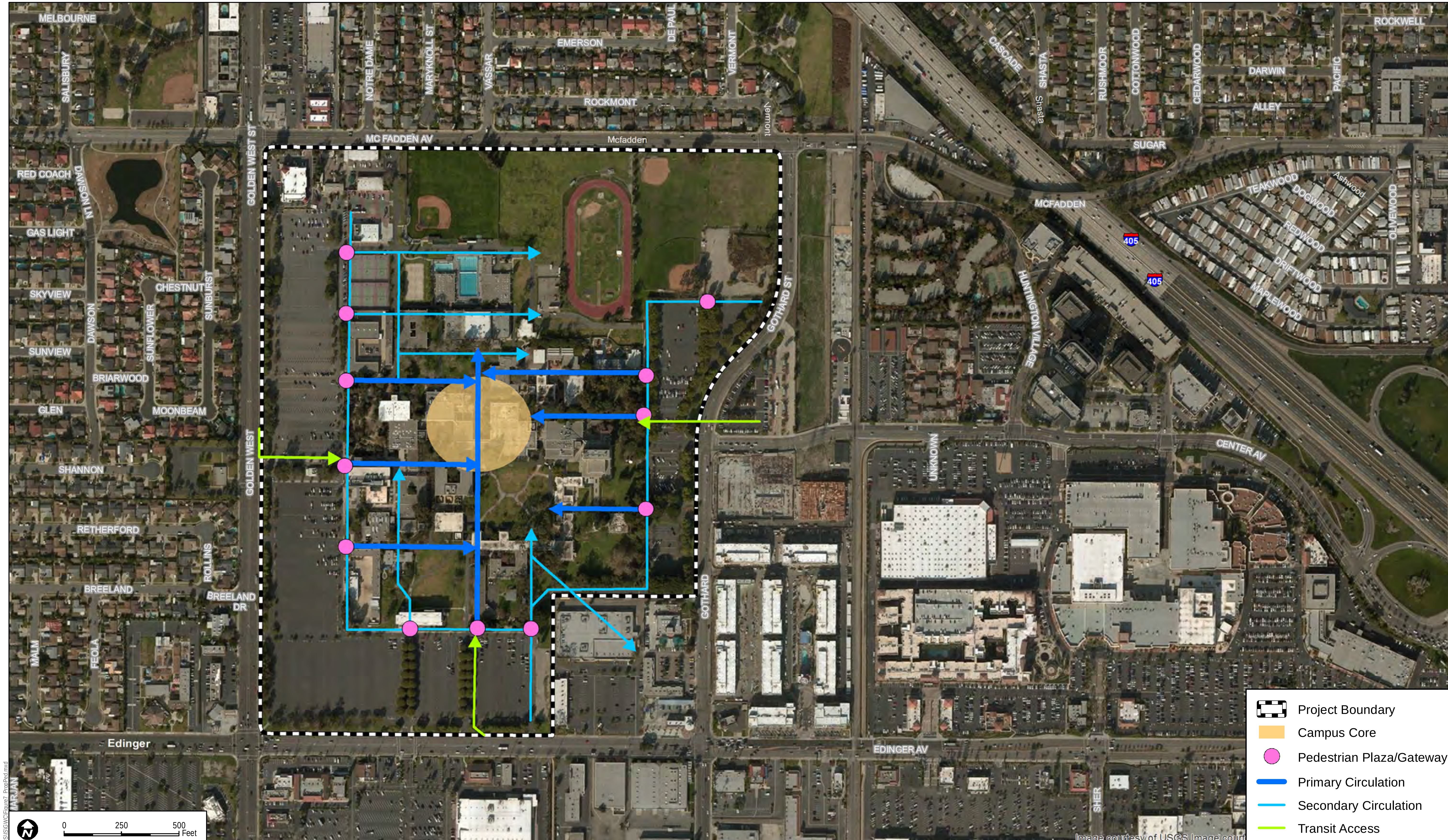

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

GOLDEN WEST COLLEGE HUNTINGTON BEACH, CA

7910.0001

FIGURE 3-7

Proposed Pedestrian Circulation Improvements

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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CHAPTER 4
ENVIRONMENTAL ANALYSIS

The following environmental analyses provide information relative to 13 environmental topics as they pertain to the proposed Golden West College Vision 2020 Facilities Master Plan (proposed project). Each section of this chapter describes existing environmental and regulatory conditions, presents the criteria used to determine whether an impact would be significant, analyzes significant impacts, identifies mitigation measures for each significant impact, discusses the significance of impacts after mitigation has been applied, and discusses cumulative impacts.

This chapter includes a separate section for each of the following issue areas:

- Section 4.1, Aesthetics
- Section 4.2, Air Quality
- Section 4.3, Biological Resources
- Section 4.4, Cultural Resources
- Section 4.5, Geology and Soils
- Section 4.6, Greenhouse Gas Emissions
- Section 4.7, Hazards and Hazardous Materials
- Section 4.8, Hydrology and Water Quality
- Section 4.9, Noise
- Section 4.10, Population and Housing
- Section 4.11, Public Services
- Section 4.12, Traffic and Circulation
- Section 4.13, Utilities and Service Systems

Issues for which effects were found not to be significant are agricultural and forestry resources, land use and planning, mineral resources, and recreation. These environmental topics are discussed in Chapter 5, Other CEQA Considerations, of this Program Environmental Impact Report (PEIR) and are not discussed in further detail, pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15128 (14 CCR 15000 et seq.). Chapter 6 provides analyses of alternatives to the proposed project, and Chapter 7 includes the list of preparers.

Analysis Format

The PEIR assesses how the proposed project would impact these issue areas. Each environmental issue addressed in this PEIR is presented in the following subsections:

- **Existing Conditions**: Provides information describing the existing setting on or surrounding the project site that may be subject to change as a result of the implementation of the project. This setting described the conditions that existed when the Notice of Preparation (NOP) was sent to responsible agencies and the State Clearinghouse.
- **Relevant Plans, Policies, and Ordinances:** Includes a discussion of applicable regulations.
- **Thresholds of Significance**: Provides criteria for determining the significance of project impacts for each environmental issue.
- **Impacts Analysis**: Provides a discussion of the characteristics of the proposed project that may have an effect on the environment, analyzes the nature of expected project impacts and the extent to which the proposed project is expected to change the existing environment, and indicates whether the project impacts meet or exceed the levels of significance thresholds.
- **Mitigation Measures**: Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.
- **Levels of Significance After Mitigation**: Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, and adverse environmental impacts that are not significant.
- **Cumulative Impacts**: Provides a discussion of the past, present, and reasonably foreseeable projects relevant to each resource analysis and documents cumulatively considerable environmental impacts that cannot be feasibly mitigated or avoided; cumulatively considerable environmental impacts that can be feasibly mitigated or avoided; and environmental impacts that are not cumulatively considerable. Mitigation measures to reduce cumulative impacts are included where necessary.

References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

4.1 AESTHETICS

This section describes the existing visual setting of the Golden West College (GWC) campus and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed GWC Vision 2020 Facilities Master Plan (proposed project). The description of the existing visual setting is based on site visits, a review of site photos and aerial photographs of the GWC campus and surrounding area, and on the characterization of campus architecture and visual character presented in the *Golden West College Draft Program Environmental Impact Report* (Chambers Group Inc. 2007), as well as the proposed layout and descriptions of future needs described in the Golden West College section of the *Vision 2020 Facilities Master Plan* (District 2011).

4.1.1 Existing Conditions

Overview

The general layout of the GWC campus is depicted on Figure 3-3, Existing Campus Land Uses. As shown on Figure 3-3, athletic fields and facilities are located in the northern portion of the campus (the campus' Central Warehouse/Corporation Yard is also located in the northern extent of campus just south of McFadden Avenue), and buildings are generally clustered around a centrally located grass quad area. In the campus core, 1960s buildings designed by renowned architect William Pereira tend to display uniformity in design, scale, and materiality. More specifically, the core consists of one- to two-story, primarily concrete buildings repetitiously supported by concrete cylindrical columns and horizontal rectangular beams featuring drain spout ends. The stark yet functional and modernist style of the Pereira-designed buildings is routinely softened by crawling vines and shrubs that mask portions of multiple building facades and edges, and as a result, vegetation is integral to the visual setting of the campus core. For example, turf open space areas surrounded and/or planted with tall canopy trees dot the campus core (and periphery) and provide visual and spatial relief between campus facilities. Included in these areas is the campus California Native Garden situated between the existing Math/Science Building and Parking Lot B and the turf and ascending seating amphitheater, which is surrounded by mature pine (*Pinus* ssp.) and eucalyptus (*Eucalyptus oblique*) trees and other ornamental plantings. On the south and east sides of campus are densely landscaped berms that were part of Pereira's original campus master plan, intended to screen the campus from the outside world and provide an oasis from the surrounding urban environment.

Newer modern-style facilities including the three-story Learning Resource Center and the three-story Frank M. and Gertrude R. Doyle School of Nursing and Health Services Building are located on the periphery of the campus core (see Figure 3-3). Similar to the 1960s-era Pereira buildings, these facilities display a functional design but incorporate a contemporary style and modern features and amenities. For example, the Learning Resource Center includes varying planes on building facades, large skylights and north-facing windows for access to natural light, and smaller metal screened east–west facing windows to filter sunlight. A single-story annex building displaying a reflective metallic façade incorporating tall and narrow windows is attached to the south side of the Learning Resource Center. Completed in 2008, the Frank M. and Gertrude R. Doyle School of Nursing and Health Services Building is designed in a contemporary style and features a concrete masonry unit ground floor exterior, colored stucco upper level exteriors, flat rooflines, metallic exterior articulations, and exposed walkways along the perimeter of each building level. Also located on the campus core periphery, the Child Care Center is visually distinct from the 1960s-era buildings, as it incorporates colorful (and triangular) roof segments, flat and rectangular entryway overhangs, and a wide horizontal band of tan/brown color on the building exterior. Beyond the campus core periphery, surface parking lots and landscaped parkways are located along the western campus boundary adjacent to Goldenwest Street, along the southern campus boundary adjacent to Edinger Avenue, and along a portion of the eastern campus boundary adjacent to Gothard Street and west of the existing Orange County Transportation Authority's Golden West Transportation Center. Multiple ingress and egress points (some that are lined by parallel rows of tall ficus (*Ficus*) trees) are located along the western, southern, and eastern boundaries of the campus, and a large, approximately 25-foot-tall electronic display, a GWC informational sign, is located at the northeastern corner of the Goldenwest Street/Edinger Avenue intersection.

As shown on Figure 3-3, the GWC campus is located in a suburban setting within the City of Huntington Beach (the City). The City of Westminster is located immediately north of the campus boundary across McFadden Avenue. The campus is surrounded by one- and two-story single-family residential development to the north (a CVS Pharmacy is located adjacent to the campus at the southwestern corner of the McFadden Avenue/Goldenwest Street intersection on land owned by Coastline Community College District), commercial retail uses, including "big-box" retailer Toys "R" Us, and parking lots to the south. Undeveloped land, retail development, the Orange County Transportation Authority's transportation center, and a high-voltage overhead transmission line utility corridor are located east of the campus boundary, and a residential neighborhood comprised of one- and two-story single-family homes, as well as a small strip mall/gas station development located at the Goldenwest Street/Edinger Avenue intersection, lie to the west.

Residential areas typically back up to Goldenwest Street and McFadden Avenue, with concrete block walls set at the back of the sidewalk. Parkway plantings are absent on these streets. Some residential backyard walls are covered with vines, and occasional mature tree and shrub canopy in backyard landscapes are visible from the public right-of-way. Commercial areas typically have a 5-foot-wide planted parkway that separates parking lots from major roadways with low shrub and tree plantings.

The relationship of GWC to the adjacent roadways varies with land use. A consistent 40-foot-wide landscaped setback occurs along all parking lot areas behind the street sidewalk. These landscape areas are planted with turf grass and mature trees, lending a park-like character to the campus edges adjacent to Goldenwest Street, Edinger Avenue, and Gothard Street. The landscape setback is absent at the commercial strip mall located at the corner of Edinger Avenue and Gothard Street. Chain-link fencing with green fabric screens and/or heavy vine growth is present for much of the distance along athletic fields adjacent to McFadden Avenue. Occasional trees occur in sidewalk cutout planters along McFadden Street. These fences effectively screen the athletic fields and present a softened landscaped edge to passing motorists. Unfenced soccer and baseball fields occur at McFadden Avenue and Gothard Street. The absence of a fence opens up views to passing motorists and pedestrians. The visual contrast between residential/ commercial development and GWC accentuates the visual character of GWC.

Night lighting is relatively common feature on campus and in the landscape surrounding GWC. Outdoor lighting, including streetlights, building lighting, illuminated signs, security lighting, sidewalk lighting, parking lot lighting, lights from motorists, and GWC athletic field lighting, are a regular source of nighttime light in the project area.

4.1.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal regulations regarding the protection of visual resources that would be applicable to the proposed project or the project area.

State

California Scenic Highway Program

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (California Streets and Highways Code, Section 260 et seq.). The California Scenic Highway Program includes a list of officially designated highways and highways that are eligible for designation. If a highway is listed as eligible for official designation, it is part of the Scenic Highway Program, and care must be taken to preserve its eligibility status. The program entails the regulation of land use and density of development; attention to the design of sites and structures; attention to and control of signage, landscaping, and grading; and other restrictions applicable to development within the scenic highway viewshed.

In Orange County, Pacific Coast Highway (Highway 1) is listed as an eligible scenic highway but it has not been officially designated by the state (Caltrans 2013). At its closest point, Pacific Coast Highway is located approximately 3.3 miles southwest of the GWC campus, as measured from Parking Lot E at the northeast corner of Goldenwest Street and Edinger Avenue.

Local

City of Huntington Beach General Plan

The City of Huntington Beach General Plan Environmental Resources/Conservation Element (City of Huntington Beach 1996a) contains goals and policies applicable to the protection of aesthetic resources. While the majority of policies pertain to the preservation of undeveloped "natural" and open space areas, the following policies are general in nature and may be relevant to the proposed project:

- **Policy ERC 4.1:** Enhance and preserve the aesthetic resources of the City, including natural areas, beaches, bluffs and significant public views
- **Policy ERC 4.1.6:** Require that future development be designated and sited to maintain the natural topographic characteristics of the City including the minimization of the area and height of cuts and fills (City of Huntington Beach 1996a)

In addition to the Environmental Resources/Conservation Element, the Urban Design Element contains background information regarding the existing visual setting and character of the City and its many identified districts. For example, as shown on Figure UD-1 in the Urban Design Element, the GWC campus is located in the Edinger Avenue Corridor, which, according to the General Plan, is characterized by larger retail centers that have little physical or visual connection, and as a result, lack overall identity and strong physical anchors (City of Huntington Beach 1996b). In addition, Figure UD-2 in the Urban Design Element identifies the Goldenwest Street/Edinger Avenue intersection as internal node, which functions as focal points of high activity within the community (City of Huntington Beach 1996b). However, as noted in the General Plan, the City's internal nodes "lack a distinctive character and identity" (City of Huntington Beach 1996b). Goldenwest Street and Edinger Avenue are also identified as primary paths/image corridors, but according to the General Plan, the City's primary paths lack characteristics that provide identity and clarity of location due to a confusing array of signs, lack of consistent landscape, and the presence of strip commercial centers.

While the Environmental Resources/Conservation Element does not identify scenic vistas in the City, the Urban Design Element identifies several visual assets that contribute positively to the character of the City. According to the General Plan, the visual assets of the City consist of the

Pacific Ocean, Huntington Harbour, Bolsa Chica Ecological Reserve, Huntington Beach Central Park, and neighborhood parks. Greer Park, a 10-acre community park, is located approximately 500 feet west of the GWC boundary off of McFadden Avenue. College Park, a 4-acre neighborhood park located in the City of Westminster is located approximately 100 feet north of the northeastern GWC boundary.

The Urban Design Element also contains policies requiring public improvements to enhance the existing setting for all identified nodes, the use of consistent design themes and/or landscape design character along the community's corridors that reflect the unique qualities of individual districts, and the heightening of arterial street and median landscaping. In addition, specific streetscape and landscape improvements along Goldenwest Street are identified (see Table UD-2 in the Urban Design Element) to enhance the corridor's focus. Proposed improvements applicable to the project area consist solely of the recommended extension of the landscape style of GWC to the east side of Goldenwest Street and to the superblock wall and sidewalk on the west through the use of turf, low shrubs, and trees.

Roads that offer motorists, cyclists, and pedestrians scenic vistas and street scenes are identified by the City as "scenic corridors." The Circulation Element defines three types of scenic corridors including major urban scenic corridors, minor urban scenic corridors, and landscape corridors. Off-site signs and billboards are prohibited along scenic corridors, and development located adjacent to designated corridors is required to incorporate compatible landscaping and specific treatment of signage or other details to "reinforce the aesthetic beauty of the surrounding area" and to "reinforce the design continuity of the area" (City of Huntington Beach 2013a).

Near the GWC campus, Goldenwest Street and Edinger Avenue are designated as minor urban scenic corridors, and Gothard Street is designated as a landscape corridor.

City of Huntington Beach Municipal Code

Development standards applicable to land use districts established within the City are discussed in Title 21 of the City's Municipal Code. The GWC site is zoned Public-Semipublic (PS) by the City. According to the City's Municipal Code (Chapter 214), the maximum building height in the PS zone is 50 feet, the minimum front and street side setback is 10 feet (side and rear yard setbacks are not required), and the minimum site landscaping is 8%. In addition, development in the PS zoning district is required to provide a 10-foot-wide landscape strip along all street frontages, except for necessary driveways and walkways.

City of Huntington Beach Urban Design Guidelines

The *City of Huntington Beach Urban Design Guidelines* are intended to promote high-quality development that enhances the City's unique identity and character and contributes to a positive

City image (City of Huntington Beach 2000). The guidelines are organized into 11 chapters covering major land use categories (i.e., residential, commercial, and industrial uses), signs, streetscape, districts, and special commercial development considerations, including mixed-use projects. Of particular relevance to the proposed project are design guidelines pertaining to streetscape and the Edinger Avenue Corridor. Relevant guidelines established for those particular areas are discussed in the following text.

General objectives of the City's streetscape design guidelines include the provision of a clear sense of arrival through distinctive use of landscaping and special entry features, use of a consistent landscape theme palette, enhancement of the pedestrian environment, and mitigation of adverse visual impacts of walls along the residential "superblock" corridors. Wall treatments, a proposed plant palette for shrubs, vines and groundcovers (most of which are evergreen or semi-evergreen, fast-growing, non-native species), and median design concepts are also included in the streetscape guidelines.

While partially bounded by Edinger Avenue to the south, the GWC campus is located outside of the *Beach and Edinger Corridors Specific Plan* (BECSP) boundary area (City of Huntington Beach 2010). While campus development is not subject to BECSP design, campus development does contribute to the overall aesthetic character of the built environmental along the Edinger Avenue Corridor. As such, surrounding development, and in particular, development included in the BECSP boundary, must be considered when assessing the potential cumulative aesthetic impacts of the proposed project.

City of Huntington Beach and Edinger Corridors Specific Plan

The development regulations of the BECSP govern all development located with the Beach and BECSP area. All proposed development in BECSP area must be designed in accordance with the BECSP development code to ensure high quality design that is compatible and complimentary to surrounding development (City of Huntington Beach 2010). Furthermore, adherence to adopted architectural regulations ensures that development is constructed at an appropriate human-scale and displays a rhythm and character appropriate for the corridor. BECSP development guidelines also require preparation of shadow studies to determine potential shade impacts associated with new development and the selection of light fixtures and lamp types that both preserve the integrity of the night sky and avoid unnecessary light spillover. Lastly, BECSP development guidelines require new development to use lightly colored roofs and maximize the use of non-reflective exterior treatments in efforts to minimize the introduction of substantial glare to the visual environment (City of Huntington Beach 2010).

While the GWC campus is not included in the BECSP area, the southern and eastern campus boundaries (and a portion of the southwestern campus boundary) are located adjacent to the BECSP area boundary.

City of Westminster General Plan

While GWC is located in the City of Huntington Beach, the City of Westminster boundary is located directly north of McFadden Avenue, and existing residences along the avenue are afforded views of the northern portion of campus. Therefore, the City of Westminster General Plan was reviewed for policies pertaining to aesthetics, and more specifically, the preservation of visual resources and protection of existing views. Upon review, the General Plan policies were found to involve actions or requirements applicable to development subject to City land use jurisdiction (City of Westminster 1996) and would not necessarily apply to the campus environment. Scenic vistas, roadways, or other visual "assets" within the City are not discussed in the General Plan, and as such, these assets are not further discussed.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur if the project would:

1. ***Have a substantial adverse effect on a scenic vista.***
2. ***Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.***
3. ***Substantially degrade the existing visual character or quality of the site and its surroundings.***
4. ***Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.***

Thresholds 1 and 2 were eliminated from further consideration in the Initial Study. The City of Huntington Beach General Plan does not identify any scenic areas, vistas, or corridors in the vicinity of the campus. The nearest scenic vista is the Bolsa Chica Ecological Reserve, located approximately 2 miles southwest of the campus, and is far enough away that implementation of the proposed project would not to interfere with any associated vistas at the reserve. Also, there are no designated scenic roadways within the project vicinity. At its closest point, Pacific Coast Highway (an eligible state scenic highway) is located approximately 3.3 miles southwest of the GWC campus, as measured from Parking Lot E, located at the northeast corner of Goldenwest Street and Edinger Avenue. Due to intervening terrain, development, and vegetation, views of the GWC campus are not available to motorists along Pacific Coast Highway. Therefore, because project elements would not be visible from an eligible or designated state scenic highway, no impacts would occur.

Because there are no designated scenic vistas within the vicinity of the proposed project site, and because the proposed project would not damage scenic resources within a state scenic highway, Thresholds 1 and 2 are not further considered in Section 4.1.4. As such, the impact analysis in the following text is focused and considers potential impacts to existing visual character and quality of the site and its surroundings (Threshold 3) and new sources of substantial light and glare that would adversely affect views in the area (Threshold 4).

4.1.4 Impacts Analysis

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

For purposes of this analysis, changes to the visual character of the project area as result of implementation of project- and program-level elements are assessed from off-site viewing locations within the public right-of-way. These viewing locations represent views of the campus afforded to potentially sensitive viewers, and more specifically, to passing motorists and pedestrians, as well as residential land uses located north and west of the GWC campus. Because students and staff of GWC are on campus voluntarily for higher education and employment purposes, the visual expectations of these viewers are tempered by the existing assemblage of campus buildings and facilities. In addition, because students and staff enter the campus and the associated visual environment voluntarily and would derive an indirect economic benefit from capital improvements, they are not considered sensitive viewers.

New Construction of Buildings and Facilities

Table 4.1-1 summarizes the Vision 2020 Facilities Master Plan project-level elements that would entail new building and facility construction. In addition, Table 4-1 summarizes the anticipated impact to existing visual character and quality associated with each newly constructed building/facility, and if a potentially significant impact would occur, applicable mitigation measures are identified.

Table 4.1-1
Project-Level Elements: New Construction of Buildings and Facilities

Building/Facility	Severity of Visual Character/ Quality Impacts	Applicable Mitigation Measure(s)
Criminal Justice Training Center Complex	Less Than Significant	N/A
Math/Science Building	Less Than Significant	N/A

Table 4.1-1
Project-Level Elements: New Construction of Buildings and Facilities

Building/Facility	Severity of Visual Character/ Quality Impacts	Applicable Mitigation Measure(s)
Language Art Complex	Less Than Significant	N/A
Cosmetology Building	Less Than Significant	N/A
Business/Social Science/Administrative Office Building	Less Than Significant	N/A

N/A = Not Applicable

As shown on Figure 3-4, Proposed Campus Land Uses, a new Criminal Justice Training Center Complex is planned to the east of the existing facility, located approximately 520 feet north of Edinger Avenue. The complex would feature a new two-story training center building, a scenario village located west of the training center building, and a traffic stop practice track. The new Criminal Justice Training Center Complex would likely display a more modern architectural design than the existing training center, and could include exterior colors and structural and/or decorative features not currently supported under existing conditions. The scenario village would include multiple one- and two- story structures, and the asphalt traffic stop practice track would essentially replace an existing disturbed lot located east of Parking Lot G. Similar to existing disturbed lot, the track would be used for campus parking when not used for training activities.

Due to the presence of existing retail development and sporadic landscape trees, the availability of off-site views of the new two-story structure would be extremely limited, even with removal of the landscaped berm to the south of the training center. Furthermore, the distance between sensitive receptors on Edinger Avenue and the new training center (i.e., approximately 700 feet) would reduce the apparent scale of the building, and as a result, the new facility would not be visually prominent when viewed from the roadway. In addition to occasional street trees, an east–west row of mature trees located north of Edinger Avenue in a landscape parkway and parallel north–south rows of dense canopied trees lining the two campus entryways off Edinger Avenue effectively block campus facilities from the view of off-campus motorists and pedestrians. Similarly, even with the removal of the landscaped berm to the east of the training center, the new building would be partially screened by the row of dense trees installed in the landscaped parkway located adjacent to the southbound travel lanes of Gothard Street. Views of the new training center building and scenario village structures may be available where the spacing of mature trees is less dense (such as at ingress/egress points to campus parking lots off of Edinger Avenue); however, these views are intermittent and largely go unnoticed by passing motorists and pedestrians. While color and texture contrasts would occur as the result of the installation of asphalt at the disturbed lot to be used for the practice track, the lot is currently used for parking. In addition, the lot is underused and disturbed, and the introduction of asphalt would be viewed as an easterly expansion of Parking Lot G. Therefore, due to the screening effect of existing landscaping, and because the existing underused lot is located adjacent to Parking Lot G and used for campus parking, changes to the existing visual character of the GWC campus would be subtle and would not be overly perceptible to off-site motorists and pedestrians or residents in the area. As a result, impacts would be less than significant.

While not located within the BECSP area boundary, the proposed Criminal Justice Training Center Complex would be located adjacent to the boundary and near off-campus commercial development located at the northwestern corner of the Edinger Avenue/Gothard Street intersection subject to the regulations of the BECSP. In addition, the proposed traffic stop practice track is planned north of Edinger Avenue, which the City designated as a minor urban scenic corridor. Although not expressly permitted by the BECSP, the proposed two-story training center building and the scenario village would not be located adjacent to Edinger Avenue, and would be obscured from passing motorists by existing off-campus retail development and on-campus vegetation. In addition, the two-story training center would be less than the maximum permitted building height of five stories, which is applicable to parcels included in the Town Center Boulevard Segment of the BECSP (i.e., the segment located closest to the Criminal Justice Training Center Complex). As such, the scale of the two-story training center would be consistent with the permitted building height of nearby parcels included in the BECSP area. The planned traffic stop practice track would not entail the introduction of new aboveground utilities or signs and/or billboards. The track would occupy an existing on-campus lot used for overflow parking, and would not require the removal of alteration of existing turf or trees located immediately north of Edinger Avenue. Therefore, development of the planned traffic stop practice track would be consistent with the minor urban scenic corridor regulations applicable to development along Edinger Avenue.

In addition to the new criminal justice training facility, project-level elements include a new Math/Science Building in the southwest corner of campus. Locating the new Math/Science Building at the southwest corner of campus in the vicinity of the newly constructed School of Nursing and Health Services Building and on the site of the existing Auto Body and Design and Graphics/Publications Building would be consistent with the existing pattern of development on the periphery of the campus core. The bulk and scale of the new Math/Science Building may be larger than the facilities to be replaced; however, the new buildings would be located near existing structures and would be partially screened from off-site viewing locations by landscaping. Mature trees planted within landscaped parkways parallel to Edinger Avenue and Goldenwest Street and by tree-lined entryways located in the southern portion of campus effectively block campus facilities from the view of area motorists, pedestrians, and residents. As a result, effects to the existing character of the GWC campus resulting from development of the new Math/Science Building would not be substantial, and the proposed facilities are not anticipated to be overly apparent to passing motorists, pedestrians, or residents in the area. Therefore, impacts would be less than significant.

The new Math/Science Building would be setback more than 400 feet from Goldenwest Street and Edinger Avenue (see Figure 3-4, Proposed Campus Land Uses). Both Goldenwest Street and Edinger Avenue are designated by the City as minor urban scenic corridors. As described previously, mature trees planted within landscaped parkways parallel to Edinger Avenue and Goldenwest Street would partially screen the new building from the view of passing motorists. Furthermore, development of the new building would not require the installation of new overhead utilities or new off-campus signs and buildings, and would not entail the removal or alteration of existing campus landscaping lining Goldenwest Street and Edinger Avenue. As such, existing views along Goldenwest Street and Edinger Avenue would not be substantially altered by the development of the new Math/Science Building.

The Vision 2020 Facilities Master Plan also envisions a new Language Arts Complex that would be located on the site of the existing Humanities Building and Health Sciences Building in the center of campus (see Figure 3-4). In addition to encompassing the footprints of the humanities and health sciences buildings, the new Language Arts Complex would display a slightly greater mass and would expand to the west. Despite displaying a slightly greater footprint than the buildings it would replace, the new Language Arts Complex (which would be constructed at a similar vertical scale as the existing humanities and health sciences buildings) would be screened from off-campus viewers along Goldenwest Street by existing campus development including the multistory Learning Resource Center and Media Center and mature street trees along the western perimeter of campus. Similarly, views to the new building from Edinger Avenue would be screened by mature street trees lines the southern perimeter of campus and by existing campus development including the Frank M. & Gertrude R. Doyle School of Nursing and Health Services Building and the new Math/Science Building. Due to the screening effect of existing development and vegetation, the scale and mass of the new Language Arts Complex would not be overly apparent to passing motorists, pedestrians or residents in the area. As a result, impacts would be less than significant.

The new Language Arts Complex would be setback approximately 600 feet from Goldenwest Street and as stated previously, the new building would be screened from view of passing motorists by existing campus development and street trees. In addition, along Goldenwest Street and north of Edinger Avenue and the BECSP boundary (Town Center Boulevard Segment) does not extend north of Breeland Drive. Since neither the college nor the residential development located along Goldenwest Street and north of Breeland Drive are included in the BECSP boundary, the new Language Arts Complex would not conflict with the development standards of the BECSP and/or the planned aesthetic character of the Town Center Boulevard Segment of the BECSP. Lastly, Goldenwest Street is identified as minor urban scenic corridor by the City. Because the new Language Arts Complex would be screened from the view of passing motorists and development would not entail the removal of street trees in the landscaped parkway, existing views along Goldenwest Street would not be substantially affected. As such, development of the Language Arts Complex would not impact the designation of Goldenwest Street as a minor urban scenic corridor.

As shown on Figure 3-4, a new Cosmetology Building is planned in the northwest corner of campus and would be constructed at the site of existing tennis courts situated west of the sand volleyball courts and south of the existing heating, ventilation, and air conditioning building. The footprint of the new Cosmetology Building would occupy the northern half of the existing tennis court site. Demolition of the existing Cosmetology Building located at the interior of the GWC campus and construction of a new building at the periphery of campus development would increase the visibility of this facility from off-site viewing locations, such as Goldenwest Street. While the existing building is effectively screened from off-site viewing locations by campus parkway landscaping and surrounding structures, there would be no campus structures located between the new Cosmetology Building and Goldenwest Street. The new building would be setback approximately 375 feet from the street and would be separated from the street by a 40-foot-wide landscaped parkway and a large campus parking lot. There is an existing gap between clusters of mature street trees in the landscape parkway located west of the new building site; however, rows of parking stalls within the campus parking lot are bookended by planters supporting 10- to 15-foot-tall trees that partially screen the site from view. Therefore, in addition to the 375-foot setback from Goldenwest Street that would reduce the apparent scale and visual prominence of the new Cosmetology Building, campus landscaping would partially screen the new building from view and would create short, discontinuous viewing windows to the project site. As such, mobile viewers on Goldenwest Street would not be afforded clear views of new building, and design details would not be overly perceptible. From Goldenwest Street, views of the new Cosmetology Building would be similar to existing brief views of campus development available to passing motorists at ingress/egress points to GWC. Intervening structures and landscaping would also block the new building from view of motorists on McFadden Avenue. Therefore, while the demolition of the existing tennis courts and construction of the new Cosmetology Building on the periphery of existing campus development would alter the character of the site, the new Cosmetology Building would be partially screened from passing motorists by existing landscaping. In addition, the apparent scale and visual prominence of the new structure would be reduced due to a 375-foot setback from Goldenwest Street. As a result, development would not substantially degrade the character of campus when viewed from off-site locations, and impacts would be less than significant.

As stated previously, the new Cosmetology Building would be setback back approximately 375 feet from Goldenwest Street and would be partially screened from views of passing motorists by existing mature street trees and parking lot trees. Because views would be intermittent and made in passing, and the new building would be consistent with the scale of existing development located on the campus periphery, existing views along Goldenwest Street would not be substantially affected. In addition, development of the Cosmetology Building would not entail the removal of existing landscaping along the Goldenwest Street Corridor, and the building would be located on a currently developed site. As such, development of the new Cosmetology Building would not impact the designation of Goldenwest Street as a minor urban scenic corridor, and would not substantially affect the existing aesthetic beauty of the corridor.

A new multiuse Business/Social Sciences/Administrative Office Building is planned east, adjacent to the campus' California Native Garden, on the site of the existing Math/Science Building. While the consolidation of several uses into one building may necessitate a structure of greater bulk and scale than the existing Math/Science Building, the development footprint is anticipated to be similar, and the scale would remain consistent with existing campus facilities in the core campus area. Because the new multiuse building would be located on the site of an existing campus facility, new construction would not substantially alter the existing spatial characteristics of development, and off-site views to the site would not significantly change. In addition, existing mature trees within the unmodified, continuous 40-foot-wide parkway adjacent to Goldenwest Street and plantings within the campus's California Native Garden would screen or partially screen views of the new building from motorists and residents in the area. As such, development of the new multiuse building would not substantially degrade the character of campus as viewed from off-site locations, and impacts would be less than significant. Moreover, because the new building would be constructed at the site of the existing Math/Science Building and would be partially screened from view by existing street trees, parking lot trees, and tall and spreading trees within the campus' California Native Garden, existing views along Goldenwest Street would be minimally affected. Therefore, the new Business/Social Sciences/Administrative Office Building would not substantially affect the existing aesthetic beauty and character of the Goldenwest Street Corridor.

Renovation of Buildings and Facilities

Table 4.1-2 summarizes the Vision 2020 Facilities Master Plan project-level elements that consist of building and facility renovations. In addition to impacts to existing visual character and quality anticipated to occur because of building and facility renovations, mitigation measures (where applicable) are also listed in Table 4.1-2.

Table 4.1-2
Project-Level Elements: Renovation of Buildings and Facilities

Building/Facility	Severity of Visual Character/ Quality impacts	Applicable Mitigation Measure(s)
One Stop Student Center	Less Than Significant	N/A
Technology Building	Less Than Significant	N/A
Automotive Technology Building	Less Than Significant	N/A
Physical Education Outdoor Labs	Less Than Significant	Less Than Significant
Central Warehouse/Corporation Yard	Potentially Significant	Mitigation Measure AES-1

N/A = Not Applicable

The proposed project includes the renovation of buildings located in the interior of the GWC campus, including the existing Technology Building. While Boyce Library would be demolished to accommodate a new One Stop Student Center, the physical characteristics of the new structure, including form, line, and color, are unlikely to be visible to sensitive receptors in the area. Due to the screening effect of intervening campus facilities and landscaping, as well as vegetation in the unmodified parkways bordering the campus boundary, changes to the visual character of the GWC campus associated with the One Stop Student Center would not be detectable through casual observation by off-site viewers, such as passing motorists, pedestrians, and residents. Similarly, renovations to the existing Technology Building would not include building expansion, and as such, the existing footprint and scale of the structure would be maintained, and existing structures and vegetation in the area would continue to mask the building from the view of off-site receptors. Therefore, development of the One Stop Student Center and renovations to the Technology Building would not degrade the existing character of the site and its surroundings, and impacts would be less than significant. Further, both the interior location of renovated buildings and the presence of existing buildings on the campus perimeter would greatly limit opportunities for these structures to be viewed from Goldenwest Street and Edinger Avenue. Because existing views from Goldenwest Street and Edinger Avenue would not be substantially affected by renovation of existing buildings on the campus interior, the existing aesthetic beauty and character along the corridors would be maintained.

Within the northern portion of campus, planned renovation has also been identified for the Automotive Technology Building, athletic fields located east of the baseball field, and the Central Warehouse/Corporation Yard. While renovation of the existing Automotive Technology Building would increase the size of the current facility by approximately 27,000 gross square feet, the new building would display a similar height as the existing building. In addition, the expanded footprint and gross square footage of the facility would not be readily apparent to motorists on McFadden Avenue and Goldenwest Street or to local residents due to the screening effect of intervening campus structures and vegetation to the north and intervening vegetation to the west located within the campus parking lot and along the Goldenwest Street adjacent landscaped parkway. Similar to the new Cosmetology Building, the renovated Automotive Technology Building would be setback back approximately 375 feet from Goldenwest Street and would be partially screened from views of passing motorists by existing landscaping. Because views would be intermittent and made in passing, and the expanded building would be consistent with the scale of existing development located on the campus periphery, existing views along Goldenwest Street would not be substantially affected. Further, existing street trees and parking lot trees would not be removed to accommodate the expanded building footprint; therefore, the renovated Automotive Technology Building would not substantially affect the existing aesthetic beauty and character of the Goldenwest Street Corridor. Therefore, for the reasons discussed previously, renovation of the Automotive Technology Building would result in less-than-significant impacts to existing visual character.

For purposes of this analysis, renovation of existing recreational facilities in the northern portion of campus to provide enhanced, "state of the art" facilities is understood to entail the reconfiguration and restriping of existing programmed turf fields, baseball and softball fields, and the area immediately surrounding the all-weather track. Based on available information, planned renovations would not involve the introduction of large new structures or buildings or the relocation of existing facilities, including the pool or the Men's and Women's Physical Education Facilities located in the area corresponding to Physical Education Outdoor Labs, as depicted on Figure 3-4. Reconfigured and restriped fields would be visible from off-site viewing locations, including McFadden Avenue and Gothard Street; however, striped recreational fields are established uses in the existing campus landscape. Furthermore, planned renovations would not entail the introduction of large new structures or buildings displaying considerable mass and bulk that, as a result, would substantially alter the existing visual character of the northern portion of the campus or substantially alter existing off-site views to residences or motorists along Gothard Street and McFadden Avenue. As such, impacts to existing visual character resulting from the Physical Education Outdoor Labs would be less than significant.

Renovation of existing recreational facilities in the northern portion of campus may require the removal of existing street trees installed along Gothard Street. For example, an elevated, eucalyptus-dotted lot located north of Parking Lot J and east, adjacent to Gothard Street, is designated as an area for future joint-use athletic facilities. While the lot does not currently support recreational facilities, the area may be used for recreation fields in the future. Development of the area would require the removal of existing eucalyptus trees and other vegetation, and while construction activities would alter the appearance of the lot, future joint-use athletic facilities would not substantially affect the existing visual character of the area and would not conflict with the designation of Gothard Street as a landscape corridor. Recreational fields are located to the north and west of the lot, and as such, recreational development would be consistent with the established character of the northeastern corner of campus. Street trees are consistently planted along the eastern boundary of campus; however, landscaping along the Gothard Street Corridor is noticeably thin on the east side of the road, south of Center Avenue and north of the Golden West Transportation Center. As such, the presence of landscaping is currently inconsistent along the corridor. East of Gothard Street and north of Center Avenue, the land tapers and the long rectangular parcels are occupied by high-voltage transmission lines and an approximately 150-foot-wide disturbed right-of-way. While the right-of-way occasionally supports low seasonal grasses, trees have not been planted due to transmission line clearance requirements. The elevated lot is located to the west of the transmission corridor, and while the lot's eastern boundary is covered with dense vegetation, the overall landscape theme is inconsistent with that of the landscaped parkway to the south. Furthermore, the utter lack of landscaping along the northerly stretch of Gothard Street creates a noticeable gap in vegetation along this segment of the corridor. As such, landscaping along the northern segment of the

Gothard Street Corridor lacks continuity and displays an inconsistent visual theme. Therefore, future renovation of existing facilities in the northern portion of campus would not conflict with the designation of Gothard Street as a landscape corridor and would not substantially affect the existing aesthetic beauty of the corridor.

The existing Central Warehouse/Corporation Yard consists of two single-story, rectangular buildings separated by an asphalt parking area. Only the northern building that abuts McFadden Avenue is visible to passing motorists and nearby residents. Views from the public right-of-way are of an approximately 150-foot-long, windowless, grey and beige, concrete building separated from McFadden Avenue by a 10-foot-wide landscape strip and sidewalk. Views of the building façade are broken up by five mature twisted juniper (*Juniperus* spp.) trees in the planter area and two mature pear (*Pyrus* spp.) trees located in sidewalk cutout planters. The juniper trees are located in front of visual architectural panels on the building that are created and framed by roof drain downspouts. Although the architecture lacks detail, a visual harmony of landscape and building is achieved. Because the existing buildings would be renovated and expanded, it is assumed that the bulk and scale of the renovated facilities could be slightly larger, and new walls may be constructed. A substantially larger facility and the construction of monotonous walls lacking any visual interest could increase visual contrast associated with the Central Warehouse/Corporation Yard as viewed from off-site area. Therefore, specific site design measures that consider the composition and scale of the surrounding area are recommended, as is the incorporation of visual interest into the design of new building façade treatments (MM-AES-1). Absent mitigation, impacts resulting from renovation and expansion of the Central Warehouse/Corporation Yard could be potentially significant.

Intermittent views to the existing Central Warehouse/Corporation Yard are briefly available to northbound motorists on Goldenwest Street, north of Edinger Avenue. Between Edinger Avenue and McFadden Avenue, motorists are afforded easterly views of street trees, campus parking lots, and partially screened buildings on the periphery of campus development. As stated previously, a substantially larger Central Warehouse/Corporation Yard could increase the visual prominence of this facility and create greater visual contrast when viewed from off-site areas. However, specific site design measures that consider the composition and scale of the surrounding area are recommended (MM-AES-1) to ensure that resulting visual contrast associated with the renovated facility is minimized. Furthermore, planned renovations would not entail the removal of existing street trees along Goldenwest Street, and the Central Warehouse/Corporation Yard is largely screened from the view of passing motorists on Goldenwest Street by the CVS Pharmacy at the southeastern corner of Goldenwest Street and McFadden Avenue. Therefore, planned renovations would not substantially affect the design continuity along the Goldenwest Street Corridor, and impacts would be less than significant.

Site Improvement Elements

Table 4.1-3 summarizes the site improvements planned in the Vision 2020 Facilities Master Plan and lists anticipated impacts to existing visual character and quality resulting from implementation of improvements and mitigation measures (where applicable).

Table 4.1-3
Project-Level Elements: Site Improvements

Building/Facility	Severity of Visual Character/ Quality Impacts	Applicable Mitigation Measure(s)
Vehicular entryways, circulation, and parking	Less Than Significant	N/A
Pedestrian entryways and circulation	Less Than Significant	N/A
Service access	Less Than Significant	N/A
Open space	Less Than Significant	N/A
Site infrastructure	Less Than Significant	N/A
Thermal energy storage unit	Less Than Significant	N/A

N/A = Not Applicable

Site improvements elements would include enhancement of vehicular entryways, circulation and parking, pedestrian entryways and circulation, service access, and open space. In addition, the installation of a thermal energy storage unit for heating, cooling, or power generation is planned north of the current HVAC Building (near the Central Warehouse/Corporation Yard).

Existing campus primary and secondary vehicular entryways support an inconsistent theme and character. For example, secondary entryways along Edinger Avenue are lined with ficus trees, while the main entryway off of Goldenwest Street supports several hedges, pine and eucalyptus trees, and the existing Campus Safety Building. Primary vehicular entry points from Golden West and Edinger Avenue would be strengthened through a formal program of landscape and hardscape elements, as well as the introduction of a signage and lighting program with consistent style, scale, and visual appearance. These improvements, as well similar features envisioned for secondary vehicular access points and parking lot landscaping (parking ticket dispensers and emergency phone kiosks would also be installed in parking lots), would help to strengthen the visual character of GWC at the campus edge and along main entrances by providing a consistent landscape theme and a clear sense of arrival. Therefore, for purposes of this analysis, enhancement of vehicular entryways, circulation, and parking would be beneficial to the character of the GWC campus, as viewed from off-site viewing locations, and impacts would be less than significant.

Vehicle entryways, circulation, and parking adjacent to Edinger Avenue and Goldenwest Street are existing features on campus and because improvements to these elements would not conflict with the building use regulations within the Town Center Boulevard Segment or Classic Boulevard specifications established in the BECSP. Therefore, these planned site improvements would not substantially affect the existing and planned character of the Edinger Avenue Corridor, as envisioned in the BECSP. A formal program of compatible landscape and hardscape elements would be introduced at entryways and parking lots, and existing campus entryway signage and lighting elements would be replaced to ensure a consistent style, scale, and visual appearance. Landscaping would be compatible with the scale and character of existing street trees installed along Edinger Avenue and Goldenwest Street (and with the scale and character of existing campus landscaping), and improved signage is anticipated to be similar in scale to existing signage. As such, planned vehicular entryway, circulation, and parking improvements would not substantially affect the existing aesthetic beauty or character of the Edinger Avenue or Goldenwest Street scenic corridors. As stated previously, enhancement of vehicular entryways, circulation, and parking would be beneficial to the character of the GWC campus, as viewed from off-site viewing locations.

Primary and secondary walkways from campus parking lots to the campus core are also included as a component of planned site improvements. Because enhancement of pedestrian entryways and circulation would be largely screened from off-site viewers by existing parkway and streets trees, and by the proposed landscaping improvements discussed previously, alteration of campus character attributed to pedestrian enhancements would be less than significant. Even with the removal of the berms along the southern and eastern edges of campus, pedestrian enhancements would not result in a significant visual impact due to the screening effect of intervening landscaping and parking lots and because of the distance between proposed enhancements and mobile off-site receptors on Edinger Avenue and Gothard Street. Proposed enhancements would not substantially alter the existing visual character of the GWC campus. Further, planned enhancements would strengthen the on-campus pedestrian environment by providing clear pathways and access to the campus core, and students and staff would directly benefit from these capital improvements. Similarly, because primary and secondary walkways would largely be screened from off-site viewers due to campus perimeter landscaping and parking lots, these improvements would not substantially affect the existing or planned visual character of the Edinger Avenue and Goldenwest Street Corridors as envisioned in the BECSP. Lastly, walkways are not located adjacent to Edinger Avenue and Goldenwest Street, and due to screening of these elements by intervening features (i.e., perimeter landscaping and campus development), planned enhancements would not substantially affect the existing aesthetic beauty and character of the Edinger Avenue, Goldenwest Street, and Gothard Street Corridors.

As shown on Figure 3-6, the three service access roads are planned as a component of the overall site improvement elements. With the exception of the planned access road off McFadden Avenue, new service roads would be located along the periphery of the campus core and would begin at parking lots. These interior access roads would be screened from off-site viewing locations/receptors by campus landscaping, parking lot vehicles, and parkway and street trees, and would not be apparent to casual observation by passing motorists, pedestrians, and nearby residents. The identified access road from McFadden Avenue would replace the existing access road located west of the baseball field and east of the Central Warehouse/Corporation Yard; therefore, the new access road would not substantially alter the existing visual landscape. Because planned access roads would be screened from off-site viewers or would be aligned along existing access roads, impacts would be less than significant. Furthermore, due to screening of these access roads from off-site viewing location and the alignment of access roads along existing areas of disturbance (i.e., existing campus access roads), these site improvements would not substantially affect the existing aesthetic beauty and character of the Goldenwest Street and Gothard Street scenic and landscape corridors.

Also, as a component of planned site improvements, existing open spaces in the campus core would be enhanced and reprogrammed in order to create a welcoming environment for students, visitors, and employees. Because open space enhancement would be experienced by on-campus students, visitors, and employees, and open space areas would not be visible to off-site viewers due to intervening campus facilities and landscaping, impacts to visual character as viewed from off-site location would be less than significant. In addition, because these groups would directly benefit from the planned improvements, and because planned enhancements would create a cohesive and inviting open space program for the GWC campus, beneficial impacts to campus visual character are anticipated. Lastly, due to the screening of existing open spaces in the campus core from off-site viewing locations, planned site improvements would not substantially affect the existing aesthetic beauty and character of the Goldenwest Street, Edinger Avenue, and Gothard Street scenic and landscape corridors.

Lastly, the installation of a thermal energy storage unit would occur just north of the current HVAC Building. As shown on Figure 3-4, the storage unit would be setback approximately 275 feet from McFadden Avenue and would be located south of the renovated Central Warehouse/Corporation Yard facility. The location on which the storage unit would be constructed is currently used by GWC as a maintenance yard. The maintenance yard is currently screened from the view of passing motorists by chain-link fencing with green fabric screens and occasional heavy vine growth along the perimeter of the GWC baseball field and McFadden Avenue, street trees, and the existing single-story, rectangular Central Warehouse/Corporation Yard buildings. The planned storage unit would be screened from view by existing fencing and vegetation and by the renovated facilities of the Central Warehouse/Corporation Yard. Because the thermal energy storage unit would be screened from off-site viewing locations, changes to existing visual character and quality of the campus would not be apparent to passing motorists and pedestrians. As such, impacts to existing visual character of the area and to the existing aesthetic beauty of the Goldenwest Street scenic corridor would be less than significant.

Table 4.1-4 summarizes the Vision 2020 Facilities Master Plan joint venture elements. In addition to impacts to existing visual character and quality anticipated to occur because of joint venture elements, mitigation measures (where applicable) are also listed in Table 4.1-4.

Table 4.1-4
Joint Venture Elements

Building/Facility	Severity of Visual Character/ Quality Impacts	Applicable Mitigation Measure(s)
Boys & Girls Club After School Building	Less Than Significant	N/A
Boys & Girls Club Gymnasium Facilities	Less Than Significant	N/A

N/A = Not Applicable

A Boys & Girls Club After School Building and the Boys & Girls Club Gymnasium Facilities are planned at an existing turf area on the periphery of the campus core. More specifically, the Boys & Girls Club facilities would be located north of the existing Fine Arts Building, east of the Rehab Center/Training Room facilities and southwest of the track. While the after school building and the gymnasium facilities would be located in an area that currently supports turf and several trees, and development would introduce bulk and scale where none currently exists, the planned facilities would be located in close proximity to existing campus structures. The height and mass of the new building and the gymnasium facilities are anticipated to be consistent with those of existing campus development, and as such, would not produce strong visual contrast as could result from the introduction of new structures where none currently exist. In addition, the after school building and gymnasium facilities would be located approximately 800 feet south and 400 feet west of motorists on McFadden Avenue and Gothard Street, and existing campus and parkway vegetation would obscure views of the proposed structures. For example, a campus perimeter chain-link fence installed along McFadden Avenue is planted with crawling ivy, and large, regularly spaced street trees are located within the McFadden Avenue adjacent sidewalk. The presence of these landscape features would partially screen future development from off-site viewing locations to the north. In addition, due to the approximate 800-foot setback from McFadden Avenue, the new structures would not be visually prominent and would not be overly distinguishable from existing campus development visible from McFadden Avenue. From Gothard Street, campus landscaping, mature jacaranda (*Jacaranda* ssp.) trees planted in Parking Lot J, and the landscaped parkway adjacent to Gothard Street would partially screen or mask views of the proposed building and gymnasium facilities from off-site viewing locations to the east. Because the proposed building and gymnasium facilities would be located in close proximity to existing structures, would be setback from nearby roads at a similar distance as existing campus facilities, and would be partially screened from view of motorists and residents by intervening vegetation, impacts to existing visual character of the site and surroundings are anticipated to be less than significant.

As stated previously, the Boys & Girls Club After School Building and the Boys & Girls Club Gymnasium Facilities would be partially screened or masked from the view of Gothard Street motorists by campus landscaping, mature jacaranda trees planted in Parking Lot J, and the landscaped parkway adjacent to Gothard Street. In addition, because development of the Boys & Girls Club facilities would not entail the removal of mature trees within Parking Lot J or alteration of the Gothard Street adjacent landscaped parkway, development would not substantially affect the existing aesthetic beauty or character of the Gothard Street landscape corridor. Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

New Construction of Buildings and Facilities

New project-level elements including the Criminal Justice Training Center Complex, Math/Science Building, Language Arts Complex, and the Business/Social Science/Administrative Office Building are planned where campus buildings and parking lots are currently located. While a building is not currently located on site, the tennis courts where the new Cosmetology Building is proposed are located south and north of existing campus development, and the courts feature an overhead outdoor lighting fixtures. Similar to existing campus buildings, new buildings would include interior lighting for illumination of classrooms, instruction space, walkways, restrooms, and other areas, and exterior lighting for safety and security purposes. While it is assumed that new facilities would be constructed of similar materials as existing buildings in order to visually integrate into the existing campus environment, specific building designs and materials have not yet been proposed or identified. Similarly, the specific lighting plan and intensity of new lighting sources to illuminate new buildings, facilities, and associated outdoor areas has not yet been developed. Therefore, because building materials and lighting plans have yet to be prepared for the planned Criminal Justice Training Center Complex, Math/Science Building, Language Arts Complex, and the Business/Social Science/Administrative Office Building, light and glare generated by these project-level elements may adversely affect day- or nighttime views in the surrounding area. As such, lighting and glare are considered potentially significant impacts, and MM-AES-2 and MM-AES-3 have been provided to reduce impacts to a less-than-significant level. Absent mitigation, impacts to day- and nighttime views resulting from the new construction of buildings and facilities could be potentially significant.

While not subject to the regulations of the BECSP, implementation of MM-AES-2 and MM-AES-3 would be consistent with development guidelines applicable to off-campus parcels located near the Criminal Justice Training Center Complex and included in the BECSP area boundary. The BECSP includes development guidelines that require (1) the selection of light fixtures and lamp types that both preserve the integrity of the night sky and avoid unnecessary light spillover, and (2) use of non-reflective exterior treatments in efforts to minimize the introduction of substantial glare to the visual environment. MM-AES-2 and MM-AES-3 are similar in intent to the previously referenced BECSP development guidelines, and therefore, implementation of MM-AES-2 and MM-AES-3 at the Criminal Justice Training Center Complex would ensure a consistent approach to addressing potential new sources of light and glare associated with planned development.

Renovation of Buildings and Facilities

With the exception of planned renovation of the athletic facilities/fields in the northern portion of campus, renovations would occur within existing buildings/facilities, and new exterior lighting sources or substantially different interior lighting schemes are not anticipated. If new exterior lighting is ultimately introduced, such as anticipated at the expanded Automotive Technology Building, new sources would generally be located near existing exterior sources, and the presence of existing nighttime lighting would reduce the potential for new lighting impacts. However, if new lighting were to be introduced at buildings/facilities located along the periphery of the GWC campus and adjacent to campus perimeter roadways, an increase in the intensity of lighting and new fixture types could potentially result in light spillover that would be received by surrounding land uses. For example, the introduction of new lighting at the Central Warehouse/Corporation Yard (located south of McFadden Avenue at the northwest corner of the GWC campus) could adversely affect nighttime views in the area if an increase in lighting intensity is proposed and/or if lighting fixtures are not shielded and directed downward. As such, new sources of lighting at the Central Warehouse/Corporation Yard are considered a potentially significant impact, and MM-AES-2 has been provided to reduce impacts to a less-than-significant level. Absent mitigation, impacts to nighttime views resulting from renovation of the Central Warehouse/Corporation Yard could be potentially significant.

Renovation of existing athletic fields/facilities would occur where some exterior lighting sources currently operate during evening and nighttime hours. For example, lighting is currently located around the perimeter of both softball fields but is not currently installed around the perimeter of the all-weather track or adjacent recreations fields. Similarly, a relocated tennis court facility could provide a new nighttime light source near the intersection of McFadden Avenue and Gothard Street, directly across the street from single-family housing. Therefore, new sources of lighting around these areas are assumed for future redevelopment, and because new lighting would be visible to passing motorists on McFadden Avenue and residents to the north because of a lack of intervening elements (i.e., vegetation and structures), development could potential introduce new lighting that could affect existing nighttime views. In addition, because specifics regarding the type and scale of facilities that would be constructed are not known, planned lighting schemes and intensity of exterior fixtures cannot be determined. Therefore, for purposes of this analysis, lighting is considered a potentially significant impact, and MM-AES-2 has been provided to reduce impacts to a less-than-significant level. Absent mitigation, impacts to visual character resulting redevelopment of athletic facilities/fields could be potentially significant.

Due to distance and the presence of intervening elements (i.e., structures and landscaping), the introduction of new lighting to renovated building and facilities located at the interior of the GWC campus is unlikely to create substantial light that would be received by off-site receptors or adversely affect existing nighttime views. Therefore, because new lighting associated building and facility renovations located at the interior of the GWC campus is unlikely to adversely affect nighttime views, impacts would be less than significant.

The use of reflective building materials in renovations is anticipated to be limited. Future work performed to correct building deficiencies and support instructional needs would not require highly reflective building façades or an increased use of reflective building materials on existing structures. In addition, renovations are anticipated to occur primarily within existing buildings/facilities. Therefore, because renovations are unlikely to create new sources of substantial glare, impacts to day- or nighttime views would be less than significant.

Site Improvement Elements

Site improvement elements would include new sources of lighting associated with vehicular entryway circulation and parking, pedestrian walkways, and open space areas. While new lighting sources and fixtures are planned in areas of campus that currently support nighttime lighting sources, the specific lighting plan and intensity of new lighting sources associated with site improvement elements have not yet been developed. Because lighting plans have yet to be prepared for reconfigured parking lots and campus entries (and because parking lots and entries are located on the periphery of the GWC campus), new sources of lighting introduced at these areas could potentially affect existing nighttime views. As such, new sources of lighting are considered a potentially significant impact, and MM-AES-2 has been provided to reduce impacts to a less-than-significant level. Absent mitigation, impacts to nighttime views resulting from site improvement elements could be potentially significant.

Joint venture elements are planned where existing buildings and exterior lighting sources are currently located. The planned Boys & Girls Club After School Building and the Boys & Girls Club Gymnasium Facilities would be located near the existing Child Care Center and the old Health Center. In addition, lighting currently operates in the vicinity of the identified gymnasium facility site along existing access roads, parking lots, and on building exteriors. While the development sites are located in areas where existing facilities are located and nighttime lighting is relatively common, detailed building designs and lighting plans have yet to be developed. As such, the introduction of new building materials and lighting sources associated with these joint-venture elements could potentially affect day- or nighttime views in the surrounding area.

Therefore, lighting and glare are considered potentially significant impacts, and MM-AES-2 and MM-AES-3 have been provided to reduce impacts to a less-than-significant level. Absent mitigation, impacts to day- and nighttime views resulting from the proposed Boys & Girls Club Gymnasium Facilities could be potentially significant.

4.1.5 Mitigation Measures

The following mitigation measures would reduce potential impacts to existing visual character and impacts associated with lighting and glare resulting from certain project elements to a less than significant level:

MM-AES-1 Architectural and site design of proposed structures shall consider the existing composition and scale of the surrounding area and implement appropriate measures to reduce bulk and scale. Measures to be considered shall include the following:

- Setbacks shall be implemented along sides of structures abutting or fronting roadways and shall strive to be consistent with setbacks displayed by existing development in the area. All front and street side setbacks shall incorporate a landscape planter strip (except where necessary driveways and walkways are located).
- Architectural design strategies to reduce bulk and scale of new buildings abutting or fronting roadways shall include step-back design for floors above street level to reduce spatial impingement on adjacent roadways, and architectural facades shall be suitably articulated to provide visual interest. In addition, planned fencing/walls abutting or fronting roadways shall be designed to add visual interest and shall incorporate appropriate fence/wall treatments.
- A landscape plan featuring drought-tolerant planting material consisting of canopy trees, shrubs, and groundcover shall be implemented to soften the appearance of structure edges and continuous facades, and relieve solid, unbroken elevations. In addition, the landscape plan shall be integrated with all elements of the project, such as buildings and parking areas. Plant materials shall be suitable for the given soil and climatic conditions and shall consider typical species used on campus in the vicinity, as well as species used in the existing streetscape palette to create a consistent landscape theme. The size of installed plant material shall be based on a 5-year time frame to achieve the desired level of visual screening and view modification.
- If adequate space is available, streetscape amenities shall be incorporated (or if currently present, enhanced) along sidewalks adjacent to roadways abutting the development site. Landscaping adjacent to and within existing sidewalks

shall be increased/enhanced, shall display a consistent theme, and shall be visually compatible with existing landscaping and land uses, as well as with the landscape plan prepared for the proposed development site. Additional streetscape amenities shall include enhanced sidewalk paving, raised and/or cutout planters suitable for shrubs and street trees, seating, lighting, and other features in a cohesive and visually appealing design that establishes a perceptible thematic image that visually unifies architecture and exterior streetscape spaces.

- Future on-campus facilities shall strive to use a unifying architectural style that contributes to a unified campus appearance and reflects a consistent architectural character.

MM-AES-2 New sources of exterior lighting shall be shielded and directed downward to avoid light spillover onto adjacent properties. Lighting shall also be of the minimum required intensity to provide for safety and security purposes. Nighttime operation of new sources of lighting shall be consistent with that of existing lighting sources on campus and shall consider potential effects to nighttime views of adjacent motorists and nearby residents. Interior lighting shall be turned off when not in operation or operated in the lowest possible setting.

MM-AES-3 The use of reflective building materials shall be minimized to the extent practicable. Building materials shall be consistent with the visual character of existing and planned campus facilities and with the overall character of the Golden West College campus.

4.1.6 Level of Significance After Mitigation

Implementation of MM-AES-1 through MM-AES-3 listed previously would reduce potentially significant impacts to existing visual character and day- and nighttime views associated with the future development to below a level of significance.

4.1.7 Cumulative Impacts

Section 15130(b)(1)(A) of the CEQA Guidelines allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. The consideration of cumulative impacts in this document uses the following approach: an initial list and description of all related projects is presented, followed by a discussion of the effects that the proposed project, in conjunction with relevant cumulative projects, may have on each environmental category of concern. Consistent with CEQA (California Public Resources Code, Section 21000 et seq.), this discussion is guided by the standards of practicality and reasonableness.

Table 3-10 in Chapter 3, Project Description, provides a list of past, present, and reasonably foreseeable future projects determined most relevant to the project. Several development proposals and City projects in proximity to the proposed project have been submitted for consideration or have been recently approved that, together with the proposed project, may result in an increase in environmental impacts.

The geographic extent for the analysis of cumulative impacts associated with aesthetics consists of a 1-mile radius centered on the GWC campus. Use of a 1-mile radius is appropriate given the type and extent of proposed project's aesthetic impacts and given the screening effect of existing structures and vegetation surrounding the GWC campus. Due to the presence of intervening structures and vegetation, views to proposed project buildings/facilities from off-campus locations are limited, and as such, only those cumulative projects located in the immediate vicinity could potentially be viewed jointly with the proposed project. In addition, this cumulative boundary is appropriate and was selected because it would include projects that would have the potential to change the visual character of the local neighborhood surrounding the GWC campus. Two projects that have been approved by the City are located within the cumulative study area boundary and are listed in the following text:

- **The Boardwalk (Murdy Commons Mixed-Use)**. Located at the northeast corner of Edinger Avenue and Gothard Street, The Boardwalk consists of four- to six-story buildings that will include 487 dwelling units and 14,500 square feet of commercial space. The project (currently under construction) also includes a 0.5-acre public park (City of Huntington Beach 2011).
- **Pedigo Apartments**. Located at 7262,7266, and 7280 Edinger Avenue and 16001 and 17091 Gothard Street, the Pedigo Apartments would consist of 510 dwelling units in a new four-story structure. The project will also include 81,211 square feet of open space and 862-space, six-level parking structure (City of Huntington Beach 2013b).

The proposed project would be located on the GWC campus, which is located within a suburban setting in the City. Because the GWC campus has not been identified by the City as a visual asset, and planned development would not be visible from coastal areas or parks (existing development and vegetation would partially to fully screen project elements from viewers at City parks), the proposed project would not contribute to a cumulative scenic vista impact.

Due to the presence of intervening topography, development, and vegetation, future development on the GWC campus and projects considered in the cumulative scenario would not be visible from Pacific Coast Highway (Highway 1). Therefore, a cumulative impact to scenic resources within a state scenic highway viewshed would not occur.

While most planned development associated with the proposed project would be located near the campus core, and would be screened from off-site viewers (either partially or fully) by existing or proposed structure and landscaping, mitigation has been proposed that would reduce potential impacts to existing visual character associated with the bulk and scale of certain future development to a less-than-significant level. It should be noted that according to the City, the suburban and commercial environment surrounding the campus (which includes a portion of the Edinger Avenue commercial corridor) lacks a consistent theme and a distinct visual character (City of Huntington Beach 2000). The development regulations of the BECSP were established by the City to help strengthen and unify the visual character of the corridor by ensuring compatible and complimentary design within the BECSP area. Projects considered in the cumulative scenario are located in the BECSP area, are subject to the architectural regulations of the BECSP, and were determined to be consistent with the requirements of the BECSP (City of Huntington Beach 2011, 1996b). As such, cumulative development considered in this analysis would help strengthen the overall character of the Edinger Avenue commercial corridor. Similarly, site improvement elements planned in the Vision 2020 Facilities Master Plan would strengthen the visual character of the western and southern boundaries of campus by installing a consistent architectural and landscape theme at vehicular entryways that would strengthen the visual identity of the Goldenwest Street and Edinger Avenue corridors and improve sense of place. As such, planned campus development would not combine with other development planned in the area to create a cumulative impact to existing visual character.

As stated in Section 4.1.1, Existing Conditions, the suburban project setting supports numerous nighttime lighting sources and contains buildings and facilities constructed of reflective materials, including glass. However, as previously stated, new development is proposed on the periphery of campus and would be located in close proximity to residences to the north, across McFadden Avenue. In instances where lighting associated campus development could potentially affect existing nighttime views, mitigation has been proposed that would minimize light trespass onto nearby properties. Similarly, cumulative development considered in this analysis is located in the BECSP area and would be subject to mandatory lighting regulations that require downward directed lighting fixtures and the installation of luminaires that prevent light spillover and provide for the efficient distribution of lighting. Through adherence to mitigation measures for the proposed project and applicable development regulations for cumulative development, cumulative impacts to nighttime views due to new sources of substantial lighting would not occur. Furthermore, with implementation of mitigation (where relevant) for the proposed project, and through adherence with applicable exterior building material regulations for cumulative development located in the BECSP area, potential cumulative impacts to daytime views due to new sources of substantial glare in the project area would be less than significant.

4.1.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Public Resources Code, Sections 21000–21177. California Environmental Quality Act (CEQA), as amended.

California Streets and Highway Code, Sections 260–284. State Scenic Highways.

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4.2 AIR QUALITY

This section evaluates short-term (construction) and long-term (operational) impacts to air quality that would potentially occur as a result of implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project). Methodology used in the air quality analysis is discussed in Section 4.2.1. Applicable laws, regulations, standards, and enumerated thresholds established by the South Coast Air Quality Management District (SCAQMD), the California Air Resources Board (CARB), and the U.S. Environmental Protection Agency (EPA) are provided in Section 4.2.2, Existing Conditions, and Section 4.2.3, Thresholds of Significance. Emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, (available at www.caleemod.com), and air quality impacts are discussed in Section 4.2.4, Impacts Analysis. Mitigation, levels of significance after mitigation, and cumulative impacts are presented in Sections 4.2.5 through 4.2.7, and references cited are provided in Section 4.2.8.

4.2.1 Methodology

Air emission sources that would result from implementation of the proposed project would include emissions from motor vehicles calculated using CalEEMod, estimates that are partially based on information derived from the project-specific traffic impact analysis report prepared by Linscott, Law and Greenspan, Engineers, in 2015 (Appendix I), and emissions from area sources such as natural gas usage for water and space heating based on historical campus energy usage. Historical energy usage data from the campus and projected usage under the proposed project were used to provide improved estimates of combustion-related emissions. Other mobile sources, such as construction equipment, were estimated using the CalEEMod default equipment fleet assumptions based on the expected construction methods that would be employed during building demolition and new development under the proposed project. Emission estimates were compared against SCAQMD emission-based significance thresholds for criteria pollutants and other thresholds to determine project impacts.

In addition to air emissions modeling conducted for the proposed project, the following webpage serves as a source of supplementary information for the project's air quality analysis:

- *CEQA Air Quality Handbook* supplemental information (SCAQMD 2012a)

Emission calculations and CalEEMod outputs can be found in Appendix B.

4.2.1.1 Air Quality Characteristics

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts on people who are deemed sensitive receptors are the most serious hazards that can result from changes in existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993).

4.2.1.2 Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive people from illness or discomfort. Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases, and oxides of nitrogen (NO_x) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide. Most NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO

1 The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the EPA's Six Common Air Pollutants (EPA 2012) and the CARB Glossary of Air Pollutant Terms (CARB 2011a).

and NO_2 are collectively referred to as NO_x and are major contributors to O_3 formation. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere, with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis, and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits placed on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Inhalable or coarse particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as producing haze and reducing regional visibility.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

4.2.2 Existing Conditions

The proposed project is located within the South Coast Air Basin (basin). The basin is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall). The basin is a 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. It includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.

The general region lies in the semipermanent, high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the basin is a function of the area's natural physical characteristics (e.g., weather and topography) as well as man-made influences (e.g., development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the basin.

4.2.2.1 Relevant Plans, Policies, and Ordinances

Regulatory oversight for air quality in the South Coast Air Basin is maintained by the EPA at the federal level, CARB at the state level, and by the SCAQMD at the local level. Applicable laws, regulations, and standards of these three agencies are described in the following subsections.

Federal

Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including the setting of National Ambient Air Quality Standards (federal standards) for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions. Federal standards are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The federal standards describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The federal standards (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. Federal standards for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the federal standards at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the federal standards must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the federal standards to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels.

State

CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (state standards), which are generally more restrictive than the federal standards. The state standards describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. The state standards for O_3, CO, SO_2 (1 hour and 24 hours), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The federal and state standards are presented in Table 4.2-1, Ambient Air Quality Standards.

Table 4.2-1
Ambient Air Quality Standards

Pollutant	Average Time	State Standards[a]	Federal Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m^3)	—	Same as primary standard
	8 hours	0.070 ppm (137 μg/m^3)	0.075 ppm (147 μg/m^3)	
CO	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	None
	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	
NO_2	1 hour	0.18 ppm (339 μg/m^3)	0.100 ppm (188 μg/m^3)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	
SO_2	1 hour	0.25 ppm (655 μg/m^3)	0.75 ppm (196 μg/m^3)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m^3)
	24 hours	0.04 ppm (105 μg/m^3)	—	—
PM_{10}[f]	24 hours	50 μg/m^3	150 μg/m^3	Same as primary standard
	Annual arithmetic mean	20 μg/m^3	—	

Table 4.2-1
Ambient Air Quality Standards

Pollutant	Average Time	State Standards[a]	Federal Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
$PM_{2.5}$[f]	24 hours	No separate state standard	35 μg/m^3	Same as primary standard
	Annual arithmetic mean	12 μg/m^3	12.0 μg/m^3	15.0 μg/m^3
Lead[g]	30-day average	1.5 μg/m^3	—	—
	Calendar quarter	—	1.5 μg/m^3	Same as primary standard
	Rolling 3-month average	—	0.15 μg/m^3	
Hydrogen sulfide	1 hour	0.03 ppm	—	—
Vinyl chloride[g]	24 hours	0.01 ppm	—	—
Sulfates	24 hours	25 μg/m3	—	—
Visibility-reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2013.

Notes: O_3 = ozone; ppm = parts per million by volume; μg/m^3 = micrograms per cubic meter; CO = carbon monoxide; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; PST = Pacific Standard Time

a State standards for O_3, CO, SO_2 (1 hour and 24 hours), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations (CCR).

b Federal standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO_2 and SO_2, the standard is attained when the 3-year average of the 98th and 99th percentile, respectively, of the daily maximum 1-hour average at each monitoring station within an area does not exceed the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d Federal primary standards: The levels of air quality necessary with an adequate margin of safety to protect the public health.

e Federal secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On December 14, 2012, the federal annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing federal 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

g CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Local

Local Air Quality Management Plan

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the South Coast Air Basin, where the proposed project is located. The SCAQMD operates monitoring stations in the basin, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the basin. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The most recent AQMP was adopted by the SCAQMD governing board in December 2012 (SCAQMD 2012b). The previous AQMP, adopted in 2007 (SCAQMD 2007), was prepared by SCAQMD and the Southern California Association of Governments (SCAG). The 2007 AQMP proposed policies and measures to achieve federal and state standards for improved air quality in the South Coast Air Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction. As part of the 2007 AQMP, the SCAQMD requested that the EPA "bump up" the O_3 nonattainment status from severe to extreme to allow additional time for the South Coast Air Basin to achieve attainment of the federal standard. The EPA, however, approved the redesignation of the basin to an extreme O_3 nonattainment area, effective June 2010.

The 2012 AQMP incorporated new scientific data and updated emission inventory methodologies and planning assumptions, including the 2012 *Regional Transportation Plan/Sustainable Communities Strategy*. The 2012 AQMP includes the new federal requirements and develops compliance approaches (SCAQMD 2012b).

Applicable Rules

Emissions that would result from stationary and area sources during operation under the proposed master plan revision may be subject to SCAQMD rules and regulations. The SCAQMD rules applicable to the proposed project may include the following:

- **Rule 401 – Visible Emissions.** This rule establishes the limit for visible emissions from stationary sources.

- **Rule 402 – Nuisance.** This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- **Rule 403 – Fugitive Dust.** This rule requires fugitive dust sources to implement best available control measures for all sources to ensure all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.
- **Rule 431.2 – Sulfur Content of Liquid Fuels.** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of SO_x and particulates during combustion and enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers, such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the district. The rule also affects diesel fuel supplied for mobile-source applications.

4.2.2.2 Climate and Meteorology

Climate

Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the South Coast Air Basin. The average annual temperature varies little throughout the basin, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the basin show greater variability in annual minimum and maximum temperatures. All portions of the basin have recorded temperatures over 100°F in recent years. Although the basin has a semiarid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as “high fog,” are a characteristic climate feature. Annual average relative humidity is 70% at the coast and 57% in the eastern part of the basin. Precipitation in the basin is typically 9 to 14 inches annually and is rarely in the form of snow or hail, due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the basin. The greatest precipitation in the City of Huntington Beach (City) occurs in January and February, during which time the rainfall averages 2.8 and 3.5 inches, respectively. The coolest months of the year are typically December and January, with an annual average low of 46°F and 47°F, respectively. The warmest months are typically August and September, with an annual average high of 84°F and 83°F, respectively (Weather Channel 2015).

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain "primary" pollutants (mainly reactive hydrocarbons and NO_x) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level (amsl), the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet amsl, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet amsl, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours. Mixing heights for inversions are lower in the summer and inversions are more persistent, being partly responsible for the high levels of ozone observed during summer months in the South Coast Air Basin. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. The basin has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges.

The GWC campus is located in an area that is susceptible to air inversions. This traps a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

4.2.2.3 Local Ambient Air Quality

Local Attainment Status

An area is designated as "in attainment" when it is in compliance with the federal and/or state standards. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or public welfare with a margin of safety.

The criteria pollutants of primary concern considered in this air quality assessment include O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Although there are no ambient air quality standards for VOCs or NO_x, they are important because they are precursors to O_3.

The entire South Coast Air Basin is designated as a nonattainment area for both federal and state O_3 standards. The EPA has classified the basin as an extreme nonattainment area and has mandated that it achieve attainment no later than June 15, 2024. The basin is designated as an attainment area for state and federal CO standards. The basin is designated as an attainment area under the state and federal standards for NO_2. The entire basin is in attainment with both federal and state SO_2 standards. It has been designated as nonattainment for the federal rolling 3-month average lead standard, and the basin is designated attainment for the state lead standard.

The basin is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal standards. In regard to $PM_{2.5}$ attainment status, the basin is designated as a nonattainment area by CARB and the EPA.

The attainment classifications for the criteria pollutants are outlined in Table 4.2-2, South Coast Air Basin Attainment Classification.

Table 4.2-2
South Coast Air Basin Attainment Classification

Pollutant	Averaging Time	Designation/Classification
	Federal Standards	
O_3	8 hours	Nonattainment/Extreme
NO_2	1 hour	Unclassifiable/attainment
	Annual arithmetic mean	Attainment (maintenance)
CO	1 hour; 8 hours	Attainment (maintenance)
SO_2	24 hours; annual arithmetic mean	Unclassifiable/attainment
PM_{10}	24 hours	Attainment (maintenance)
$PM_{2.5}$	24 hours; annual arithmetic mean	Nonattainment
Pb	Quarter	Unclassifiable/attainment
	3-month average	Nonattainment

Table 4.2-2
South Coast Air Basin Attainment Classification

Pollutant	Averaging Time	Designation/Classification
State Standards		
O_3	1 hour; 8 hours	Nonattainment
NO_2	1 hour; annual arithmetic mean	Attainment
CO	1 hour; 8 hours	Attainment
SO_2	1 hour; 24 hours	Attainment
PM_{10}	24 hours; annual arithmetic mean	Nonattainment
$PM_{2.5}$	Annual arithmetic mean	Nonattainment
Pb[a]	30-day average	Attainment
Sulfates (SO_4)	24 hours	Attainment
Hydrogen sulfide (H_2S)	1 hour	Unclassified
Vinyl chloride[a]	24 hours	Unclassified
Visibility-reducing particles	8 hours (10:00 a.m.–6:00 p.m.)	Unclassified

Sources: EPA 2014a; CARB 2014a.
Notes: O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; Pb = lead
[a] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined.

CARB and SCAQMD monitor ambient air quality at over 250 air-monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The Costa Mesa Monitoring Station, located along Mesa Verde Drive East in the City of Costa Mesa, is the nearest air-monitoring station to the project area. The data collected at this station are considered representative of the air quality experienced in the project vicinity. Air quality data from 2011 through 2013 for the Costa Mesa Monitoring Station are provided in Table 4.2-3, Ambient Air Quality Data. Because PM_{10} and $PM_{2.5}$ levels were not monitored at the Costa Mesa Monitoring Station, reported values were taken from the Anaheim Monitoring Station.

Table 4.2-3
Ambient Air Quality Data (ppm unless otherwise indicated)

Pollutant	Averaging Time	2011	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	1 hour	0.093	0.090	0.095	0.096	0.09	Costa Mesa[a]
	State exceedances	0	0	1	1		
	8 hours	0.077	0.076	0.083	0.079	0.070	
	Federal exceedances	1	1	1	4		
	State exceedances	2	1	2	6		

Table 4.2-3
Ambient Air Quality Data (ppm unless otherwise indicated)

Pollutant	Averaging Time	2011	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
PM_{10}	24 hours	53.0 µg/m³	48.0 µg/m³	77.0 µg/m³	85.0 µg/m³	50 µg/m³	Anaheim[b]
	Federal exceedances	0	0	0	0		
	State exceedances	12.2	0	5.7	12.0		
	Annual	24.7	22.3	25.2	26.7	20 µg/m³	
$PM_{2.5}$	24 hours	39.2 µg/m³	50.1 µg/m³	37.8 µg/m³	56.2 µg/m³	35 µg/m³	Anaheim[b]
	Federal exceedances	2.0	4.2	1.1	6.5		
	Annual	10.9	10.8	10.0	10.5	12 µg/m³	
NO_2	1 hour	0.065	0.074	0.076	0.061	0.100	Costa Mesa[a]
	Annual	N/A	0.010	0.011	0.011	0.030	
CO	1 hour	2.9	2.1	2.4	2.7	20	Costa Mesa[a]
	8 hours	2.2	1.7	2.0	1.9	9.0	
SO_2	1 hour	0.008	0.006	0.004	0.009	0.25	Costa Mesa[a]
	24 hours	0.002	0.001	0.001	0.001	0.040	

Sources: CARB 2014b, 2015; EPA 2014b, 2015.
Notes: ppm = parts per million; O_3 = ozone; PM_{10} = coarse particulate matter; µg/m3 = micrograms per cubic meter; $PM_{2.5}$ = fine particulate matter; NO_2 = nitrogen dioxide; N/A = not applicable; CO = carbon monoxide; SO_2 = sulfur dioxide
Data were taken from CARB iADAM (2014; http://www.arb.ca.gov/adam) or EPA AirData (2014; http://www.epa.gov/airdata/) and represent the highest concentrations experienced over a given year. Exceedances of federal and state standards are only shown for ozone and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed either federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.
[a] Costa Mesa Monitoring Station is at 2850 Mesa Verde Drive East, Costa Mesa, California 92626.
[b] Anaheim Monitoring Station is at 1630 West Pampas Lane, Anaheim, California 92802.

4.2.2.4 Existing Emissions

Emissions generated during operation of existing GWC buildings and facilities were estimated to provide a baseline for comparison to projected operational emissions generated by buildout of buildings and facilities in the proposed project. Year 2014 was used to represent existing conditions.[2] Operation of the project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, energy sources, and mobile sources. Area sources include the use of consumer products, architectural coatings for maintenance, and landscaping equipment. Energy sources include emissions associated with natural gas consumption. Mobile sources include emissions associated with motor vehicle trips to and from project land uses. The existing operation of the campus generates air emissions primarily through vehicular traffic generated by students, faculty, staff, employees, and visitors to the campus.

2 Most of the existing data for the campus reflect conditions in the 2011 to 2014 time frame. Year 2014 was selected for purposes of the baseline analysis.

Emissions associated with existing daily traffic were modeled using weekday trip-generation rates, which were calculated using the project traffic generation values provided in the traffic impact analysis report (see Appendix I). CalEEMod default Saturday and Sunday trip-generation rates were adjusted based on weekday trip-generation rates per land use type because weekend trip-generation rates were not provided in the traffic impact analysis report. CalEEMod default data for temperature, variable start information, and emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2014 emission factors were used to represent existing conditions.

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from other project area sources, which include gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for building maintenance. The estimated existing operational emissions were based on existing land use defaults and total area (i.e., square footage) of GWC buildings and facilities that were in operation in 2014. Existing development of academic, general administrative, and auxiliary land uses on the campus totals 653,945 gross square feet (GSF) and parking lots on campus currently total 1,209,375 GSF (Flint, pers. comm. 2014a, 2014b). Default values provided by CalEEMod were changed for the VOC content of architectural coatings. The interior non-residential architectural coating VOC content was changed to 50 grams per liter (g/L) from the default value of 250 g/L in CalEEMod based on compliance with SCAQMD Rule 1113 and use of low-VOC flat coatings.

Rather than using default values in CalEEMod to estimate emissions from some sources, default factors were changed to reflect existing campus activity rates. Emissions from energy sources, which include natural gas appliances and space and water heating, were also estimated using CalEEMod. Natural gas consumption defaults were revised for Title 24 and non-Title 24 natural gas energy intensities to values of 23.19 and 9.94 thousand British thermal units (Btu) per 1,000 square feet per year, respectively, to reflect GWC's natural gas consumption from November 2012 through November 2013. CalEEMod estimates of water use using default usage factors, however, were changed to 45,958,616 gallons per year based on water consumption from January 2013 through December 2013. Solid waste generation rates were changed to 108 tons per year based on generation rates for 2011 (CR&R 2012).

Table 4.2-4, Existing Conditions 2014 Estimated Daily Maximum Operational Emissions, presents the maximum daily emissions associated with the operation of the existing GWC buildings and facilities. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B.

Table 4.2-4
Existing Conditions 2014 Estimated Daily Maximum Operational Emissions
(lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	41.25	<0.01	0.20	<0.01	<0.01	<0.01
Energy source emissions	0.63	5.69	4.78	0.03	0.43	0.43
Mobile source emissions	57.07	134.52	613.94	1.29	94.65	26.49
Total emissions	**98.95**	**140.21**	**618.92**	**1.32**	**95.08**	**26.92**

Notes: See Appendix B for complete results.
lb/day = pounds per day; VOCs = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

1. ***Conflict with or obstruct implementation of the applicable air quality plan.***
2. ***Violate any air quality standard or contribute substantially to an existing or projected air quality violation.***
3. ***Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors).***
4. ***Expose sensitive receptors to substantial pollutant concentrations.***
5. ***Create objectionable odors affecting a substantial number of people.***

No topics related to air quality were eliminated in the Initial Study for the proposed project; therefore, all topics are covered in the impacts analysis.

In addition, Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied on to determine whether the proposed project would have a significant impact on air quality. The SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993), as supplemented in March 2015, sets forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality (SCAQMD 2015). Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.2-5, SCAQMD Air Quality Significance Thresholds, are exceeded. A project would result in a substantial contribution to an existing air quality violation of the federal or state standards for O_3 (see Table 4.2-2), which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4.2-5. These emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly (see the previous discussion of O_3 and its sources), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Table 4.2-5
SCAQMD Air Quality Significance Thresholds

Pollutant	Construction	Operation
Criteria Pollutants Mass Daily Thresholds		
VOCs	75 lb/day	55 lb/day
NO_x	100 lb/day	55 lb/day
CO	550 lb/day	550 lb/day
SO_x	150 lb/day	150 lb/day
PM_{10}	150 lb/day	150 lb/day
$PM_{2.5}$	55 lb/day	55 lb/day
Lead[a]	3 lb/day	3 lb/day
TACs and Odor Thresholds		
TACs[b]	Maximum incremental cancer risk ≥ 10 in 1 million Chronic and acute hazard index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Standards for Criteria Pollutants[c]		
NO_2 1-hour average NO_2 annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)	
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
PM_{10} 24-hour average PM_{10} annual average	10.4 $\mu g/m^3$ (construction)[d] 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$	
$PM_{2.5}$ 24-hour average	10.4 $\mu g/m^3$ (construction)[d] 2.5 $\mu g/m^3$ (operation)	

Source: SCAQMD 2015.
Notes: SCAQMD = South Coast Air Quality Management District; VOC = volatile organic compounds; lb/day = pounds per day; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; TAC = toxic air contaminant; NO_2 = nitrogen dioxide; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

Greenhouse gas thresholds for industrial projects, as added in the March 2015 revision to the SCAQMD Air Quality Significance Thresholds, were not include included in Table 4.2-5, as they will be addressed within the greenhouse gas emissions analysis and not the air quality study.

[a] The phase-out of leaded gasoline started in 1976. Since gasoline no longer contains lead, the proposed project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

[b] TACs include carcinogens and non-carcinogens.

[c] Ambient air quality standards for criteria pollutants based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.

[d] Ambient air quality threshold based on SCAQMD Rule 403.

In addition to the emission-based thresholds in Table 4.2-5, the SCAQMD also recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of construction activities. The significance thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. For project sites of 5 acres or less, SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology; SCAQMD 2008) includes lookup tables that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO_2, CO, PM_{10}, and $PM_{2.5}$) without performing project-specific dispersion modeling. The allowable emission rates depend on the following parameters:

a. Source–Receptor Area in which the project is located
b. Size of the project site
c. Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals)

The project site is located in Source–Receptor Area 18 (North Coastal Orange County). Campus building projects would be located near sensitive receptors (e.g., residences, private preschool, and elementary school). Of the proposed project components, two were analyzed because construction of these facilities could occur relatively close to sensitive receptors: the Central Warehouse/Corporation Yard expansion and the Math/Science Building. The values from the SCAQMD lookup tables for Source–Receptor Area 18 for project sites of 1, 2, and 5 acres and the closest distances between sensitive receptors and project sites (25, 50, 100, 200, and 500 meters (approximately 80, 160, 330, 660, and 1,640 feet)) are shown in Table 4.2-6.

Table 4.2-6
LSTs for Source–Receptor Area 18

Pollutant	Thresholds (lb/day)														
	Distance from 1-Acre Site (meters)					*Distance from 2-Acre Site (meters)*					*Distance from 5-Acre Site (meters)*				
	25	*50*	*100*	*200*	*500*	*25*	*50*	*100*	*200*	*500*	*25*	*50*	*100*	*200*	*500*
NO_2	92	93	108	140	219	131	128	139	165	235	197	190	202	223	278
CO	647	738	1,090	2,096	6,841	962	1,089	1,506	2,615	7,493	1,711	1,864	2,455	3,888	9,272
PM_{10}	4	13	27	54	135	7	21	35	62	144	14	44	57	85	167
$PM_{2.5}$	3	5	9	22	76	5	7	12	26	83	9	11	18	35	101

Source: SCAQMD 2008; Appendix C.
Notes: LST = localized significance threshold; lb/day = pounds per day; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
LSTs are shown for 1-, 2-, and 5-acre project sites corresponding to a distance to a sensitive receptor of 25, 50, 100, 200, and 500 meters

4.2.4 Impacts Analysis

Would the project conflict with or obstruct implementation of the applicable air quality plan?

GWC is located within the South Coast Air Basin under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. Construction and operation of the development proposed as part of the proposed project may result in the emissions of additional short- and long-term criteria air pollutants in conflict with the SCAQMD AQMPs.

While striving to achieve the federal standards for O_3 and $PM_{2.5}$ through a variety of air quality control measures, the 2012 AQMP also accommodates planned growth in the basin. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP. As indicated in Chapter 3 of the 2012 AQMP, demographic growth forecasts for various socioeconomic categories developed by SCAG for its 2012 Regional Transportation Plan were used to estimate future emissions in the 2012 AQMP (SCAQMD 2012b).

The proposed project does not involve the development of campus housing; however, the proposed project would involve an increase in student enrollment. GWC had an enrollment of 12,746 students in 2013 (Flint and Nguyen, pers. comm. 2014), and enrollment is projected to grow to 15,391 students by 2020 (District 2011). This increase in student enrollment could result in an increase of GWC students and employees living within the vicinity of the proposed project.

The construction and renovation of existing facilities on campus would have the potential to attract more students and increase the population in the area. Although the construction and renovation of these facilities is intended to accommodate the projected growth, these improved facilities would have the potential to induce growth indirectly.

In comparison to the projected population growth in the region, an increase of 2,645 students is not a substantial increase in population. According to SCAG, the City of Huntington Beach is expected to have a population of 199,800 by 2020 (SCAG 2012). The projected student enrollment at GWC by 2015 would be 15,391, which accounts for 7.7% of SCAG's projected population for the City. However, the net increase of 2,645 students between 2013 and 2020 only represents 1.3% of SCAG's overall growth projections. Therefore, projections are consistent with SCAG's growth projections for the City and impacts as a result of increased student generation rates would not be substantial.

For the 2013 fall semester, the student headcount enrollment was 12,746 and the employee count was 618, representing a student-to-employee ratio of 21 to 1. Assuming that this same ratio is maintained upon buildout of the proposed project, this would result in an employee count of 733, or a net growth of 115 employees by the year 2020. Thus, GWC would experience a 15.6% increase in employees, which is only 0.14% of SCAG's overall growth projection of 80,100 employees for the City by 2020. Therefore, employee growth is consistent with SCAG's overall growth projections and would not result in a substantial increase in employment growth.

Accordingly, the proposed project would result in population and employment growth that is consistent with SCAG's growth projections anticipated in the SCAQMD's 2012 AQMP. Because the planned growth of the proposed project has been factored into the underlying growth projections of the 2012 AQMP, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Thus, this impact would be less than significant.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction and operation of the proposed project may result in the emission of criteria air pollutants from mobile, area, and/or stationary sources, which may cause exceedances of federal and state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short- and long-term impacts that would result from implementation of the proposed project. Feasible mitigation measures to reduce or avoid any potential significant impacts, as appropriate, are proposed.

Construction Impacts

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from employee vehicles and off-site trucks hauling construction materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As stated in Chapter 3, Project Description, development of the proposed project is planned incrementally. Development is planned in three phases, resulting in an estimated buildout of the proposed project by 2024. The Automotive Technology Building expansion, Physical Education Outdoor Labs, and Boys & Girls Club Gymnasium Facilities and After School Building are unscheduled; however, these facilities were assumed to be constructed at the end of Phase 3 for purposes of the emission calculations. Accordingly, construction emissions were modeled by each project component in three separate phases: Phase 1 (2015–2017), Phase 2 (2017–2020), and Phase 3 (2020–2024).

Emissions from the construction of each project component were estimated using CalEEMod. Table 4.2-7, Construction Equipment, presents an example of the construction equipment mix used for the air emissions modeling of the proposed project. The equipment mix was generally followed for all construction modeling scenarios (i.e., construction of the Math/Science Building, One Stop Student Center, Criminal Justice Training Center Complex, Cosmetology Building, and Language Arts Complex). For analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours a day (or less), 5 days a week (22 days per month), during project construction. However, the construction phases (i.e., demolition, grading), construction equipment, and equipment hours of operation varied depending on the project component. Specific CalEEMod assumptions for each model scenario, including quantities of equipment, are provided in Appendix B.

Table 4.2-7
Construction Equipment

Construction Phase	Equipment
Demolition	Concrete/industrial saws
	Crawler tractors
	Tractors/loaders/backhoes
Grading	Crawler tractors
	Graders
	Trackers/loaders/backhoes
Trenching	Trenchers
	Plate compactors
	Trackers/loaders/backhoes
Building construction	Cranes
	Forklifts
	Welders
	Generator sets
	Trackers/loaders/backhoes
Paving	Paving equipment
	Cement and mortar mixers
Architectural coating	Air compressors

Ground disturbances and equipment operation during construction activities, specifically during the grading and site preparation phases, would produce short-term PM_{10} and $PM_{2.5}$ emissions. Implementation of the proposed project would generate construction-related air pollutant emissions from two general activity categories: entrained dust and vehicle emissions. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Vehicle exhaust, which results from internal combustion engines used by construction equipment and vehicles, results in emissions of NO_x, VOCs, CO,

SO_x, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC emissions.

Default values provided by CalEEMod were changed for the VOC content of architectural coatings. The interior non-residential architectural coating VOC content was changed to 50 g/L from the default value of 250 g/L in CalEEMod based on compliance with SCAQMD Rule 1113 and use of low-VOC flat coatings.

During Phase 1, new construction of buildings and facilities would total 234,446 GSF and the total size of buildings demolished would be 153,762 GSF.[3] Construction was assumed to commence in July 2015 and reach completion by July 2017, for a total duration of approximately 24 months.[4] Table 4.2-8, Phase 1 Estimated Daily Maximum Construction Emissions, presents the estimated maximum unmitigated daily construction emissions generated during construction of the proposed project in Phase 1. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Individual project component's maximum daily emissions per pollutant were totaled to provide a conservative estimate of the maximum daily emissions during each year of construction.

Table 4.2-8
Phase 1 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2015						
One Stop Student Center	3.81	25.93	17.73	0.03	4.62	1.82
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2016						
One Stop Student Center	27.73	21.55	17.23	0.03	1.72	1.42
Criminal Justice Training Center Complex	21.72	21.65	17.45	0.03	1.75	1.43
Math/Science Building	4.04	26.46	21.36	0.04	2.82	1.75
Total of project component maximum daily emissions	**53.49**	**69.66**	**56.04**	**0.10**	**6.29**	**4.60**

3 The estimated number of buildings to be constructed in each phase and the construction schedule are based on current estimates. The actual number and schedule may change; however, these assumed estimates are representative for purposes of assessing the potential for significant air quality impacts.

4 The timing estimates of the proposed project buildout were based on the preliminary project phasing schedule. Because CalEEMod uses real dates (e.g., January 15, 2024) to calculate construction emissions, assumptions were made as to key dates for each phase. Although all dates reflected in this Program Environmental Impact Report (PEIR) are estimates and actual dates may differ depending on funding, weather, future campus needs, and other factors, this analysis represents a conservative assessment of likely air quality impacts.

Table 4.2-8
Phase 1 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2017						
Criminal Justice Training Center Complex	21.69	2.21	2.12	<0.01	0.23	0.19
Math/Science Building	51.81	24.52	20.56	0.04	2.13	1.60
Total of project component maximum daily emissions	**73.50**	**26.73**	**22.68**	**0.04**	**2.36**	**1.79**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix B for complete results.
lb/day = pounds per day; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 4.2-8, daily construction emissions would not exceed the thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during Phase 1 construction.

New construction of buildings and facilities in Phase 2 would total 94,520 GSF, renovation of the Technology Building would total 25,773 GSF, and a total of 70,777 GSF of buildings and 21,000 GSF of tennis court pavement would be demolished. Phase 2 construction was assumed to start in August 2017 and finish in May 2020, lasting approximately 34 months. Table 4.2-9, Phase 2 Estimated Daily Maximum Construction Emissions, presents the estimated maximum unmitigated daily construction emissions generated during Phase 2 construction. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Individual project components' maximum daily emissions per pollutant were totaled to provide a conservative estimate of the maximum daily emissions during each year of construction.

Table 4.2-9
Phase 2 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2017						
Cosmetology Building	1.96	20.71	12.88	0.03	3.62	1.41
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2018						
Cosmetology Building	12.69	11.30	8.64	0.01	0.86	0.69
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Table 4.2-9
Phase 2 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2019						
Language Arts Complex	2.43	19.18	15.74	0.03	4.11	1.36
Technology Building Renovation	1.43	12.77	11.15	0.02	0.92	0.76
Total of project component maximum daily emissions	**3.86**	**31.95**	**26.89**	**0.05**	**5.03**	**2.12**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2020						
Language Arts Complex	31.69	2.69	3.28	0.01	0.22	0.14
Technology Building Renovation	12.19	11.60	10.92	0.02	0.81	0.66
Total of project component maximum daily emissions	**43.88**	**14.29**	**14.20**	**0.03**	**1.03**	**0.80**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix B for complete results. These estimates reflect control of fugitive dust required by Rule 403 for the student housing project.
lb/day = pounds per day; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 4.2-9, daily construction emissions would not exceed the thresholds for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during Phase 2 construction.

Phase 3 consists of construction of 101,954 GSF of a new Business/Social Sciences/Administrative Office Building, the construction of a 116,000-cubic-foot thermal energy storage unit, the expansion and renovation of the Central Warehouse/Corporation Yard from 12,328 to 31,552 GSF, and the demolition of 44,144 GSF of the existing Math/Science Building and 20,500 GSF of tennis court pavement. Phase 3 construction is assumed to commence in June 2020 and reach completion in August 2022, a total of 26 months of construction. The construction of the Boys & Girls Club Gymnasium Facilities and After School Building, the Automotive Technology Building expansion, and renovation of the Physical Education Outdoor Labs is currently unscheduled. For the purpose of this analysis, it was assumed that the Automotive Technology Building expansion would occur at the end of Phase 3, commencing in August 2022 with completion in July 2023. It was assumed that the Physical Education Outdoor Labs would be renovated beginning in August 2023 with completion in February 2024. Additionally, it was assumed that the Boys & Girls Club Gymnasium Facilities and After School Building would be constructed beginning in February 2024 with completion in September 2024. Table 4.2-10, Phase 3 Estimated Daily Maximum Construction Emissions, presents estimated maximum unmitigated daily construction emissions generated during Phase 3 construction and unscheduled phase construction. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Individual project components' maximum daily emissions per pollutant were totaled to provide a conservative estimate of the maximum daily emissions during each year of construction.

Table 4.2-10
Phase 3 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2020						
Business/Social Sciences/Administrative Office Building	2.51	18.48	18.19	0.03	3.24	1.14
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2021						
Business/Social Sciences/Administrative Office Building	47.50	16.93	17.73	0.03	1.42	0.95
Thermal Energy Storage Unit	1.35	14.09	11.33	0.03	2.52	0.90
Total of project component maximum daily emissions	**48.85**	**31.02**	**29.06**	**0.06**	**3.94**	**1.85**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2022						
Thermal Energy Storage Unit	20.93	9.34	10.41	0.02	0.60	0.48
Central Warehouse/Corporation Yard Expansion	29.46	14.46	13.60	0.03	5.34	1.32
Automotive Technology Building Expansion[a]	1.82	17.37	18.59	0.03	4.54	1.35
Total of project component maximum daily emissions	**52.21**	**41.17**	**42.60**	**0.08**	**10.48**	**3.15**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2023						
Automotive Technology Building Expansion[a]	27.45	12.09	14.31	0.03	0.86	0.60

Table 4.2-10
Phase 3 Estimated Daily Maximum Construction Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Physical Education Outdoor Labs[b]	2.05	12.60	26.18	0.07	3.79	1.36
Total of project component maximum daily emissions	**29.50**	**24.69**	**40.49**	**0.10**	**4.65**	**1.96**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No
2024						
Physical Education Outdoor Labs[b]	61.12	11.98	25.59	0.07	3.75	1.31
Boys & Girls Club Gymnasium Facilities and After School Building[c]	11.67	9.27	9.49	0.02	0.80	0.43
Total of project component maximum daily emissions	**72.79**	**21.25**	**35.08**	**0.09**	**4.55**	**1.74**
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix B for complete results.
lb/day = pounds per day; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

[a] The construction schedule of the Automotive Technology Building expansion is currently unknown; however, to provide an estimate, it is assumed that construction would occur from August 2022 to July 2023.

[b] The construction schedule of the Physical Education Outdoor Labs is currently unknown; however, to provide an estimate, it is assumed that construction would occur from August 2023 to February 2024.

[c] The construction schedule of the Boys & Girls Club Gymnasium Facilities and After School Building is currently unknown; however, to provide an estimate, it is assumed that construction would occur from February 2024 to September 2024.

As shown in Table 4.2-10, daily construction emissions would not exceed the thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during Phase 3 and unscheduled construction. As shown in Tables 4.2-8 through 4.2-10, the maximum construction-generated PM_{10} emissions of 10.48 pounds per day, which would occur in 2022 of Phase 3, would not exceed the SCAQMD's quantitative significance threshold of 150 pounds per day. $PM_{2.5}$ maximum daily emissions of 4.60 pounds per day, which would occur in 2016 of Phase 1, would also be below the threshold of 55 pounds per day. Although such fugitive dust would be short term and would only last during the duration of grading activity, such PM_{10} and $PM_{2.5}$ emissions could be considered problematic since they could cause a public nuisance or further exacerbate the existing PM_{10} nonattainment status in the South Coast Air Basin. During construction, the project would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the SCAQMD. The general requirement prohibits causing or allowing emissions of fugitive dust from construction (or other fugitive dust sources) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. Although impacts related to anticipated PM_{10} and $PM_{2.5}$ emission levels during construction are below their respective significance thresholds and are therefore considered less than significant, Mitigation Measure (MM) AQ-1 is recommended to further minimize impacts.

Because the emissions associated with construction of the proposed project would not exceed the SCAQMD construction emission thresholds for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$, the proposed project would result in a less-than-significant impact.

Operational Impacts

Operation of the project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including natural gas combustion, use of consumer products, and motor vehicle trips to project land uses. The proposed project would primarily impact air quality through vehicular traffic generated by students; faculty, staff, and employees; and visitors of the public/ private partnership developments (i.e., Boys & Girls Club Gymnasium Facilities and After School Building).

Emissions associated with existing and project-generated daily traffic were modeled using weekday trip-generation rates, which were calculated using the project traffic generation values provided in the traffic impact analysis report prepared by Linscott, Law & Greenspan, Engineers (Appendix I). CalEEMod default Saturday and Sunday trip-generation rates were adjusted based on weekday trip-generation rates per land use type, as weekend trip-generation rates were not provided in the traffic impact analysis report. CalEEMod default data for temperature, variable start information, and emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2024 emission factors were used to represent project buildout and the first full year of operation.

CalEEMod was used to estimate emissions from the project area sources, which include gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for building maintenance. The estimation of proposed operational emissions was based on proposed land use defaults and total area (i.e., square footage) of GWC buildings and facilities that would be in operation in year 2024, with a few exceptions. Default values provided by CalEEMod were changed for the VOC content of architectural coatings for maintenance. The interior non-residential architectural coating VOC content was changed to 50 g/L from the default value of 250 g/L in CalEEMod based on compliance with SCAQMD Rule 1113 and use of low-VOC flat coatings.

Emissions from energy sources, which include natural gas appliances and space and water heating, were also estimated using CalEEMod. Default values for indoor and outdoor water use, solid waste generation, and natural gas consumption (through Title 24 and non-Title 24 natural gas energy intensities) were used for the new facilities constructed as part of the proposed project. Default values for natural gas consumption through Title 24 and non-Title 24 natural gas energy intensities were adjusted to reflect historical energy use rates of existing facilities; see Section 4.2.2.4, Existing Emissions. In 2024, upon buildout of the proposed project, existing development and proposed development of academic, general administrative, auxiliary, and public/private partnership land uses on the GWC campus would total approximately 861,494 GSF. A total of 1,209,380 GSF of parking lot space would be provided on campus.

Table 4.2-11, Buildout Year 2024 Estimated Daily Maximum Operational Emissions, presents the maximum daily emissions associated with operation of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B. The estimated existing emissions in 2014, as shown in Table 4.2-4, were subtracted from the proposed project emissions, and the net change in emissions is compared with SCAQMD significance thresholds.

Table 4.2-11
Buildout Year 2024 Estimated Daily
Maximum Operational Emissions (lb/day unmitigated)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	46.72	<0.01	0.05	<0.01	<0.01	<0.01
Energy source emissions	0.59	5.35	4.50	0.03	0.40	0.40
Mobile source emissions	41.80	77.93	412.05	1.65	117.95	32.56
Total emissions	**89.11**	**83.28**	**416.60**	**1.68**	**118.35**	**32.96**
Existing emissions	**98.95**	**140.21**	**618.92**	**1.32**	**95.08**	**26.92**
Net change in emissions	**(9.84)**	**(56.93)**	**(202.32)**	**0.36**	**23.27**	**6.04**
Pollutant threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix B for complete results.
lb/day = pounds per day; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 4.2-11, the net change in combined daily area, energy, and mobile source emissions would not exceed the SCAQMD operational thresholds for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$. Although the proposed project would increase the campus population (students, faculty, and staff) and the buildings relative to existing conditions, the emissions of most of the air pollutants would decrease over the next 10 years. This reduction would occur, in part, because more stringent motor vehicle emission standards would reduce total emissions as older, high-emission vehicles are replaced with newer, cleaner vehicles. In addition, the demolition of older existing campus facilities and the addition of new, more energy-efficient buildings would also be responsible for this reduction. Other sources of emissions, such as consumer products and architectural coatings for building maintenance, would increase because the estimated emissions from these sources are a function of building area, which would increase. In addition, the net PM_{10} emissions are indicated to increase, primarily because paved road dust, which is a function of total vehicle miles traveled, would not be affected by motor vehicle emission standards and other factors that tend to reduce project emissions over time.

Because the net change in emissions resulting from the proposed project would not exceed the SCAQMD operational thresholds for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$, the proposed project would result in a less-than-significant impact on air quality.

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

See Section 4.2.7, Cumulative Impacts, for a discussion of this threshold.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds

Sensitive receptors include but are not limited to residential land uses, schools, open space and parks, recreational facilities, hospitals, resident care facilities, daycare facilities, or other facilities that may house individuals with health conditions that would be affected by poor air quality. The nearest off-site sensitive receptors to the GWC campus are the residents located along the northern and eastern boundaries of the campus.

Construction activities associated with the proposed project would result in temporary sources of fugitive dust and construction vehicle emissions. Long-term operation of the proposed project would result in daily vehicular trips that would generate local emissions that could expose sensitive receptors to substantial pollutant concentrations.

As indicated in the discussion of the thresholds of significance, the SCAQMD recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts as a result of construction activities to sensitive receptors in the immediate vicinity of the project site. The closest off-site existing sensitive receptors (residences) are located within 115 feet of the Central Warehouse/Corporation Yard expansion. Additionally, residences are located within 350 feet of the proposed Criminal Justice Training Center Complex.

The closest off-site existing sensitive receptors to construction of proposed project buildings and facilities are residences located 115 feet north of the proposed Central Warehouse/Corporation

Yard expansion that would be constructed during Phase 3. For the purposes of the LST analysis, it is assumed that the Central Warehouse/Corporation Yard expansion construction site would be 1 acre[5] and the sensitive receptors would be located within 25 meters (82 feet) of construction activity. Estimated maximum on-site emissions generated during construction of the Central Warehouse/Corporation Yard expansion were used for the LST analysis.

The impacts were analyzed using methods consistent with those in the SCAQMD's LST Methodology (SCAQMD 2008). The allowable emission rates for Source-Receptor Area 18 (North Coastal Orange County) from the SCAQMD LST Methodology lookup tables are shown in Table 4.2-12, Central Warehouse/Corporation Yard expansion LST Analysis for Construction Emissions, and compared to the maximum daily on-site construction emissions of these pollutants during the Phase 3 construction.

Table 4.2-12
Central Warehouse/Corporation Yard
Expansion LST Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions (lb/day)[a]	LST Criteria (lb/day)	Exceeds LST?
NO_2	11	92	No
CO	9	647	No
PM_{10}	2	4	No
$PM_{2.5}$	1	3	No

Source: SCAQMD 2008.
Notes: These estimates reflect control of fugitive dust required by Rule 403.
LST = localized significance threshold; lb/day = pounds per day; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter
[a] See Appendix B for complete results. Construction emissions estimates rounded to nearest pound.

The proposed Criminal Justice Training Center Complex site would be located 350 feet west of nearby residences. For the purposes of the LST analysis, it is assumed that the Criminal Justice Training Center Complex site would be 1 acre and the sensitive receptors would be located within 100 meters (164 feet) of construction activity. Estimated maximum on-site emissions generated during construction of the Criminal Justice Training Center Complex were used for the LST analysis.

[5] Although the actual construction area may be larger than 1 acre, using the smaller area results in a more conservative analysis because the LSTs for a 1-acre site are lower than those for a 2- or 5-acre site.

Table 4.2-13
Criminal Justice Training Center
LST Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions[a] (lb/day)	LST Criteria (lb/day)	Exceeds LST?
NO_2	21	93	No
CO	15	738	No
PM_{10}	1	13	No
$PM_{2.5}$	1	5	No

Source: SCAQMD 2008.
Notes: These estimates reflect control of fugitive dust required by Rule 403.
LST = localized significance threshold; lb/day = pounds per day; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter
[a] See Appendix B for complete results. Construction emissions estimates rounded to nearest pound.

As shown in Tables 4.2-12 and 4.2-13, construction activities would not generate emissions in excess of site-specific LSTs during the respective construction phases, and impacts to sensitive receptors in the vicinity of the project site would be less than significant.

Carbon Monoxide Hotspots

Mobile source impacts occur on two scales of motion. Regionally, project-related travel will add to regional trip generation and increase the vehicle miles traveled within the local airshed and the South Coast Air Basin. Locally, project traffic will be added to the City of Huntington Beach and City of Westminster roadway system near the GWC campus. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the basin is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The traffic impact analysis report and Section 4.12, Traffic and Circulation, evaluated whether there would be a decrease in the level of service (LOS) (i.e., increased congestion) at the intersections affected by the project. The potential for CO hotspots was evaluated based on the results of the traffic impact analysis. The California Department of Transportation (Caltrans) Institute of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol) (Caltrans 1997) was followed.

In accordance with the CO Protocol, CO hotspots are typically evaluated when (1) the LOS of an intersection or roadway decreases to LOS E or worse, (2) signalization and/or channelization is added to an intersection, and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment. In general, the SCAQMD recommends that a quantitative CO hotspots analysis be performed for any intersections where the LOS worsens from C to D or for intersections that experience an increase in volume-to-capacity ratio of 2% or more as a result of a proposed project for intersections rated LOS D or worse.

The traffic impact analysis report evaluated 26 key intersections in the project vicinity to assess existing conditions, year 2024 cumulative traffic conditions, and year 2024 cumulative plus project traffic conditions. Table 4.2-14, Year 2024 Peak Hour Intersection Capacity Analysis, summarizes the year 2024 cumulative traffic conditions, year 2024 cumulative plus project traffic conditions, traffic conditions with the proposed mitigation and improvements, and whether a CO hotspot analysis is required per the CO Protocol and SCAQMD recommendations.

Table 4.2-14
Year 2024 Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Increase	With Mitigation and Improvements		Requires CO Hotspot Analysis?
			ICU/HCM	*LOS*	*ICU/HCM*	*LOS*		*ICU/HCM*	*LOS*	*Yes/No*
1.	Edwards Street at McFadden Avenue (HB)	a.m. p.m.	0.628 0.609	B B	0.628 0.612	B B	0.000 0.003	— —	— —	No
2.	Edwards Street at Edinger Avenue (HB)	a.m. p.m.	0.689 0.635	B B	0.692 0.637	B B	0.003 0.002	— —	— —	No
3.	Goldenwest Street at I-405 SB ramps (WM)	a.m. p.m.	0.530 0.719	A C	0.538 0.735	A C	0.008 0.016	— —	— —	No
4.	Goldenwest Street at Bolsa Avenue (HB)	a.m. p.m.	0.676 0.976	B E	0.678 0.986	B E	0.002 0.010	0.620 0.946	B E	No
5.	Goldenwest Street at McFadden Avenue (HB)	a.m. p.m.	0.723 0.882	C D	0.737 0.907	C E	0.014 0.025	0.737 0.855	C D	No
6.	Goldenwest Street at Driveway No. 12 (HB)	a.m. p.m.	12.1 s/v 15.2 s/v	B C	12.2 s/v 15.7 s/v	B C	0.1 s/v 0.5 s/v	— —	— —	No
7.	Goldenwest Street at Driveway No. 11 (HB)	a.m. p.m.	61.3 s/v 2462.2 s/v	F F	99.3 s/v 5133.9 s/v	F F	38.0 s/v 2671.7 s/v	0.417 0.607	A B	No
8.	Goldenwest Street at Driveway No. 10 (HB)	a.m. p.m.	11.8 s/v 15.7 s/v	B C	11.9 s/v 16.1 s/v	B C	0.1 s/v 0.4 s/v	— —	— —	No

Table 4.2-14
Year 2024 Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Increase	With Mitigation and Improvements		Requires CO Hotspot Analysis?
			ICU/HCM	*LOS*	*ICU/HCM*	*LOS*		*ICU/HCM*	*LOS*	*Yes/No*
9.	Goldenwest Street at Driveway No. 9 (HB)	a.m. p.m.	0.379 0.481	A A	0.395 0.499	A A	0.016 0.018	— —	— —	No
10.	Goldenwest Street at Driveway No. 8 (HB)	a.m. p.m.	11.9 s/v 13.8 s/v	B B	12.0 s/v 14.1 s/v	B B	0.1 s/v 0.3 s/v	— —	— —	No
11.	Goldenwest Street at Driveway No. 7 (HB)	a.m. p.m.	12.1 s/v 14.0 s/v	B B	12.3 s/v 14.2 s/v	B B	0.2 s/v 0.2 s/v	— —	— —	No
12.	Goldenwest Street at Edinger Avenue (HB)	a.m. p.m.	0.743 0.905	C E	0.749 0.923	C E	0.006 0.018	0.749 0.881	C D	No
13.	Goldenwest Street at Heil Avenue (HB)	a.m. p.m.	0.616 0.676	B B	0.617 0.677	B B	0.001 0.001	— —	— —	No
14.	Driveway No. 6 at Edinger Avenue (HB)	a.m. p.m.	0.383 0.464	A A	0.387 0.478	A A	0.004 0.014	— —	— —	No
15.	Driveway No. 5 at Edinger Avenue (HB)	a.m. p.m.	11.1 s/v 13.4 s/v	B B	11.2 s/v 13.7 s/v	B B	0.1 s/v 0.3 s/v	— —	— —	No
16.	Driveway No. 4 at Edinger Avenue (HB)	a.m. p.m.	78.2 s/v 763.9 s/v	F F	92.5 s/v 1056.3 s/v	F F	14.3 s/v 292.4.s/v	13.3 s/v 16.6 s/v	B C	No
17.	Vermont/Gothard at McFadden Avenue (HB)	a.m. p.m.	0.651 0.851	B D	0.671 0.904	B E	0.020 0.053	0.613 0.778	B C	No
18.	Gothard Street at Driveway No. 1 (HB)	a.m. p.m.	12.2 s/v 14.6 s/v	B B	12.6 s/v 17.5 s/v	B C	0.4 s/v 2.9 s/v	— —	— —	No
19.	Gothard Street at Driveway No. 2 (HB)	a.m. p.m.	0.434 s/v 0.878 s/v	A D	0.442 0.929	A E	0.008 0.051	0.457 0.792	A C	No
20.	Gothard Street at Driveway No. 3 (HB)	a.m. p.m.	13.7 s/v 14.5 s/v	B B	13.9 s/v 19.0 s/v	B C	0.2 s/v 4.5 s/v	— —	— —	No
21.	Gothard Street at Edinger Avenue (HB)	a.m. p.m.	0.669 0.897	B D	0.674 0.942	B E	0.005 0.045	0.674 0.884	B D	No
22.	Gothard Street at Heil Avenue (HB)	a.m. p.m.	0.555 0.671	A B	0.555 0.680	A B	0.000 0.009	— —	— —	No
23.	I-405 SB ramps at Center Avenue (HB)	a.m. p.m.	0.621 1.007	B F	0.625 1.026	B F	0.004 0.019	0.464 0.805	A D	No

Table 4.2-14
Year 2024 Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Increase	With Mitigation and Improvements		Requires CO Hotspot Analysis?
			ICU/HCM	*LOS*	*ICU/HCM*	*LOS*		*ICU/HCM*	*LOS*	*Yes/No*
24.	Beach Boulevard at McFadden Avenue (WM)	a.m. p.m.	0.905 0.926	E E	0.913 0.930	E E	0.008 0.004	— —	— —	No
25.	Beach Boulevard at Center Avenue (HB)	a.m. p.m.	0.725 0.854	C D	0.729 0.854	C D	0.004 0.000	— —	— —	No
26.	Beach Boulevard at Edinger Avenue (HB)	a.m. p.m.	0.840 0.985	D E	0.842 0.993	D E	0.002 0.008	— —	— —	No

Notes: CO = carbon monoxide; ICU/HCM = Intersection Capacity Utilization/Highway Capacity Manual; LOS = level of service; HB = City; I-405 = Interstate 405; SB = southbound; WM = City of Westminster; s/v = seconds per vehicle

As shown in Table 4.2-14, with required improvements, no intersections would deteriorate from LOS C to D or experience an increase in the volume-to-capacity ratio of 2% or more as a result of the proposed project for intersections rated LOS D or worse under year 2024 cumulative plus project traffic conditions; therefore, no CO hotspot analysis would be required per SCAQMD recommendations.

Additionally, the traffic impact analysis report evaluated five state-controlled study intersections in the project vicinity to assess existing conditions, year 2024 cumulative traffic conditions, and year 2024 cumulative plus project traffic conditions. Table 4.2-15, Year 2024 Peak Hour Intersection Capacity Analysis – Caltrans, summarizes the year 2024 cumulative traffic conditions, year 2024 cumulative plus project traffic conditions, traffic conditions with the proposed mitigation and improvements, and whether a CO hotspot analysis is required per the CO Protocol and SCAQMD recommendations, for the five state-controlled study intersections.

Table 4.2-15
Year 2024 Peak Hour Intersection Capacity Analysis – Caltrans

Key Intersection		Time Period	Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		With Mitigation and Improvements		Requires CO Hotspot analysis?
			HCM	*LOS*	*HCM*	*LOS*	*HCM*	*LOS*	*Yes/No*
3.	Goldenwest Street at I-405 SB ramps	a.m.	14.5 s/v	B	15.0 s/v	B	—	—	No
		p.m.	16.4 s/v	B	17.2 s/v	B	—	—	No

Table 4.2-15
Year 2024 Peak Hour Intersection Capacity Analysis – Caltrans

Key Intersection		Time Period	Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		With Mitigation and Improvements		Requires CO Hotspot analysis?
			HCM	*LOS*	*HCM*	*LOS*	*HCM*	*LOS*	*Yes/No*
23.	I-405 SB ramps at Center Avenue	a.m.	21.6 s/v	C	21.8 s/v	C	17.1 s/v	B	No
		p.m.	70.5 s/v	E	74.4 s/v	E	29.6 s/v	C	No
24.	Beach Boulevard at McFadden Avenue	a.m. p.m.	71.7 s/v 74.8 s/v	E E	73.2 s/v 76.2 s/v	E E	49.5 s/v 53.8 s/v	D D	**Yes**
25.	Beach Boulevard at Center Avenue	a.m. p.m.	13.0 s/v 36.2 s/v	B D	13.1 s/v 36.2 s/v	B D	— —	— —	**Yes**
26.	Beach Boulevard at Edinger Avenue	a.m. p.m.	52.4 s/v 95.1 s/v	D F	52.8 s/v 97.6 s/v	D F	43.7 s/v 78.1 s/v	D E	**Yes**

Notes: CO = carbon monoxide; HCM = Highway Capacity Manual; LOS = level of service; I-405 = Interstate 405; SB = southbound; s/v = seconds per vehicle

A total of three intersections would deteriorate from LOS C to D or would experience an increase in the volume-to-capacity ratio of 2% or more as a result of a proposed project for intersections rated LOS D or worse under year 2024 cumulative plus project traffic conditions, which would require a CO hotspot analysis per SCAQMD recommendations:

- Beach Boulevard at McFadden Avenue
- Beach Boulevard at Center Avenue
- Beach Boulevard at Edinger Avenue

In accordance with SCAQMD recommendations, a site-specific CO hotspot analysis was performed for the intersections of Beach Boulevard at McFadden Avenue, Beach Boulevard at Center Avenue, and Beach Boulevard at Edinger Avenue during the year 2024 cumulative plus project traffic conditions.

The potential impact of the proposed project on local CO levels was assessed at these intersections with the Caltrans CL4 interface, based on the California LINE Source Dispersion Model (CALINE4), which allows microscale CO concentrations to be estimated along each roadway corridor or near intersections (Caltrans 1998).

The modeling analysis was performed for worst-case wind angle, in which the model selects the wind angles that produce the highest CO concentrations at each of the receptors. The suburban land classification of 100 centimeters (40 inches) was used for the aerodynamic roughness coefficient, which determines the amount of local air turbulence that affects plume spreading. The at-grade option was used in the analysis; for at-grade sections, CALINE4 does not permit the plume to mix below ground level. The mixing zone, which is defined as the width of the roadway plus 3 meters (10 feet) on either side, was estimated for each roadway using Google Earth (2014). The calculations assume a mixing height of 10 meters (33 feet), a flat topographical condition between the source and the receptor (link height of 0 meters), and a meteorological condition of little to almost no wind (1.0 meters (3.3 feet) per second), consistent with EPA guidance.

The emission factor represents the weighted average emission rate of the local Orange County vehicle fleet expressed in grams per mile per vehicle. Consistent with the traffic impact analysis report, emission factors for 2024, representing the year 2024 cumulative plus project traffic conditions, were predicted by EMFAC2011 and were used in the CALINE4 model. Emission factors were based on a 30 mile per hour (mph) to 45 mph average speed for all of the intersections, a temperature of 40°F,[6] and an average humidity of 55%. The hourly traffic volume anticipated to travel on each link, in units of vehicles per hour, was based on the traffic impact analysis report. Since project-generated traffic would have a direct impact on the Beach Boulevard at Center Avenue intersection in the p.m. peak hours, vehicle counts for the p.m. hours were used. Project-generated traffic would have a direct impact on the Beach Boulevard at Edinger Avenue and Beach Boulevard at McFadden Avenue intersections in both the a.m. and p.m. peak hours. The vehicle count for the p.m. peak hours was used for the Beach Boulevard at Edinger Avenue and Beach Boulevard at McFadden Avenue intersections CO hotspot analysis because traffic volume would be greater during the p.m. peak hours.

Three to seven receptor locations at each intersection were modeled to determine CO ambient concentrations. A receptor was assumed on the sidewalk at each corner of the modeled intersections, for a total of four receptors adjacent to the intersection, to represent the possibility of extended outdoor exposure. CO concentrations were modeled at these locations to assess the maximum potential CO exposure that could occur in 2024. Impacts at additional nearby sensitive receptors, such as residences or schools, were modeled. A receptor height of 1.8 meters (5.9 feet) was used in accordance with EPA recommendations for all receptor locations.

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6 December is usually the coldest month of the year in Tustin, with an average minimum temperature of 43°F (NOAA n.d.). Assuming a 5° correction factor for p.m. traffic conditions, average evening temperature would be approximately 48°F. However, as these meteorological readings are for the U.S. Marine Corps Air Station in Tustin, and as CO concentrations generally increase with a decrease in temperature, a temperature of 40°F (4.4°C) was used to conservatively determine the emission factors in EMFAC2011 and CO concentrations in CALINE4.

The maximum 1-hour CO background concentration of 2.9 ppm, as measured in 2011 (see Table 4.2-3), was assumed in the CALINE4 model. The model provides predicted concentrations in parts per million at each of the receptor locations. To estimate an 8-hour average CO concentration, a persistence factor of 0.7, as is recommended for urban locations, was applied to the output values.

The results of the model are shown in Table 4.2-16, CALINE4 Predicted CO Concentrations. Model input and output data are provided in Appendix B.

Table 4.2-16
CALINE4 Predicted CO Concentrations

Intersection	Maximum Modeled Impact Year 2024 Cumulative Plus Project Conditions (ppm)[a]	
	1-hour	*8-hour*[b]
Beach Boulevard at McFadden Avenue	3.3	2.3
Beach Boulevard at Center Avenue	3.4	2.4
Beach Boulevard at Edinger Avenue	3.4	2.4

Source: Caltrans 1998 (CALINE4).
Notes: CO = carbon monoxide; ppm = parts per million
[a] Modeled concentrations reflect background 1-hour concentration of 2.9 ppm.
[b] 8-hour concentrations were obtained by multiplying the 1-hour concentration by a factor of 0.7, as referenced in Caltrans 1997, Table B.15.

As shown in Table 4.2-16, maximum CO concentrations predicted for the 1-hour averaging period would be 3.4 ppm, which is below the state 1-hour CO standard of 20 ppm (see Table 4.2-3 for state standards). Maximum predicted 8-hour CO concentrations of 2.4 ppm would be below the state CO standard of 9.0 ppm. Neither the 1-hour nor 8-hour state standard would be equaled or exceeded at any of the intersections studied. Accordingly, impacts would be less than significant.

Would the project create objectionable odors affecting a substantial number of people?

Construction of proposed project components would result in the emission of diesel fumes and other odors typically associated with construction activities. These compounds would be emitted in varying amounts on campus, depending on where construction activities were occurring. Sensitive receptors located in the vicinity of the construction sites, including residences that house children, open space areas, or schools, may be affected. However, SCAQMD rules restrict the VOC content (the source of odor-causing compounds) in paints. Construction of the proposed project would use typical construction techniques in compliance with SCAQMD rules. Odors are highest near the source and would quickly dissipate off site. Any odors associated with construction activities would be temporary and would cease upon completion of construction.

Land uses and industrial operations that typically are associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Accordingly, it is not anticipated that any operational sources under the proposed project would result in objectionable odors.

4.2.5 Mitigation Measures

Although no significant construction or operational impacts were identified, the following mitigation measure is recommended to reduce air quality impacts during construction of the proposed project and ensure that significant impacts would not occur:

MM-AQ-1 Consistent with South Coast Air Quality Management District Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum, with a goal of retaining dust on the site, by following the dust control measures listed as follows:

a. During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

b. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour.

c. Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation.

d. Speeds on unpaved roads shall be reduced to less than 15 miles per hour.

e. All grading and excavation operations shall be halted when wind speeds exceed 25 miles.

f. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.

g. Should minor import/export of soil materials be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped or a minimum 2 feet of freeboard shall be maintained.

h. At a minimum, at each vehicle egress from the project site to a paved public road, a pad shall be installed consisting of washed gravel (minimum size: 1 inch) maintained in clean condition to a depth of at least 6 inches and extending to a width of at least 30 feet and a length of at least 50 feet (or as otherwise directed by South Coast Air Quality Management District) to reduce trackout and carry out onto public roads.

i. Review and comply with any additional requirements of South Coast Air Quality Management District Rule 403.

4.2.6 Level of Significance After Mitigation

Because impacts related to air quality emissions are found to be less than significant, no mitigation measures are necessary and impacts would remain less than significant. However, mitigation measure MM-AQ-1, described in Section 4.2.5, would further minimize less-than-significant impacts associated with fugitive dust generation during construction.

4.2.7 Cumulative Impacts

Development of the proposed project, combined with known and reasonably foreseeable growth in the area, could result in cumulatively considerable emissions of nonattainment criteria air pollutants.

In analyzing cumulative impacts from the proposed project, the assessment must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the South Coast Air Basin is designated as nonattainment for the federal or state standards. Implementation of the proposed project would generate short-term air pollutant emissions during construction and long-term operational emissions associated with vehicle traffic to and from the campus as well as energy use of buildings and facilities.

Cumulative localized impacts could occur if the construction of a project component were to occur concurrently with another off-campus project. Construction under the proposed project would occur in multiple phases over 10 years throughout the GWC campus. Construction schedules for potential future projects near the GWC campus are currently unknown; therefore, potential construction impacts associated with two simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This analysis is nonetheless provided in an effort to show good faith analysis and comply with CEQA's information disclosure requirements.

Air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ construction emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD, and implementation of MM-AQ-1 is recommended. The maximum daily PM_{10} and $PM_{2.5}$ emissions would not exceed the significance thresholds during proposed project construction activities, although fugitive dust, as well as vehicle and equipment exhaust, generated during project construction would contribute to the basin's nonattainment designation for PM_{10} and $PM_{2.5}$; however, this contribution would not be considered cumulatively considerable.

With regard to operational cumulative impacts associated with nonattainment pollutants, in general, if a project is consistent with the community and general plans, it will have been accounted for in the attainment demonstration contained within the state implementation plan. Therefore, it would not cause a cumulatively significant impact on the ambient air quality. As discussed in Section 4.2.4, the proposed project would result in population growth that is consistent with the growth projections anticipated in the SCAQMD's 2012 AQMP. Accordingly, the proposed project would not result in a cumulatively considerable contribution to the nonattainment pollutants in the basin, and this impact would be less than significant.

4.2.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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4.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources on the Golden West College (GWC) campus, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed GWC Vision 2020 Facilities Master Plan (proposed project). This section focuses on potentially adverse impacts to candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), resulting from implementation of the proposed project. Information in this section is based on a number of sources, including a 2013 Biological Resources Letter Report by Dudek in Appendix C.

4.3.1 Existing Conditions

The GWC campus is located in the City of Huntington Beach (City) in northwest Orange County, California. Surrounding cities include Westminster to the north, Santa Ana to the east, and Huntington Beach to the south and west. Based on recommendations provided by the Vision 2020 Facilities Master Plan and an analysis of the evolving student body, the proposed project consists of incorporating upgrades and repairs to existing buildings, including the Automotive Technology Building, Physical Education Outdoor Labs, the Central Warehouse/Corporation Yard, and the Technology Building; construction of new facilities, including a Math/Science Building, a Language Arts Complex, a Business/Social Sciences/Administrative Office Building, a Cosmetology Building, a Criminal Justice Training Center, a One Stop Student Center, and Boys & Girls Club Gymnasium Facilities; and implementation of various parking, vehicular, and pedestrian circulation improvements. The proposed project would occur within the existing GWC campus boundary.

Topography on site is generally flat with elevations ranging from 25 feet above mean sea level within the parking lot areas around the perimeter of GWC campus to 40 feet above mean sea level along the central eastern portion of the study area within a terraced outdoor amphitheater. According to the U.S. Department of Agriculture and Natural Resources Conservation Services (USDA and NRCS 2013), three soil types from one soil series are mapped within the project study area: Bolsa silt loam, drained; Bolsa silty clay loam; and Bolsa silty clay loam, drained. The majority of the project area is comprised of Bolsa silt loam, drained soils. Bolsa silty clay loam and Bolsa silty clay loam, drained soils make up a small portion of the project area to the northeast, where the existing CVS Pharmacy and GWC parking lots occur. All three soil types (Bolsa silt loam, drained; Bolsa silty clay loam; and Bolsa silty clay loam, drained) generally occur on large alluvial fans, floodplains, and basins at nearly level terrain.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (FESA), as amended (16 U.S.C. 1531 et seq.), provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for listed animal species. FESA also prohibits all persons subject to U.S. jurisdiction from "taking" endangered species, which includes any harm or harassment. Section 7 of FESA requires that federal agencies, prior to project approval, consult the USFWS and/or the National Marine Fisheries Service to ensure adequate protection of listed species that may be affected by the project.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The list of bird species covered by the Migratory Bird Treaty Act is extensive and is detailed in 50 CFR 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species, including any part, egg, or nest of such a bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under FESA. The Migratory Bird Treaty Act, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Clean Water Act

The federal Water Pollution Control Act Amendments of 1972 (Clean Water Act (CWA); 33 U.S.C. 1251 et seq.), as amended by the Water Quality Act of 1987 (Public Law 100-4), is the major federal legislation governing water quality. The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters" (33 U.S.C. 1251 et seq.). Discharges into waters of the United States are regulated under Section 404. Waters of the United States include (1) all navigable waters (including all waters subject to the ebb and flow of tides); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, or natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above (40 CFR 230.3(s)). In California, the State Water Resources Control Board and the nine Regional Water Quality

Control Boards are responsible for implementing the CWA. Important applicable sections of the CWA include the following:

- **Section 303** requires states to develop water quality standards for inland surface and ocean waters and submit to the Environmental Protection Agency for approval. Under Section 303(d), the state is required to list waters that do not meet water quality standards and to develop action plans, called total maximum daily loads, to improve water quality.
- **Section 304** provides for water quality standards, criteria, and guidelines.
- **Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the CWA. Certification is provided by the respective Regional Water Quality Control Board.
- **Section 402** establishes the National Pollutant Discharge Elimination System, a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. The National Pollutant Discharge Elimination System program is administered by the Regional Water Quality Control Board. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401.
- **Section 404** provides for issuance of dredge/fill permits by the U.S. Army Corps of Engineers (ACOE). Permits typically include conditions to minimize impacts on water quality. Common conditions include (1) ACOE review and approval of sediment quality analysis before dredging, (2) a detailed pre- and post-construction monitoring plan that includes disposal site monitoring, and (3) required compensation for loss of waters of the United States.

U.S. Army Corps of Engineers

The ACOE has primary federal responsibility for administering regulations that concern waters and wetlands in the project area. In this regard, the ACOE acts under two statutory authorities, the Rivers and Harbors Act (33 U.S.C., Sections 9 and 10), which governs specified activities in navigable waters, and the CWA (Section 404), which governs specified activities in waters of the United States, including wetlands and special aquatic sites. Wetlands and non-wetland waters (e.g., rivers, streams, and natural ponds) are a subset of waters of the United States and receive protection under Section 404 of the CWA. The ACOE has primary federal responsibility for administering regulations that concern waters and wetlands in the project area under statutory authority of the CWA (Section 404). In addition, the regulations and policies of various federal agencies mandate that the filling of wetlands be avoided to the extent feasible. The ACOE requires obtaining a permit if a project proposes placing structures within navigable waters and/or alteration of waters of the United States.

State

California Endangered Species Act

Similar to FESA, the California Endangered Species Act of 1970 provides protection to species considered threatened or endangered by the State of California (California Fish and Game Code, Section 2050 et seq.). The California Endangered Species Act recognizes the importance of threatened and endangered fish, wildlife, and plant species and their habitats, and prohibits the taking of any endangered, threatened, or rare plant and/or animal species unless specifically permitted for education or management purposes.

California Fish and Game Code

The California Fish and Game Code regulates the handling and management of the state's fish and wildlife. Most of the code is administered or enforced by the CDFW (prior to January 2013, California Department of Fish and Game). One section of the code generally applies to public infrastructure projects such as the proposed project:

- **Section 1602** regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources.

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act of 1969, updated in 2012 (California Water Code, Section 13000 et seq.), provides for statewide coordination of water quality regulations. The act established the California State Water Resources Control Board as the statewide authority, and nine separate Regional Water Quality Control Boards were developed to oversee water quality on a day-to-day basis.

Local

City of Huntington Beach General Plan

The City General Plan Environmental Resources and Conservation Element (City of Huntington Beach 1996) is in accordance with California Government Code, Sections 65302(d), 65302(e), and 655560. This element of the General Plan discusses marine waters, plant life, and wildlife for each of the ecological categories of the city. The goals, objectives, and policies of the Environmental Resources and Conservation Element have been put in place to protect the biological resources of the City. The goal, objective, and policies relevant to the proposed project are as follows:

- **Goal ERC 2:** Protect and preserve significant habitats of plant and wildlife species, including wetlands, for their intrinsic values.
  - **Objective ERC 2.1:** Evaluate, enhance, and preserve the City's important habitat areas.
    - **Policy ERC 2.1.1:** Acquire and maintain the most current information available regarding the status and location of sensitive biological elements (species and natural communities) throughout the City.
    - **Policy ERC 2.1.10:** Conduct construction activities to minimize adverse impacts on existing wildlife resources.
    - **Policy ERC 2.1.12:** Promote the preservation and restoration of those sensitive biological areas identified by Policy 2.1.1 (City of Huntington Beach 1996, pp. IV-ERC-21, IV-ERC-22).

City of Huntington Beach Municipal Code

Municipal Code Chapter 13.50, Regulation of Trees:

- **Section 13.50.040** *Permits required:* No person shall plant, spray, or maintain any tree on any street, parkway, or public place without first applying for and obtaining a permit from the City of Huntington Beach to do so.
- **Section 13.50.060** *Applications – Generally:* Applications for permits shall be filed with the director no less than 10 days prior to the time the work is to be commenced. The director shall issue such permits if applicant has complied with the provisions of this chapter, the City standard on insurance requirements, and the work to be performed meets the requirements and conditions contained in the Standards and the tree management program.
- **Section 13.50.120** *Permit – Planting:* No person shall plant, replant, relocate or remove any tree from any street, parkway, or public place without first complying with Sections 13.50.050 through 13.50.070. In addition to the information required by Section 13.50.110 of this chapter, such permit shall set out the specific number of trees to be planted and the specific work to be performed in connection therewith.

- **Section 13.50.130** *Permit – Spraying:* No person shall spray any tree on any street, parkway or public place without first complying with Sections 13.50.050 through 13.50.070. In addition to the information required by Section 13.50.110 of this chapter, such permit shall specify the types of chemicals and commercial sprays which may be used in the work to be performed and require that the performance of all such work shall confirm all state, municipal and federal laws.
- **Section 13.50.140** *Permit – Maintenance:* No person shall fertilize, preserve or prune any tree on any street, parkway or public place, without first complying with Sections 13.50.050 through 13.50.070. In addition to the information required by Section 13.50.110 of this chapter, such permit shall state the kinds and number of trees to be fertilized, pruned or otherwise preserved and maintained, and types of materials and equipment, including irrigation systems, to be used in such work. Such permit shall specify that the performance of all maintenance work shall comply with all the standards of the City, and all federal and state laws applicable thereto.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the project would:

1. ***Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.***
2. ***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.***
3. ***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.***
4. ***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.***
5. ***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.***

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

4.3.4 Impacts Analysis

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

Special-status plant and wildlife species (i.e., federally, state, or locally listed species), their favorable habitat conditions and their potential to occur on site based on the findings of the field investigations are presented in Appendix C.

Special-Status Plant Species

Based on the Biological Resources Letter Report (Appendix C), no federally or state-listed special-status plant species occur within the proposed project area due to the disturbed condition of the site and the surrounding urban environment. The proposed project is planned to occur within an existing college campus, surrounded by residential and commercial development. Developed areas within the project area include buildings, facilities, pedestrian walkways, and parking lots. Development is the dominant land cover type within the project area, totaling 61.63 acres. Due to the lack of biodiversity and absence of special-status plant species, impacts would be less than significant.

Special-Status Wildlife Species

There are three special-status wildlife species determined to have a moderate to high potential to occur on site: monarch butterfly (*Danaus plexippus*), Cooper's hawk (*Accipiter cooperii*), and western yellow bat (*Lasiurus xanthinus*). The monarch butterfly was the only special-status wildlife species observed during the site visit. The monarch butterfly is recognized on the California Special Animal List and has high potential to occur on site. The eucalyptus woodland and ornamental trees observed throughout the proposed project site could provide wintering habitat for the monarch butterfly. Monarch butterflies are known to overwinter within a small stand of ornamental trees (i.e., pines (*Pinus* sp.)) at the central eastern portion of the GWC campus, immediately south of the outdoor amphitheater and eucalyptus woodland area. Although the monarch butterfly is not state or federally listed, overwintering sites are important for the conservation of this species and are protected within California. Overwintering monarchs are known to travel during the day and roost in tight colonies within a single tree at night for warmth. They typically overwinter in select areas of coastal California and are known to return to the same locations annually. It is important that overwintering sites be protected when practicable, especially during the overwintering months (October 1 to March 1). The trees utilized by overwintering monarchs during previous years are not anticipated to be removed during the proposed project activities. Additionally, construction activities are anticipated to occur during daylight hours. Therefore, impacts to this species are anticipated to be less than significant.

The Cooper's hawk and the western yellow bat were not observed during the site visit; however, they both have moderate potential to exist on the project site. Cooper's hawk is recognized on the California Watch List (nesting only). In urban areas, Cooper's hawks are known to nest within tall ornamental trees (e.g., eucalyptus (*Eucalyptus* sp.)). While the project area contains tall ornamental trees (eucalyptus and pine species) that provide suitable nesting substrate to support this species, no raptor nests were identified during the field visit. The closest active Cooper's hawk nest was documented just outside the fence of Shipley Nature Center in Huntington Beach, approximately 1.5 miles south of the project area (Appendix C). GWC keeps a log of the birds sighted at the native garden each month, dating back to 2010 (Songster 2013). Cooper's hawk was identified within the native garden in May of 2010 and March and August of 2012. Although this species has been documented to use the native gardens on site, Cooper's hawks have not been observed nesting within the college campus. Nonetheless, it is recommended that the proposed project activities be planned to occur outside of the general nesting season (February 1 to August 31). If construction activities must occur within the general nesting season, a pre-construction nesting bird survey is recommended (Mitigation Measure (MM) BIO-1; see Section 4.3.5, Mitigation Measures). Therefore, absent mitigation, impacts to special-status avian species would be potentially significant.

The western yellow bat is a California Species of Special Concern and is known to occur within residential areas. Although this species was not observed during the site visit, the eucalyptus woodland and ornamental trees on site are suitable to support day roosts for this species. The closest known occurrence of western yellow bat was documented to occur within the vicinity of Garden Grove, approximately 3 miles northwest of the proposed project site (CDFW 2013). Although there is a high level of human activity within the project area during most hours of the day (classes beginning as early as 7:30 a.m. and ending as late as 10:30 p.m.), western yellow bats are known to occur in urban and residential areas. Additionally, there is a water source approximately 500 feet west of the project area. The portion of Greer Park south of McFadden Avenue and west of Goldenwest Street contains a man-made lake that has the potential to provide suitable foraging habitat for this species. It is recommended that pre-construction survey or acoustic bat survey be conducted by a qualified biologist no earlier than 30 days prior to the commencement of construction activities to determine whether active bat roosts are present on or within 300 feet of the proposed construction activities (MM-BIO-2). Implementation of MM-BIO-2 would reduce impacts to the western yellow bat to less than significant. Therefore, absent mitigation, impacts would be potentially significant.

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

A total of 54 species of vascular plants, 28 native and 26 non-native species, were recorded during the reconnaissance survey (Appendix C). The high diversity of native plants recorded within the project site is attributed to the planted and maintained native garden located along the western portion of the GWC campus. The majority of the native species, 25 of the 28 native plant species, documented within the project area were identified within this native garden. Since the native garden represents only 3% of the ornamental planting landscape and 1.3% of the total project site, these numbers are not representative of the total project area. In actuality, the overall project area contains a relatively low diversity of native plant species due to the ornamental plantings within the existing development and the urban setting of the study area.

Five land cover types were identified within the project boundary, including developed land, disturbed land, eucalyptus woodland, ornamental plantings, and ruderal habitat. The land cover types observed on site are described in detail after the table, their acreages are presented in Table 4.3-1, and their spatial distributions are shown on Figure 4.3-1.

Table 4.3-1
Vegetation Communities and Land Cover Types on Site

Vegetation Community/Land Cover Type	Acreage
Developed land	61.63
Disturbed land	1.45
Eucalyptus woodland	1.56
Ornamental plantings (native garden is 1.46 acres)	43.34
Ruderal habitat	1.04
Total	**109.02**

The ruderal habitat mapped within the project area is the only land cover type with any potential, though minimal, to support special-status species. Ruderal habitat on site is found in a single location along the northeastern portion of the project site, totaling 1.04 acres. Additionally, this land cover appears to be compacted and routinely disturbed. Therefore, direct and indirect impacts to vegetation communities and special-status plant species are not anticipated as a result of the proposed project. Impacts are considered less than significant with no mitigation recommended.

Would the project 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?

Hydrology and vegetation were examined throughout the project study area during the site visit (Appendix C) to identify potential wetland sites and/or non-wetland waters (e.g., drainages, channels), although no official jurisdictional delineation was performed. No jurisdictional wetlands or non-wetland waters occur within the study area. Additionally, riparian habitats were not identified within the project area. Therefore, implementation of the proposed project activities would not result in impacts to state and federally jurisdictional waters (and wetlands) or riparian habitat.

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site and the surrounding area are currently developed with urban uses and do not contain any significant areas of natural open space or areas of significant biological resource value. Developed areas within the study area include buildings, facilities, pedestrian walkways, and parking lots. Developed land is the dominant land cover type within the project area, totaling 61.63 acres. No wildlife corridors or nurseries are located on the site due to existing surrounding urban development. Therefore, no impacts related to wildlife corridors would occur.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project is in compliance with all policies outlined in the City General Plan Natural Resources Element. The proposed project would be in compliance with the City General Plan Land Use Element Policy LU 5.1.1, which requires that development protect environmental resources through consideration of federal, state, and local policies. The proposed project would also be in compliance with the goals and policies outlined in the City General Plan Environmental Resources and Conservation Element.

Implementation of the proposed project may result in removal, planting, and/or maintenance of trees protected under the Huntington Beach Municipal Code. Chapter 13.50 of the City's Municipal Code provides the regulation for trees growing in public places (City of Huntington Beach 2002). As such, the District should coordinate with the City's Director of Public Works to obtain necessary permits from the City prior to planting, replanting, relocating, removing, spraying, and/or maintaining (e.g., pruning or fertilizing) any trees associated with the proposed project. Compliance with all applicable laws, ordinances, regulations, and standards would avoid or minimize potential impacts to a less-than-significant level.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The proposed project is not located within or adjacent to any designated conservation plan, natural community conservation plan, or local or regional habitat conservation plan areas and would therefore not impact the goals or objectives of any adopted plans.

4.3.5 Mitigation Measures

The following mitigation measures would reduce potential impacts to a less-than-significant level.

MM-BIO-1 If construction activities are scheduled to take place adjacent to potential bird nesting habitat during the general bird breeding season (i.e., February 1 through August 31), a nesting bird survey shall be conducted by a qualified biologist to determine the presence of nests[1] or nesting birds within 300 feet (500 feet for raptors) (given the level of disturbance associated with the project area) of the construction activities. The nesting bird survey shall be completed no more than 72 hours prior to any construction activities.

The survey will focus on special-status species known to use the area, as well as other nesting birds that are protected under the Migratory Bird Treaty Act and California Fish and Game Code. If an active nest[2] (defined by the presence of eggs or young) is identified, grading or site disturbance within an appropriate buffer (e.g., 500 feet for raptors and 250 feet for other birds) of the nest shall be monitored by a qualified biologist regularly until project activities are no longer occurring within the required avoidance buffer of the nest or until fledglings become independent of the nest. All staging and construction equipment access routes shall be located away from nesting birds at all times.

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1 A “nest” is defined as a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. [2] An “active nest” is defined as a structure or site where birds have begun constructing, preparing, or using a nest for egg-laying. A nest is no longer an active nest if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

2 An “active nest” is defined as a structure or site where birds have begun constructing, preparing, or using a nest for egg-laying. A nest is no longer an active nest if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

The monitoring biologist may adjust the buffer radius if he or she determines it is necessary. The monitoring biologist shall halt construction activities determined to be disturbing nesting activities. The monitor shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the nest. This may include recommendations such as (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) working in other areas until the young have fledged, or (3) placing noise barriers to maintain the noise at the nest to 60 A-weighted decibel equivalent continuous sound level hourly or less or to the preconstruction ambient noise level if that exceeds 60 A-weighted decibel equivalent continuous sound level hourly. The on-site biologist will review and verify compliance with these nesting boundaries and will verify that the nesting effort has finished. Construction activities restricted by this measure can resume when no other active nests are found within the restricted area.

Note: "Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest (California Fish and Game Code, Sections 3503/3503.5).

MM-BIO-2 A pre-construction survey or acoustic bat survey will be conducted by a qualified biologist no earlier than 30 days prior to the commencement of construction activities to determine if active bat roosts are present on or within 300 feet of the proposed construction activities. Construction activities will avoid removing identified bat roost trees. If trees must be removed, it is recommended that these trees be removed when the bats are not roosting and between August 1 and March 31 to avoid the breeding season for western yellow bats. Cosmetic removal/trimming of dead palm fronds is the primary conservation threat to this species and will be avoided in areas where this species is known to occur. The use of pesticides will be prohibited within areas identified to have active bat roosts.

4.3.6 Level of Significance After Mitigation

Implementation of MM-BIO-1 and MM-BIO-2 would reduce potentially significant impacts to special-status species to below a level of significance.

4.3.7 Cumulative Impacts

A significant adverse cumulative biological resources impact would occur where the construction or operation of the cumulative projects would encroach into areas containing sensitive biological resources, affect the movement of wildlife species, or affect the functionality of a planned conservation area. As previously discussed, the proposed project would take place in a highly urbanized area in the city. Developed and previously disturbed areas dominate the study area and include impervious surfaces and ornamental landscaping. Overall wildlife abundance and species richness appear to be low because of the urbanized nature of the study area. No special-status plant species were identified during the biological evaluation, and one special-status wildlife species was observed during the biological evaluation—the monarch butterfly (Appendix C). In addition to the observed special-status wildlife species, two other special-status wildlife species were determined to have a moderate potential to occur on the GWC campus—Cooper's hawk and western yellow bat. Mitigation is proposed to minimize adverse impacts to these species.

Similarly, projects surrounding the GWC campus could also provide habitat for the same species. The combined construction of projects within the vicinity could deprive the affected species of a significant amount of habitable space. However, it is anticipated that species that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed project. These determinations would be made on a case-by-case basis and the effects of cumulative development on nesting birds would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, cumulative adverse effects on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS would be less than significant.

4.3.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 703–712. Migratory Bird Treaty Act.

16 U.S.C. 1531–1544. Endangered Species Act of 1973.

33 U.S.C. 401–430. Rivers and Harbors Act of 1899.

33 U.S.C. 1251–1376. Water Pollution Control Act Amendments of 1972 (Clean Water Act).

40 CFR 230.3(s) Definitions.

50 CFR 10.12. Definitions.

50 CFR 10.13. List of Migratory Birds.

50 CFR 21.11. General Permit Requirements.

California Fish and Game Code, Sections 2050–2069. California Endangered Species Act.

California Fish and Game Code, Sections 3503 and 3503.5. Protection of Birds' Nests. http://www.calforests.org/wp-content/uploads/2013/06/Discussion-Draft-of-Nest-Regulations-05032013.pdf.

California Water Code, Section 13000–14958. Porter–Cologne Water Quality Act of 1969.

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SOURCE: ESRI 2013, Coast Community College Vision Plan 2012, The Monarch Program (digitized wintering location); County of Orange, 2015.

7910.0001

FIGURE 4.3-1

Vegetation Map

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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4.4 CULTURAL RESOURCES

This section describes the existing cultural resources of the Golden West College (GWC) campus, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed GWC Vision 2020 Facilities Master Plan (proposed project). The discussion in this section is based on the Historic Resources Technical Report (Appendix D), Cultural Inventory Memorandum prepared by Dudek in October 2013 (Appendix E), and the Paleontological Resource Survey prepared by Paleo Solutions Inc. in November 2013 (Appendix F).

4.4.1 Existing Conditions

Cultural resources include prehistoric resources and historical resources. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials. Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. In North America, the historical period is generally considered to be equivalent to the time period since European contact, beginning in AD 1492. Historic resources can include archaeological remains and architectural structures. Historic archaeological site types include town sites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military use of the land. Historic architectural resources can include houses, cabins, barns, lighthouses, early military structures, and local structures, such as missions, post offices, and meeting halls.

4.4.1.1 Historical Setting

In assessing the historic significance of properties located within the study area, various criteria for designation under federal and state regulations were considered and applied. The National Register of Historic Places (NRHP) and the California Office of Historic Preservation survey methodology was used to evaluate the significance of properties on the GWC campus. The historic setting described in the following paragraphs comes from the Historic Resources Technical Report prepared by Ostashay & Associates (Appendix D).

History of Golden West College

GWC was conceived in 1961 as the second campus within the Orange Coast Junior College District (now Coast Community College District (District)). Its purpose was to address the anticipated "education explosion" that was predicted to double the nation's existing facilities for higher education at that time.

GWC was built in Huntington Beach on a 122-acre portion of the original 600-acre Golden West Farms. The new junior college would be named after the farm and have the Old West-themed "Rustler" as the school's mascot. In 1963, the architectural firm of William L. Pereira & Associates (WLPA) was chosen to plan and design the campus and all of its buildings. Pereira envisioned a design for the campus that would be unique and interesting and more like a garden-like pavilion with distinct yet expandable buildings set among its landscape.

District trustees approved the GWC master plan in early 1964, with an expected initial student population of 1,500 when officially opened in September 1966. Plans called for future expansion to accommodate 5,000 students with the potential to grow to a maximum of 10,000 students. Dr. R. Dudley Boyce, a Stanford University administrator and former Orange Coast College instructor–counselor, was named the first GWC president. Ground breaking and campus construction began in 1965; doors opened to 1,600 day students and 3,000 night students on September 12, 1966, despite the fact that several buildings would not be completed for another 30 days.

Over the decades the student population has ebbed and flowed, with a high of 23,112 students in 1981 and 17,156 in 2013–2014. Today, GWC is especially known for curriculums in nursing, police science, and cosmetology.

In the twentieth century, Modernism in architecture was one aspect of the Modern Movement that began in Europe after World War I. Modern architecture, as practiced in the 1920s by disciples of the German Bauhaus School, stressed a universality of design free from historical references. Under this philosophy, a building designed according to Modernist principles, whether residential, commercial, institutional, or any other building type, would succeed wherever it was placed. The pre-World War II designs of European architects Le Corbusier, Walter Gropius, and Ludwig Mies van der Rohe illustrated this philosophy, which was dubbed the "International Style," because the buildings would be suitable anywhere in the world.

International Style buildings express the tenets of form following function and a rejection of applied ornamentation. Compositionally, a balance of unlike parts is often substituted for symmetry. Character-defining features include flat roofs, smooth and uniform exterior surfaces, large expanses of glass, minimal overhangs, and cantilevered elements. Skeleton construction of steel or reinforced concrete is typical, especially for larger buildings. Rectilinearity predominates the design. In the United States, the first International Style buildings were the Lovell Health House of 1928 in Los Angeles and the Aluminaire House of 1931 in New York. The first International Style high-rise commercial building in America was the Philadelphia Saving Fund Society building, erected in 1932, by George Howe and William Lescaze.

By the late 1930s, the mostly German masters of the Modern Movement—Gropius, Mies van der Rohe and Marcel Breuer—had relocated to the United States. Mies and Gropius both attained prestigious academic positions upon their arrival—Mies at the Illinois Institute of Technology in Chicago and Gropius at Harvard University in Cambridge.

After World War II, Modernism became the principal architectural style applied to buildings of every type throughout the United States, although less so for single-family dwellings where traditional styles continued to predominate. From 1945 to 1970, various architects interpreted Modernism in a wide variety of ways. In Brazil, an organic Modernism that used curves and biomorphic shapes appeared. Out of Chicago, a variant known as the Miesian style emerged that was based upon the architectural philosophy of Mies van der Rohe. The Miesian style was predicated upon rectangular forms of the utmost regularity and precision, a modular pattern established by the structural frame typically of steel, with glass curtain walls and overall symmetry. By the mid-1960s, the Miesian style was the style of choice for corporate high-rises in most American cities.

In the late 1950s, reaction against the restraints of the International Style and Miesian designs resulted in the New Formalism movement. This style primarily applied to prominent institutional buildings such as museums, embassies, and philharmonic theaters. New Formalism sought to reintroduce classical forms such as the arch, columns, and temple-like monumentality with updated and refined use of modern methods and expensive surface materials.

In direct contrast to the New Formalist approach, a Brutalist architectural style appeared in the 1960s. It is the style closest to what Pereira chose for the GWC buildings. Brutalism is an architecture of mass, weight, roughness, and solidity. Its form is derived from exposed concrete that is often given a rough surface or shows the marks of the wooden formwork. Windows are treated as holes or as voids in the solids of exterior elevations and not, as in the International Style, as continuations of the "skin" of the building. The exposed, unadorned, but generally smooth concrete of the original GWC buildings is Brutalist in inspiration. However, it differs in that the utilitarian post and lintel modular design is visually lighter in mass and weight than typical Brutalist buildings.

Golden West College Master Plan

The original design of the GWC campus was undeniably Modern. The form of each building was based upon a highly functional, precisely engineered, modular approach that provided a remarkable degree of expandability and flexibility in accommodating the anticipated growth in student population. In early 1964, Campus Architect and Master Planner William L. Pereira stated that the new institution was designed "to grow and change like a living organism, adapting itself over the years to unpredictable changes in the academic environment" (*Los Angeles Times*, February 23, 1964) As directed by the District, WLPA initially planned the campus to eventually accommodate a student population of 10,000 or more.

The desire for flexibility, a key term of postwar building, enhanced the popularity of new materials, construction methods, and configurations of plan design for educational facilities. Flexibility was both a desirable quality for the structural aspects of a building, embodied in open corridors, non-load-bearing partitions, and zoned ventilation and heating systems, but also included provisions for rearranging interior features and spaces.

The original master plan depicts the entire campus divided into a grid of 40-foot squares arranged on a north–south axis. To achieve the desired degree of expandability and flexibility, WLPA devised a modular building system based upon this 40- x 40-foot constraint. Within each module, interiors could be quickly partitioned into any combination of spaces that could be extended not only horizontally but also vertically. Under WLPA's master plan, the basic design would consist of a post-and-lintel system of interlocking modules with concrete floors and precast concrete waffle-section ceilings. Roofs were flat and covered with composition sheathing. In providing natural interior illumination, skylights were placed within various individual cells of the waffle-section ceiling.

On exterior elevations, space divisions within the modules were accomplished by using no-load-bearing and relocatable partitions to accommodate change and maximize flexibility. Each 40-foot section contained seven equally sized panels that enclosed the space. Panels consisted of a variety of materials including plaster-covered concrete, plate glass, jalousie windows, and door openings—all of which could be removed, relocated, or added, as desired. The modular frame itself was constructed using a post-and-lintel system of exposed precast concrete columns and beams. Providing a decorative element to the composition, projecting beam-ends were stepped and incised, with chamfered corners. Regularly spaced at the roof's edge along the preformed concrete beams were slightly projecting rectangular concrete downspouts.

Original plans and historic photographs confirm that the concrete posts for each module were reinforced with steel arranged in a spiral pattern. Because of the soft soil associated with this part of Huntington Beach, which previously consisted of peat bogs prior to being cultivated for beans and other crops, each post went as deep as necessary to reach bedrock. In some cases, this was over 60 feet.

In making the buildings completely expandable, and to provide a maximum of usable interior space, the mechanical and electrical distribution equipment would be located in separate "load centers." These monolithic, two-story structures designed according to the basic 40- x 40-foot framework of columns and beams would be separated entirely from the academic buildings and connected to them by footbridges containing the duct system. Each load center would act as a distribution center for electricity, telephone, closed-circuit television, and restrooms. In addition, hot and chilled water was to be piped in open channels around the exterior of the academic buildings and then into unit ventilators for conversion into hot and cold air. The first phase of construction, or "increment," called for 5 of these load centers, with 10 more to be added as the campus grew.

Of WLPA's approach, the *Los Angeles Times* wrote in February, 1964, "Other novel features of the plan include a wide raised promenade which provides the main avenue of pedestrian traffic and also contains the utilities – and a series of adroitly designed earth berms that screen the perimeter parking areas from the academic campus 'island.'" Altogether, plans were to accommodate 5,000 automobiles on the 122-acre site with provision for future double-decking of the parking area if more space was required. Overall, GWC was designed to grow almost five times within its original site dimensions. The master plan by Pereira provided placement of the buildings to create a cohesive campus from the beginning of the project.

A review of the original WLPA campus plan prepared by Associate Architect Blurock, Ellerbroek & Associates and signed by the District's consulting architect and master planner, William L. Pereira, depicts the continuous grid of 40- x 40-foot square units in an exact north–south alignment. Each of the 12 initial buildings envisioned for GWC were placed within the grid according to the 40- x 40-foot arrangement. None of these buildings deviated in their footprint from WLPA's 40-square-foot scheme. Most surround the large central quad situated towards the southeast portion of the campus. The quad became the de facto center of GWC from which campus buildings and their locations would generally be identified. The WLPA master plan includes a circulation pattern of concrete walkways that unifies the original campus. Together, the buildings, walkways, and central quad create a sense of uniformity to the campus as realized in 1966.

Initially, as part of WLPA's plan to enhance the aesthetics of campus, many buildings featured a combination of inground planters, reflecting pools, and river rocks contained within shallow rectangular cutouts near perimeters. To soften the exposed concrete modular framework, Pereira also included inground planters at the base of concrete posts so that climbing vines with cascading foliage would cover the structure's prominent horizontal and vertical elements. Unfortunately, for reasons of cost and maintenance, most of the mature vines were taken out and not replaced over time. In addition, many of the river rocks were removed and, along with the reflecting pools, filled in with dirt. This has resulted in the palpable degradation of the carefully planned, lushly planted arbor effect Pereira intended for the modular buildings. Indeed, in those places where climbing cascading vines still exist, such as the Communications Building, its adjacent Load Center, and the Music Building (each erected in 1966), the singular aesthetic sense of a verdant, leafy pergola is clearly evident. As part of Pereira's landscape plan for the campus, he also adroitly incorporated earth berms that screened the perimeter parking areas from the academic campus "island." The berms still exist and surround portions of the core central campus along its eastern and southern boundaries.

The landscape architecture and environmental planning firm of Linesch & Reynolds of Long Beach was hired in 1966 for landscaping portions of the GWC campus. They were reported to have designed a landscape development and planting plan to complement Pereira's modular design plan for the campus and his general landscape concept. However, according to GWC's historian and original faculty member John Wordes, Linesch & Reynolds was responsible for planting trees in the campus quad only. In 2007, all of the original quad trees were removed due to disease apparently caused by the naturally damp local soil. The remainder of the campus was landscaped by Max Sisneros, who was the Director of Maintenance and Operations for the college from 1966 until 1983.

Over the decades, Sisneros planted the majority of GWC's trees and shrubs, including the large, mature Moreton Bay fig trees (*Ficus macrophylla*) located in the center median of the Gothard Street parking area. Sisneros also decorated the campus with whimsical Old West-themed objects in recognition of the school's mascot, the Rustler. He obtained antique farm equipment from nearby farms as they were residentially or commercially developed. One of Sisneros' best-known campus creations is the miniature mine tunnel complete with rail tracks and ore cars located near the original GWC library. Today, due to the efforts of Sisneros and others, a verdant park-like setting makes GWC an oasis in Huntington Beach.

The original campus color scheme was orange, yellow, and rusty red. These colors were applied to exterior paneled surfaces but not to the concrete modular frames, which remained unpainted and exposed. Interiors, including the initial furnishings, matched the exterior colors. Neither the original exterior colors nor the matching interiors remain.

Campus Construction

From 1966 until 1979, each construction phase at GWC was assigned an "Increment," with Increment I corresponding to the initial buildings erected in 1966 and 1967. It appears that the increment numbering system was discontinued after Increment IX in 1979. Henceforth, new construction was not assigned a numerical building phase label.

Under Increment I, the first permanent structures to be erected on the campus in 1966 were the Math/Science, Forum I, Business, Administration, Communications, Music, Student Center, Campus Bookstore, Boyce Library and Multimedia Center, Fine Arts, Men's Physical Education, and Women's Physical Education Buildings. The Community Center was built the following year in 1967 as the last component of Increment I.

The Administration Building is situated at the south end of the quad. The two-story structure originally had a square footprint derived from four double-stacked 40-foot modules. A wide raised promenade that stretched 200 feet between the Administration Building and the Business Building was known as GWC's "front door" because of its prominence at that strategic location. In 1978, most of the promenade was infilled to accommodate the westward expansion of the Administration Building. In 1980, a large two-story U-shaped addition to the Administration Building was constructed south of the existing building. The expansion included a second story exterior walkway and a bridge connecting the Administration and Business Buildings. While the infill had followed WLPA's plan, the new addition did not. Instead, a plaster veneer of simulated concrete beams and fascia, complete with projecting incised beam ends with chamfered corners, was applied to the courtyard facing elevations of the new wing. It appears that 1980 was the last year that any attempt was made to simulate the 1960s-era designs for new additions. Henceforth, new construction, additions, and building footprints would bear no resemblance to Pereira's original modular approach to the design of the GWC campus.

The Business Building located at the west end of the "front door" promenade consists of two stories of six modules arranged in a U pattern. There have been no additions to this building since it was erected in 1966. As noted, a second story bridge now connects it to the Administration Building.

Forum I, a lecture hall situated at the southwest corner of the quad and also constructed in 1966, consists of six two-story modules. Its primary entrance faces east. An original Load Center is adjacent to the southeast corner of Forum I. Neither structure has experienced major alterations.

When originally constructed in 1966, the Math/Science Building was the furthest west of the campus structures. L-shaped in plan, there were eight modules on each of its two stories. An adjacent Load Center was located near the building's northeast corner. In 1971, the Math/Science Building more than doubled in size as 2 stories of 15 modules each were erected on its north elevation. The addition included prominent exterior concrete staircases and perimeter second story walkways. All of the new construction followed WLPA's modular program.

The Student Center consists of a pair of diagonally positioned two-story buildings placed near the northwest corner of the original campus cluster. The seven-module north building was built in 1966 with dining facilities, as well as the four-module south building, which includes the Campus Bookstore. They share a large paved courtyard partially sheltered by Pereira's open modular concrete framework that visually links the space to the adjacent structures. A two-story food service addition to the north building that followed WLPA's modular system was completed in 1971.

East of the Student Center and Campus Bookstore and connected by a full-height covered promenade is the original Boyce Library and Multimedia Center. The promenade is similar in design to the front door promenade at the south end of the quad that was later infilled. Initially, a two-story building of seven modules per floor, the Boyce Library and Multimedia Center, was substantially enlarged in 1976 on its east and north elevations (secondary elevations), according to the WLPA modular plan. A Load Center is situated at the building's northeast corner. The Boyce Library and Multimedia Center was closed following the completion of the new Library/Learning Resource Center in 2011.

The Music Building began as four modules arranged in a T-plan at the northeast corner of the quad. The three-module north portion was three stories, and the one-module south portion was one story. In 1976, a two-story addition to the building's north elevation, designed according to the WLPA modular system, was completed. It connects the two-story Telecommunications Center and Forum II that had been built 5 years earlier in 1971.

Directly south of the Music Building on the east side of the quad is the one-story, six-module Communications Building with its U-shaped footprint. The inner portion of the U faces east and contains a sunken seating area and a manicured lawn. There have been no additions. A noteworthy element is the lush climbing and cascading foliage that covers most of the concrete framework that separates the south and north elevations of the Music and Communications Buildings, respectively. This was a key element of the original landscaping scheme that has since been removed from the perimeters of most of the campus buildings.

The one-story, two-module Counseling Building just south of the Communications Building was identified as "Administration" in the original plan. It has not been modified. A Load Center fronts the Counseling Building on its west side.

The Increment I structures north of the original buildings that surround the quad include the Fine Arts, Men's Physical Education, and Women's Physical Education Buildings. The two-story, five-module Fine Arts Building would later be supplemented by a much larger building to its north erected in 1993. Located at the far north end of the campus, the original one-story Men's and Women's Physical Education Buildings were separated by a large swimming pool. In 1971, both buildings were greatly expanded according to the WLPA modular scheme.

The last of the Increment I buildings to be constructed was the Community Center, completed in 1967. Located between the Administration (now Counseling) Building and the Gothard Street parking lot at the east end of the campus, the one-story, four-module Community Center was square in the plan. It was perhaps the most charming of Pereira's modular buildings. Historic photographs and original plans reveal that it was extensively glazed with numerous skylights within its waffle ceiling. The building featured a large open floor plan with its perimeter landscaped with shallow pools and in-ground planters surrounded by a covered walkway. In later years, the interior was divided into numerous smaller spaces, north and west elevations were pushed outward beneath the former walkway, and the pools filled were with soil. As a result, the loss of physical integrity has substantially diminished the building's aesthetic appeal.

In 1969, under Increment II, the Cosmetology and Health Sciences Buildings were constructed. The irregularly shaped, one-story Cosmetology Building west of Fine Arts and the one-story, nine-module Health Sciences Building south of the Math/Science Building both followed the WLPA modular plan. In contrast, the utilitarian Central Warehouse/Corporation Yard located near the campus's northwest corner that was built primarily to store and repair facilities equipment was not modular in design.

Numerous additions and new campus buildings were erected in 1971 under Increments III and V, all of which followed Pereira's initial modular plan. There were additions to the Math/Science, Cosmetology, Food Service, and Men's and Women's Physical Education Buildings, as well as the construction of the aforementioned two-story Telecommunications Building and the Forum II building. An enormous new Physical and Recreation Education Pavilion was erected just south of the Physical Education Buildings/Swimming Pool Complex. The two-story, 10-module Technology Building, with its O-shaped plan, was erected west of the new Physical and Recreation Education Pavilion.

Among GWC's most monumental buildings is the Community Theater, which was constructed in 1971 near the east end of campus. With its slender concrete posts raised two stories in height, the structure's verticality is accentuated by the plaster-covered panels that continue skyward through the waffle ceiling that shelters the entrance promenade. Full height, dark tinted glazing frames the panels on either side of the primary (south) elevation. This elegant design demonstrates the aesthetic possibilities afforded by Pereira's modular system.

In 1973, under Increment VI, the first major deviation from the original WLPA approach to constructing the college's modular buildings was implemented with the three-story Humanities Building. Instead of requiring spiral rebar concrete columns to reach bedrock, a lower-cost steel frame design using sturdy I-beams was employed, as documented in historic photographs. A thin layer of concrete veneer was then applied over the steel frame in creating round columns similar to those on the earlier buildings. Stunted decorative chamfered beam-ends were an attempt to mimic Pereira's original design. Although WLPA was responsible for the Humanities Building's design, the plans and elevations were not signed by Pereira, unlike those prepared prior to 1973 by the firm. This suggests that Pereira was no longer the chief architect for the GWC campus. Also part of Increment VI was the 1,200-seat amphitheater constructed north of the Community Theater that same year.

A complete departure from Pereira's original modular approach occurred in 1974 under Increment VII with construction of the Trade–Industry 1 Building (now Automotive Technology Building). A tilt slab construction method that was inexpensive and highly utilitarian without any aesthetic pretense was used to assemble this building. It was erected just west of the Technology Building.

In 1976, under Increment VIII, there were additions made to the Math/Science, Music, and Boyce Library and Multimedia Center Buildings first erected 10 years earlier. A Los Angeles Times article from 1976 states that Pereira was again "retained to plan, design and supervise construction of the buildings." However, the tilt slab KOCE Administration Building located east of the Fine Arts Building erected that same year was not a WLPA design.

The unprepossessing Trade–Industry 2 Building (now Graphics and Publications, College Support Services, and Automotive Technology Building) appeared in 1978 as part of Increment IX. It also utilized a tilt slab construction method. Both Trade–Industry Buildings 1 and 2 were designed by WLPA; however, as with the Humanities Building plans, Pereira's signature does not appear on the plans.

In 1979, under Increment IX, an addition to the Health Sciences Building first erected in 1969 was completed. This appears to be the last building and final year that Pereira's original modular approach was employed for additions to existing modular buildings. Furthermore, it does not appear that WLPA itself had any involvement with GWC after 1979.

Three buildings illustrate the complete departure from Pereira's modular system in the 1980s. The one-story Criminal Justice Training Center (1981) southwest of the Administration Building was constructed of concrete brick and thin sheets of molded steel. A glazed and scalloped façade characterizes the center's northeast corner. The three-story School of Nursing and Health Services Building (2008) at the far south end of the campus features a complex exterior of various materials, textures, colors, solids, and voids. The imposing three-story Library/Learning Resource Center (2011) at the west entrance to GWC is a contemporary monolith of concrete and metal cladding with fenestration consisting of narrow slits or large plate glass windows.

The campus today is composed of 38 buildings and a number of ancillary structures and facilities, most of which were constructed between the mid-1960s and the 1970s. Much of the GWC campus continues to be characterized by the preponderance of unadorned, concrete post-and-lintel modular buildings planned and designed by WLPA.

William L. Pereira

William Pereira (1909–1985), born in Chicago, Illinois, majored in architecture at the University of Illinois. He relocated to Los Angeles in 1938, where, over the next decade, he worked for Paramount Studios as architect, photographer, art director, and producer. After World War II through the 1970s, Pereira taught at the School of Architecture at the University of Southern California in addition to his career as an active architect. From 1945 to 1950, Pereira's architectural practice was small with relatively few commissions of note. Then, in 1950, Pereira formed a partnership with his old University of Illinois classmate, the architect-turned-businessman Charles Luckman. In their 8 years together, Pereira and Luckman received increasingly larger commissions for buildings and planning projects. Celebrated projects by the architectural team in Southern California include Marineland of the Pacific (Palos Verdes); CBS Television City (Los Angeles); the Disneyland Hotel (Anaheim); Union Oil Company headquarters; the Los Angeles headquarters of Firestone Tire and Rubber Company; the new campus of the University of California, Santa Barbara; several Robinson's Department Stores; and the master plan for the enlargement and updating of the Los Angeles International Airport. The partners split in 1958 and each formed their own practice: William L. Pereira & Associates and The Luckman Partnership. Each architect would go on to be involved with significant projects locally and worldwide.

WLPA began with a small group of architects, but quickly grew into a large office rivaling that of the former Pereira and Luckman firm at their peak. It was during the early and mid-1960s that Pereira refined his practice and, ultimately, the work for which he is largely remembered. Pereira was an early adopter of new construction technologies in which he integrated into many of his designs. His enthusiasm for precast concrete panels, for instance, was a sustained engagement with what could otherwise be an inappropriately industrial material.

Within the Orange County area, two of Pereira's most ambitious projects were his planning and design of the University of California, Irvine (UC Irvine), campus and the master planning for what would become the community of Irvine (incorporated 1971). One thousand acres of ranch land was donated by the Irvine Company for the UC Irvine campus, which Pereira began master planning in 1959 at the same time as he was planning the portion of the 93,000-acre ranch that became the City of Irvine.

Pereira searched for grand gestures to unify complex master plans. This is exemplified by his master plan for UC Irvine. Modern, idealistic in his pursuit, and always envisioning an optimistic and harmonious future, he felt that strong formal moves had the power to create consensus and organize the collateral events of community life around civility and ceremony.

The plan for the new UC Irvine campus was a broad circle with radiating spokes representing academic and administrative districts plus outlying support neighborhoods connected to the City of Irvine's main street by a pedestrian bridge. In the center of the ring at UC Irvine lies Aldrich Park, a naturalistic garden space named for the founding chancellor, Daniel Aldrich. Construction of the UC Irvine campus began in 1965, the same year that GWC's initial buildings were also being built. Eight major buildings were sited around its perimeter, six of which William L. Pereira designed.

In 1965, WLPA designed GWC using an innovative modular approach for the campus buildings. In comparing the two campuses there are substantial differences in planning and architectural design. Although both were constructed on previously unimproved land, UC Irvine's plan was based on a circle with radiating spokes. GWC's plan was purely rectilinear, based on a 40-foot by 40-foot grid.

Architecturally, the modular buildings at GWC were, by their very nature, practically identical in their construction and appearance, varying primarily in height and footprint. In contrast, there was substantially more variety in the design and appearance of the buildings Pereira designed for UC Irvine. Historic photographs reveal that the UC Irvine buildings, markedly larger in size that those at GWC, featured façades that generally differed from building to building and also by elevation. Each was raised above the ground for a floating effect, with a first floor balcony encircling the edifice. In addition, red tile-covered hipped roofs capped the UC Irvine buildings versus the flat roofs at GWC. However, the two campuses shared Pereira's fondness for exposed, repetitive, precast concrete. At GWC, this was expressed as a 40-foot square modular exterior skeletal frame of posts and lintels. At UC Irvine, it appeared as bands of window panels shaded by projecting hoods.

UC Irvine was to be the central, unifying component of an entirely new city master planned by William L. Pereira. For GWC, WLPA had more modest goals—to design a campus of modular buildings that could accommodate a growing student population in the City of Huntington Beach. Pereira succeeded in accomplishing both.

In reviewing WLPA's output, it can be concluded that Pereira's lengthy career resulted in the completion of an extraordinary number of buildings and urbanistic statements, ranging from the residential scale of his own home to the planning of the vast Irvine Ranch that became the community of Irvine and site of the UC Irvine campus. As typical with mid-century modern architecture, Pereira's work had not been well-studied or analyzed until recently. In reviewing his portfolio of work, the scale of some of his more significant projects, and the noted recognition he has received in the past, it is evident that his professional work, both visually and physically, has played an important and indelible role in the development pattern of Southern California.

Associated Architects

References in newspaper articles and elsewhere, as well as on the actual title block of the original construction plans for GWC, dated June 15, 1965, list WLPA in addition to the associated architects: A. Qunicy Jones, Frederick E. Emmons & Associates, and Blurock

Ellerbroek & Associates. The address noted on the project plans is listed as Urbanus Square, MacArthur Boulevard at Ford Road, Corona del Mar, California.

Urbanus Square, with a formal address of 2418 MacArthur Boulevard in Irvine (initially part of Corona del Mar and originally called Buffalo Ranch), was the locale of Pereira's Orange County office (now demolished). From 1962 to 1975, Pereira maintained this office with support staff while he worked on several of his key Orange County projects, including the planning and design of the UC Irvine campus, the master plan for the City of Irvine, the master plan of the Irvine Ranch (Newport Center and Fashion Island, among other areas), the design of the Laguna Theater, the initial planning and design of the GWC site and its associated buildings, and the ziggurat Chet Holifield Building for North American Rockwell in Laguna Niguel. He also worked from this office as he developed the site selection and planning of the University of San Diego and the design of its spheroidal library.

Pereira spearheaded a collaborative team of noted architects and planners in the planning and design of not only the UC Irvine campus but also the GWC campus, among other programs. As typically done for such large-scale projects, Pereira worked with professionals of similar mindset and design theory, including modernists A. Quincy Jones and Frederick E. Emmons. Both of these architects assisted Pereira with planning and design, and the Orange County-based architectural firm Blurock Ellerbroek & Architects served as the local associate architect. This extended team played a vital role in implementing Pereira's visionary master plans and design programs.

A. Quincy Jones – Frederick E. Emmons & Associates

The partnership of noted architects A. Quincy Jones and Frederick E. Emmons spans roughly 18 years, from 1945 to 1969, when Emmons retired. During this span, they produced a wide variety of work that ranged from small residential projects to university master plans throughout much of Southern California. While most of their work was concentrated in Southern California, they also had projects (primarily residential) in Northern California from Palo Alto to Sacramento. Their practice was consistent in their implementation of rationalized building systems, sensitive site design, consideration of the user, and experimentation with both design and materials. The partnership grew to include commissions for churches, manufacturing plants, university and college structures, libraries, and commercial buildings of varying size. Their work also included a long-term partnership with developer Joseph Eichler, who commissioned the team to design and plan dynamic, livable neighborhood communities with housing for the post–World War II era, moderate-income family. Jones and Emmons worked in partnership with Pereira on his master planning and design of the City of Irvine, portions of the UC Irvine campus, and sections of the GWC campus.

Blurock Ellerbroek & Architects

William H. Blurock, Fellow of the American Institute of Architects (FAIA), (1922–2012) was a Newport Beach architect whose work from the 1950s through the 1970s was considered visionary in the burgeoning field of modern educational design. Over his long career, Blurock guided the planning and design of buildings on 32 California college campuses and scores of other educational facilities throughout the state, including Orange Coast College and the UC Irvine. A Los Angeles native, Blurock was a 1947 graduate of the University of Southern California, School of Architecture. In 1993, he was honored as the Distinguished Alumnus of the architecture school and was elected an FAIA in 1968 for outstanding contributions to the design and science of construction. By 1970, Blurock's architectural practice was listed as William Blurock & Partners, a successor to William H. Blurock & Associates. He served on the American Institute of Architects (AIA), Orange County Chapter, as president and as an AIA national director in the late 1970s. He was appointed by Governor Ronald Reagan to the California State Board of Architectural Examiners, on which he served for 13 years.

Philmer J. Ellerbroek (1905–1969), the partner of Blurock Ellerbroek & Architects, was from Sioux City, Iowa, and also studied at the University of Southern California, graduating in 1928. He was a member of the AIA Orange County Chapter and served as president in 1954 and was later elected as an FAIA in 1967. He established his own practice in 1946 and later became a partner in Pleger, Blurock, Hougan and Ellerbroek in the late 1950s. He served on the Newport Beach Planning Commission from 1940 to 1950. In reviewing the American Architects Directory (1956, 1962) besides his work with the firm herein at the GWC campus, other representative examples of his work include the design of a department store in Corona (1952), a number of elementary schools in Newport Beach (1955), an office building in Newport Beach (1955), and modernist style residential properties in and around Newport Beach. He went on to join William H. Blurock in the 1960s to establish Blurock Ellerbroek & Associates before he established his own private practice.

4.4.1.2 Geologic Setting

The proposed project area is the GWC campus in the City of Huntington Beach, California. This portion of Orange County lies within the Coastal Los Angeles Basin of Southern California. The GWC campus is entirely underlain by young Quaternary sedimentary deposits of Holocene and late Pleistocene age. These deposits are further subdivided within the GWC campus as paralic estuarine deposits (late Holocene), young alluvial fan and valley deposits (Holocene and late Pleistocene), and young axial-channel deposits (Holocene and late Pleistocene). Young Quaternary deposits were noted at the surface of the project area during the pedestrian survey and at the residential development for Avalon Bay east of the GWC campus. Also visible in the project area east of Gothard Street were unconsolidated, light brown silts and sands. No fossils are known from these young alluvial deposits in the area and their young age indicates that they do not contain in situ paleontological resources. Because of the young age and/or disturbed nature of these deposits they are assigned a low paleontological resource sensitivity. Figure 4.4-1 shows the paleontological context of the campus.

Older Pleistocene age deposits may be encountered at an unknown depth below surface deposits of Holocene age. Although these Pleistocene geologic units are not mapped at the surface within the project area, they are mapped nearby and have been assigned high paleontological sensitivity based on their potential to yield significant Ice Age mammals elsewhere in the City of Huntington Beach. It is anticipated that deposits of older Pleistocene sediments underlie the campus at depth.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

National Historic Preservation Act

The National Historic Preservation Act (16 U.S.C. 470 et seq.) establishes the nation's policy for historic preservation and sets a program in place for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (e.g., historic properties) prior to undertakings.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of projects on historic properties (resources included in or eligible for the NRHP). It also gives the Advisory Council on Historic Preservation and the state historic preservation offices an opportunity to consult. Federal agencies issuing permits for the proposed project will be required to comply with National Historic Preservation Act requirements.

Executive Order 11593, "Protection and Enhancement of the Cultural Environment"

Executive Order 11593 (36 FR 8921) (1) orders the protection and enhancement of the cultural environment through requiring federal agencies to administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations; (2) initiates measures necessary to direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and (3) in consultation with the Advisory Council on Historic Preservation, institutes procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance (16 U.S.C. 470 et seq.).

National Register of Historic Places

The NRHP is the nation's official list of historic places. The register is overseen by the National Park Service and requires that a property or resource eligible for listing in the register meet one or more of the following four criteria at the national, state, or local level to ensure integrity and obtain official designation:

- The property is associated with events that have made a significant contribution to the broad patterns of our history.
- The property is associated with the lives of persons significant to our past. Eligible properties based on this criterion are generally those associated with the productive life of the individual in the field in which the person achieved significance.
- The property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master or possesses high artistic value or represents a significant and distinguishable entity whose components lack individual distinction.
- The property has yielded, or is likely to yield, information important to prehistory or history.

In addition to meeting at least one of these four criteria, listed properties must also retain sufficient physical integrity of those features necessary to convey historic significance. The register has identified the following seven aspects of integrity: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association.

Properties are nominated to the register by the state historic preservation officer of the state in which the property is located by the federal preservation officer for properties under federal ownership or control or by the tribal preservation officer if on tribal lands. Listing in the NRHP provides formal recognition of a property's historic, architectural, or archaeological significance based on national standards used by every state. Once a property is listed in the NRHP, it becomes searchable in the NRHP database of research information. Documentation of a property's historic significance helps encourage preservation of the resource.

State

California Public Resources Code

California Public Resources Code, Sections 5097–5097.6, state that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (express permission) on public lands, and it provides for criminal sanctions. This section was amended in 1987 to require consultation with the Native American Heritage Commission

(NAHC) whenever Native American graves are found. Violations that involve taking or possessing remains or artifacts are felonies.

California PRC, Section 5097.5, states that "no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands" (California Public Resource Code, Section 5097 et seq.).

California Register of Historical Resources

The California Office of Historic Preservation maintains the California Register of Historical Resources (CRHR). The CRHR is the authoritative guide to the state's significant historic and archaeological resources. The program provides for the identification, evaluation, registration, and protection of California's historic resources. The CRHR encourages public recognition and protection of resources of architectural, historic, archaeological, and cultural significance; identifies historic resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protection to resources under the California Environmental Quality Act (CEQA).

The CRHR also has established context types to be used when evaluating the eligibility of a property or resource for listing. The four criteria are as follows:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- It is associated with the lives of persons important to local, California, or national history.
- It represents the work of a master or possesses high artistic values.
- It has yielded, or is likely to yield, information important to prehistory or history of the local area, California, or the nation.

Similar to the NRHP, eligibility for the CRHR requires an establishment of physical integrity, including the seven aspects previously described. The CRHR's list of special considerations is less stringent than the NRHP's, providing allowances for relocated buildings, structures, or objectives as reduced requirements for physical integrity.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code, Section 7050.5b, requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (California Health and Safety Code, Section 7050.5 et seq.). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code, Section 7050.5 et seq.). The NAHC will notify a Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of the human remains and items associated with Native Americans with appropriate dignity.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources (California Public Resource Code, Section 21000 et seq.). As defined in Section 21083.2 of the California Public Resources Code a "unique" archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person. (California Public Resource Code, Section 21080 et seq.)

In addition, the California Code of Regulations, Section 15064.5, broadens the approach to CEQA by using the term "historical resource" instead of "unique archaeological resource." The CEQA Guidelines recognize that certain historical resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource in the CRHR; (2) a resource included in a local register of historical resources, as defined in California Public Resources Code, Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of California Public Resources Code, Section 5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record (14 CCR 15000 et seq.).

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of the California Public Resources Code and Section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the Guidelines, then the site is to be treated in accordance with the provisions of California Public Resources Code, Section 21083, which is a unique archaeological resource. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (14 CCR 15000 et seq.).

Local

Orange County General Plan Resources Element

The Orange County General Plan Resources Element sets forth a comprehensive strategy for the development, management, preservation, and conservation of resources that are necessary to meet Orange County's existing and future demands. This strategy is expressed as an integrated framework of resource goals, policies, and programs. Preservation of Orange County's significant archaeological, paleontological, and historical resources in a manner that both preserves the site and is compatible with development is desirable (County of Orange 2005).

City of Huntington Beach

The City of Huntington Beach does not currently have a historic preservation ordinance, formal eligibility criteria, or designation procedures for properties to be recognized as local landmarks. However, according to the Historic and Cultural Resources Element of the City's General Plan, a property can be identified as significant in one of the following four ways:

- Recommendation by the Historic Resources Board;
- Being listed on the National Register of Historic Places;
- Being located within a potential historic district as identified in the 1986 downtown survey; or
- Designation as a local landmark by the Huntington Beach City Council. (City of Huntington Beach 1996).

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

1. ***Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5.***
2. ***Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines, Section 15064.5.***
3. ***Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.***
4. ***Disturb any human remains, including those interred outside of formal cemeteries.***

4.4.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5?

A review of relevant historical records, including the California Historic Resources Inventory and files at the City of Huntington Beach, indicates that the GWC campus has not been previously assessed for historical significance, and no aboveground historic resources are located within the project site.

For the purposes of this current assessment, the campus and its associated improvements have been formally evaluated for historical significance using National Register and California Register criteria in order to identify any potential historic resources on the campus, as defined by the CEQA Guidelines.

The current survey process was conducted per Office of Historic Preservation methodology, which gives a 45-year-old threshold for surveying properties for historical significance. Those properties that had a construction date of less than 45 years of age, meaning they were constructed after 1970, were not documented unless they exhibited “exceptional” importance or were determined to be an integral part of the initial GWC master plan completed a few years after the 45-year period.

The Modernist-designed GWC today, with its concrete post-and-lintel modular buildings; planned circulation pedestrian walkways in and around a central quad; integrated earth berms; and overall siting, scale, and massing of improvements, reflects many of the features and design principles specifically developed for the campus by Pereira in the early 1960s.

The central quad, the heart of the campus, is surrounded by these buildings with later construction that differed from the modular approach generally relegated to areas beyond the central core. Pereira's master plan for the GWC campus was entirely predicated on a north–south, 40-square-foot grid. Initially, upon this grid were twelve unadorned concrete post-and-lintel modular buildings that were architecturally influenced by the Brutalist variant of Modernism emerging at that time. Within each module, non-load-bearing interior walls could be quickly partitioned into any combination of spaces desired. According to this plan, anticipated growth in the student population would be accommodated by simply adding modules vertically and/or horizontally, by reorganizing interior or exterior walls, or by constructing new buildings following Pereira's modular approach. Hence, nine additional module type buildings were constructed on campus following Pereira's initial design concept and master plan. This architecturally innovative and highly flexible program designed by WLPA was successfully implemented by GWC from 1966 until 1971, after which a nonuniform approach to new construction was adopted.

The desire for flexibility, a key term of postwar building and not unique to Pereira's master plan, was a desirable quality for GWC because it provided the ability to rearrange interior features and spaces within a modular structure. Unlike other higher educational facilities in Orange County, WLPA's 1964–1965 master plan for GWC was unique in the consistency of building design because WLPA followed a strict modular approach. This sense of uniformity was derived from those early identically engineered buildings that were constructed according to the strict 40- x 40-square-foot modular plan upon the identically proportioned north–south campus grid. In contrast, WLPA's 1959–1964 master plan for UC Irvine was based upon a series of concentric circles with non-modular buildings that differed from each other in design and appearance. Only at the University of California, San Diego, with its Brutalist influenced central library completed in 1970, did Pereira use exposed reinforced concrete that appears to have been influenced by the modular design approach employed by the architect at GWC 4 years earlier.

As discussed, the first major phase of the WLPA master plan occurred under Increment I with the construction of the Mathematics/Science, Forum I, Business, Administration, Communications, Music, Student Center, Campus Bookstore, Boyce Library and Multimedia Center, Fine Arts, Men's Physical Education, and Women's Physical Education Buildings in 1966. The GWC Community Center, also part of Increment I, was completed in 1967. A continuation of Pereira's module designed master plan was soon implemented with Increments II, III, and IV from 1967 to 1971. Building under these phases included Health Science, Cosmetology, Forum II, Gymnasium, Technology, and Community Theater Buildings.

The GWC campus was purposely planned in incremental stages over a period of years. The central core of the campus physically and visually reflects the unity and cohesiveness envisioned by Pereira's design. Aesthetically, however, GWC's modular buildings are not especially pleasing because of their overall utilitarian design, despite the decorative chamfered projecting beam-ends. Further, the original WLPA landscaping program to enhance the aesthetics of campus buildings was mostly abandoned over time, but for the earth berms. Specifically, the mix of planters, reflecting pools, and river rocks associated with many of the buildings are now gone. More poignantly, the climbing vines with cascading foliage designed to soften the harshness of the concrete "tinker toy" appearance of the buildings have been almost entirely removed. Without these landscaping elements, the aesthetic qualities of the modular buildings are further compromised.

Nonetheless, the core of the GWC campus possesses a significant concentration, linkage, and continuity of buildings, structures, landscape features, and walkways that are united historically, architecturally, and aesthetically by plan and physical development. As a result, this area is identified as a potential historic district—the GWC Campus Historic District. The district derives its importance from being a unified entity that visually conveys a sense of the overall historic environment and shares an interrelationship by arrangement, function, and plan. The sense of uniformity is principally derived from the 40- x 40-square-foot grid upon which the equally sized modular buildings were precisely placed. In addition, its circulation pattern of concrete walkways unifies the original campus. This collection of improvements, including its buildings, structures, landscape, and walkways is historically significant as well because they embody the distinctive characteristics of a particular property type, period of construction, and architectural expression. This district also reflects the overall initial master plan, design, and vision of master architect William L. Pereira. The period of significance for the historic district is 1966 to 1971. This span of time captures the initial master planning, design, and construction of GWC by WLPA, as well as those additions to the original buildings that followed the firm's modular system.

Contributors to the district are the majority of the buildings that were erected according to the WLPA modular program from 1966 to 1971. Most of those improvements are located around or in the vicinity of the main campus quad area. They are the Math/Science, Forum I, Business, Administration, Communications, Music, Student Center, Campus Bookstore, Boyce Library and Multimedia Center, Fine Arts, Men's Physical Education, Women's Physical Education, and Community Center Buildings. Although there were additions to the original Math/Science, Music, Boyce Library, and Multimedia Center Buildings in 1976, the additions carefully followed WLPA's original modular system, which allowed for expansion. Landscape features of the district include some grid pattern, paved walkways and their material, location, configuration, and design; central quad space; climbing and cascading vines planted at the base of concrete posts; concrete benches; and the surrounding earth beams. Also included as a contributing feature is the large square-shaped concrete block monument sign just south of the Admission and Records Building that is inscribed with the campus name and initial date of admissions, which reads as follows: "Golden West College, 1966." Additional contributors constructed between 1966 and 1971 include Health Science, Cosmetology, Forum II, Gymnasium, Technology, and Community Theater Buildings.

Non-contributors to this identified historic district are those buildings that did not follow the original modular approach or buildings and features that were built after the 1966–1971 period of significance. They include the 1973 Humanities–Arts and Sciences Building, which is of steel frame construction and not modular, and the 1974 Trade–Industry 1 addition (now Automotive Technology Building) with its non-modular, tilt slab construction. After 1976, new construction did not follow the modular method; therefore, all post-1971 buildings are non-contributors.

The historic district identified within the GWC campus has been evaluated as eligible for listing in the California Register under Criterion 3 for architectural merit. Specifically, it embodies distinctive characteristics of a modular method of construction for an educational institution as realized in the mid-1960s, represents the work of master architect William L. Pereira, and denotes a significant and distinguishable entity whose components may lack individual distinction (i.e., a district). Demonstrating exceptional significance for the district due to its date of construction is not necessary because the original buildings were designed in 1965 and completed in 1966. As such, the subject property, as defined, is considered a historic resource pursuant to the CEQA Guidelines.

It does not appear that any of the GWC buildings are individually eligible for listing in the California Register because they all follow the same WLPA modular approach, and none stand out as exemplary in comparison with the others. Indeed, this was precisely Pereira's intent. All of the campus buildings were to be consistent in design, construction, appearance, and expandability.

As for National Register eligibility, the GWC master plan, modular building design, and association with William L. Pereira do not appear to meet designation criteria at the federal level of significance as individual resources or as a potential historic district. Although technically interesting from a planning and engineering standpoint, neither the master plan nor the buildings were critically examined at the time of construction or since. In contrast, UC Irvine, designed by Pereira at the same time as GWC, received extensive critical review in the early 1960s and, in recent years, and was found to be significant principally for its innovative master plan. Also, in regards to architectural merit, the original WLPA-designed buildings at UC Irvine, which were not based upon a modular system, have much more variety and vitality in their exterior appearance in comparison with those at GWC.

In terms of local landmark eligibility, the City of Huntington Beach does not currently have official criteria for local evaluation or designation of individual properties or for historic districts. Though the City of Huntington Beach has recognized a few properties as local landmarks through their General Plan, neither the GWC campus nor any of its buildings have been previously identified as potential historic resources by the City of Huntington Beach, its Historic Resources Board, or by any local survey efforts. Nonetheless, if such significance criteria and designation policies did exist in the City of Huntington Beach, the GWC campus would appear eligible for local landmark designation as a potential historic district. There are 19 buildings and landscape/hardscape features located within the boundaries of the historic district. Table 4.4.1 provides a list of the buildings on the GWC campus that either contribute to the potential historic district status or not, and the years they were built. These building locations are illustrated in Figure 4.4-2.

Table 4.4-1
Golden West College Historic District Contributors/Non-Contributors

ID No.	Building Name/Campus Building No.	Built	Historic District Status
1	Math/Science (15)	1966	Contributor
2	Forum I (12)	1966	Contributor
3	Business Education (6)	1966	Contributor
4	Administration (4/5)	1966/67	Contributor
5	Communication (35)	1966	Contributor
6	Music (32)	1966	Contributor
7	Boyce Library (30)	1966	Contributor
8	Fine Arts and Gallery/Fine Arts (28)	1966	Contributor
8	Fine Arts Building (26)	1993	Non-Contributor
10	Men's Physical Education (22)	1966	Contributor
11	Women's Physical Education (23)	1966	Contributor
12	Community Center (1)	1967	Contributor
13	Corporation Yard/Maintenance (20)	1967	Non-Contributor
14	Automotive Technology (18)	1967	Non-Contributor
15	Health Science (11)	1969	Contributor
16	Cosmetology (27)	1969	Contributor
17	Forum II (31)	1971	Contributor
18	Physical Education/Gymnasium (24)	1971	Contributor
19	Technology (19)	1971	Contributor
20	Theater (34)	1971	Contributor
21	Humanities (13)	1973	Non-Contributor
22	KOCE Space (29)	1976	Non-Contributor
23	Graphics and Publications (10)	1978	Non-Contributor
24	Child Care Center (8)	1979	Non-Contributor
25	Wellness Center (25)	1979	Non-Contributor
26/33	Criminal Justice (7)	1981/2001	Non-Contributor
27	Rehabilitation Center (21)	1986	Non-Contributor
35	HVAC/Central Plant (N/A)	2007	Non-Contributor
36	Nursing and Health Services (36)	2008	Non-Contributor
38	Library/LRC (38)	2011	Non-Contributor
39	Boys & Girls Club Child Development (39)	2011	Non-Contributor
91	Campus Bookstore (16)	1966	Contributor

Table 4.4-1
Golden West College Historic District Contributors/Non-Contributors

ID No.	Building Name/Campus Building No.	Built	Historic District Status
92	Student Center (17)	1966	Contributor
	Landscape/Hardscape Features, as noted herein	1960s	Contributor

Source: Appendix D.
Notes: HVAC = heating, ventilation, and air conditioning.
Shading designates buildings that contribute to the potential historic district status.

Eleven buildings and facilities are proposed demolition under the Vision 2020 Facilities Master Plan. Of that number, seven of the identified contributing buildings to the potential GWC Campus Historic District are proposed for removal. Portions of the existing landscape/hardscape features may also be affected directly or indirectly by the proposed project. Table 4.4-2 summarizes the facilities proposed for demolition.

Table 4.4-2
Golden West College Buildings Proposed for Demolition

ID No.	Building Name/No.	Built	Historic District Status
1	Math/Science (15)	1966	Contributor
3	Business (12)	1966	Contributor
4	Administration (4/5)	1966	Contributor
12	Community Center (1)	1967	Contributor
7	Boyce Library Multimedia Center (30)	1966	Contributor
15	Health Science (11)	1969	Contributor
16	Cosmetology (16)	1969	Contributor
21	Humanities (13)	1973	Non-Contributor
23	Graphics and Publications (10)	1978	Non-Contributor
24	Child Care Center (39)	1979	Non-Contributor
26/33	Criminal Justice (7)	1981/2001	Non-Contributor
	Landscape/Hardscape Features, as noted	1960s	Contributor

Source: Appendix D.
Note: Shading designates buildings that contribute to the potential historic district status.

The proposed project anticipates the demolition of several existing core campus improvements, including most of contributing properties and some noted landscape and hardscape features to the potentially California Register-eligible GWC Campus Historic District.

The existing setting of the core campus area would be redesigned and reconfigured in a manner that would destroy much of the original semblance of the historic character of the site and those qualities that convey the district's historical significance, period of significance, and eligibility for listing in the California Register. The demolition, reconfiguration, and redesign of the district and its contributing resources, as proposed by the current project, would result in significant adverse impacts under CEQA. These impacts cannot be mitigated to a less-than-significant level unless redesign of the project occurs. Nonetheless, mitigation measures are still required.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines, Section 15064.5?

South Central Coastal Information Center records indicate that no cultural resources have been previously identified within the proposed project area. Two prehistoric archaeological sites (30-000113 and 30-000162) have been previously recorded within a half-mile of the project boundary. Resource 30-000113 is located 0.45 mile from the project site and consists of a prehistoric habitation and food processing site with organic-rich sediments, a small number of lithic tools (n=4), and marine shell. The distal portion of a human humerus was recorded on the surface within this area. The site was destroyed through construction of the 405 Freeway and subsequent development. Resource 30-000162 is located 0.3 mile from the proposed project site and consists of a prehistoric habitation and/or processing site with organic-rich sediments and a scatter of marine shell. The site has also been destroyed through subsequent development.

According to the Cultural Inventory Memo (see Appendix E), no artifacts or archaeological features were identified within the proposed project area. Portions of the project area have been previously disturbed by mechanical grading, landscaping, road construction, drainage control, and general development. It is unclear as to the depth and character of past disturbances within some of these areas; however, it is evident that it has been substantial. A, NAHC search for sacred lands was conducted in September 2013. The search did not indicate the presence of Native American traditional cultural places within the area or the surrounding 1-mile buffer. However, correspondence with the Gabrieleno Band of Mission Indians/Kizh Nation indicates that culturally sensitive locations exist in the surrounding area, and a Native American monitor has been requested during earthmoving activities. As such, mitigation has been included in the instance that potentially significant archaeological materials are encountered during construction (MM-CUL-3). Additionally, the Juaneño Group, United Coalition to Protect Panhe, requested to be informed should unanticipated archaeological discoveries be made during construction.

It has been determined that there is low potential for the inadvertent discovery of cultural resources during ground breaking activities. The area has been highly disturbed by past modifications to the campus, and impacts to archeological resources during each phase of the proposed project would not be significant. However, the northern-most section of the project area is considered to have a low-to-moderate potential for encountering cultural resources based on its proximity to two prehistoric sites with sensitive and well developed cultural deposits, limited ground surface visibility within grassy areas, and a lack of information relating to the depth and character of past disturbances. Therefore, MM-CUL-3 would be implemented to ensure that any impacts associated with the unexpected discovery of archaeological resources would be reduced to a less-than-significant level. Prior to mitigation, impacts to unknown archaeological resources would be significant.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

According to the Los Angeles Cultural Museum Records Search (Paleo Solutions Inc. 2013), there are no documented fossil localities within a 1-mile radius of the GWC campus. There are no documented paleontological localities within the boundaries or within a 1-mile radius of the GWC campus. Geologic units mapped at the surface beneath the GWC campus have a low paleontological sensitivity with respect to the potential to yield fossil remains. Construction of the proposed project is unlikely to impact paleontologically sensitive sediments, as the entire area is underlain by relatively shallow recent sedimentary deposits that are too young to contain significant fossil remains. However, old alluvial deposits, potentially at depth, may occur within the project area and have the potential to yield paleontological resources.

It is anticipated that construction activities that extend less than 5 feet below the ground surface would only impact artificial fill, topsoil, and/or the surface mapped younger Holocene age deposits mapped within the project area. Five feet is a typical interval utilized in construction operations and is a best estimate for avoiding monitoring of Holocene sediments. Excavations into undisturbed Pleistocene age deposits may unearth scientifically significant fossils at an indeterminate depth below the alluvial fan deposits during construction. Such disturbance should be monitored during construction in order to mitigate adverse impacts to scientifically significant paleontological resources (MM-CUL-4 through MM-CUL-7). All scientifically significant fossils salvaged from the project area will be permanently curated in an accredited regional museum where they will be available for future scientific research. In the event that unexpected, intact paleontological resources are unearthed during construction, a potentially significant impact could occur. Therefore, compliance with all applicable rules, ordinances, and regulations, as well as implementation of mitigation measures listed, potentially significant impacts to paleontological resources would be reduced to a less-than-significant level. Prior to mitigation, impacts to paleontological resources would be considered significant.

Would the project disturb any human remains, including those interred outside of formal cemeteries?

There is no evidence of human remains on the project site, and the potential for the inadvertent discovery of human remains on the project site is very low because there is no evidence of any historical camps or human settlement on the site. Additionally, existing regulations through California Health and Safety Code, Section 7050.5, state that if human remains are discovered during project construction, no further disturbance shall occur until the Orange County coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code, Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made (California Public Resource Code, Section 5097.9 et seq.). If the county coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable time. Subsequently, the NAHC shall identify the MLD. The MLD shall then make recommendations and engage in consultations concerning the treatment of the remains as provided in California Public Resources Code, Section 5097.98. Given the very low potential for human remains on the project site and required compliance with existing regulations pertaining to the discovery of human remains, the proposed project would result in less-than-significant impacts to human remains.

4.4.5 Mitigation Measures

The following mitigation measures are recommended to reduce significant impacts to historical resources, recorded archaeological resources, unrecorded subsurface archaeological resources, and unrecorded human remains within the project area:

MM-CUL-1 Prior to any alteration, relocation, or demolition of any contributing buildings, structures, objects, features, or landscape elements located within the identified Golden West College Campus Historic District a Historic American Buildings Survey Level II-like recordation narrative document shall be prepared by the Coast Community College District. The work shall be completed by a qualified historic preservation professional who meets the requirements of the U.S. Secretary of the Interior's Professional Qualifications for history, architectural history, and/or historic architecture (pursuant to 36 CFR 61).

The Historic American Buildings Survey-like document shall record the history of the campus and its associated contributing buildings and features, as well as its contextual relationship to the overall development of the college and community. The physical condition of the Coast Community College District, both historic and current, should also be addressed in the document through the use of site plans; original as-built drawings, as available; historical maps and photographs, including aerial photos and digital photography; and written data and text. Any field photos and notes should also be included as supporting exhibit material. This documentation shall include at a minimum:

- A written historic and descriptive report completed in narrative format, including an architectural data form for each contributing resource.

- A site plan showing the location of each building. This site plan shall include a photo key.
- A sketch floor plan shall accompany each architectural data form.
- Digital format photographs in accordance with Historic American Buildings Survey guidelines and standards. Views shall include contextual views, all exterior elevations, details views of significant exterior architectural features, and interior views of significant historical architectural features or spaces. Such photographs shall be logged, tagged, and collected onto a media storage device for safe archiving and copies provided to those repositories receiving the Historic American Buildings Survey-like finished document.
- Available historic photographs and historic and/or current as-built plans of the site and its contributing resources shall be reproduced digitally or photographically and included in the recordation document.

One original copy of the documentation reproduced on archival paper as specified previously shall be assembled and offered to each of the following entities:

- One set shall be sent to the Southern California Information Center at California State University, Fullerton.
- One set shall be offered to and, if accepted, deposited in the archives of the Los Angeles Conservancy.
- One set shall be offered to and, if accepted, deposited in the archives of the University of California, Irvine.
- One set shall be offered to and, if accepted, deposited in the archives of the City of Huntington Beach Public Library.
- One set shall be offered to and, if accepted, deposited in the archives of the Huntington Library, Art Collections, and Botanical Gardens.
- One set shall be offered to and, if accepted, deposited with the William L. Pereira and Associates Records archives at the University of Southern California Libraries, Special Collections.

One set shall be offered to and, if accepted, deposited in the archives of the Orange County Archives.

MM-CUL-2 To assist the students, faculty, parents, and other interested parties in understanding the early history of the Golden West College campus, an interpretive multimedia educational program and 3-D public art display shall be incorporated into the development of the reconfigured campus quad area and/or campus library. This interpretive program and public art work shall be developed with the assistance of a qualified architectural historian or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications. Content and design of the interpretive program should be specific to the initial planning and design of the Golden West College campus by William L. Pereira in association with the Coast Community College District; specifically, the architecture and historical development of the campus. The program/display may include but not be limited to commemorative signage; plaques; enlarged and framed historic photographs; representative statues; salvaged materials; models; displays of as-built plans and drawings; an educational, interactive CD software program; other relevant displays and exhibits; tours or events; and published information in the form of brochures, pamphlets, videos, electronic media, and campus website.

MM-CUL-3 If unexpected, potentially significant archaeological materials are encountered during construction, ground-disturbing activities shall be temporarily redirected or suspended until a qualified archaeologist is retained to evaluate the significance of the find. Unanticipated discoveries of significant cultural features would require handling in accordance with California Public Resources Code, Section 5097..

MM-CUL-4 If any subsurface fossils are found by construction personnel, activity in the immediate area should be suspended and the fossils should be left in place untouched. A qualified paleontologist should then evaluate the significance of the discovery and make further recommendations. Fossils that are considered unique under CEQA Guidelines, Section V(c) of Appendix G (14 CCR 15000 et seq.) should be collected, prepared, analyzed, reported, and curated.

MM-CUL-5 Paleontological monitoring of earthmoving activities below 5 feet (an arbitrary depth below which Holocene-age sediments are anticipated) will be conducted on an as-needed basis by the paleontological monitors under the supervision of an Orange County qualified paleontologist (principal investigator) during all earthmoving activities that may expose sensitive strata. If fossils are unearthed at a shallower depth, the monitoring program should be adjusted accordingly. Earthmoving activities in sections of the project area where previously undisturbed strata will be buried but not otherwise disturbed will not be monitored. The principal investigator or his/her assignee will have the authority to reduce monitoring once he/she determines the probability of unearthing fossils is lower than anticipated. If the excavations in undisturbed sediments will exceed 5 feet in depth, a qualified paleontological monitor should be present to observe earthmoving activities in these areas. Five feet is the general dividing point in this area, after which monitoring should be initiated in sediments of high sensitivity, as determined by mapping and in compliance with County of Orange guidelines. In areas of disturbed sediments on campus, a paleontological monitor should spot-check construction activities until such a time that it becomes possible to determine the depth of undisturbed native sediments or that no undisturbed sediments have been or will be impacted. Monitoring during any brushing or vegetation removal activities in artificial fill is not recommended.

MM-CUL-6 If a fossil is discovered by a monitor during construction, the monitor must immediately notify the equipment operator and the construction manager to stop work and then delineate the discovery area with flagging until it can be fully explored and evaluated. The paleontological monitor shall immediately notify the construction manager and the principal investigator. Construction activities in the immediate vicinity of the project area shall be immediately redirected away from the vicinity of the discovery to allow room for the recovery of the resources as necessary. Earthmoving will be allowed to proceed within the discovery site when the principal investigator determines the fossil discovery has been adequately documented and recovered..

MM-CUL-7 All scientifically significant fossils collected during monitoring and salvage should be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, should be reposited (as a donation) at the John D. Cooper Archaeological and Paleontological Center at California State University, Fullerton. Donation of the fossils should be accompanied by financial support for initial specimen storage. A final summary report that outlines the results of the mitigation program should be completed. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

4.4.6 Level of Significance After Mitigation

Mitigation measures listed in Section 4.4.5, Mitigation Measures, would reduce potential impacts to archaeological and paleontological resources to a less-than-significant level. However, under CEQA, the mitigation measures herein would reduce but not eliminate the significant impacts of the proposed project to the identified historic district and its contributing resources. The demolition of buildings and landscape elements that comprise the GWC Campus Historic District would result in a substantial adverse change to the historic property (historic district) and the environment. The impact to the GWC Campus Historic District cannot be mitigated to a less-than-significant level. Nevertheless, the measures outlined for documentation of the district and the development of an interpretative education program(s) are important to assure that information regarding the historic development of the college campus, its association with Master Architect William L. Pereira and its physical manifestation of Modern style educational facilities are documented, archived, and promoted. The impact to historic resources remains significant and unavoidable.

4.4.7 Cumulative Impacts

Cumulative impacts on cultural resources evaluate whether impacts of the proposed project and related projects, when taken as a whole, substantially diminish the number of historical or archeological resources within the same or similar context or property type. As discussed throughout this section, the proposed project could have potentially significant impacts to unknown archaeological resources, and mitigation would be required to reduce adverse impacts to less than significant. It is anticipated that cultural resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed project and mitigate for their impacts, if applicable. However, the proposed project would have potentially significant and unmitigable impacts on the identified historic district and its contributing resources. The impact to the GWC Campus Historic District cannot be mitigated to a less-than-significant level. In the event that related projects would also result in potentially significant and unmitigable impacts to historical resources, then the proposed project would contribute cumulatively considerable impacts. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible, in accordance with CEQA and other applicable legal requirements. Therefore, the proposed project would contribute to a cumulatively considerable impact associated with cultural resources due to the fact that demolition or removal of any historically designated building would impact the potential historic district.

4.4.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

36 FR 8921. Executive Order 11593, "Protection and Enhancement of the Cultural Environment."

16 U.S.C. 470–470-1. National Historic Preservation Act.

"Buildings to Be Ready at New JC in 1966," *Los Angeles Times*, April 26, 1964, p. L11.

California Health and Safety Code, Section 7050.5–7055. General Provisions.

California Public Resource Code, Section 5097–5097.7. Archaeological, Paleontological, and Historical Sites.

California Public Resource Code, Section 5097.9–5097.991. Native American Historical, Cultural, and Sacred Sites.

California Public Resource Code, Section 21000–21006. Policy. Division 13, Environmental Quality.

California Public Resource Code, Section 21080–21098. General. Division 13, Environmental Quality.

City of Huntington Beach. 1996. "Historic and Cultural Resources Element." In *City of Huntington Beach General Plan*.

"College Designed to Grow with Population," *Los Angeles Times*, February 23, 1964. p. L13.

County of Orange. 2005. "Resources Element." In *County of Orange General Plan*.

"Golden West Buildings," *Los Angeles Times*, April 10, 1976, p. H6.

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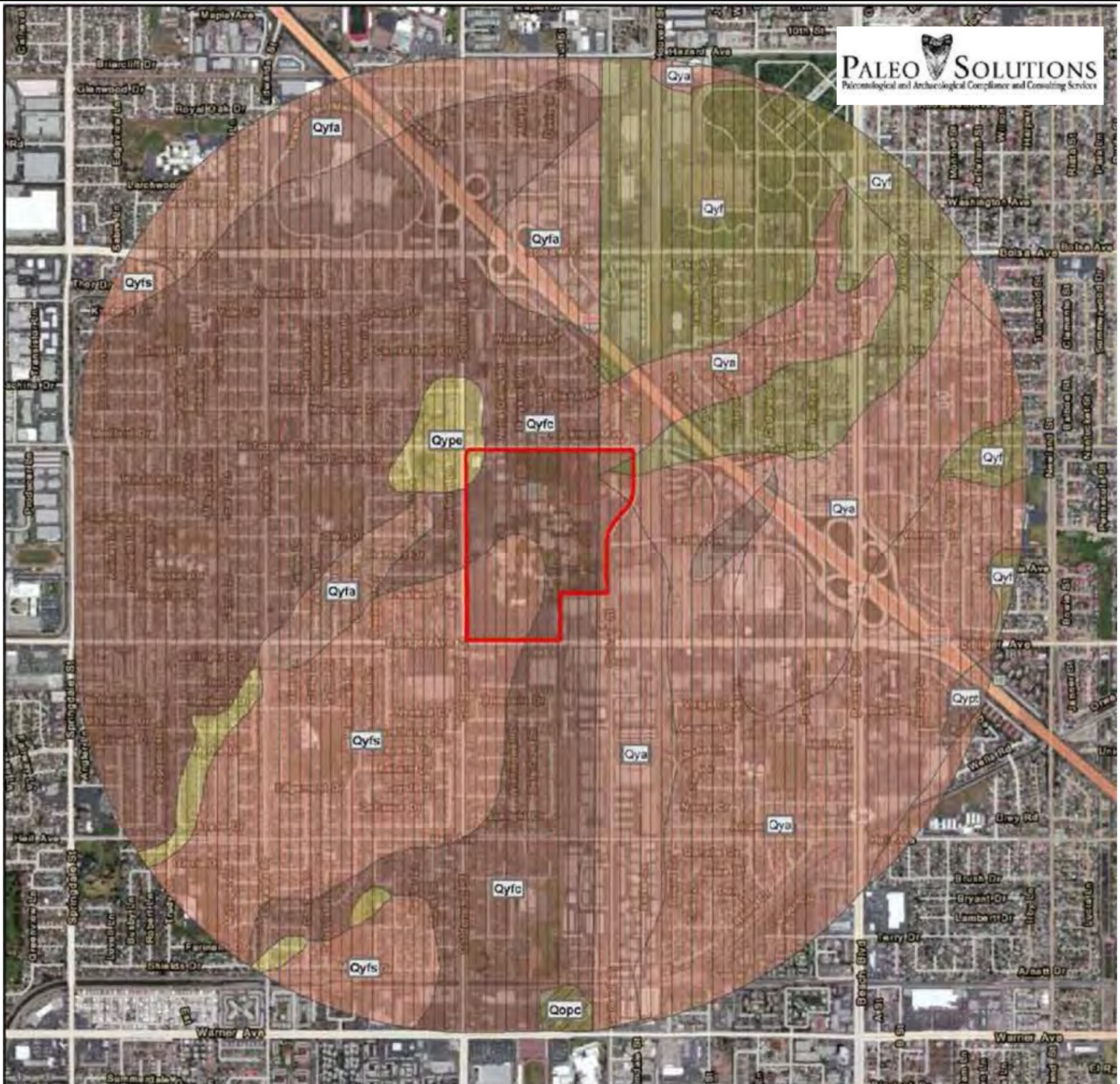

Golden West College: Paleontological Context

Project boundary

Paleosensitivity

Low

Moderate

Geologic Context (Saucedo etal. 2009): Long Beach Sheet (left side of map)

- Qyfa: Young alluvial fan and valley deposits, sand (Holocene)
- Qyfc: Young alluvial fan and valley deposits, clay (Holocene)
- Qyfs: Young alluvial fan and valley deposits, silt (Holocene)
- Qype: Young paralic estuarine deposits (Holocene)
- Qopc: Old paralic deposits, clay (Pleistocene)

Geologic Context (Morton etal. 2006): Santa Ana Sheet (right side of map)

- Qya: Young axial-channel deposits (Holocene)
- Qyf: Young alluvial-fan deposits (Holocene)
- Qypt: Young peat deposits (Holocene)
- Qop: Old paralic deposits, undivided (Pleistocene)
- Qopf: Old paralic deposits overlain by alluvial-fan deposits (Pleistocene)
- Qvof: Very old alluvial-fan deposits (Pleistocene)

Miles
0 0.5 1

USGS Quads:
Seal Beach and Newport Beach 7.5' series
Aerial and transportation base layers from:
ESRI Online
Geology from:
Preliminary Geologic Map of the Santa Ana 30' x 60' Quad
By D. M. Morton and Miller, F. K., 2006
Preliminary Geologic Map of the Long Beach 30' x 60' Quad
by G. J. Saucedo etal., 2009

One to 24,000 scale map

Path: Z:\Projects\j791001\MAPDOC\MAPS\PEIR\Cultural\GWC\Figure4.4_1_Paleontological_Context.mxd

GOLDEN WEST COLLEGE GWC HUNTINGTON BEACH, CA

SOURCE: Paleo Solutions

FIGURE 4.4-1
Paleontological Context

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Non-Contributing Buildings
Potential Historic District
Project Boundary

Existing Land Use

1, Math/Science Buidling
2, Forum I
3, Business Building
4, Administration Building
5, Communications Building
6, Music Building
7, Student Services and Boyce Library
8, Fine Arts Building
10, Men's PE
11, Women's PE
12, Community Center
13, Central Warehouse/Corporation Yard
14, Automotive Technology Building
15, Health Sciences Building
16, Cosmetology Building
17, Forum II
18, Physical Education/Gymnasium
19, Technology Building
20, Theater
21, Humanities Building
22, KOCE Building
23, Auto Body and Design and Graphics/Publications
25, Wellness Center
26, Criminial Justice Training Center
33, Criminal Justice Training Center Annex
35, HVAC Building
36, Nursing and Health Services
38, Library/LRC
91, Bookstore
92, Student Center
24, 39, Child Care Center

Note: Building numbers are non-consecutive to match the campus map and building inventory.

GOLDEN WEST COLLEGE GWC HUNTINGTON BEACH, CA

7910.0001

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 4.4-2

Potential Historic District

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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4.5 GEOLOGY AND SOILS

This section evaluates the direct, indirect, short-term, and long-term impacts related to geology, soils, and exposure to geologic hazards that would potentially occur as a result of implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project). The evaluation is based in part on review of various geologic maps and reports from the U.S. Geological Survey (USGS), the California Geological Survey (CGS), the U.S. Department of Agriculture (USDA), and the City of Huntington Beach (City) General Plan. If project impacts are determined to be significant or potentially significant, mitigation measures to avoid or reduce those impacts are identified.

4.5.1 Existing Conditions

The project area is located within California's Peninsular Ranges Geomorphic Province, represented by a series of ranges separated by northwest-trending valleys, subparallel to faults branching out from the San Andreas Fault (DOC 2002). The trend of topography is similar to the California Coast Ranges, but the geology is more like the Sierra Nevada, with granitic rock intruding older metamorphic rocks. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert. On the west, the province includes the Los Angeles Basin, its marine shelf, and the Catalina Islands. Major faults in the province are the Cucamonga, San Jacinto, and San Andreas Faults.

Local Geology and Soils

The project site is within the Seal Beach 7.5-minute quadrangle, whose geology has been mapped at various scales and extents over the years by numerous authors. In the official seismic hazard zone report for the Seal Beach quadrangle, the California Geological Survey (CGS; formerly the California Division of Mines and Geology) compiled geologic mapping within the quadrangle and reported on the liquefaction potential and the landslide potential of various geologic units within the study area (DOC 1998). According to the seismic hazard zone report, the project site is underlain by late Holocene (i.e., within the last few thousand years) alluvial soft silt, silty sand, and sand of distal alluvial fan deposits associated with the active Santa Ana River.

According to the USDA soil survey, the predominant soil unit mapped on the site—over 98%—is the Bolsa silt loam[1]; the northwestern corner of the site is underlain by the Bolsa silty clay loam, both drained and undrained[2] (USDA 2014). The soils on site and their characteristics are

[1] Loam is soil composed of sand, silt, and clay in relatively even concentration (about 40-40-20 percent concentration, respectively). The term is often qualified to indicate a relative abundance of one constituent over others (e.g., a "silt loam" is a loam, but where silt is more abundant than sand and gravel).

[2] Soil units that are qualified as drained have been artificially altered such that the soil no longer has ponded conditions and is rarely flooded.

shown in Table 4.5-1. The soil type is generally fine grained, containing a lot of silt and clay—such soils typically have poor drainage, moderate expansive soil potential, and moderate to high rates of runoff. This composition is consistent with the distal alluvial fan and estuarine deposits associated with the active Santa Ana River, and is also consistent with maps EH-12 and EH-13 found within the City's General Plan (City of Huntington Beach 1996).

The actual structural foundations for buildings, parking lots and other structures on campus are probably underlain by a combination of engineered fills and non-engineered fill, depending on when and how the structure was constructed. "Fills" are soils that have been used to support structural pads and building foundations—they may be reworked from natural soils found on site or imported and prepared per engineered specifications.

Table 4.5-1
Soil Types Underlying the Golden West College Campus

Soil Type	Acres within Golden West College	Drainage Class[a]	Expansive Potential	Risk of Corrosion[b] (concrete/uncoated steel)	Hydrologic Soil Group[c]/Erosion Factor (Kf)[d]
Bolsa silt loam, drained	107.6 (98%)	Somewhat poorly drained	Moderate	Moderate/low	C/0.55
Bolsa silty clay loam	1.2 (1%)	Somewhat poorly drained	Moderate	High/low	C/0.49
Bolsa silty clay loam, drained	0.5 (1%)	Somewhat poorly drained	Moderate	Moderate/low	C/0.49

Source: USDA 2014.
Notes:
a Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained.
b Pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete.
c Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups (A through D) according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Soils in Group B have a moderate infiltration rate and a moderate rate of water transmission. Soils in Group C have a slow infiltration and transmission rates and consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. Soils in Group D have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.
d Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Faults and Seismic Hazards

The faulting and seismicity of Southern California is dominated by the San Andreas Fault System. The zone separates two of the major tectonic plates that comprise the Earth's crust. The Pacific Plate lies west of the fault zone. This plate is moving in a northwesterly direction relative to the North American Plate, which lies east of the fault zone. The relative movement between the two plates is the driving force of fault ruptures in western California. The San Andreas Fault System generally trends northwest–southeast; however, on the northern border of the Transverse Ranges Province, the fault trends more in an east–west direction, causing a north–south compression between the two plates. This compression has produced rapid uplift of many of the mountain ranges in Southern California and is responsible for most of the seismic activity in the region.

There are numerous faults in Southern California that are categorized by the CGS as active, potentially active, and inactive. A fault is classified as active by the state if it has moved during the Holocene epoch (during the last 11,000 years) or is included in an Alquist–Priolo Earthquake Fault Zone (as established by the CGS). A fault is classified as potentially active if it has experienced movement during the Quaternary period (the last 1.6 million years). Faults that have not moved in the last 1.6 million years generally are considered inactive. Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts.

The highest seismic risk to the proposed project site originates from the Newport–Inglewood fault zone, the Whittier fault zone, the San Joaquin Hills fault zone, and the Elysian Park fault zone, each with the potential to cause moderate to large earthquakes that would cause ground shaking in Costa Mesa and nearby communities. The Newport–Inglewood fault, which is a regulatory earthquake fault zone (as defined under the Alquist–Priolo Earthquake Fault Zoning Act (Alquist–Priolo Act)), is located on the western edge of the City, approximately 1.5 miles southwest of the proposed project site (DOC 1986; Treiman and Lundberg 1999). However, neither the Newport–Inglewood Fault nor any other known fault line crosses the proposed project area, which means that fault rupture (i.e., along the trace of a fault line) would not occur on the site (USGS and DOC 2006). Regardless, an earthquake on any of these faults (or more distant faults) could cause both ground-shaking effects and possibly liquefaction at the proposed project site.

According to earthquake probability mapping conducted by the USGS (2008), there is a 30%–40% probability of an earthquake occurring with a magnitude greater than 6.7 in the next 50 years within 50 kilometers of GWC. The probability decreases to 12%–15% for an earthquake greater than magnitude 7.0 (USGS 2008). These probabilistic ground motion values are in the high to very high range for Southern California and are the result of proximity to major fault systems with high earthquake recurrence rates. These levels of shaking can be expected to cause damage, particularly to older and poorly constructed buildings. They could also cause damage to utility infrastructure.

Liquefaction and slope failure are destructive secondary effects of strong seismic shaking. Because the site and the surrounding area are nearly flat, slope failure is not considered a potential hazard at the proposed project site (DOC 1999). However, due to the observed instances of liquefaction in the past, the potential presence of a shallow groundwater table, and the character of the underlying soils, the site is considered to be in a liquefaction hazard zone (DOC 1999). In the Seal Beach quadrangle, numerous effects attributed to liquefaction were noted in the Bolsa Chica area and coastal areas of the City of Long Beach following the 1933 Long Beach Earthquake. Observed damage and effects include buckled and displaced pavement, fill settlement, surficial cracks, and “mud volcanoes” formed near the north end of Seal Beach (DOC 1999). This information is consistent with map EH-7 of the City’s General Plan, which identifies the site as being in a location with a high to very high liquefaction potential (City of Huntington Beach 1996).

Soil Conditions

Differential Compaction or Settlement

Differential ground settlement resulting from earthquake ground shaking is potentially damaging to structures and buried utilities and services. Differential settlement may occur in cohesionless sediments where differences in densities in adjacent materials lead to different degrees of compaction during ground shaking. In the case of saturated cohesionless sediments, post-earthquake settlement may occur when excess pore-water pressures generated by the earthquake dissipate. For soft saturated cohesive soils such as the known peat deposits within the City, post-earthquake differential settlement may also occur (USDA 2014; City of Huntington Beach 1996). Consolidation of soils and differential settlement can occur under the weight of a building or structure over the long term, even in the absence of earthquakes. Whereas differential settlement is a potential hazard in the City, the significance of the hazard at any particular site may only be determined by soils investigations.

Expansive Soils

Soils on site have fine-grained components (silt and clay) that have a moderate expansive potential. These materials may be present at the surface or exposed by grading activities. Man-made fills can also be expansive, depending on the soils used to construct them. According to the USDA, the shrink/swell potential of a soil is low if the soil has a linear extensibility of less than 3%; moderate if 3% to 6%; high if 6% to 9%; and very high if more than 9% (USDA 2014). If the linear extensibility is more than 3%, shrinking and swelling can cause damage to buildings, roads, and other structures as well as to plant roots. In such cases, import of non-expansive fill or other special designs may be needed. As shown in Table 4.5-1, all soils underlying the project site are estimated to have a moderate linear extensibility.

Subsidence

Regional land subsidence is the condition where the elevation of a land surface decreases due to the large-scale withdrawal of fluid (e.g., oil or groundwater). The location of major oil drilling areas and state-designated oil fields are areas with subsidence potential in the region. According to map EH-9 of the City's General Plan, the project area is not within an area that has historically experienced subsidence (City of Huntington Beach 1996). Subsidence of between 0 and 10 inches occurred closer to the coast in an area corresponding to the Huntington Beach Oil Field between 1967 and 1986. Localized subsidence or settlement can also occur in weak saturated soils with a high plasticity or peat deposits, which the project area is documented as having. Local subsidence or settlement is different than regional land subsidence, as it occurs in response to a structural load (such as construction of a building) rather than water or oil withdrawals.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration's (OSHA's) Excavation and Trenching standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code (CBC), Alquist–Priolo Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy, but in most cases, it is not required to prevent or avoid the ground failure itself.

California Building Code

The CBC has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 to be enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The CBC, Section 1803A (1802A in the 2007 CBC), describes requirements for engineering geologic reports, supplemental ground-response reports, and geotechnical reports. In the case of structures proposed by the Coast Community College District, it is the California Department of General Services, Division of State Architect (DSA) that enforces building standards and geologic hazard requirements, as further discussed below.

Alquist–Priolo Earthquake Fault Zoning Act

Surface rupture is the most easily avoided seismic hazard. The Alquist–Priolo Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the state geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches. The proposed project is not subject to this act because it is not within an earthquake fault zone.

Seismic Hazards Mapping Act

The CGS provides guidance with regard to seismic hazards. Under the CGS Seismic Hazards Mapping Act, seismic hazard zones are to be identified and mapped to assist local governments for planning and development purposes. The intent of the act is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other types of ground failure, as well as other hazards caused by earthquakes. CGS Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations (CDC 2013). Because proposed structures would be located within a liquefaction hazard zone (i.e., zone of required investigation), the act would apply to the project and construction of any structures for human occupancy[3] and would require accompanying liquefaction investigations per CGS Special Publication 117. The purpose of these investigations is to develop geotechnical design recommendations necessary to protect life and property from the adverse effects of liquefaction.

[3] A "structure for human occupancy" is any structure used or intended for supporting or sheltering any use or occupancy that is expected to have a human occupancy rate of more than 2,000 person-hours per year.

Division of State Architect

For public schools and State Essential Services Buildings, the California Department of General Services, DSA has jurisdiction over all aspects of construction (including access compliance), to ensure that plans, specifications, and construction activities comply with the CBC (Title 24 of the California Code of Regulations). The California DSA reviews and approves public school plans prior to issuing building permits and ensures project compliance with the CBC, the Field Act, and other applicable geologic hazard regulations.

The Field Act (Education Code Sections 17280–17317 and 80030–81149) was established following the 6.3 magnitude Long Beach Earthquake of March 10, 1933, in which more than 230 school buildings were destroyed, suffered major damage, or were judged unsafe to occupy. The Field Act established seismic design standards, plan review processes, construction inspections, and special tests for public schools in California. Normally, local building departments enforce the CBC plus any other local or state provisions. The generally good performance in earthquakes of most buildings constructed since 1933 shows that local building departments are enforcing the Uniform Building Code, which is aimed at mitigating seismic hazards in general. The provisions of the Field Act, however, go beyond the requirements of the Uniform Building Code, requiring stricter seismic design standards.

The DSA published an Interpretation of Regulations (IR) document that explains acceptable methods for achieving compliance with building codes and regulations. For example, IR A-4 details geologic hazard studies for schools; IR A-9 describes school site improvements for school building projects, IR 16-3 details earth retaining systems, and IR 18-1 describes use of controlled low-strength material as controlled fill. The Coast Community College District will be required to send all required engineering geology and geotechnical reports to the CGS to review the reports for compliance with state geologic hazard regulations (i.e., Alquist–Priolo Act and the Seismic Hazards Mapping Act, described previously). Final DSA approval of the proposed project will not occur unless DSA receives the final acceptance letter from CGS.

4.5.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to geology and soils are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the project would:

1. ***Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:***

   a. ***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***

based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.

- b. ***Strong seismic ground shaking.***
- c. ***Seismic-related ground failure, including liquefaction.***
- d. ***Landslides.***

2. ***Result in substantial soil erosion or the loss of topsoil.***
3. ***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.***
4. ***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.***
5. ***Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.***

Threshold of Significance 5 was eliminated from further consideration in the Initial Study. The proposed project would not involve the use of septic tanks because all buildings requiring wastewater disposal would tie into the sewer system that serves the campus. Therefore, this criterion is not applicable to the project and it was not carried forward for further analysis in this Program Environmental Impact Report (PEIR).

4.5.4 Impacts Analysis

Would the project 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 based on other substantial evidence of as known fault (refer to Division of Mines and Geology Special Publication 42); strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?

As discussed in Section 4.5.1, Existing Conditions, the project site is likely to experience at least one major earthquake in the foreseeable future. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. Ground shaking from distant seismic events (greater than 40 miles) will be of a different nature than events within 10 miles of Huntington Beach. For more distant, larger events (greater than 7.5 magnitude) such as those that occur on the San Andreas Fault, the ground shaking will reflect a predominance of long-period waves. This will have minimal effects upon structures less than three stories in height but will affect flexible structures (typically high-rise buildings) greater than three stories, especially if the natural period of the building should coincide with that of the long-period earthquake waves. The resultant amplifications of motions could result in serious damage to high-rise structures. Short-period waves, however, are generally very destructive near the epicenter of moderate- and large-magnitude seismic events, causing severe damage predominantly to low-rise rigid structures (less than three stories) not specifically designed to resist them. As described in the Existing Conditions section, there is a 30%–40% probability of an earthquake with a magnitude greater than 6.7 occurring in the next 50 years within 50 kilometers of GWC (on any of the faults capable of producing such an earthquake).

The absence of on-site fault traces, the flat topography of the project site, and the character of underlying soils mean that the potential for landslides and fault rupture is minimal. However, the site is within a state seismic hazard zone for earthquake-induced liquefaction. No element of the proposed project would affect the timing, probability, or duration of an earthquake or increase the severity of ground shaking or ground-shaking effects that would occur. Thus, the potential impact of the project would be limited to a potential for an increase in public exposure (through construction of classrooms) to high levels of ground shaking and possibly liquefaction during an earthquake.

However, this potential impact would be minimal because numerous laws, policies, and building standards are in place that impose stringent seismic safety requirements on the design and construction of new structures, especially construction undertaken by public school districts. All buildings in California are subject to the standards in the CBC, which require engineers to develop seismic design criteria that reflect the nature and magnitude of maximum ground motions that can be reasonably expected. These seismic design criteria allow engineers to apply appropriate building codes and design structures to withstand the effects of earthquakes. For public school districts specifically, the DSA has jurisdiction over all aspects of construction (including access compliance), to ensure that plans, specifications, and construction activities comply with the CBC (Title 24 of the California Code of Regulations).

The CGS serves as an advisor under contract with the DSA to review engineering geology and seismology reports for compliance with state geologic hazard regulations. The Coast Community College District will be required to send all engineering, geotechnical, and soils reports normally required to comply with the CBC to the CGS to ensure such reports also comply with applicable geologic hazard regulations (i.e., the Field Act and the Seismic Hazards Mapping Act, described in Section 4.5.2). The CGS has outlined the required scope of geology, seismology, and geologic hazards evaluations under California Code of Regulations Title 24 (DOC 2013). Among other things, the report(s) must be prepared by appropriately licensed professionals and must include adequate site characterization, estimates of earthquake ground motions, assessment of liquefaction/settlement potential, slope stability analysis, identification of adverse soil conditions (e.g., expansive or corrosive soils), and mitigation recommendations for all identified issues.

Final DSA approval of the proposed project will not occur unless DSA receives the final acceptance letter from CGS.

The projects contemplated in the Vision 2020 Facilities Master Plan would not be approved or built without adequately demonstrating to DSA and CGS their compliance with the CBC and applicable geologic hazards regulations. For this reason, the proposed project would be designed and built in a manner that would reduce public exposure to geologic risks to acceptable levels, and the potential impacts of the proposed project would be less than significant.

Would the project result in substantial soil erosion or the loss of topsoil?

Because the proposed project site is already developed and not located in sloped areas, the potential for substantial soil erosion or significant loss of topsoil is generally low. Section 4.8, Hydrology and Water Quality—which addresses soil erosion and sedimentation in greater detail from a water quality perspective—found the potential impacts to be less than significant. Because the analysis and conclusions located therein would be equally applicable to this criterion, the projects contemplated in the Vision 2020 Facilities Master Plan would have less-than-significant impacts with respect to substantial soil erosion or significant loss of topsoil.

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

Would the project 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?

As discussed in the Existing Conditions section, soils within the project site could be prone to a variety of instabilities, including shrink/swell, differential settlement, or other instabilities, which could only be determined precisely through site-specific soil testing. If unstable soils are not taken into consideration in construction site preparation activities (i.e., grading) and in the design of proposed structures, unstable soils would have potentially significant impacts on the structural components of the project. Improperly designed structures could be subject, in the long term, to damage or distress as a result of adverse soil conditions, resulting in the need for frequent and potentially costly repairs; in severe cases, they could represent a public safety issue. Although soil settlement and/or corrosion causes deterioration to plumbing, pipelines, and foundations in a slow, incremental manner, unexpected or sudden utility line breaks or other structural failures could occur as result of, or be more likely to occur in the event of, an earthquake.

Shrinking/swelling of soil, differential settlement potential, and high corrosion risks are common geotechnical issues in California, particularly within clay-rich residual soils, hydric soils, and wetland/estuarine peat/mud deposits. Standard engineering practices have been developed to effectively address such concerns. Commonly employed solutions include over-excavation and replacement with engineered fills, lime treatment, moisture conditioning, proper compaction of base and sub-base soils, use of appropriate construction materials, and appropriate selection and design of foundations, among others. As discussed above, projects contemplated in the Vision 2020 Facilities Master Plan would not be approved or built without adequately demonstrating to DSA and CGS their compliance with the CBC and applicable geologic hazard regulations. Geotechnical recommendation—likely similar to the common solutions previously described (as appropriate)—would be included as part of project designs and construction plans to protect facilities for unstable or expansive soils.

For these reasons, the potential impact of the proposed project with respect to expansive or otherwise unstable soils would be less than significant.

4.5.5 Mitigation Measures

None required.

4.5.6 Level of Significance After Mitigation

Not applicable.

4.5.7 Cumulative Impacts

The geographic extent considered for potential cumulative impacts to people and structures related to geologic and seismic hazards is localized and site specific. As analyzed above, the project would experience less-than-significant impacts related to all issue areas. Impacts related to earthquakes and adverse soil conditions would be less than significant as a result of the required compliance with applicable building codes and geologic hazard regulations. Geologic/soil issues relate to local, site-specific soil conditions, ground response to earthquakes, and the potential for adverse soil conditions to damage the project's structural components. Although impacts identified as less than significant can compound to generate a significant cumulative impact, the geology and soils impacts of the proposed project are not cumulative in nature. The only projects in the cumulative scenario that would contribute to or compound the identified impacts would be those that are overlapping or adjacent to the proposed project. Because no projects in the cumulative scenario are adjacent or overlapping, there would be no cumulative impacts with respect to geology, soils, and seismicity to which the proposed project could contribute.

4.5.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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4.6 GREENHOUSE GAS EMISSIONS

This section evaluates short-term (construction) and long-term (operational) impacts related to greenhouse gas (GHG) emissions and climate change that would potentially occur as a result of implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project). Applicable laws, regulations, standards enacted by the federal and state governments, and thresholds of significance used in this analysis are provided in Section 4.6.2, Existing Conditions, and Section 4.6.3, Thresholds of Significance, respectively. Emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2 (available online at www.caleemod.com), and GHG impacts are discussed in Section 4.6.4, Impacts Analysis.

4.6.1 Methodology

Sources of GHG emissions that would result from implementation of the proposed project would include emissions from motor vehicles. Vehicle emissions were calculated using CalEEMod, estimates from which are partially based on information derived from the traffic impact analysis report prepared by Linscott, Law & Greenspan, Engineers, in 2015 (Appendix I). Emissions from area sources such as natural gas usage for water and space heating were calculated using CalEEMod. Historical energy usage data from the campus were used to provide improved estimates of combustion-rated emissions and those associated with electricity usage. Emissions from other mobile sources, such as construction equipment, were estimated using CalEEMod default equipment fleet assumptions based on the expected construction methods that would be employed during demolition and development associated with the proposed project. GHG emissions estimates were then compared against thresholds to determine the proposed project's impacts.

Neither the State of California nor the South Coast Air Quality Management District has adopted emission-based thresholds for GHG emissions under the California Environmental Quality Act (CEQA). The Governor's Office of Planning and Research's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states, "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (2008). Furthermore, Section 15064.4(a) of the CEQA Guidelines states that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project" (14 CCR 15000 et seq.). Section 15064.4(a) further notes that an agency may identify emissions either by selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR

15000 et seq.). Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which a project may increase or reduce GHG emissions as compared to the environmental setting
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15000 et seq.)

4.6.2 Existing Conditions

4.6.2.1 The Greenhouse Effect and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and back toward the Earth. This trapping of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, can occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Human-caused GHGs, which are produced by certain industrial products and processes, have a much greater heat-absorption potential than CO_2. They include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (CAT 2006).

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Without it, the temperature of the Earth would be about 0 degrees Fahrenheit (°F) (−18 degrees Celsius (°C)) instead of its current 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect.

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG gas emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2E).[1]

4.6.2.2 Contributions to Greenhouse Gas Emissions

In 2012, the United States produced 6,525 million metric tons (MMT) of CO_2E (EPA 2014). The primary GHG emitted by human activities in the United States was CO_2. This primary GHG represented approximately 82.5% of total GHG emissions. The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 94.2% of CO_2 emissions.

According to the 2012 GHG inventory data compiled by the California Air Resources Board (CARB) for the California Greenhouse Gas Emission Inventory for 2000–2012, California emitted approximately 459 MMT CO_2E of GHGs, including emissions resulting from out-of-state electrical generation (CARB 2014a). The primary contributors to GHG emissions in California are transportation; industry; electric power production from both in-state and out-of-state sources; agriculture; and other sources, including commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions in 2012 are presented in Table 4.6-1, GHG Sources in California.

Table 4.6-1
GHG Sources in California

Source Category	Annual GHG Emissions (MMT CO_2E)	% of Total[a]
Agriculture	37.86	8.3%
Commercial uses	14.20	3.1%
Electricity generation	95.09[b]	20.7%
Industrial uses	89.16	19.4%
Recycling and waste	8.49	1.9%
Residential uses	28.09	6.1%
Transportation	167.38	36.5%
High GWP substances	18.41	4.0%
Total[c]	**458.68**	**100%**

Source: CARB 2014a.
Notes:
a Percentage of total has been rounded.
b Includes emissions associated with imported electricity, which account for 44.07 MMT CO_2E annually.
c Total may not sum due to rounding.

1 The CO_2 equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2E = (metric tons (MT) of a GHG) × (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emissions of 1 MT of CH_4 are equivalent to emissions of 21 MT of CO_2.

4.6.2.3 Potential Effects of Human Activity on Climate Change

Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a rise in average global tropospheric temperature of 0.2°C (0.36°F) per decade; this was determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of approximately 0.36°F (0.2°C) per decade is projected, and there are identifiable signs that global warming could be taking place, including substantial ice loss in the Arctic (IPCC 2007).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, which has led to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling in the form of snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010a). Climate change modeling using emission rates from 2000 shows that further warming would occur, which would induce further changes in the global climate system during the current century. Changes to the global climate system and ecosystems and to California would include but would not be limited to the following:

- The loss of sea ice and mountain snowpack, which results in higher sea levels and higher sea surface evaporation rates, with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures (IPCC 2007)
- A rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps and the Greenland and Antarctic ice sheets (IPCC 2007)
- Changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns. These change also include more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and intensity of tropical cyclones (IPCC 2007)
- A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 30% to as much as 90% over the next 100 years (CAT 2006)

- An increase in the number of days conducive to O_3 formation by 25% to 85% (depending on the future temperature scenario) in high-O_3 areas of Los Angeles and the San Joaquin Valley by the end of the twenty-first century (CAT 2006)
- A high potential for erosion of California's coastlines and seawater intrusion into the delta and levee systems due to the rise in sea level (CAT 2006).

4.6.2.4 Relevant Plans, Policies, and Ordinances

Federal

Massachusetts v. U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, the U.S. Supreme Court directed the U.S. Environmental Protection Agency (EPA) administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The elevated concentrations of GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The combined emissions of GHGs—CO_2, CH_4, N_2O, and hydrofluorocarbons—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act

On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following to aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel by 2022

2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances

EPA and NHTSA Joint Final Rule for Vehicle Standards

On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016 (EPA 2010). The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA approved the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA approved Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act (75 FR 25324–25728). The final rule became effective on July 6, 2010.

The EPA's GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO2 per mile in model year 2016, which is equivalent to 35.5 mpg if the automotive industry were to meet this CO2 level through fuel economy improvements alone. The Corporate Average Fuel Economy standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg (75 FR 25324–25728). The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers.

In August 2012, the EPA and NHTSA approved a second round of GHG and Corporate Average Fuel Economy standards for model years 2017 and beyond (77 FR 62624–63200). These standards will reduce motor vehicle GHG emissions to 163 grams of CO2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through reductions in air conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel-cell vehicles

- Incentives for hybrid technologies for large pickup trucks and for other technologies that achieve high fuel economy levels on large pickup trucks
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standard test procedures

State

Title 24

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards.

While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The most recent amendments, referred to as the 2013 standards, became effective on July 1, 2014. Building constructed in accordance with the 2013 standards will use 25% less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 standards. Additionally, the standards will save 200 million gallons of water per year and avoid 170,500 tons of GHG emissions per year (CEC 2012).

Title 24 also includes Part 11, known as California's Green Building Standards. California's Green Building Standards, which took effect initially in January 2011, were updated effective January 1, 2014, and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- A 20% mandatory reduction in indoor water use
- Diversion of 50% of construction and demolition waste from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particleboard

California's Green Building Standards also include voluntary efficiency measures that are provided at two separate tiers and implemented per the discretion of local agencies and applicants.

Assembly Bill 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493 (Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. The near-term (2009–2012) standards resulted in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards will result in a reduction of about 30%.

Executive Order S-3-05

In June 2005, Governor Arnold Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The executive order established the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050. The California Environmental Protection Agency secretary is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. The Climate Action Team is composed of representatives from several state agencies and is responsible for implementing global warming emissions reduction programs. Under the executive order, the California Environmental Protection Agency secretary must report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team fulfilled its initial report requirements through the 2006 *Climate Action Team Report to Governor Schwarzenegger and the Legislature* (CAT 2006).

The 2009 *Climate Action Team Biennial Report* (CAT 2010b), published in April 2010, expanded on the policy outlined in the 2006 assessment. The 2009 report provided information and scientific findings regarding the development of new climate and sea-level projections using new information and tools that have recently become available. The report also evaluates climate change within the context of broader social changes, such as land use changes and demographics. In addition, the 2009 report identified the need for additional research in several different aspects that affect climate change in order to support effective climate change strategies. The aspects of climate change determined to require future research include vehicle and fuel technologies, land use and smart growth, electricity and natural gas, energy efficiency, renewable energy and reduced carbon energy sources, low-GHG technologies for other sectors, carbon sequestration, terrestrial sequestration, geologic sequestration, economic impacts and considerations, social science, and environmental justice.

The subsequent 2010 *Climate Action Team Report to Governor Schwarzenegger and the California Legislature* (CAT 2010a) reviewed past climate action milestones, including voluntary reporting programs, GHG standards for passenger vehicles, the Low Carbon Fuel Standard (LCFS), a statewide renewable energy standard, and the cap-and-trade program. Additionally, the 2010 report included a cataloguing of recent research and ongoing projects; mitigation and adaptation strategies identified by sector (e.g., agriculture, biodiversity, electricity, and natural gas); actions that can be taken at the regional, national, and international levels to mitigate the adverse effects of climate change; and today's outlook on future conditions.

Assembly Bill 32

In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed in September 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB was assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early action GHG emissions reduction measures in June 2007. The early actions include three specific GHG control rules. In October 2007, CARB approved an additional six early action GHG reduction measures under AB 32. The three original early action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" include the following:

1. A low-carbon fuel standard to reduce the "carbon intensity" of California fuels
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies

The additional six early action regulations, which were also considered "discrete early action GHG reduction measures," consist of the following:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology
2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification
3. Reduction of perfluorocarbons from the semiconductor industry
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products)
5. Requirements that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency
6. Restriction on the use of SF_6 from non-electricity sectors if viable alternatives are available

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMT CO_2E. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. Approximately 800 separate sources fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit CO_2 in excess of specified thresholds.

In December 2008, CARB approved the *Climate Change Proposed Scoping Plan: A Framework for Change* (Scoping Plan) (CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

The key elements of the Scoping Plan include the following:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewables energy mix of 33%
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions

- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the LCFS
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

The First Update to the Climate Change Scoping Plan (Scoping Plan Update) was approved by CARB in May 2014. The Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The update defines CARB's climate change priorities for the next 5 years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. These efforts were pursued to achieve the near-term 2020 goal and have created a framework for ongoing climate action that can be built upon to maintain and continue economic sector-specific reductions beyond 2020, as required by AB 32. The Scoping Plan Update identifies key focus areas or sectors including energy, transportation, agriculture, water, waste management, natural and working lands, short-lived climate pollutants, green buildings, and the cap-and-trade program (CARB 2014b). The update also recommends that a statewide mid-term target and mid-term and long-term sector targets be established toward meeting the 2050 goal established by Executive Order S-3-05 to reduce California's GHG emissions to 80% below 1990 levels, although no specific recommendations are made.

Senate Bill 1368

In September 2006, Governor Schwarzenegger signed Senate Bill (SB) 1368, which requires the California Energy Commission to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order S-1-07 sets a declining LCFS for GHG emissions measured in CO_2E grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the LCFS would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The LCFS is anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Senate Bill 375

In August 2008, the legislature passed, and in September 2008, Governor Schwarzenegger signed SB 375 (Steinberg), which addresses GHG emissions associated with the transportation section through regional transportation and sustainability plans. By September 30, 2010, CARB was required to assign regional GHG reduction targets for the automobile and light truck sector for 2020 and 2035. The targets are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy within the Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a development plan for the region that, after considering transportation measures and policies, will achieve the GHG reduction targets, if feasible. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the Sustainable Communities Strategy or Alternative Planning Strategy. In September 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the Southern California Association of Governments are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a Sustainable Communities Strategy will be the responsibility of the metropolitan planning organizations. Southern California Association of Governments prepared its Regional Transportation Plan/Sustainable Communities Strategy, which was adopted by the

Southern California Association of Governments Regional Council in April 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035.

Executive Order S-13-08

Governor Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The Executive Order is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. It directs state agencies to take specified actions to assess and plan for such impacts. It directed the California Natural Resources Agency, in cooperation with the California Department of Water Resources, the California Energy Commission, California's coastal management agencies, and the Ocean Protection Council, to request the National Academy of Sciences to prepare a sea level rise assessment report by December 1, 2010. The order also requires the other state agencies to develop adaptation strategies by June 9, 2009, to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. A discussion draft adaptation strategies report was released in August 2009, and the final adaption strategies report was issued in December 2009. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report also recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Senate Bill X1 2

On April 12, 2011, Governor Jerry Brown signed SB X1 2 in the First Extraordinary Session, which would expand the Renewable Portfolio Standard by establishing a target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107 (2006), SB X1 2 adds local publicly owned electric utilities to the Renewable Portfolio Standard. By January 1, 2012, the California Public Utilities Commission was required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20% by December 31, 2013; 25% by December 31, 2016; and 33% by December 31, 2020. Retail sellers do not include local publicly owned electric utilities. The statute also requires that the governing boards for these utilities establish the same targets, and that the governing boards be responsible for ensuring compliance with these targets. The California Public Utilities Commission will be responsible for enforcing the Renewable Portfolio Standard for retail sellers, whereas the California Energy Commission and CARB will enforce the requirements for local publicly owned electric utilities.

4.6.2.5 Existing Emissions

GHG emissions generated during operation of existing GWC buildings and facilities were estimated to provide a baseline for comparison to projected operational emissions generated by buildout of buildings and facilities of the proposed project. Year 2014 was used to represent existing conditions.[2] Operation of GWC currently results in GHG emissions through energy use (natural gas and generation of electricity consumed by the existing buildings and facilities); motor vehicle trips to and from existing GWC land uses; generation of electricity associated with water supply, treatment, and distribution and wastewater treatment; and solid waste disposal. Annual GHG emissions from these sources were estimated using CalEEMod.

GWC currently generates GHG emissions primarily through vehicular traffic (mobile sources) generated by students, faculty and staff, employees, and visitors to the campus. Emissions associated with existing daily traffic were modeled using weekday trip-generation rates, which were calculated using the project traffic generation values provided in the draft traffic impact analysis report (Appendix I). CalEEMod default Saturday and Sunday trip-generation rates were adjusted based on weekday trip-generation rates per land use type because weekend trip-generation rates were not provided in the draft traffic impact analysis report. CalEEMod default data for temperature, variable start information, and emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2014 emission factors were used to represent existing conditions.

In addition to estimating mobile source emissions, CalEEMod was used to estimate emissions from the project area sources, which include gasoline-powered landscape maintenance equipment. The estimated existing operational emissions were based on existing land use defaults and total area (i.e., square footage) of GWC buildings and facilities that were in operation in 2014. Existing development of academic, general administrative, and auxiliary land uses on the campus totals 652,025 gross square feet (GSF) and parking lots on campus currently total 1,209,375 GSF (Flint, pers. comm. 2014a, 2014b).

Rather than using default values in CalEEMod to estimate emissions from some sources, default factors were changed to reflect existing campus activity rates. Emissions from energy sources, which include natural gas appliances and space and water heating, were also estimated using

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2 Most of the existing data for the campus reflect conditions in the 2011 to 2014 time frame; 2014 was selected for the purpose of the baseline analysis.

CalEEMod. Natural gas consumption defaults were revised through Title 24 and non-Title 24 natural gas energy intensities to values of 23.19 and 9.94 thousand British thermal units per 1,000 square feet per year, respectively, to reflect GWC's natural gas consumption from November 2012 through November 2013. Electricity consumption defaults were also revised through Title 24 electricity energy intensity, non-Title 24 electricity energy intensity, and lighting energy intensities to values of 5.56, 2.13, and 4.38 kilowatt-hours per 1,000 square feet per year, respectively, to reflect GWC's electricity consumption from February 2013 through January 2014. CalEEMod estimates of water-use default values, however, were changed to 45,958,616 gallons per year based on water consumption from January 2013 through December 2013. Solid waste generation rates were changed to 108 tons per year based on generation rates for 2011 (CR&R 2012).

The estimated existing operational GHG emissions from electricity usage, mobile sources, water consumption, wastewater treatment, and solid waste generation in 2014 are shown in Table 4.6-2, Estimated Existing Operational GHG Emissions. Details of the emission calculations are provided in Appendix B to this Program Environmental Impact Report (PEIR).

Table 4.6-2
Estimated Existing Operational GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Area	0.05	<0.01	0.00	0.05
Energy (natural gas and electricity)	3,336	0.12	0.04	3,352
Mobile source	14,799	0.67	0.00	14,813
Solid waste	22	1.30	0.00	49
Water supply and wastewater	162	0.59	0.02	179
Total	**18,319**	**2.68**	**0.06**	**18,393**

Notes: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent.

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the proposed project's impacts to GHGs/climate change are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to GHG emissions would occur if the project would:

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

No topics related to GHGs/climate change were eliminated in the Initial Study for the proposed project; therefore, all topics are covered in the PEIR impacts analysis.

The CEQA Guidelines with respect to GHG emissions state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions (14 CCR 15000 et seq.). Section 15064.4(a) further notes that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15000 et seq.). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which a project may increase or reduce GHG emissions as compared to the environmental setting
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15000 et seq.)

The Governor's Office of Planning and Research's Technical Advisory *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

It is generally the case that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). Accordingly, a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Neither the State of California nor South Coast Air Quality Management District has established thresholds for assessing the significance of a project's cumulative contribution to global climate change.

In the absence of accepted numeric thresholds to evaluate the first Appendix G threshold identified previously, the significance of the GHG emissions associated with the proposed project will be evaluated using the following two criteria:

- Would the project reduce GHG emissions compared to existing conditions?
- Would the project reduce emissions from business as usual in a manner sufficient to achieve the statewide goal for reduction of GHG emissions?

The first criterion would be achieved if the estimated GHG emissions under the proposed project would be less than the current (2014) GHG emissions through a combination of project design features and other GHG reduction measures and statewide GHG reduction measures that would ultimately influence emissions associated with motor vehicles and the consumption of electricity, natural gas, and water.

The second criterion would be achieved if the estimated GHG emissions under the proposed project would achieve California's goal under AB 32. As noted in Section 4.6.2.4, Relevant Plans, Policies, and Ordinances, AB 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020. In adopting AB 32, the legislature determined the necessary GHG reductions for the state to make in order to sufficiently offset its contribution to global climate change.

To understand what percentage reduction in emissions would be required to achieve AB 32's goal, CARB first determined that the 1990 baseline GHG emission level is 427 MMT CO_2E. CARB then estimated the statewide emissions that would be generated in 2020 (see CARB 2008, Appendix F). CARB's current prediction for 2020 emissions is 545 MMT CO_2E, assuming business as usual (CARB 2010).[3] The 2020 business-as-usual forecast does not take any credit for reductions from GHG measures included in the Scoping Plan, including those enacted before AB 32 (e.g., AB 1493). Accordingly, AB 32's mandated decrease in GHG emissions from 545 to 427 MMT CO_2E is equivalent to a 21.7% emission reduction. Thus, the AB 32 mandate requires a 21.7% reduction in emissions relative to the 2020 business-as-usual scenario.

AB 32 will result in emission reductions in a variety of ways, including increasing energy efficiency and introducing more renewable energy sources. However, a reduction of 21.7% from a 2020 business-as-usual scenario would satisfy AB 32's goal. Accordingly, the proposed project should comply with its share of AB 32 goals by reducing project GHG emissions to 21.7% below a 2020 business-as-usual scenario in order to appropriately mitigate the project's cumulative GHG emission impacts consistent with the goal of AB 32.

[3] CARB initially estimated the 2020 business-as-usual forecast in 2010 as 596 MMT CO_2E (CARB 2008). The forecast was reevaluated in 2010 in light of the downturn in the California economy in recent years. The revised 2020 forecast without accounting for any statewide GHG reduction measures is 545 MMT CO_2E.

4.6.4 Impacts Analysis

Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Impacts

Construction of the proposed project would result in GHG emissions that would primarily be associated with use of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 4.2, Air Quality.

During Phase 1, new construction of buildings and facilities would total 234,446 GSF, and the total size of buildings demolished would be 153,762 GSF. Table 4.6-3, Phase 1 Estimated Annual Construction GHG Emissions, presents construction emissions for the proposed project in 2015, 2016, and 2017.

Table 4.6-3
Phase 1 Estimated Annual Construction GHG Emissions

	MT CO_2	*MT CH_4*	*MT N_2O*	*MT CO_2E*
2015				
One Stop Student Center	128.93	0.02	0.00	129.45
2016				
One Stop Student Center	143.38	0.03	0.00	143.93
Criminal Justice Training Center Complex	265.50	0.05	0.00	266.54
Math/Science Building	207.38	0.04	0.00	208.18
Total	**616.26**	**0.12**	**0.00**	**618.65**
2017				
Criminal Justice Training Center Complex	0.61	<0.01	0.00	0.61
Math/Science Building	155.72	0.03	0.00	156.28
Total	**156.33**	**0.03**	**0.00**	**156.89**

Note: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Table 4.6-3, the estimated total GHG emissions during construction of Phase 1 would be approximately 129 metric tons (MT) CO_2E in 2015, 616 MT CO_2E in 2016, and 156 MT CO_2E in 2017. Additional details regarding these calculations are provided in Appendix B.

New construction of buildings and facilities in Phase 2 would total 94,520 GSF and renovation of the Technology Building would total 25,773 GSF. A total of 70,777 GSF of buildings and 21,000 GSF of tennis court pavement would be demolished as well. Table 4.6-4, Phase 2 Estimated Annual

Construction GHG Emissions, presents construction emissions for the proposed project in 2017, 2018, 2019, and 2020.

Table 4.6-4
Phase 2 Estimated Annual Construction GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
2017				
Cosmetology Building	79.15	0.02	0.00	79.54
2018				
Cosmetology Building	20.41	<0.01	0.00	20.52
2019				
Language Arts Complex	263.79	0.04	0.00	264.70
Technology Building Renovation	9.40	<0.01	0.00	9.44
Total	**273.19**	**0.04**	**0.00**	**274.14**
2020				
Language Arts Complex	3.55	<0.01	0.00	3.56
Technology Building Renovation	70.42	0.02	0.00	70.75
Total	**73.97**	**0.02**	**0.00**	**74.31**

Note: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Table 4.6-4, the estimated total GHG emissions during construction of Phase 2 would be approximately 80 MT CO_2E in 2017, 21 MT CO_2E in 2018, 274 MT CO_2E in 2019, and 74 MT CO_2E in 2020.

Phase 3 consists of construction of 101,954 GSF of a new Business/Social Sciences/ Administrative Office Building, the construction of a 116,000 cubic feet thermal energy storage unit, the expansion and renovation of the Central Warehouse/Corporation Yard from 12,328 to 31,552 GSF, and the demolition of 44,144 GSF of the existing Math/Science Building and 20,500 GSF of tennis court pavement.

The construction of the Boys & Girls Club Gymnasium Facilities and After School Building, the expansion of the Automotive Technology Building, and the renovation of the Physical Education Outdoor Labs are currently unscheduled. For the purpose of this analysis, it was assumed that the Automotive Technology Building expansion would occur at the end of Phase 3, commencing in August 2022 with completion in July 2023. It was assumed that the Physical Education Outdoor Labs would be renovated starting in August 2023 and ending in February 2024. Additionally, it was assumed that the Boys & Girls Club Gymnasium Facilities and After School Building would be constructed beginning in February 2024 and ending in September 2024.Table 4.6-5, Phase 3 Estimated Annual Construction GHG Emissions, presents construction emissions for the proposed project in 2020, 2021, 2022, 2023, and 2024.

Table 4.6-5
Phase 3 Estimated Annual Construction GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
2020				
Business/Social Sciences/Administrative Office Building	196.72	0.03	0.00	197.41
2021				
Business/Social Sciences/Administrative Office Building	145.04	0.02	0.00	145.51
Thermal Energy Storage Unit	99.21	0.02	0.00	99.68
Total	**244.25**	**0.04**	**0.00**	**245.19**
2022				
Thermal Energy Storage Unit	5.11	<0.01	0.00	5.13
Central Warehouse/Corporation Yard Expansion	83.46	0.02	0.00	83.89
Automotive Technology Building Expansion[a]	108.61	0.02	0.00	108.98
Total	**197.18**	**0.04**	**0.00**	**198.00**
2023				
Automotive Technology Building Expansion[a]	137.72	0.02	0.00	138.14
Physical Education Outdoor Labs[b]	239.88	0.02	0.00	240.37
Total	**377.60**	**0.04**	**0.00**	**378.51**
2024				
Physical Education Outdoor Labs[b]	31.06	<0.01	0.00	31.12
Boys & Girls Club Gymnasium Facilities and After School Building[c]	67.76	0.02	0.00	68.15
Total	**98.82**	**0.02**	**0.00**	**99.27**

Note: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent
[a] The construction schedule of the Automotive Technology Building expansion is currently unknown; however, to provide an estimate, it is assumed that construction would occur from August 2022 to July 2023.
[b] The construction schedule of the Physical Education Outdoor Labs is currently unknown; however, to provide an estimate, it is assumed that construction would occur from August 2023 to February 2024.
[c] The construction schedule of the Boys & Girls Club Gymnasium Facilities and After School Building is currently unknown; however, to provide an estimate, it is assumed that construction would occur from February 2024 to September 2024.

As shown in Table 4.6-5, the estimated total GHG emissions during construction of Phase 3 would be approximately 197 MT CO_2E in 2020, 245 MT CO_2E in 2021, 198 MT CO_2E in 2022, 379 MT CO_2E in 2023, and 99 MT CO_2E in 2024.

Operational Impacts

Operational Emissions Compared to Existing Conditions

Operation of the proposed project would result in GHG emissions through energy use (natural gas and generation of electricity consumed by the project); motor vehicle trips to project land uses; generation of electricity associated with water supply, treatment, and distribution and wastewater treatment; and solid waste disposal. Annual GHG emissions from these sources were estimated using CalEEMod. The proposed project would primarily generate GHG emissions through vehicular traffic generated by students, faculty and staff, and employees and visitors.

Emissions associated with existing and project-generated daily traffic were modeled using weekday trip-generation rates, which were calculated using the project traffic generation values provided in the traffic impact analysis report prepared by Linscott, Law & Greenspan, Engineers (Appendix I). CalEEMod default Saturday and Sunday trip-generation rates were adjusted based on weekday trip-generation rates per land use type, as weekend trip-generation rates were not provided in the traffic impact analysis report. CalEEMod default data for temperature, variable start information, and emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2024 emission factors were used to represent project buildout and the first full year of operation.

CalEEMod was used to estimate emissions from the project area sources, which include gasoline-powered landscape maintenance equipment.

Emissions from energy sources, which include natural gas appliances, space and water heating, and building electricity, were also estimated using CalEEMod. Default values for electricity and natural gas consumption (through Title 24 electricity energy intensity, non-Title 24 electricity energy intensity, and lighting energy intensities and Title 24 and non-Title 24 natural gas energy intensities) were used for the new facilities constructed as part of the proposed project. Default values for electricity and natural gas consumption through Title 24 electricity energy intensity, non-Title 24 electricity energy intensity, and lighting energy intensities and Title 24 and non-Title 24 natural gas energy intensities were adjusted to reflect historical energy use of existing facilities (see Section 4.6.2.5, Existing Emissions). Default values for indoor and outdoor water use and solid waste generation for new facilities were adjusted to reflect historical water consumption and solid waste generation of existing facilities (see Section 4.13, Utilities and Service Systems).

As part of the proposed project, a thermal energy storage unit would be installed just north of the current Central Plant. This system would store energy to be used later for heating, cooling, or power generation. The storage tank volume would be approximately 116,000 cubic feet or

867,740 gallons (Flint, pers. comm. 2014b). Other specifications for the proposed thermal energy storage tank are not available at this time. However, a 1996 study by the California Energy Commission provided case studies for three colleges located in Texas, Arizona, and California. These colleges used chilled water thermal energy storage tanks on campus and achieved an 8% to 13% savings in energy used to cool their facilities (CEC 1996). Although thermal energy storage tank system technologies have improved since the publication of this study, an 8% reduction in the estimated electricity consumption used for campus cooling associated with the proposed project can be applied to provide a conservative estimate of energy savings. According to Southern California Edison (SCE), on average, 23.3% of college and university electricity usage is attributed to space cooling (2013). Applying this 8% reduction to GWC's electricity consumption for space cooling, the thermal energy storage tank could result in an offset of 206,124 kilowatt-hours in electricity consumption, and the GWC campus would use approximately 10,852,023 kilowatt-hours of electricity upon buildout of the proposed project. This additional energy source was implemented as energy mitigation in CalEEMod.

In 2024, upon buildout of the proposed project, existing development and proposed development of academic, general administrative, auxiliary, and public/private partnership land uses on the GWC campus would total approximately 861,494 GSF. A total of 1,209,380 GSF of parking lot space would be provided on campus.

The estimated operational GHG emissions from project area sources, electricity usage, motor vehicles, water consumption, wastewater treatment, and solid waste generation associated with the proposed project at full buildout in 2024 are shown in Table 4.6-6, Estimated Operational GHG Emissions. The estimated existing operational emissions in 2014, as shown in Table 4.6-2, were subtracted from the proposed project emissions to present the net change in GHG emissions. Details of the emission calculations are provided in Appendix B.

Table 4.6-6
Estimated Operational GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Area	<1	<0.01	0.00	<1
Energy (natural gas and electricity)	3,588	0.16	0.05	3,606
Mobile source	14,921	0.49	0.00	14,931
Solid waste	29	1.73	0.00	66
Water supply and wastewater	172	0.78	0.02	195
Total emissions	**18,710**	**3.16**	**0.07**	**18,798**
Existing emissions	18,319	2.68	0.06	18,393
Net change in emissions	**391**	**0.48**	**0.01**	**405**

Notes: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent.

As shown in Table 4.6-6, estimated annual project-generated GHG emissions would be approximately 18,798 MT CO_2E per year. The net change in GHG emissions from 2014 to 2024 would be 405 MT CO_2E per year. Compared to existing conditions, the proposed project would result in an addition of GHG emissions. While the proposed project would increase the campus population (students, faculty, and staff) and the buildings relative to existing conditions, the GHG emissions would not increase proportionately over the next 10 years. This reduction would occur, in part, because improvements in fuel economy and associated GHG emissions would reduce total emissions as older, less efficient vehicles are replaced with newer, more efficient vehicles. In addition, the demolition of older existing campus facilities and the addition of new, more energy-efficient buildings would also be responsible for this reduction.

Operational Emissions Compared to Business as Usual

The following discussion compares the proposed project's operational GHG emissions under two scenarios—(1) business as usual and (2) as proposed—together with implementation of selected statewide GHG reduction measures. Both scenarios evaluate the emissions in 2024. While 2020 is the state's target year to achieve 1990 emission levels under AB 32, the proposed project does not anticipate full buildout until 2024. In addition, several of the statewide measures that are assumed to reduce the project's GHG emissions would not be fully implemented until at least 2020.

All operational conditions and assumptions discussed previously for the proposed project (e.g., areas for campus and public–private partnership buildings, water consumption, and sources of electricity) would also apply to the business-as-usual and proposed project scenarios, except as identified. CalEEMod was used to estimate the GHG emissions associated with the two scenarios; however, some adjustments were made to reflect the business-as-usual conditions.

As noted previously, CARB's business-as-usual forecast for 2020 does not take any credit for reductions from GHG measures included in the Scoping Plan, including those enacted before AB 32. Accordingly, the business-as-usual scenario reflects conditions prior to the passage of AB 32 in 2006 (i.e., conditions typical of those in the 2005–2006 time frame). This scenario assumes the following conditions, consistent with this definition of business as usual:

- No implementation of AB 1493 ("Pavley") motor vehicle standards for automobiles and light-duty trucks, although fuel efficiency would reflect the average efficiency of the motor vehicle fleet as determined by CalEEMod
- No implementation of the LCFS for motor vehicle fuels

- GWC campus building use of electricity and natural gas at levels based on the energy use intensity (i.e., energy used per square foot) for fiscal years 2013/2014 and 2012/2013, respectively[4])
- SCE provision of electricity to the campus, of which 16% is obtained from renewable energy sources as occurred in 2006 (SCE 2007)

The motor vehicle GHG emissions without implementation of the Pavley motor vehicle standards and the LCFS were estimated by substituting the non-Pavley/LCFS emission factors (ENVIRON 2013, Appendix D, Table 4.4) for automobiles, light-duty trucks, and medium-duty trucks in CalEEMod. The GHG emissions associated with electricity and natural gas usage were estimated using the same methods as those for the proposed project; however, electricity and natural gas usage factors reflecting conditions in fiscal years 2012/2013 and 2013/2014 were used (Higgins, pers. comm. 2014; SCE 2014) for the campus buildings. In addition, the default value associated with electricity supplied by SCE in CalEEMod, which reflects 2007 data, was unmodified.

The estimated GHG emissions under the business-as-usual scenario associated with motor vehicles, natural gas and electricity usage, water supply and wastewater, and solid waste corresponding to the proposed project's operations in 2024 are shown in Table 4.6-7, Estimated Project GHG Emissions Compared to Business as Usual,.

Under the proposed project scenario, the following GHG measures would occur:

- The motor vehicle fleet would include newer vehicles, reflecting implementation of Pavley motor vehicle standards for automobiles and light-duty trucks as calculated by CalEEMod
- Motor vehicles would use fuels meeting the LCFS for motor vehicle fuels, which would reduce the carbon intensity by 10% relative to current fuels as calculated by CalEEMod
- GWC campus buildings would use electricity and natural gas at levels determined by CalEEMod; however, *new* buildings would be more efficient resulting from compliance with Title 24
- SCE would provide electricity to the campus, 33% of which would be obtained from renewable energy sources in compliance with SB X1 2, resulting in a 20.2% reduction in CO_2 emissions relative to the level assumed in the business-as-usual scenario

The motor vehicle GHG emissions with implementation of the Pavley motor vehicle standards and the LCFS were estimated using the unmodified emission factors for automobiles, light-duty trucks, and medium-duty trucks in CalEEMod. The GHG emissions associated with water

4 GWC campus electricity and natural gas building use data for fiscal year 2005/2006 are not available. Therefore, data for the fiscal years 2012/2013 and 2013/2014 were used instead.

supply were estimated using methods based on CalEEMod, as described for the proposed project. The GHG emissions associated with electricity and natural gas usage were estimated using the CalEEMod defaults. To reflect the emission factor for generation of electricity in the SCE service area, the default value of 630.89 pounds of CO_2 per megawatt-hour (lb CO_2/MWh) was adjusted by the amount of electricity provided by renewable energy sources, assuming that such sources either produce no direct GHG emissions (e.g., wind, solar) or produce CO_2 emissions that are biogenic (e.g., biomass). In 2006, 16% of the electricity sold by SCE was generated by renewable energy sources (SCE 2007). This adjustment would represent the CO_2 emission factor for electricity provided by SCE if it did not include renewable energy sources. The adjusted emission factor was then adjusted again to reflect an energy portfolio that would consist of 33% renewable energy sources as required by the Renewable Portfolio Standard in 2020, as specified by SB X1 2. This calculation is:

$$630.89 \text{ lb } CO_2/\text{MWh} \div (1 - 0.16) \times (1 - 0.33) = 503.21 \text{ lb } CO_2/\text{MWh}$$

The resultant value was entered in CalEEMod to represent the CO_2 emission factor for electrical generation in 2020 and after.

The estimated GHG emissions under the business-as-usual scenario associated with motor vehicles, natural gas and electricity usage, water supply and wastewater, and solid waste corresponding to the proposed project's operations in 2024 are shown in Table 4.6-7, Estimated Project GHG Emissions Compared to Business as Usual. Additional details regarding these calculations can be found in Appendix B.

Table 4.6-7
Estimated Project GHG Emissions Compared to Business as Usual

Source	GHG Emissions Business as Usual (MT CO_2E)	GHG Emissions with GHG Reduction Measures (MT CO_2E)	Percent Reduction
Area	<1	<1	0.0%
Energy (natural gas and electricity)	4,344	3,606	17.0%
Mobile sources	20,691	14,931	27.8%
Solid waste	66	66	0.0%
Water supply and wastewater	236	195	17.4%
Total	**25,337**	**18,798**	**25.8%**

Notes: See Appendix B for complete results.
GHG = greenhouse gas; MT = metric ton(s); CO_2E = carbon dioxide equivalent.

The estimated GHG emissions would be 25,337 MT CO_2E per year under the business-as-usual scenario and 18,798 MT CO_2E per year with the proposed project features and statewide GHG reduction measures. As indicated in Table 4.6-7, implementation of the GHG reduction measures would reduce GHG emissions by 25.8% relative to business as usual.

As shown in Tables 4.6-3 through 4.6-6, the proposed project would contribute to the overall production of GHG emissions during construction and operation. The operation of the proposed project would result in an increase in GHG emissions relative to existing conditions. The proposed project would incorporate project design features that would conserve energy through the use of renewable energy. In addition, several statewide GHG reduction measures would reduce GHG emissions associated with motor vehicles and electrical generation over time. The benefits of these measures are compared to the GHG emissions that would be generated under a business-as-usual scenario. As shown in Table 4.6-7, the proposed project along with implementation of the statewide measures would result in a 25.8% reduction compared to business as usual. Accordingly, it would achieve an equivalent of the 21.7% statewide reduction required to meet the goal of AB 32. On the basis of the comparison of the proposed project's GHG emissions to business as usual, the proposed project would result in an impact for GHG emissions that is less than significant.

Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in Section 4.6.2.4, Relevant Plans, Policies, and Ordinances, the Scoping Plan approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Moreover, the Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage and high GWP GHGs in consumer products) and changes to the vehicle fleet (e.g., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., LCFS). Although state regulatory measures will ultimately reduce GHG emissions associated with the project through their effect on these sources, no statewide plan, policy, or regulation would be specifically applicable to reductions in GHG emissions from the project. Furthermore, neither GWC, nor local jurisdictions, nor the South Coast Air Quality Management District have adopted any GHG reduction measures that would apply to the GHG emissions associated with the proposed project. At this time, no mandatory GHG regulations or finalized agency guidelines would apply to implementation of this project, and no conflict would occur. Therefore, this impact would be less than significant.

4.6.5 Mitigation Measures

Because impacts related to GHG emissions would be less than significant, no mitigation measures are necessary.

4.6.6 Level of Significance After Mitigation

Since mitigation is not necessary, residual impacts would be less than significant.

4.6.7 Cumulative Impacts

Despite the conclusion that the proposed project's impact for GHG emissions would be less than significant, the proposed project's contribution to global GHG emissions and the effect on global climate should be evaluated on a cumulative basis, as stated previously. Under CEQA, a project would have a significant cumulative impact caused by the combined impact of past, present, and probable future projects if its incremental impact represents a "cumulatively considerable" contribution to such cumulative impacts (14 CCR 15064(h)). The proposed project would generate GHG emissions that contribute to potential cumulative impacts of GHG emissions on climate change. Because levels of GHG emissions in the atmosphere are at levels considered substantial enough to create adverse impacts (i.e., climate change), the emissions of a particular project, even if not considered to produce a significant impact, may nonetheless contribute to an adverse, unavoidable cumulative impact. In light of the previous conclusions regarding the proposed project's reduction in GHG emissions relative to existing conditions and business as usual, cumulative impacts in terms of climate change would be less than significant.

4.6.8 References

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4.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing Golden West College (GWC) campus with regard to any hazardous materials or previous contamination in the project vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed GWC Vision 2020 Facilities Master Plan (proposed project). The discussion in this section is based on the January 2014 Hazards Assessment prepared by Dudek (Appendix H).

4.7.1 Existing Conditions

California Government Code, Section 65962.5, requires the California Environmental Protection Agency to prepare an annual hazardous waste and substances list, commonly referred to as the Cortese List. A review of federal, state, and local Cortese List databases identified a number of known and potentially contaminated sites within the project area.

4.7.1.1 Hazardous Materials

Existing and past land use activities are potential indicators of hazardous material storage and use. For example, many industrial sites, historical and current, are known to have soil or groundwater contamination. Other hazardous materials sources include leaking underground storage tanks (LUSTs), surface runoff from contaminated sites, and migration of contaminated groundwater plumes. A records review of federal, state, and local regulatory agency databases was used to evaluate environmental conditions of potential concern in the project area.

Regulatory Database Review

Environmental Data Resources

A 2013 environmental database search performed by Environmental Data Resources (EDR; see Appendix H) listed 54 sites within the American Society for Testing Materials (ASTM) standard search radius of the project area. A release occurred in 1988 and received case closure in July 2000; soil and groundwater remediation was performed at the site. Another release was reported in January 2010 after two underground storage tanks (USTs) (2,500-gallon gasoline and 550-gallon diesel) were removed from the northwest portion of the Maintenance Yard parking lot. The case received closure in June 2012.

Twenty-seven sites were identified within the ASTM-specified distances of the project area and are listed in databases associated with permitting and hazardous material storage or disposal. Based on the information provided in the databases for these sites, it is unlikely they have impacted the environmental conditions at the project site.

Twenty-three sites are listed in the LUST database and all of these sites have received case closure and based on the information provided in the databases they are unlikely to have impacted the environmental conditions at the project site. The remaining four sites were listed in the LUST database and have an open case status. These sites are discussed below.

1. UNICAP COP No. 5888 at 15482 Goldenwest Street is located at the corner of McFadden Avenue and Goldenwest Street near the northwest corner of the project site. Gasoline and waste oil were released to the groundwater in February 1997. Groundwater monitoring is preformed quarterly and a soil vapor extraction and air sparge system has operated at the site to remediate impacted soil and groundwater. Based on plume maps presented in the *Second Quarter 2013 – Quarterly Status Report* on GeoTracker, total petroleum hydrocarbons as gasoline and tert-butyl alcohol extend off site and potentially onto the northwestern corner of the project site. This site is located upgradient from the northwestern corner of the project site and may have had impacted the environmental conditions at the project site.
2. Sentry Metal Forming at 16072 Gothard Street is located 0.15 mile southeast of the project site. According to the *Quarterly Monitoring and Sampling Report 3rd Quarter 2013*, a release of volatile organic compounds (VOCs) occurred aboveground around January 1965. Dissolved-phase VOC concentrations exceed California Maximum Contaminate Levels at four wells at the southern portion of the site. The site's environmental consultant, Pinnacle, states that the location and extent of the contaminant plume appears to be stable and has not shown any indications that significant plume growth is occurring. Because the site is downgradient from the project site, it is unlikely that this site has impacted the environmental conditions at the project site.
3. Sher Lane Retail Center Dry Cleaner site at 7672–7746 Edinger Avenue is located 0.35 mile southeast of the project site. A leak was discovered in February 2004. The contaminants of concern at this site are tetrachloroethylene and trichloroethylene. A soil vapor extraction treatment system was installed in December 2011 and is currently operational. Because of the distance from the project site and downgradient location, it is unlikely that this site has impacted the environmental conditions at the project site.
4. TOSCO – 76 No. 5280 at 6502 Edinger Avenue is located 0.50 mile southwest of the project site. In February 1990, soil samples were collected from beneath the three former USTs (two single-wall 10,000-gallon gasoline, one single-wall 500-gallon waste oil) locations. According to the *Low Threat Case Closure Request Report*, maximum detectable total petroleum hydrocarbon and benzene concentrations of 8,050 and 96.6 milligrams per kilogram, respectively, were detected in the soil. Given the distance from the project site and downgradient location, it is unlikely that this site has impacted the environmental conditions at the project site.

The EDR report identified eight sites located in Huntington Beach that were not mapped due to limited address information. Dudek further researched the location of each site. Two listings were found with 1 mile of the project site. These sites are not listed in any databases that indicate a release has occurred; therefore is unlikely to have impacted environmental conditions at the project site. The other six unmapped sites are located greater than 1 mile from the project site.

County of Orange Environmental Health

The County of Orange (County) Environmental Health has records for two closed LUST cases at the project site. Both of the cases were due to fuel releases from USTs formerly located near the Maintenance Yard on McFadden Avenue, east of Goldenwest Street (Figure 4.7-1).

1. A release was reported when two gasoline USTs were removed from the Maintenance Yard parking lot area in 1988. One UST was located in the northeast portion of the parking lot, and one UST was located in the southwest portion of the parking lot. A total of 10 groundwater monitoring wells were installed at the site along with a groundwater treatment system, which operated from April 1991 to June 1995. A total of 2,400,000 gallons of water was pumped and treated, including 125 gallons of fuel hydrocarbons. A 10-day vapor extraction test was conducted in 1994 and an additional 175 gallons of petroleum hydrocarbons were reportedly removed. In 1995, approximately 2,060 cubic yards of impacted soil was excavated from the former UST area. The excavated soil was transported off site for thermal treatment. Groundwater monitoring conducted through July 1999 showed that the dissolved-phase plume was stable. Site closure was granted in July 2000, but the Case Closure Summary reports indicate that some contaminated soil was left in place due to the proximity of adjacent aboveground and underground structures. Wells located in the immediate vicinity of the contaminated soil left in place did not show increasing concentrations of methyl tertiary butyl ether or benzene, further suggesting that the dissolved-phase plume is stable.
2. A release was reported in January 2010 after two USTs (2,500-gallon gasoline and 550-gallon diesel) were removed from the northwest portion of the Maintenance Yard parking lot. Soil sample results indicated the presence of petroleum hydrocarbons and VOCs. Approximately 66 tons of soil was excavated from the area immediately surrounding the former USTs in April 2010. The soil was transported off site for disposal. Five soil borings were conducted in May 2010 to determine the vertical and lateral extent of the impacts. Low concentrations of petroleum hydrocarbons and VOCs were detected in several of the soil borings and groundwater monitoring at the site resumed. The ten monitoring wells installed during the previous investigation (1988–2000) were sampled in May 2010 and January 2011. The January 2011 groundwater sampling results showed that low concentrations of petroleum hydrocarbons and VOCs were detected in four wells. The Case Closure Summary report states that the concentrations of petroleum hydrocarbons and

VOCs in groundwater were below the Regional Water Quality Control Board low risk levels and are not expected to impact sensitive receptors or adjacent properties.

Background Information Interview

Maintenance and Operations Director

Joseph Dowling, Director of Maintenance and Operations for GWC, was interviewed regarding background information and current uses of the subject property (Appendix H). The college has occupied the project site since 1965. Prior use of the site is unknown to Mr. Dowling. The project site has been used for industrial activities including gasoline station and motor repair facility. Two gasoline tanks are located on campus in the Central Plant Maintenance Yard (Figure 4.7-1). The tanks are both aboveground storage tanks—one 1,000-gallon gasoline and one 500-gallon diesel. Clean fill dirt has been brought onto the property for construction purposes. Stained soils have previously existed on the property. Mr. Dowling stated that an old underground gas tank leaked and soil was removed and tested. Based on the answers provided by Mr. Dowling, the underground gas tank leak is a potential environmental hazard on the project site.

Aerial Photography Review

EDR Historical Aerial Photographs

Historical aerial photographs from EDR were reviewed to determine whether evidence of recognized environmental conditions was present on the project site. Historical aerial photographs from 1938, 1947, 1953, 1963, 1972, 1977, 1990, 1994, 2005, 2009, 2010, and 2012 were reviewed. Aerial photographs indicate that between 1938 and 1953 the project site was used for agricultural purposes; therefore, residual pesticides and metals may be present in the soil.

Topographic Map Review

EDR Historical Topographic Maps

Historical topographic maps from EDR were reviewed to determine whether evidence of recognized environmental conditions was present on the project site. The historical topographic maps from 1901, 1902, 1934, 1935, 1942, 1950, 1951, 1965, 1972, and 1981 were reviewed.

Sanborn Maps

Sanborn fire insurance maps provide information regarding historical activities, such as property use, property address, chemical storage, and street configuration. The Sanborn maps of the project site indicated that the property was an unmapped property; therefore, no maps were reviewed.

4.7.1.2 Fire Hazards

City of Huntington Beach Fire Department

The City of Huntington Beach Fire Department (Fire Department) is responsible for fire prevention, enforcement of fire protection laws and ordinances, fire suppression, emergency medical services, hazardous materials response, and weed abatement. The Fire Department performs annual fire inspections in businesses and multifamily dwellings in the City of Huntington Beach (City). These inspections follow the California Fire Code (CFC), which has been adopted by the City. City businesses are inspected to ensure that these codes and regulations are followed. Performing such inspections minimizes the changes of fire and property damage while increasing public safety. Fire Department requirements relate to emergency vehicle access, fire suppression and notification systems, and soil remediation with structural protection, and may include special systems such as a liquid hydrogen facility (City of Huntington Beach 2014a). The Fire Department also manages the Hazardous Materials Disclosure Program within the City limits (City of Huntington Beach 2014b).

4.7.1.3 Airports

The closest airport to the project area is John Wayne International Airport, located approximately 12 miles south of the GWC campus, at 18800 MacArthur Boulevard in the City of Santa Ana. The project site is neither within the John Wayne International Airport area of influence nor in the vicinity of a private airstrip.

4.7.1.4 Emergency Action Plans

Orange County Emergency Operations Center

The Orange County Emergency Operations Center functions as the communication and coordination center for both the County and operational area emergency response organization and disaster preparedness, providing a central point for coordinating operational, administrative, and support needs of the County and operational area members. It also assists in coordination and communication between mutual aid coordinators and the state Office of Emergency Services during County-wide and statewide emergency response and recovery operations. In addition, the Orange County Emergency Operations Center may become responsible for managing the tactical operations of regional resources designed to more efficiently use the pooled resources of operational area members or external resources to benefit the operational area as a whole.

City of Huntington Beach EMHS Program

The City of Huntington Beach Emergency Management and Homeland Security (EMHS) Program is in place to prepare for and respond effectively to major emergencies. The EMHS program was created by Municipal Ordinance 8.60, which designates the city manager as the director of emergency services and the fire chief as the deputy director. The EMHS staff works under the direction of the Fire Department. The EMHS establishes and maintains an emergency management system that coordinates preparedness, response, and recovery phases for natural disasters and homeland security emergencies. It also works cooperatively with neighboring cities, the County Sheriff's Department Emergency Management Bureau, California Emergency Management Agency, Federal Emergency Management Agency (FEMA), and other government entities (City of Huntington Beach 2014c).

Coast Community College District Hazard Mitigation Plan

The Coast Community College District (District) Hazard Mitigation Plan includes resources and information to assist service area residents, public and private sector organizations, the college community (students, faculty, and staff), and other parties interested in future mitigation planning. This plan outlines actions taken to direct the District-wide efforts in risk reduction and loss prevention caused by natural hazard events. The strategies focused on a multitude of natural hazard issues with primary mitigating efforts directed at earthquake and liquefaction, flooding and storms, dam failure, high winds, urban fire, and tsunamis. The District will participate in the County-wide mitigation efforts and will partner with the cities where their facilities are located and with County-wide and regional efforts, working through the Orange County Emergency Management Organization and the Orange County Operational Area (District 2011).

GWC Emergency Response Plan

The GWC Emergency Response Plan is in place to ensure that GWC has a comprehensive and standardized system to manage and respond to an emergency. The system effectively and efficiently deploys resources to preserve life, property, and the environment as well as the social, economic, and political structure of the campus. The plan is a campus-level plan that guides the emergency response of GWC personnel and resources during a major disaster. It is the official emergency response plan for GWC and supersedes previous plans and precludes employee actions not in concert with the intent of the plan or the emergency organization created by it (GWC 2010).

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Toxic Substances Control Act and Resource Conservation and Recovery Act

The federal Toxic Substances Control Act of 1976 (15 U.S.C. 2601–2697) and the Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901–6992) established a program administered by the U.S. Environmental Protection Agency (EPA) for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (PL 98-616), which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. Under the authority of RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste is found in 40 CFR 260–299.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation. Title 49 of the Code of Federal Regulations reflects laws passed by Congress as of January 2, 2006.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; 42 U.S.C. 9601–9675), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

International Fire Code

The International Fire Code (IFC; ICC 2011), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what protective measures are required to protect life safety in relation to fire. These measures may include construction standards, separations from property lines, and specialized equipment.

To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

Federal Response Plan

The Federal Response Plan of 1999 (FEMA 1999) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

State

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 330 et seq.). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

California Hazardous Waste Control Act

The Department of Toxic Substances Control is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to, or in some cases, more stringent than federal requirements. While the Hazardous Waste Control Act is generally more stringent than RCRA, until the EPA approves the California hazardous waste control program (which outlines the regulations for the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Act lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls;

establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

According to 22 CCR 66001 et seq., substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or are being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which react violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66261.1 et seq.).

California Accidental Release Prevention Program

Similar to the EPA Risk Management Program, the California Accidental Release Prevention (CalARP) Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act Amendments.

California Health and Safety Code

In California, the handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code (Section 25500 et seq.). Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan. Hazardous materials business plans contain basic information about the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95 of the California Health and Safety Code establishes minimum statewide standards for hazardous materials business plans. Each business shall prepare a hazardous materials business plan if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in disclosable quantities greater than or equal to the following:

- Five hundred pounds of a solid substance
- Fifty-five gallons of a liquid
- Two hundred cubic feet of compressed gas
- A hazardous compressed gas in any amount (highly toxic with a Threshold Limit Value of 10 parts per million or less)
- Extremely hazardous substances in threshold planning quantities (California Health and Safety Code, Section 25503.5).

In addition, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California Health and Safety Code, facilities are also required to prepare a risk management plan and CalARP plan. The risk management plan and CalARP plan provide information about the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and mitigate potential impacts.

California Fire Code

The CFC is Chapter 9 of Title 24 of the California Code of Regulations. It was created by the California Building Standards Commission, and it is based on the IFC created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, air quality management districts, and County disaster response offices.

Local

The Hazardous Materials Disclosure Program

The Hazardous Materials Disclosure Program was established in response to two high profile accidents involving hazardous materials in 1984 and 1985. The program's primary function is to help emergency responders identify, monitor, and assist businesses using or storing hazardous materials, helping to reduce the probability of accidents involving hazardous materials. Having this information helps jurisdictions handle emergency incidents more effectively, which will reduce the impact of emergency incidents involving hazardous materials on surrounding business, public safety staff, and the surrounding community. As the City's primary emergency response organization, the Fire Department manages the Hazardous Materials Disclosure Program within the city limits. Each affected business is required to complete and submit a hazardous materials disclosure package to the Fire Department and is required to submit periodic updates. The Hazardous Materials Disclosure Program's staff verifies the accuracy of the information submitted by each business through a periodic inspection program and gives guidance to businesses on prevention strategies to reduce the potential for hazardous materials incidents. The program is coordinated through a contractual agreement with the Orange County Health Care Agency's Certified Unified Program Agency, which invoices and collects disclosure-related fees.

City of Huntington Beach General Plan

The following section identifies goals, objectives, policies, and programs for hazardous materials in the City. The City is dedicated to protecting life, property, and the environment, keeping it safe and damage free from the threat of hazardous materials. All feasible actions will be taken to ensure the safety of those residing and visiting the City (City of Huntington Beach 1996).

- **Goal HM 1:** Reduce, to the greatest degree possible, the potential for harm to life, property, and the environment from hazardous materials and hazardous waste.
    - **Objective HM 1.1:** Promote the proper handling, treatment and disposal of hazardous materials and hazardous waste.
        - **Policy HM 1.1.1:** Facilitate proper disposal of hazardous waste by providing means for safe disposal.
        - **Policy HM 1.1.2:** Ensure that all citizens have access to information regarding hazardous materials and waste handling, storage and disposal.

- **Policy HM 1.1.3:** Promote effective hazardous materials and hazardous waste management through community education.

o **Objective HM 1.2:** Avoid, to the extent feasible, risks from hazardous materials to sensitive uses such as hospitals, schools, residences, and environmentally sensitive areas.

- **Policy HM 1.2.1:** Support land use patterns that avoid development of hazardous waste generators adjacent to sensitive uses.
- **Policy HM 1.2.2:** Ensure that hazardous waste transportation activities are conducted in a manner that will minimize risks to sensitive uses.
- **Policy 1.2.3:** Support land uses of developments adjacent to or within close proximity of sensitive uses, which do not utilize, store, handle, or contain hazardous materials and/or waste, and which would create an unsafe, unhealthy, or hazardous condition for adjacent uses.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

1. ***Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.***
2. ***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.***
3. ***Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.***
4. ***Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would create a significant hazard to the public or the environment.***
5. ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.***
6. ***For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.***

7. ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.***
8. ***Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including, where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.***

Three thresholds of significance were analyzed in the Initial Study and determined to be "less than significant" or "no impact." These were Thresholds 5, 6, and 8. Because John Wayne International Airport is located approximately 12 miles south of the GWC campus, at 18800 MacArthur Boulevard in the City of Santa Ana, the project site is not located within an airport land use plan or within 2 miles of a public airport. The location of John Wayne International Airport in relation to the project site would not introduce safety hazards to people in the project area. There are also no private airstrips within the vicinity of the project site. Lastly, the campus is in an urban environment and would not be subject to wildland fires. Structural fires pose the biggest threat to the proposed project; however, construction would be required to adhere to federal, state, and local building code regulations regarding fire safety. As a matter of standard operating procedures, project elements would be designed to be consistent with regulations that have been enacted to prevent, manage, and mitigate the threat of urban fires, including the Uniform Fire Code, Title 14 of the California Code of Regulations, and County Fire and Building Codes. The GWC campus has an emergency response plan that includes safety protocols in the event of a natural or manmade disaster, including local and regional fire hazards. Compliance with such regulations would reduce potential impacts as a result of structural fires on the GWC campus. Because these thresholds were found to be less than significant or no impact, they are not analyzed further in this PEIR.

4.7.4 Impacts Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction Impacts

Relatively small amounts of commonly used hazardous substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents would be used during buildout of the proposed project on the GWC campus. These materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Consequently, use of these materials for their intended purpose would not pose a significant risk to the public or environment. Once construction is complete, fuels and other petroleum products would no longer remain on site. Accidental spills, leaks, fires, explosions, or pressure releases involving hazardous materials represent a potential threat to human health and the environment if not properly treated. Accident prevention and containment are the responsibility of the construction contractors, and provisions to properly manage hazardous substances and wastes are typically included in construction specifications. All contractors are required to comply with applicable laws and regulations regarding hazardous materials and hazardous waste management and disposal. In addition, the project would be required to comply with the State Water Resources Board Construction General Permit, which requires a stormwater pollution prevention plan and development of best management practices for all phases of construction and potential pollutants generated by the construction activities.

The proposed project involves the demolition of a number of buildings on campus. Due to the age of the buildings, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. Potential release of these hazardous materials may expose construction workers and the public to potential health hazards during demolition and disposal. Prior to demolition, a lead-based paint and asbestos survey will be required to be conducted by a Cal/OSHA-certified asbestos assessor and California Department of Health Services-certified lead-based paint assessor (MM-HAZ-1; see Section 4.7.5, Mitigation Measures).

One of the sites identified in the LUST database is located adjacent to the GWC campus currently has an open case status. Remediation is currently ongoing at the site for fuel hydrocarbon-impacted soil and groundwater, and the site is being evaluated for Low-Threat Closure. This site is located upgradient of the northwestern corner of the GWC campus and may have impacted the environmental conditions at the GWC campus.

Additionally, as identified in the Hazards Assessment (Appendix H), two USTs were identified to have potentially impacted the conditions on the GWC campus. Both cases were due to fuel releases to soil and both cases are closed. According to the GWC Vision 2020 Facilities Master Plan, one of the proposed renovation areas includes the Central Warehouse/Corporation Yard in the northwest portion of the campus, which is where both of the former USTs were identified. While the cases were closed by the County, impacted soils may still be present and therefore could be encountered during demolition, which would potentially expose construction workers and the public to hazardous conditions. Furthermore, based on review of the aerial photographs it is evident that the property was formerly used for agricultural purposes. Residual pesticides and metals may still be present in the soil, which could also present a potentially hazardous condition.

Therefore, transport or disposal of soils from the project site could create a significant hazard to the public or the environment. In order to reduce potential impacts from contaminated soils, preparation of a hazardous materials contingency plan would be required (MM-HAZ-2). Due to the potentially hazardous conditions that could result during demolition and disposal of older buildings and materials, or the transport and disposal of contaminated soils, impacts would be potentially significant and mitigation is required.

Operational Impacts

The types of hazardous materials associated with routine, day-to-day operation of the proposed project would include chemical reagents, solvents, fuels, paints, cleansers, and miscellaneous organics and inorganics that are used as part of building and grounds maintenance as well as vehicle maintenance. Chemical or hazardous material spills would be reported immediately to the District Environmental Health and Safety Office. Any hazardous waste on campus would be picked up and stored in a central location until a licensed hazardous waste contractor prepares the waste for segregation, packaging, and transport to an authorized hazardous waste disposal site. While the proposed project may result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated by construction and building and landscape maintenance activities, all hazardous materials would be required to be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 CCR 66001 et seq.). With compliance with these regulations, the transport, use, and disposal of these materials would not pose a significant hazard to the public or the environment. Thus, impacts related to creation of a significant hazard to the public or the environment as a result of the proposed project would be less than significant.

Would the project 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?

Construction Impacts

As described previously, construction activities on the project site would involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. These materials would be used and stored in designated construction staging areas within the project site boundaries. These materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. In addition, the project would be required to comply with the Construction General Permit, which requires a stormwater pollution prevention program and development of best management practices for all phases of construction and potential pollutants generated by the construction activities. Consequently, the presence of these materials and the use of the materials for their intended purpose would not pose a significant risk to the public or environment. However, accidental spills or unauthorized releases of hazardous materials during construction, including ground clearing and road and foundation excavation, would potentially result in soil contamination.

Due to the age of the buildings, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. Potential release of these hazardous materials may expose construction workers and the public to potential health hazards during demolition and construction activities. One of the sites identified in the LUST database is located adjacent to the GWC campus and currently has an open case status. Remediation is currently ongoing at the site for fuel hydrocarbon-impacted soil and groundwater and the site is being evaluated for Low-Threat Closure. This site is located upgradient of the northwestern corner of the GWC campus and may have impacted the environmental conditions at the GWC campus. Additionally, any proposed demolition or renovation of the Central Warehouse/Corporation Yard in the northwest portion of the campus would occur where two former USTs released fuel and were later removed in 1988 and 2014, respectively. Impacted soils may still be present and therefore could be encountered during demolition, which would potentially expose construction workers and the public to hazardous conditions. Furthermore, the property was formerly used for agricultural purposes and residual pesticides and metals may still be present in the soil, which would also present a potentially hazardous condition.

Implementation of Mitigation Measure (MM) HAZ-1 and MM-HAZ-2 would be required to reduce impacts related to accidental spills or unauthorized releases of hazardous materials, potential release of hazardous materials during the demolition of older buildings, and potential release of hazardous materials during ground-disturbing activities. Upon implementation of MM-HAZ-1 and MM-HAZ-2, impacts would be less than significant.

Operational Impacts

The types of hazardous materials associated with routine, day-to-day operation of the proposed project would include chemical reagents, solvents, fuels, paints, cleansers, and miscellaneous organics and inorganics that are used as part of building and grounds maintenance as well as vehicle maintenance. Chemical or hazardous material spills would be reported immediately to the District Environmental Health and Safety Office. Any hazardous waste on the project site would be picked up and stored in a central location until a licensed hazardous waste contractor prepares the waste for segregation, packaging, and transport to an authorized hazardous waste disposal site. While the proposed project may result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated by the expansion of existing or construction of new buildings on campus, all hazardous materials would be required to be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 CCR 66001 et seq.). With compliance with these regulations, reasonably foreseeable upset and accident conditions involving the release of hazardous materials would not pose a significant hazard to the public or the environment. Thus, impacts related to creation of a significant hazard to the public or the environment as a result of the proposed project would be less than significant.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction Impacts

The proposed project would occur within the GWC campus, which is located west of Interstate 405, bounded by McFadden Avenue to the north, Goldenwest Street to the west, and Edinger Avenue to the south. There are a number of schools in the same general area, including College View Elementary School, Circle View Elementary School, Public Elementary School, Demille Elementary School, and Marina High School. All of these schools are at a greater distance than 0.25 mile from the GWC campus. As discussed above, the proposed project would handle relatively small amounts of hazardous materials during construction of the proposed project (e.g., lubricants, solvents, and paints), cleaning and other maintenance products (used in the maintenance of buildings and equipment), and diesel and other fuels (used in construction and maintenance equipment and vehicles). These materials would be handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. In addition, the project would be required to be under the Construction General Permit, which requires a stormwater pollution prevention program and development of best management practices for all phases of construction and potential pollutants generated by the construction activities.

However, as previously discussed, due to the potential for accidental spills or unauthorized releases of hazardous materials, potential release of hazardous materials during the demolition of older buildings, and potential release of hazardous materials during ground-disturbing activities, impacts to surrounding schools would be potentially significant; therefore, implementation of MM-HAZ-1 and MM-HAZ-2 would be required.

Operational Impacts

As previously discussed, day-to-day operation of the proposed project would include the use of chemical reagents, solvents, fuels, paints, cleansers, and miscellaneous organics and inorganics that are used as part of building and grounds maintenance as well as vehicle maintenance. All chemicals used on site would be required to be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 CCR 66001 et seq.). With compliance with these regulations, impacts to nearby schools would be less than significant.

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

According to the Hazards Assessment (Appendix H), 54 sites were identified within the ASTM-specified distances from the GWC campus. Of the 54 sites, 27 are listed in databases associated with permitting and hazardous material storage or disposal. Based on the information provided in the databases for these sites, they have not impacted the environmental conditions on the GWC campus. Of these 27 sites, 23 were identified in the LUST database but have received case closure. Because these sites are more than 0.5 mile from the GWC campus and/or downgradient of the GWC campus and closed sites, they are unlikely to have impacted the environmental conditions on the GWC campus. The remaining 4 sites identified in the LUST database have an open case status. Three of these sites are unlikely to have impacted environmental conditions at the GWC campus because they are located downgradient from the campus. The fourth site identified in the LUST database as still open is located adjacent to the GWC campus. Remediation is currently ongoing at the site for fuel hydrocarbon-impacted soil and groundwater, and the site is being evaluated for Low-Threat Closure. This site is located upgradient of the northwestern corner of the GWC campus and may have impacted the environmental conditions at the GWC campus.

Two LUST listings were identified on the GWC campus. Dudek reviewed records at the County Environmental Health Department regarding the releases. Both cases were due to fuel releases to soil and both cases are closed. However, according to the GWC Vision 2020 Facilities Master Plan, the areas where the two releases occurred are located near areas of planned renovation. Furthermore, based on review of the aerial photographs, it is evident that property was formerly used for agricultural purposes. Residual pesticides and metals may still be present in the soil, which could also present a potentially hazardous condition. Since potentially hazardous conditions could exist due to disturbance of hazardous materials sites compiled pursuant to Government Code Section 65962.5, impacts would be potentially significant and implementation of MM-HAZ-1 and MM-HAZ-2 would be required.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The GWC Emergency Response Plan is in place to ensure that GWC has a comprehensive and standardized system to manage and respond to an emergency. The system effectively and efficiently deploys resources to preserve life, property, and the environment of the campus. The plan is a campus-level plan that guides the emergency response of GWC personnel and resources during a major disaster.

Construction Impacts

Construction of the proposed project could require the closure of adjacent and on-campus roadways during construction activities, which would have the potential to impact emergency evacuation procedures. A temporary construction plan may need to be prepared in order to identify alternative evacuation routes and to ensure that the construction site is designed in as safe a manner as possible. A primary goal of the plan would be to outline provisions for emergency vehicle movement at all times. The proposed project would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, state, and/or federal requirements related to emergency access and evacuation plans. Permitting requirements mandate that the Fire Department and the Division of the State Architect perform an access compliance review and a fire and life safety review, respectively, prior to approval of individual project drawings and specification documents (District 2007). Therefore, emergency access would be ensured and the proposed project would not interfere with an adopted emergency response or evacuation plan. Impacts would be less than significant.

Operational Impacts

The proposed project may result in additional traffic on surrounding roadways. Additional traffic would increase the difficulty of evacuating the campus population in the event of an emergency. However, the proposed project is not anticipated to significantly impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Permitting requirements mandate that the Fire Department and the Division of the State Architect perform an access compliance review and a fire and life safety review, respectively, prior to approval of individual project drawings and specification documents (District 2007). Therefore, emergency response and evacuation as a result of the proposed project would be adequately evaluated in order to ensure the safest possible conditions for students, staff, and visitors at the GWC campus. Implementation of the proposed project would not interfere with an adopted emergency response or evacuation plan and impacts would be less than significant.

4.7.5 Mitigation Measures

The following mitigation measures would reduce impacts to hazards and hazardous materials to less than significant.

MM-HAZ-1 Prior to demolition permit issuance, a lead-based paint and asbestos survey shall be conducted by a California Occupational Safety and Health Administration-certified asbestos assessor and California Department of Health Services-certified lead-based paint assessor. The survey shall determine whether any on-site abatement of lead-based paint or asbestos containing materials is necessary. In addition, the survey shall include an abatement work plan prepared in compliance with local, state, and federal regulations for any necessary removal of such materials. The work plan shall include a monitoring plan to be conducted by a qualified consultant during abatement activities to ensure compliance with the work plan requirements and abatement contractor specifications. Demolition plans and contract specifications shall incorporate any necessary abatement measures for the removal of materials containing lead-based paint and asbestos. . The measures shall be consistent with the abatement work plan prepared for the proposed project and conducted by a licensed lead/asbestos abatement contractor. If the survey and abatement plans have already been conducted/prepared, then these documents need to be reviewed and implemented prior to demolition of any buildings.

In addition to an asbestos and lead paint survey, a qualified environmental specialist shall inspect the site buildings for the presence of polychlorinated biphenyls, mercury, and other hazardous building materials prior to demolition. If found, these materials shall be managed in accordance with the Metallic Discards Act of 1991 (Public Resources Code, Sections 42160 et seq.) and other state and federal guidelines and regulations. Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with the Metallic Discards Act, particularly Section 42175, Materials Requiring Special Handling, for the removal of mercury switches, polychlorinated biphenyl-containing ballasts, and refrigerant.

MM-HAZ-2 In the event that grading, construction, or operation of proposed facilities encounters evidence of contamination, underground storage tanks, or other environmental concerns, a hazardous materials contingency plan shall be followed. The plan shall (1) specify measures to taken to protect worker and public health and safety, and (2) specify measures to be taken to manage and remediate wastes. Although there is potential for soil contamination elsewhere on the property, the plan should highlight the current and former underground storage tank areas as potential areas of soil contamination. The plan should include the following:

- Identification of the current and former underground storage tank locations and identification of the known soil contamination left in place near the former underground storage tank(s)
- Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern
- Procedures for limiting access to the contaminated area to properly trained personnel

- Procedures for notification and reporting, including internal management and local agencies (Huntington Beach Fire Department, County Environmental Health Department, air pollution control district, and others), as needed
- A worker health and safety plan for excavation of contaminated soil
- Procedures for characterizing and managing excavated soils
- Procedures for certification of completion of remediation.

In addition to awareness of the contingency plan, grading and excavation staff shall be qualified or undergo training on how to identify suspected contaminated soil and underground storage tanks.

4.7.6 Level of Significance After Mitigation

Implementation of the mitigation measures listed above would reduce potentially significant impacts associated with hazards and hazardous materials to less than significant.

4.7.7 Cumulative Impacts

Cumulative impacts related to hazards and hazardous materials would result from projects that combine to increase exposure to hazards and hazardous materials. As described in Sections 4.7.1 through 4.7.6, the proposed project would have less-than-significant impacts with mitigation measures incorporated. The proposed project would comply with all federal, state, and local regulations pertaining to the use, transport, and release of hazardous materials. The potential release of hazardous materials during demolition of older buildings and ground-disturbing activities would be reduced in compliance with the mitigation measures outlined in Section 4.7.5. Although cumulative projects have the potential to result in significant impacts to hazards and hazardous materials, these projects would also be subject to federal, state, and local regulations that would help reduce potential impacts. Cumulative projects may also require similar mitigation measures to help further reduce potential impacts. Therefore, the proposed project combined with the listed cumulative projects would not result in a cumulative significant impact related to hazards and hazardous materials.

4.7.8 References

8 CCR, Parts 330–344.90. California Occupational Safety and Health Regulations.

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

19 CCR 2735.1–2785.1 and Appendix A. California Accidental Release Prevention (CalARP) Program Detailed Analysis.

22 CCR 66001–69407.2. Environmental Health Standards for the Management of Hazardous Waste.

24 CCR, Chapter 9. California Fire Code.

40 CFR, Parts 260–299. Hazardous Waste Management System: Implementation of Subtitles C and I of the Resource Conservation and Recovery Act.

49 CFR, Parts 101–177. Hazardous Materials Transportation Act. January 3, 1975.

15 U.S.C. 2601–2697. Toxic Substances Control Act of 1976.

42 U.S.C. 6901–6992. Resource Conservation and Recovery Act (RCRA) of 1976.

42 U.S.C. 9601–9675. Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

California Government Code, Sections 8550–8668. California Emergency Services Act.

California Government Code, Section 65962.5. “Cortese List” Statute.

California Health and Safety Code, Sections 25100–25258.2. Hazardous Waste Control Act.

California Health and Safety Code, Sections 25500–25543.3. Hazardous Materials Management.

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Public Resources Code, Sections 42160–42185. Metallic Discards Act of 1991.

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SOURCE: Bing Maps 2014

FIGURE 4.7-1

Approximate Location of On-Site Underground Storage Tanks (USTs)

7910.0001

Golden West College Vision 2020 Facilities Master Plan Program Environmental Impact Report

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4.8 HYDROLOGY AND WATER QUALITY

This section evaluates the potential impacts of implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project) on hydrology and water quality. This evaluation includes an assessment of the direct, indirect, short-term, and long-term effects of the proposed project on surface water, flow patterns, flow rates, and water quality. The evaluation is based on data, publications, and resources provided by public agencies such as the State Water Resources Control Board (SWRCB), the Santa Ana Regional Water Quality Control Board (RWQCB), and the Orange County Storm Water Program.

4.8.1 Existing Conditions

GWC, like most of Huntington Beach, is located on flat terrain (City of Huntington Beach 1996). The hydrology of the area is largely controlled by a network of stormwater inlets, catch basins, underground pipes, and channels that convey stormwater runoff from roofs, streets, and sidewalks to regional flood control channels and eventually out to coastal bays and estuaries and the Pacific Ocean.

Regional Hydrography

The climate within coastal central Orange County is characterized by mild winters and warm summers. According to the Western Regional Climate Center, the closest weather station to the project site is Newport Beach Harbor, which has recorded average annual temperatures between 54.6 degrees Fahrenheit (°F) and 67.8°F and average annual precipitation of 11 inches (WRCC 2013). With the exception of rare, localized, summertime convective storms, the majority of precipitation occurs between the months of November and April, predominantly in the form of light- to moderate-intensity rain events lasting no more than 1 to 2 days.

GWC is located within the jurisdiction of the Santa Ana RWQCB (Region 8), which administers a water quality control plan (Basin Plan) and other water quality programs within the Santa Ana River Basin. The Santa Ana River Basin is a 2,800-square-mile area located roughly between Los Angeles and San Diego that encompasses a group of connected inland basins and open coastal basins drained by surface streams that flow in a generally southwesterly direction to the Pacific Ocean (Figure 4.8-1). The boundaries of the Santa Ana River Basin are demarcated partly by physical watershed divides and partly by administrative boundaries (i.e., Orange County/Los Angeles County line) (Santa Ana RWQCB 2008). The Santa Ana RWQCB divides the Santa Ana River Basin into hydrologic units, hydrologic areas, and hydrologic subareas for the purpose of water quality planning. GWC is located within the Santa Ana River Hydrologic Unit, the Lower Santa Ana River Hydrologic Area, and the East Coastal Plain Hydrologic subarea (i.e., Hydrologic Unit No. 801.110). Similar to the Santa Ana River Basin, these hydrologic planning areas are generally but not necessarily coincident with regional/local watershed boundaries.

Although the site is within the Santa Ana River Hydrologic Unit, surface water runoff does not actually flow to the Santa Ana River; rather, drainage is directed to Bolsa Bay and Anaheim Bay, which are located roughly 20 miles north of the Santa Ana River's outlet to the Pacific Ocean.

Watershed Characteristics

GWC is on the coastal portion of the Santa Ana River Basin in an area that was formerly a vast alluvial floodplain. The coastal watersheds within Orange County have been extensively altered by urban development, such that surface water drainage has generally been directed to underground stormwater pipelines. These pipelines discharge to concrete, earthen, or otherwise engineered channels for eventual delivery to the Pacific Ocean, or in the case of the project area, to Bolsa Bay and Anaheim Bay. The highly urbanized nature of the watersheds poses several problems from both a hydrologic and water quality standpoint. For example, peak flows within the watershed have faster arrival times and are higher in magnitude than would occur under natural conditions in response to large rain events. The wide coverage of impervious surfaces also reduces the extent to which rainfall infiltrates into the ground and recharges the underlying groundwater aquifer.

According to the Orange County Storm Water Program, the project site is within the Anaheim Bay–Huntington Harbour watershed. This watershed covers an area of 80.35 square miles in the northwest corner of Orange County (County of Orange 2011). It includes portions of the Cities of Anaheim, Cypress, Fountain Valley, Garden Grove, Huntington Beach, Los Alamitos, Santa Ana, Seal Beach, Stanton, and Westminster. Its main tributaries are Bolsa Chica Channel, East Garden Grove–Wintersburg Channel, and Westminster Channel. The watershed has been urbanizing rapidly over the past few decades with large tracts of agricultural land converted into commercial and residential uses. Other land uses include light industrial, county and state open spaces, and federal properties (County of Orange 2011).

On-Site Drainage Patterns

Surface water runoff from the project site consists primarily of surface water runoff generated within the boundaries of GWC, with minimal off-site surface flow contribution. The GWC campus is made up of a combination of pervious and impervious surfaces that influence where and how quickly stormwater collects and drains. Based on vegetation mapping of the site, the impervious surfaces on site, which consist of structures, paved walkways, and parking lots, make up approximately 61% of the surfaces on campus, with the rest consisting of landscape areas, vacant lots, and/or isolated patches of ruderal grasses, eucalyptus (*Eucalyptus* sp.), and scrub (Appendix C). Surface water runoff due to storm events flows down roof drains; across pavement; and into curbs, gutters, and inlets to the City of Huntington Beach's (City's) municipal storm drain system, which consists of a 63- to 75-inch underground storm drain that runs through the campus from north to south (OCFCD 2000). This underground pipe collects and conveys water about a mile south to the East Garden Grove–Wintersburg Channel, which is an earthen flood control channel maintained by the Orange County Flood Control District (OCFCD 2000). The East Garden Grove–Wintersburg Channel runs in a generally westerly direction until it discharges to Bolsa Bay, which is connected to the Pacific Ocean through Huntington Harbour and Anaheim Bay (Figure 4.8-2).

As shown in Table 4.8-1, the present or potential beneficial uses designated within the Anaheim Bay–Huntington Harbour watershed by the Santa Ana RWQCB are as follows: water contact recreation; non-contact water recreation; commercial and sport fishing; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and development; marine habitat; and shellfish harvesting. The present or potential beneficial use of navigation is also designated in the Basin Plan for Anaheim Bay, Huntington Harbour, and ocean waters. The meaning and purpose of "beneficial uses" are further discussed in Section 4.8.2.

Table 4.8-1
Beneficial Uses of Receiving Water Bodies

Beneficial Use	Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters	Bolsa Bay	Sunset Bay – Huntington Harbour	Anaheim Bay	Ocean Waters (at Sunset and Seal Beaches)
Municipal and domestic supply (MUN)	+	+	+		+
Industrial (IND)					X
Navigation (NAV)			X	X	X
Water contact recreation (REC 1)	X	X	X	X	X
Non-contact water recreation (REC 2)	X	X	X	X	X
Commercial and sports fishing (COMM)	X	X	X		X
Preservation of biological habitats of special significance (BIOL)		X		X	
Wildlife habitat (WILD)	X	X	X	X	X
Rare, threatened or endangered species (RARE)		X	X	X	X
Spawning, reproduction and development (SPWN)		X	X	X	X
Marine habitat (MAR)	X	X	X	X	X
Shellfish harvesting (SHEL)		X			X
Estuarine habitat (EST)					

Source: Santa Ana RWQCB 2008.
Notes:
X = Present or potential beneficial use
\+ = Water body has been excepted specifically from the MUN designation in accordance with the criteria specified in the Sources of Drinking Water Policy.

Surface Water Quality

Several water bodies within the Anaheim Bay–Huntington Harbour watershed are designated as “water quality-limited” for water quality impairments under the federal Clean Water Act’s (CWA’s) Section 303(d) (Table 4.8-2). Being “water quality-limited” means that a water body is “not reasonably expected to attain or maintain water quality standards” without additional regulation. The law requires that the U.S. Environmental Protection Agency develop total maximum daily loads (TMDLs) for each impaired water body in the nation. The TMDLs specify the maximum amount of a pollutant a water body can receive and still meet water quality standards. A TMDL may also include a plan for bringing an impaired water body back within standards.

The Santa Ana RWQCB has set water quality objectives for all surface waters in the Santa Ana River Basin for constituents including ammonia, bacteria, biostimulatory substances, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity (Santa Ana RWQCB 2008). In addition, specific objectives for concentrations of chemical constituents are applied to bodies of water based on their designated beneficial uses (Santa Ana RWQCB 2008).

The most recently approved Section 303(d) List of Water Quality Limited Segments, as listed in the 2010 Integrated Report (SWRCB 2014), lists the terminal segment of the East Garden Grove–Wintersburg Channel, Huntington Harbour, and Anaheim Bay as impaired water bodies under Section 303(d) of the CWA. Pursuant to listing, the Santa Ana RWQCB will be tasked with developing TMDLs for the listed impairments, such as ammonia, chlordane, pathogens, polychlorinated biphenyls (PCBs), and metals (e.g., copper, lead, and nickel). There are currently no TMDLs approved by the U.S. Environmental Protection Agency that apply to the impaired water bodies. These impairments are relevant to the proposed project because runoff from the site (along with runoff from the whole watershed) eventually discharges into these waters.

Table 4.8-2
CWA Section 303(d) Impairments

Name	Pollutant/Stressor	Potential Sources	TMDL Status	Year
East Garden Grove–Wintersburg Channel	Ammonia	Source unknown	Scheduled	2021

Table 4.8-2
CWA Section 303(d) Impairments

Name	Pollutant/Stressor	Potential Sources	TMDL Status	Year
Huntington Harbour	Chlordane	Source unknown	Scheduled	2019
	Copper	Source unknown	Scheduled	2019
	Lead	Source unknown	Scheduled	2019
	Nickel	Source unknown	Scheduled	2019
	Pathogens	Urban runoff / storm sewers	Scheduled	2019
	PCBs	Source unknown	Scheduled	2019
	Sediment toxicity	Source unknown	Scheduled	2019
Anaheim Bay	Dieldrin (tissue)	Source unknown	Scheduled	2019
	Nickel	Source unknown	Scheduled	2019
	PCBs	Source unknown	Scheduled	2019
	Sediment toxicity	Source unknown	Scheduled	2019

Source: SWRCB 2014.
Notes: CWA = Clean Water Act; TMDL = total maximum daily load; PCBs = polychlorinated biphenyls

Groundwater Hydrology and Quality

The Coastal Plain of the Orange County Groundwater Basin (Orange County Basin) underlies a coastal alluvial plain in the northwestern portion of Orange County. The basin is bounded by consolidated rocks exposed on the north in the Puente and Chino Hills, on the east in the Santa Ana Mountains, and on the south in the San Joaquin Hills. The basin is bounded by the Pacific Ocean on the southwest and by a low topographic divide approximated by the Orange County–Los Angeles County line on the northwest. The basin underlies the lower Santa Ana River watershed. The Orange County Basin is dominated by a deep structural depression containing a thick accumulation of fresh water-bearing interbedded marine and continental sand, silt, and clay deposits (DWR 2004).

The Orange County Basin is a three-aquifer system consisting of shallow, principal, and deep aquifers. As of 1998, the total groundwater storage capacity of the Orange County Basin was estimated at 38 million acre-feet (DWR 2004). The upper aquifer system consists of Holocene alluvium, older alluvium, stream terraces, and the upper Pleistocene deposits represented by the La Habra Formation (DWR 2004). The average thickness of the upper aquifer system is 800 feet (DWR 2004). The upper aquifer system contains a lower percentage of water-bearing strata in the northwest and coastal areas since clays and clayey silts dominate. According to the City's General Plan Map EH-3, the depth to water in the area is approximately 5–10 feet below ground surface (City of Huntington Beach 1996).

Flood Hazards

Flood zones for the 100-year and 500-year floods are mapped in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. Storm drainage and flood control for the existing project site are accommodated by a combination of City and County of Orange (County) facilities. According to the 2014 hazards assessment completed for this project by Dudek (Appendix H), the project site is not within a 100-year flood hazard zone. According to the City's General Plan Map EH-11, the project site may be inundated by less than 1 foot in a 500-year storm event (City of Huntington Beach 1996). Localized urban flooding such as ponding can also occur in instances where heavy rains clog storm drains with debris or when their capacity is exceeded.

4.8.2 Relevant Plans, Policies, and Ordinances

Federal and State Water Quality Objectives

The statutes that govern the project activities that may affect water quality are the federal CWA (33 U.S.C. 1251 et seq.) and the Porter–Cologne Water Quality Control Act (Porter–Cologne Act; California Water Code, Section 13000 et seq.). These acts provide the basis for water quality regulation in the project area.

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. Each RWQCB adopts and implements a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code, Sections 13240–13247). These plans and policies filter down to the local level because the Basin Plans and National Pollutant Discharge Elimination System (NPDES) permits require cities and counties to incorporate water quality protection measures into their ordinances and permitting processes. The project area is located within the jurisdiction of the Santa Ana RWQCB.

Table 4.8-3 lists the major water quality-related regulations that apply to most projects with land-disturbing activity proposed within the County. These permits are issued statewide by the SWRCB and implemented throughout the state by the RWQCBs; other permits, like dewatering or de minimus permits, are issued and implemented on a region-by-region basis. Additionally, the RWQCBs issue Municipal Separate Storm Sewer System (MS4) permits to the County and cities. These permits include additional requirements for managing construction sites and require integration of drainage designs that match predevelopment runoff volumes.

Table 4.8-3
State and Regional Water Quality-Related Permits and Approvals

Program/Activity	Order Number/NPDES Number	Permit Name	Affected Area
Construction Stormwater Program	2009-0009-DWQ/ CAS000002	National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)	Statewide
Municipal Stormwater Program	R8-2009-0030/ CAS618030	Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region (MS4 Permit for Santa Ana Region)	Santa Ana Region within Orange County
Non-Stormwater Discharge To Land	2003-0003-DWQ	Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (WDR for Discharge to Land)	Statewide
Non-Stormwater Discharge to Surface Water	R8-2009-0003/ CAG998001	General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality (de minimus Waste Discharge Requirement (WDRs) for Santa Ana Region)	Santa Ana Region within Orange County

Beneficial Use and Water Quality Objectives (CWA, Section 303)

The Santa Ana RWQCB is responsible for the protection of the beneficial uses of waters within southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The Santa Ana RWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Basin Plan to implement plans, policies, and provisions for water quality management (Santa Ana RWQCB 2008). The Basin Plan also includes water quality objectives that protect the identified beneficial uses; collectively, the beneficial uses and water quality objectives make up the water quality standards for the region.

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters" (33 U.S.C. 1251(a)). Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. California is required to establish TMDLs for each pollutant/stressor. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards.

The existing and potential beneficial uses designated in the Basin Plan, water quality impairments, and relevant TMDLs within Bolsa Bay, Huntington Harbour, and Anaheim Bay are described in Section 4.8.1, Existing Conditions, and shown in Tables 4.8-1 and 4.8-2.

Water Quality Certification (CWA, Section 401)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers Section 404 permit) obtain certification from the state that the discharge would comply with other provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA Section 404.[1] For the project area, the Santa Ana RWQCB must provide the water quality certification required under Section 401 of the CWA. Water quality certification under Section 401 of the CWA, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

According to the 2013 Biological Resources Letter Report prepared by Dudek (included as Appendix C), there were no jurisdictional wetlands, non-wetland waters, or riparian habitats identified in or across the project site. Therefore, implementation of the proposed project would not result in impacts to state and federally jurisdictional waters (and wetlands) or riparian habitat. Therefore, it is not anticipated that a permit under Section 404 of the CWA or certification per Section 401 will be needed.

NPDES Program (CWA, Section 402)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES program. In November 1990, the U.S. Environmental Protection Agency published final regulations that also establish stormwater permit application requirements for discharges of stormwater to waters of the United States from construction projects that encompass 5 acres or more of soil disturbance. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES program to address stormwater discharges from construction sites that disturb land equal to or greater than 1 acre and less than 5 acres (small construction activity). The regulations also require that stormwater discharges from small MS4s be regulated by an

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[1] The term "waters of the United States" as defined in the Code of Federal Regulations (40 CFR 230.3(s)) includes all navigable waters and their tributaries.

NPDES permit. The primary NPDES permits applicable to similar types of projects in the region are described below.

- ***Construction General Permit (SWRCB Order 2009-09-DWQ (as amended by 2010-0014-DWQ and 2012-006-DWQ)).*** For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (SWRCB Order 2009-0009-DWQ, or Construction General Permit) in order to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs 1 acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify best management practices (BMPs) designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the Section 303(d) list for sediment.

  If the land disturbance associated with the proposed project would be more than 1 acre, the GWC will be subject to the requirements of the Construction General Permit. The SWRCB requires that when determining the ground disturbance of a proposed project, the whole of the action must be included; projects that are phased or involve components that are geographically separated must be considered together when part of the same plan of development (the "common plan of development"). Broad planning documents, such as land use master plans, conceptual master plans, or vision plans, are not considered common plan of development plans due to their conceptual nature. As projects proceed beyond the conceptual stages, however, and demolition plans, grading plans, building plans, and/or contract documents are developed, the boundaries of the common plan of development would be used to determine whether coverage under the Construction General Permit is required.

- ***Orange County MS4 Permit (Santa Ana RWQCB Order No. R8-2009-0030 (as amended by Order No. R8-2010-0062)).*** Within the purview of the MS4 permit requirements, the municipalities (permittees) of Orange County have jurisdiction over and/or maintenance responsibility for stormwater conveyance systems that they own. The 2007 Drainage Area Management Plan (DAMP) was developed by the permittees in response to the requirements of the MS4 permit. It contains model programs and guidance for complying with the MS4 permit requirements, including a model water quality management plan (WQMP) for use by each permittee in developing its individual stormwater programs. To describe in detail how the model programs of the 2007 DAMP are being implemented on a local level, each permittee, including the City, has adopted a Local Implementation Plan. General plan policies and ordinance codes (water quality, grading, fats/oils/grease) have been adopted and/or updated to meet MS4 permit requirements and establish necessary legal authority. This combination of programs, policies, and legal authority is used to ensure that pollutant loads resulting from urbanization are properly controlled and managed.

The MS4 permit identifies the East Garden Grove–Wintersburg Channel as an inland surface stream. The Coast Community College District (District) is not one of the listed permittees and thus is not technically subject to the requirements of the Orange County MS4 permit. However, organizations such as the GWC, which are not permittees under the Orange County MS4 permit, are encouraged to participate in implementing the Orange County NPDES Storm Water Program. The Santa Ana RWQCB has the discretion and authority to require certain non-cooperating entities to participate in this area-wide permit or obtain individual stormwater discharge permits, pursuant to 40 CFR 122.26(a).

- ***General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ):*** On April 30, 2003, as part of Phase II of the MS4 Program, the SWRCB issued a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities (population less than 100,000), including non-traditional Small MS4s, which are facilities such as military bases, public educational campuses, prison and hospital complexes. The Phase II Small MS4 General Permit covers Phase II permittees statewide; listed non-traditional permittees include the Orange County Fairgrounds but does not include the GWC campus. On February 5, 2013, the Phase II Small MS4 General Permit was adopted and became effective on July 1, 2013.

Porter–Cologne Water Quality Control Act

The Porter–Cologne Act (codified in the California Water Code, Section13000 et seq.) is the overarching water quality control law for California. As mentioned previously, it is implemented by the SWRCB and the nine RWQCBs. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs operations. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state[2] could cause pollution or nuisance, including impacts to public health and the environment. Evident from the preceding regulatory discussion, the Porter–Cologne Act and the CWA overlap

2 “Waters of the state” are defined in the Porter–Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050(e)).

in many respects, as the entities established by the Porter–Cologne Act are in many cases enforcing and implementing federal laws and policies. However, there are some regulatory tools that are unique to the Porter–Cologne Act.

- ***Dredge/Fill Activities and Waste Discharge Requirements (WDRs).*** Actions that involve, or are expected to involve, discharge of waste are subject to water quality certification under Section 401 of the CWA (e.g., if a federal permit is being sought or granted) and/or WDRs under the Porter–Cologne Act. Chapter 4, Article 4 of the Porter–Cologne Act (California Water Code, Section 13260–13274) states that persons discharging or proposing to discharge waste that could affect the quality of waters of the state (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (i.e., waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as isolated wetlands), WDRs are required and are issued exclusively under state law. WDRs typically require many of the same BMPs and pollution control technologies as required by NPDES-derived permits. Further, the WDRs application process is generally the same as for CWA Section 401 water quality certification, though in this case, it does not matter whether the particular project is subject to federal regulation.

  The Statewide General Waste Discharge Requirements for Discharge to Land (2003-0003-DWQ), for example, applies to projects that discharge to land where the discharge has a low threat to water quality. These are typically low volume discharges with minimal pollutant concentrations, such as well water discharges, small temporary dewatering projects, and hydrostatic testing discharges of clear water. The primary difference between this permit and the permits under the NPDES programs described previously is the destination of the water. This permit regulates discharges to land while the previous sections discuss discharges to storm drains or receiving waters. For instance, if a dewatering discharge will be piped to an infiltration basin during construction, this permit should be used.

SBx7-7

SBx7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package. It seeks to implement water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. As discussed previously, the bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SBx7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier still has to report the water use target for its individual service area. The bill also includes reporting requirements in the 2010, 2015, and 2020 Urban Water Management Plans.

Local

Northern Orange County Integrated Regional Watershed Management Plan

The Northern Orange County Watershed Management Area encompasses 241,000 acres (376 square miles) in Northern Orange County. The Northern Orange County Watershed Management Area is bordered by Los Angeles County to the north and west and by San Bernardino County to the east. The three watersheds in this area are the San Gabriel River/Coyote Creek, Anaheim Bay–Huntington Harbour, and the Santa Ana River. The purpose of the Northern Orange County Integrated Regional Watershed Management Plan is to facilitate effective continued collaboration on and create opportunities to leverage agency resources for solution-oriented water resource projects and programs within north Orange County.

The Northern Orange County Integrated Regional Watershed Management Plan supports state priorities that relate to the California Water Plan Update 2009, the CALFED Bay–Delta Program, the Department of Water Resources Water Recycling Task Force Recommendations, the SWRCB's Recycled Water Policy, Governor Schwarzenegger's 20×2020 Water Conservation Plan of 2010, greenhouse gas emissions reduction goals of AB 32, the Water Desalination Task Force Recommendations, the California Ocean Plan, the California Watershed Action Plan, the TMDL list, the comprehensive Orange County DAMP, and the RWQCBs' Watershed Management Initiative Chapters. The Northern Orange County Integrated Regional Watershed Management Plan does this through the integration of projects and programs that incorporate a wide range of water management strategies. Beneficial effects from implementation of proposed projects and programs will contribute to the goals and objectives of the statewide, regional, and local priorities.

City of Huntington Beach

Title 14, Water and Sewers, Chapter 14.25, Stormwater and Urban Runoff Management, of the Huntington Beach charter and codes defines specific requirements for new development and significant redevelopment projects as well as BMPs to be applied during a construction project. Specifically, the water quality ordinance requires all new development and significant redevelopment within the City to be undertaken in accordance with the Orange County DAMP. The City's Municipal Code defines new development as all public and private residential, industrial, commercial, retail, and other nonresidential construction projects or grading for future construction for which either a discretionary land use approval, grading permit, building permit, or nonresidential plumbing permit is required. The Municipal Code defines significant redevelopment as the rehabilitation or reconstruction of public or private residential (whether single-family, multiunit, or planned unit development), industrial, commercial, retail, or other nonresidential structures for which either a discretionary land use approval, grading permit, building permit, or non-residential plumbing permit is required.

Prior to the issuance by the City of a grading permit, building permit or non-residential plumbing permit for any new development or significant redevelopment, the development services department and the public services department shall review the project plans and impose terms, conditions, and requirements on the project. Development and implementation of a WQMP following the City's Municipal Code regulations is required during the entirety of a project.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the project would:

1. ***Violate any water quality standards or waste discharge requirements.***
2. ***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).***
3. ***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.***
4. ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.***
5. ***Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.***
6. ***Otherwise substantially degrade water quality.***
7. ***Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.***

8. ***Place within a 100-year flood hazard area structure which would impede or redirect flood flows.***
9. ***Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.***
10. ***Inundation by seiche, tsunami, or mudflow.***

Thresholds of Significance 7 through 10 were eliminated from further consideration in the Initial Study. The proposed project is not within a 100-year flood hazard zone or other flood zone (such as dam or levee failure zone), and it is sufficiently elevated relative to the ocean and not next to a large body of water; therefore, it would not be subject to substantial flooding-related hazards. Additionally, the project site is also not located near hillside areas that would be subject to mudslides. Any flooding that does occur would be limited to shallow nuisance flooding resulting from blocked storm drains and would not represent a public safety hazard or substantially expose structures. For these reasons, the impacts of the project with respect to flood-related risks would be less than significant.

4.8.4 Impacts Analysis

This section evaluates the potential impacts associated with construction and operation of the proposed project on hydrology and water quality. Each significance criterion in Appendix G of the CEQA Guidelines is listed in this section in bold. Significance criteria that have similar impact mechanisms, and thus, would have similar discussion, analyses, and conclusions are grouped so as to avoid redundant or overlapping analyses.

Would the proposed project violate any water quality standards or waste discharge requirements?

Would the proposed project otherwise substantially degrade water quality?

Impacts to water quality through exceedance of water quality standards, non-conformance with WDRs, or by other means can potentially result from the short-term effects of construction activity (e.g., erosion and sedimentation due to land disturbances, uncontained material and equipment storage areas, improper handling of hazardous materials) as well as long-term effects of landscaping, circulation improvements, utility infrastructure, and structural designs (e.g., alteration of drainage patterns and/or increases in impervious surfaces). This discussion generally focuses on the short-term effects of construction activities and addresses the different types of water quality impacts in terms of the type of construction-related effects including stormwater runoff from construction sites, management of demolition activities and debris, and non-stormwater discharges. Long-term effects related to changes in topography and impervious surfaces are addressed under Thresholds 3 and 4 because they address the potential for alteration of drainage patterns to have adverse effects on erosion and/or flooding.

Stormwater Runoff

Construction activities such as grading, excavation, and trenching for construction, renovation, and demolition of facilities discussed in the Vision 2020 Facilities Master Plan would result in disturbance of soils at the project site. Construction site runoff can contain soil particles and sediments from these activities. Dust from construction sites can also be transported to other nearby locations where the dust can enter runoff or water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites can also enter runoff. Typical pollutants could include petroleum products and heavy metals from equipment, and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of construction materials could result in water quality degradation if runoff containing the sediment entered receiving waters in sufficient quantities to exceed water quality objectives. Impacts from construction-related activities would generally be short term and of limited duration.

Because implementation of the Vision 2020 Facilities Master Plan would collectively require construction activities resulting in a land disturbance of more than 1 acre, GWC is required to obtain the Construction General Permit, which pertains to pollution from grading and project construction. Compliance with the permit requires the District to file a Notice of Intent with the SWRCB and prepare a SWPPP prior to construction. The SWPPP would incorporate BMPs in order to prevent, or reduce to the greatest feasible extent, adverse impacts to water quality from erosion and sedimentation. A copy of the applicable SWPPP would be kept at the construction site and be available for County/Division of the State Architect (DSA) review on request.

The following list includes examples of treatment control BMPs to employ during construction; although these would vary based on the nature of construction activities, the characteristics of the site, and the existing impairments applicable to receiving waters (these features will appear as notes on final design plans):

- Silt fences installed along limits of work and/or the project construction site
- Stockpile containment (e.g., visqueen, fiber rolls, gravel bags)
- Exposed soil stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms)
- Street sweeping
- Tire washes for equipment

- Runoff control devices (e.g., drainage swales, gravel bag barriers/chevrons, velocity check dams) shall be used during construction phases conducted during the rainy season.
- Storm drain inlet protection
- Wind erosion (dust) controls
- Tracking controls
- Prevention of fluid leaks (inspections and drip pans) from vehicles
- Dewatering operations best practices
- Materials pollution management
- Proper waste management
- Regular inspections and maintenance of BMPs.

These BMPs would prevent construction-related contaminants from reaching impaired surface waters and contributing to urban impacts on water quality in the coastal bays and estuaries into which stormwater discharges. Required compliance with the Construction General Permit, including preparation and implementation of a SWPPP, would ensure that water quality impacts resulting from construction-related activities and ground disturbances would be less than significant.

Management of Demolition Activities and Debris

As discussed in Section 4.7, Hazards and Hazardous Materials, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. Mitigation Measure (MM) HAZ-1 (see Section 4.8.5, Mitigation Measures) would require a lead-based paint and asbestos survey prior to demolition, which would be conducted by a California Occupational Safety and Health Administration (Cal/OSHA)-certified asbestos assessor and California Department of Health Services-certified lead-based paint assessor. This mitigation measure is designed to avoid worker exposure to asbestos and lead but would also serve (along with the SWPPP) to minimize the potential for these substances to be mobilized by stormwater runoff. In addition, there is sufficient evidence to indicate that soils on site may have residual pesticides/herbicides from past agricultural uses and that there have been hazardous materials cases involving the underground storage of fuel tanks. Excavation, transport, or disposal of soils from these areas could create a hazard to the public or the environment. MM-HAZ-2 would require the preparation of a hazardous materials contingency plan in order to reduce potential impacts from contaminated soils, which would also reduce the potential for contaminated soils to be mobilized in stormwater runoff.

Preparation and implementation of a SWPPP as a standard construction practice, as well as implementation of MM-HAZ-1 and MM-HAZ-2, would prevent exceedance of water quality standards, non-conformance with WDRs, and degradation of water quality due to construction and demolition activities. The impact is, therefore, less than significant with mitigation.

Non-Stormwater Discharges

Non-stormwater discharges during construction could include construction-related dewatering discharges (to keep excavations free of water) and/or dust control. If non-stormwater discharges enter the stormwater drainage system, they could potentially degrade water quality and/or violate water quality objectives of the Santa Ana RWQCB Basin Plan.

Dewatering

Due to relatively shallow groundwater (estimated to be between 5 and 10 feet below ground surface) construction crews may need to undertake construction-related dewatering discharges. The purpose of construction dewatering is to provide a dry work area if there is seepage of groundwater or if stormwater runoff enters excavations. Dewatering discharges are most likely during rainy periods and for deeper subgrade excavations (such as basement levels, underground parking, and utility vaults) associated with new building construction and renovations.

For activities that involve dewatering, discharge to the land surface would need to comply with the provisions of the SWPPP which will be required to describe and implement procedures for making non-stormwater discharges. Discharges of non-stormwater from a trench or excavation that contain sediment or other pollutants directly to a sanitary sewer, storm drain, creek bed, or other receiving water is prohibited under the terms of the Construction General Plan. The discharges of wastes are prohibited from causing a violation of any applicable water quality standards for receiving waters adopted by the RWQCB or SWRCB as required by the CWA. Therefore, the discharges are not permitted to cause any of the following:

- The undesirable discoloration of the receiving waters
- The presence of objectionable odors in the receiving water
- The presence of visible oil, grease, scum, floating, or suspended material or foam in the receiving waters
- The deposition of objectionable deposits along the banks or the bottom of the stream channel
- The depletion of the dissolved oxygen concentration below 5 milligrams per liter in the receiving water; if the ambient dissolved oxygen concentration is less than 5 milligrams per liter, the discharge shall not cause further depression

- An increase in the temperature of the receiving waters above 90°F (32 degrees Celsius (°C)), which normally occurs during the period of June through October, nor above 78°F (26°C) during the rest of the year
- Change the ambient pH levels more than 0.5 pH units
- The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving waters
- The bioaccumulation of chemicals in aquatic resources to levels that are harmful to human health

The preferred method of discharge would be to a landscaped, vegetated, or soil area or into an infiltration basin, so long as the water only contains sediment (no other pollutants) and that all sediment would filter out. If there is evidence that other pollutants are present in the groundwater, the applicant would be required to obtain a separate permit from the RWQCB or local jurisdiction. In such cases, the applicant may be required to use a vacuum truck and haul the water to an authorized discharge location or implement various methods of treatment on site prior to discharging the water. Implementation of the SWPPP provisions would ensure that non-stormwater discharges from construction site dewatering would not violate basin plan objectives or substantially degrade water quality. Implementation of MM-HAZ-1 and MM-HAZ-2 would further ensure that potential contaminants are identified and handled properly (i.e., treated on site or collected and disposed of at an authorized facility). Therefore, impacts to water quality during construction due to dewatering would be less than significant.

Dust Control

Non-stormwater discharges during construction would also include periodic application of water for dust control purposes. Since the practice of dust control is necessary during windy and dry periods to prevent wind erosion and dust plumes, water would be applied in sufficient quantities to wet the soil but not so excessively as to produce runoff from the construction site. Water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. These stipulations are routine in SWPPPs and other construction contract documents; stating that water would only be applied in a manner that does not generate runoff. Therefore, water applied for dust control would not result in appreciable effects on groundwater or surface water features, and thus, has little to no potential to cause or contribute to exceedances of water quality objectives contained in the relevant Basin Plan—a less than significant impact.

New Math/Science Building, Automotive Technology Building, and Technology Building

The Automotive Technology Building may involve activities requiring the transport, use and storage of fuels, oils and/or lubricants (to train students), and the new Math/Science Building could potentially involve storage and use of hazardous or acutely hazardous materials (lab/chemistry supplies and equipment). Improper handling or storage of these materials could result in releases to environmental media including stormwater or groundwater. Implementation of MM-HYD-1 and MM-HYD-2 would require that plans and measures for chemical management (including but not limited to storage, emergency response, employee training, spill contingencies, and disposal) be incorporated into the WQMP. With implementation of MM-HYD-2, the potential impacts would be reduced to a less-than-significant level.

Summary

Enforcement of NPDES permitting requirements is normally through the process of obtaining local building, grading and/or development permits; however, plan checks and the approval process for the District is carried out by the DSA, which does not have an obvious enforcement mechanism for NPDES compliance. Implementation of MM-HYD-1 would ensure that the District carries out facility construction and renovation activities in a manner that is consistent with the regional MS4 permit. Furthermore, implementation of MM-HYD-2 would require that plans and measures for chemical management (including, but not limited to, storage, emergency response, employee training, spill contingencies and disposal) be incorporated into the WQMP. Implementation of MM-HAZ-1 and MM-HAZ-2 would further ensure that potential contaminants are identified and handled properly, i.e., treated on site or collected and disposed of at an authorized facility. With implementation of MM-HYD-1, MM-HYD-2, MM-HAZ-1, and MM-HAZ-2, the potential impacts of the program with respect to water quality would be less than significant.

Would the proposed project 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)?

Water service for GWC is and will continue to be through purchase of municipal water from the City. In the 2010 water year, the City pumped approximately 62% of its water supply from groundwater wells accessing the Santa Ana River groundwater basin and purchased 38% from the Metropolitan Water District of Orange County (City of Huntington Beach 2011). These percentages are established through the Orange County Water District's (OCWD) allowable Basin Pumping Percentage. The Basin Pumping Percentage is typically set by OCWD on an annual basis (OCWD 2009). No on-site groundwater wells are proposed and therefore impacts to groundwater supplies, aquifer volume, or lowering of the local groundwater table level would be limited to the well field from which the City derives its supplies. The City uses 10 groundwater wells whose production varies year-to-year, but typically produce around 20,000 acre-feet per year.

The OCWD has been the primary agency managing the groundwater basin since 1933. The OCWD works collaboratively with Metropolitan Water District and other local water districts such as the City to implement a comprehensive program to manage the groundwater basin to assure a safe and sustainable supply. The Groundwater Management Plan 2009 Update documents the objectives, operations, and programs aimed at accomplishing the District's mission (OCWD 2009). The City already serves a population of 204,831 and has over 52,300 service connections, with both numbers growing only slowly since the service area is already completely built-out. In this context, any increase in demand resulting from the proposed project—when taken in the context of total water deliveries and the active management of the basin by OCWD—would be relatively minor and incremental in nature.

Nevertheless, to the extent the proposed project generates additional water demand, it could also result in an increase in the use of groundwater. Proposed facilities and facility renovations in the Vision 2020 Facilities Master Plan will still entail incremental increases in water demands associated with maintenance, landscaping, and restroom facilities necessary to accommodate the anticipated increased enrollment of approximately 2,645 additional students by 2020. OCWD would require approval of all water utility connection proposed by the District.

As discussed in Section 4.13, Utilities and Service Systems, GWC used an average of 125,000 gallons of water per day from January to December 2013. Assuming the average water consumption remains constant throughout the year, GWC's yearly water consumption is approximately 140 acre-feet. According to the 2010 Urban Water Management Plan prepared by the City (2011), the normal year water demand for the City in 2010 was calculated to be 32,367 acre-feet, making GWC's usage less than 0.5% of the City's total water demand. Compared to the annual groundwater production within the Orange County Basin as a whole (i.e., roughly 500,000 acre-feet per year), the increase in demand as a result of the proposed project would be negligible and would be far less than the variation in demand due to climatic conditions (City of Huntington Beach 2011). As a point of comparison, the volume of storage of fresh water within the basin amounted to 37,700,000 acre-feet in 1988 (DWR 2004). A water service agreement, and if required, payment of impact fees to the water district, would be required prior to initiating new water connections.

For these reasons, and because the groundwater basin is currently cooperatively managed by a multitude of agencies through Integrated Regional Water Management Programs, the project's incremental effect on groundwater resources would be less than significant. No mitigation measures are required.

Would the proposed project 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?

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

As discussed in the setting, there are approximately 72 impervious acres and 46 pervious acres on site. This means that impervious surfaces such as structures, paved walkways, and parking lots currently make up approximately 61% of the campus, with the rest consisting of landscaped areas and/or vacant lots. Much of the new construction and land uses proposed would occur on previously paved surfaces such as parking lots and walkways and within the footprint of demolished facilities. Proposed renovations would not substantially change the amount or distribution of impervious surfaces on campus, and much of the proposed demolition would serve to free up the central quad for pedestrian circulation and landscaping. Certain proposed facilities could increase the amount of impervious surfaces relative to existing conditions because their proposed footprints include areas that are currently pervious (i.e., undeveloped/bare ground).

Because many of the facilities in the Vision 2020 Facilities Master Plan are in the initial planning stages (i.e., no detailed layout or designs are available), the increase or decrease in impervious surfaces that would occur campus-wide as a result cannot be quantified at this time. However, because the campus is already largely built-out, is located on level topography, and is surrounded by urban land uses, the Vision 2020 Facilities Master Plan components are not anticipated to substantially modify existing topography, drainage-shed boundaries, or runoff rates/patterns. Furthermore, new facilities proposed under the Vision 2020 Facilities Master Plan would be subject to the most current standards for drainage design and the regional MS4 permit, which generally requires developers to mimic pre-construction drainage patterns when designing the drainage plan for a site.

The changes in impervious areas created and the newly proposed land uses could nevertheless alter the types and levels of pollutants that could be present in project site runoff. Runoff from streets, driveways, parking lots, and landscaped areas can contain nonpoint source pollutants such as oil, grease, heavy metals, pesticides, herbicides, fertilizers, and sediment. Concentrations of pollutants carried in urban runoff are extremely variable, depending on factors such as the following:

- Volume of runoff reaching the storm drains
- Time since the last rainfall

- Relative mix of land uses and densities
- Degree to which street cleaning occurs

Under existing conditions, stormwater that is not infiltrated landscaped areas and bare ground moves as sheet flow towards street gutters, swales, and the inlets of underground storm drains. The storm drains direct runoff to the East Garden Grove–Wintersburg Channel and eventually into Bolsa Bay, Huntington Harbour, and Anaheim Bay along with the runoff from much of 80-square-mile urban watershed area. If rainfall is sufficiently intense and/or long-lasting, and particularly if storm drain inlets have not been cleared of leaves and/or other debris, water may temporarily pond in low-lying areas. Under proposed conditions, stormwater runoff would generally behave in the same manner, and drainage plans would ensure hydrologic and water quality standards are met. The campus would continue to direct stormwater runoff to the City's storm drain system.

Implementation of MM-HYD-1 would require preparation of a WQMP that is consistent with guidance within the Orange County DAMP and the City of Huntington Beach Local Implementation Plan. These would require that drainage designs incorporate BMPs that have long-term benefits with respect to water quality and are consistent with local water quality requirements, including applicable TMDLs (none apply now, but some may apply in the future). The development of the project site would generally maintain the size and topography of the existing watershed and would not include substantial re-grading sufficient to alter general drainage patters. The pre- and post-project watershed area would be the same, and stormwater would flow in the same general direction as described in Section 4.8.1 (On-Site Drainage). With implementation of MM-HYD-1, the impacts of the project on drainage patterns would be less than significant.

Would the proposed project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

The potential for the project to alter drainage patterns is addressed previously under Threshold 4. Because the drainage sheds would maintain the same boundaries, and because changes in impervious surfaces would be relatively minor, the proposed project is not anticipated to exceed the capacity of existing off-site stormwater drainage system. Some on-site modifications to the drainage system may be undertaken, if required, as part of facility construction under the Vision 2020 Facilities Master Plan. Implementation of the WQMP would ensure that proposed projects include design features that slow and retain stormwater runoff. For these reasons the impact of the project on the capacity of stormwater drainage systems would be less than significant.

4.8.5 Mitigation Measures

The following mitigation measures shall be implemented:

MM-HYD-1 **Water Quality Management Plans.** Prior to the Division of the State Architect review and approval of building and development plans, the Coast Community College District shall submit for review and approval a project Water Quality Management Plan that does the following:

- Discusses regional or watershed programs including the North Orange County Integrated Regional Water Management Plan
- Addresses site design best management practices (as applicable), such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas
- Incorporates the applicable source control best management practices as defined in the Drainage Area Management Plan
- Incorporates treatment control best management practices as defined in the Drainage Area Management Plan
- Generally describes the long-term operation and maintenance requirements for the treatment control best management practices
- Identifies the entity that will be responsible for long-term operation and maintenance of the treatment control best management practices
- Describes the mechanism for funding the long-term operation and maintenance of the treatment control best management practices

Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, Coast Community College District shall perform the following:

- Demonstrate that all structural best management practices described in the project Water Quality Management Plan have been constructed and installed in conformance with approved plans and specifications
- Demonstrate that Coast Community College District is prepared to implement all nonstructural best management practices described in the project Water Quality Management Plan

- Demonstrate that an adequate number of copies of the proposed project's approved final project Water Quality Management Plan are available for the future occupiers
- Submit for review and approval an Operations and Maintenance Plan for all structural best management practices

.**MM-HYD-2 Chemical Management Plans.** Prior to issuance of certificates of use and occupancy or building permits uses shall be identified, and for specified uses, the applicant shall propose plans and measures for chemical management (including storage, emergency response, employee training, spill contingencies, and disposal). The chemical management measures shall be incorporated as an element of a project Water Quality Management Plan and shall be subject to the approval of the Division of the State Architect and other specified agencies such as the Orange County Fire Authority, the Orange County Health Care Agency, and sewer agencies (as appropriate) to ensure implementation of each agency's respective requirements. Occupancy certificates or permits may be withheld if features needed to properly manage chemicals cannot be incorporated into a previously completed building, center or complex.

MM-HYD-3 Water Conservation. Vision 2020 Facilities Master Plan shall be designed, constructed, and operated in compliance with the City of Huntington Beach's water conservation programs. The Golden West College Maintenance and Operations Department, as well as commercial tenants of leased property, shall be required to become familiar with and enforce, to the extent feasible and as applicable, the following restrictions and requirements:

- Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited between the hours of 8:00 a.m. and 5:00 p.m. Pacific Standard Time on any day. If necessary, and for very short periods of time for the express purpose of adjusting or repairing it, one may operate an irrigation system during the otherwise restricted period.
- No person shall cause or allow watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive runoff from the property.
- Washing down hard or paved surfaces, including sidewalks, walkways, driveways, parking areas, tennis courts, and patios or alleys, is prohibited, except when necessary, to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a fully functioning, a positive self-closing water shut-off

device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume, high-pressure water broom.

- Excessive use, loss, or escape of water through breaks, leaks, or other malfunctions in Coast Community College District's (or a leasee's) plumbing or distribution system, for any period of time after such escape of water should have reasonably been discovered and corrected, and in no event more than 7 days of receiving notice from the City, is prohibited.
- Operating a water fountain or other decorative water feature that does not use recirculated water shall be prohibited.
- Using water to wash or clean a vehicle shall be prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a fully functioning, positive self-closing water shut-off nozzle or device.
- Eating or drinking establishments are encouraged not to provide drinking water to any person unless expressly requested.
- Installation of single-pass cooling systems shall be prohibited in buildings requesting new water service.
- Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.
- Food preparation establishments, such as restaurants or cafes, are prohibited from using non-water-conserving dish-wash spray valves.
- After the City of Huntington Beach has provided to the user an analysis demonstrating that recycled water is available, cost effective, and safe for the intended use, and the user has been given a reasonable time to make the conversion to recycled water, the use of potable water shall be prohibited.
- Prior to the connection of any new commercial, industrial, or multiresidential water service, the City shall perform an evaluation to determine whether recycled water is available, cost effective, and safe for the intended use to supply all or some of the water needed by the new user. If available, cost effective, and safe for the intended use, recycled water must be used..

MM-HAZ-1 See Section 4.7.5.

MM-HAZ-2 See Section 4.7.5.

4.8.6 Level of Significance After Mitigation

Implementation of MM-HYD-1 (Water Quality Management Plans), MM-HYD-2 (Chemical Management Plan), MM-HYD-3 (Water Conservation), MM-HAZ-1, and MM-HAZ-2 would ensure that all impacts identified would be reduced to a less-than-significant level.

4.8.7 Cumulative Impacts

The primary pollutants of concern on a college campus are associated with private vehicle maintenance (e.g., car washing and grease/oils associated with maintenance/repairs), landscaping/grounds work (e.g., improper/excessive use of pesticides, herbicides, and/or fertilizers), and/or trash (e.g., due to improper waste disposal). The release of such pollutants would be localized and periodic in nature, minor in magnitude (especially in comparison to the total volume of stormwater discharges entering the Bolsa Bay from the entire urban watershed), and would not contribute to the existing impairments under Section 303(d) of the CWA. Nevertheless, because the cumulative effects of past projects have resulted in substantial water quality problems in the region's major waterways, and because water quality problems are generally cumulative in nature, all efforts must be made to reduce pollutant concentrations within stormwater discharges to the maximum extent practicable, even if the impact of an individual project appears inconsequential. MM-HYD-1 is designed to address this issue by reducing to the maximum extent practicable the levels of pollutants entering the storm drain system. The mitigation measure likewise ensures that the contribution of the proposed project to cumulative impacts on water quality is less than significant with mitigation.

In addition, because of the cumulative nature of groundwater impacts—meaning that all urban growth and development relying on the Orange County Basin would demand water—the project's increase in demand on groundwater, even if individually minor could be cumulatively considerable, particularly in the context of climate change and the trend toward increased reliance on local supplies. Implementation of MM-HYD-3 would ensure that water is not used in a wasteful manner, which would also further ensure that the contribution to cumulative impacts on groundwater volume and levels would be less than significant with mitigation.

4.8.8 References

40 CFR 122.26. Storm water discharges.

40 CFR 230.3(s). Definitions.

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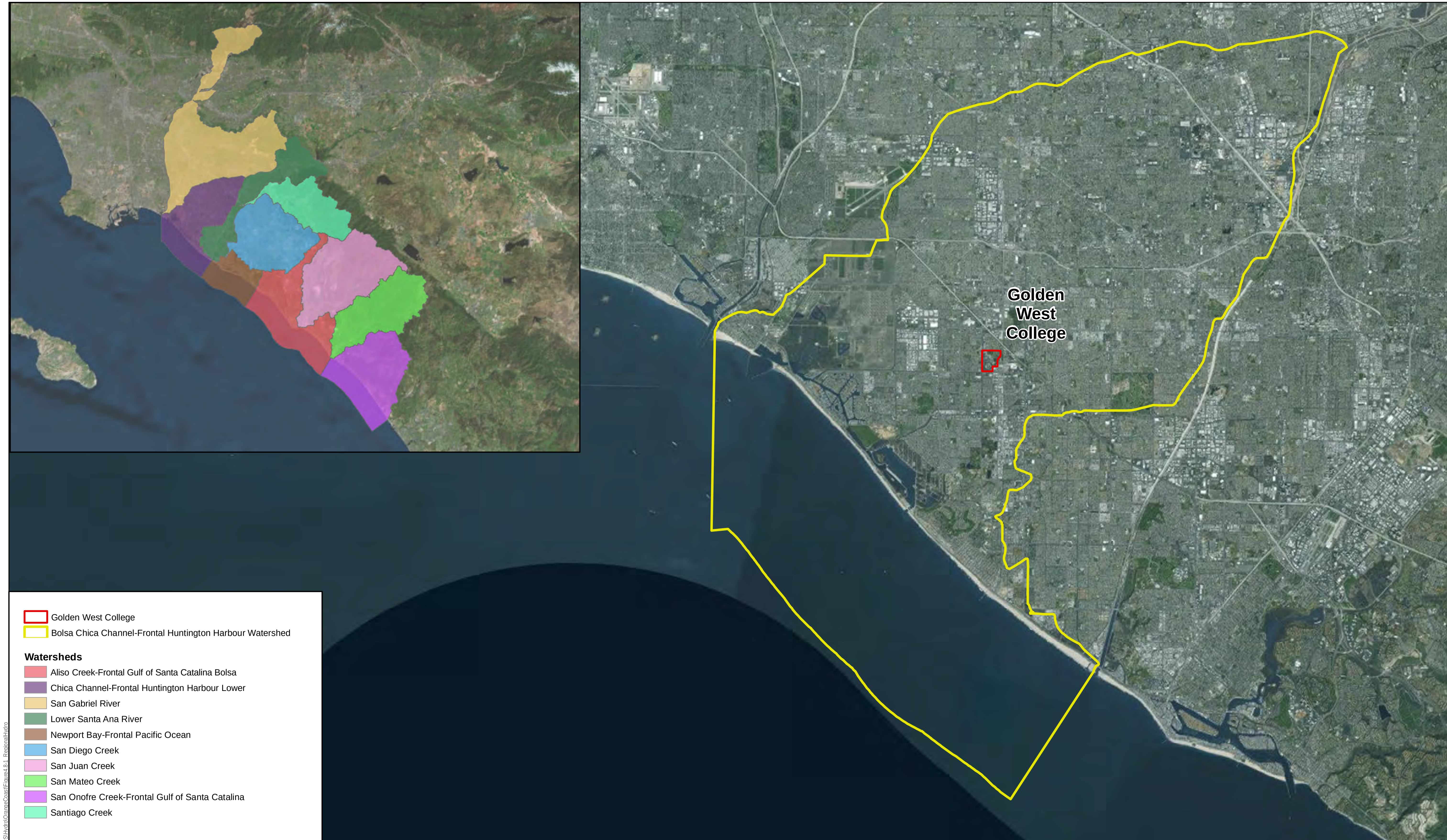

SOURCE: ESRI 2013 World Imagery, Department of Water Resources

0 1.25 2.5 Miles

FIGURE 4.8-1

Regional Watershed Map

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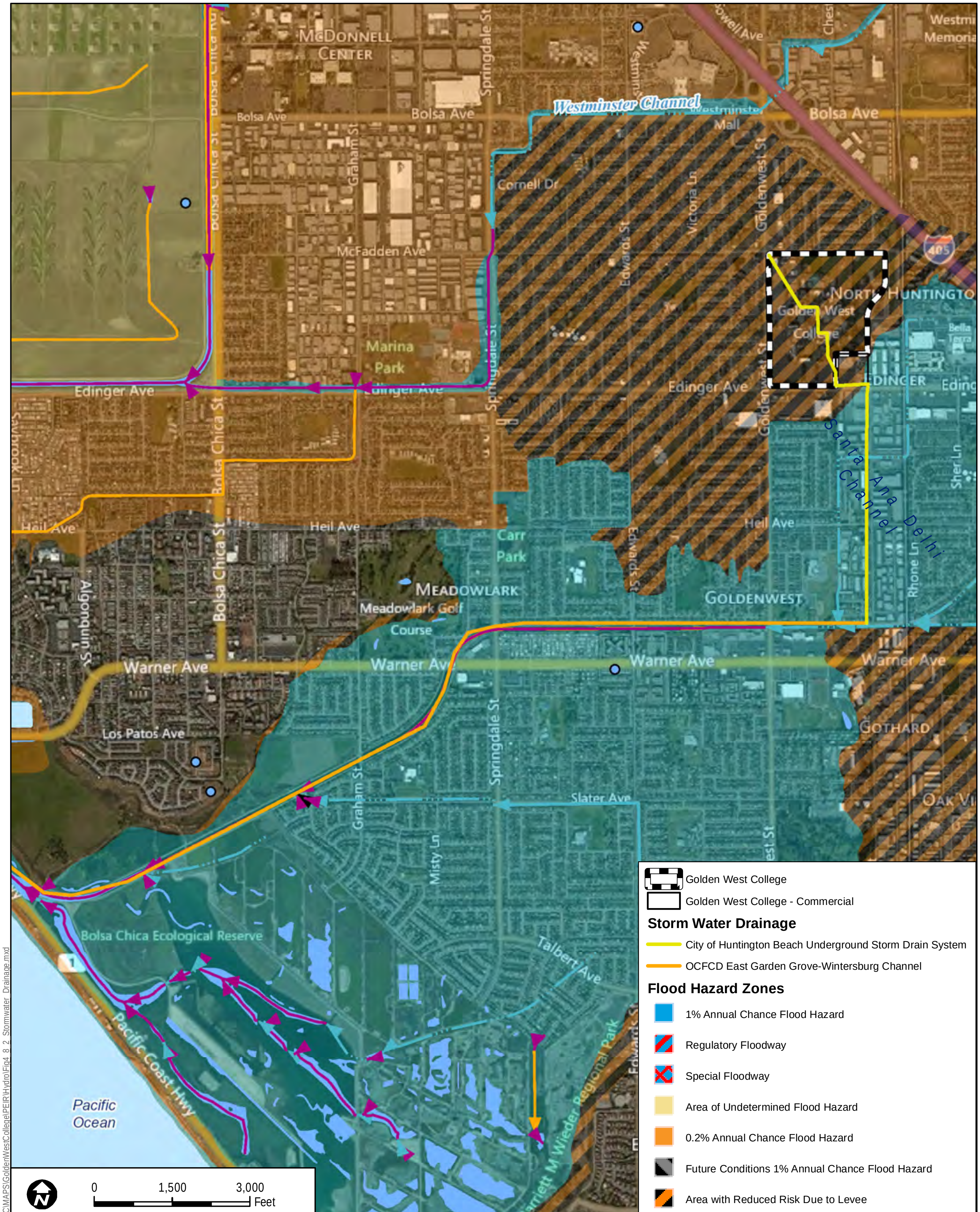

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SOURCE: Bing Imagery, 2015; DUDEK, 2013; FEMA, 2013.

FIGURE 4.8-2
Stormwater Drainage

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4.9 NOISE

This section evaluates noise effects of the Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project), including potential impacts from current and future ambient noise levels on proposed land uses, as well as the potential for noise generation from proposed land uses and activities within the proposed project area. Noise generation sources from future implementation of the project include traffic, campus-related activities and recreation, and construction. Potential noise effects from vehicular traffic were modeled and assessed using the Federal Highway Administration's Traffic Noise Model Version 2.5. Data used to model noise from vehicular traffic was derived from the project-specific traffic impact analysis report prepared by Linscott, Law and Greenspan, Engineers, in 2015 (Appendix I).

4.9.1 Existing Conditions

4.9.1.1 Noise Concepts

Noise is generally defined as loud, unexpected, or undesired sound typically associated with human activity that interferes with or disrupts normal activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. The definition of noise as unwanted sound implies that it has an adverse effect on people and their environment.

Sound is measured in terms of intensity, which describes the sound's loudness and is measured in decibels (dB); frequency or pitch, measured in cycles per second or hertz (Hz); and duration of sound. Sound is composed of various frequencies; however, the human ear does not respond to all frequencies, being less sensitive to very low and high frequencies than to medium frequencies that correspond with human speech. Sound level meters adjust for the weight the human ear gives to certain frequencies, applying a correction to each frequency range to approximate the human ear's sensitivity within each range. This is called "A-weighting" and is commonly used in measurements of community environmental noise. The A-weighted sound level, abbreviated dBA, is determined to be the most appropriate unit of measure for community noise.

The unit of measure for the cumulative effect of community noise is the community noise equivalent level (CNEL), which is the average noise level for a 24-hour period. The CNEL is often used to describe the relationship of a continuous noise source, such as traffic, to the desirable ambient noise level (normal and existing noise level). The CNEL is adjusted to reflect the greater sensitivity to noise during evening and nighttime hours, with a 5 dBA penalty assigned to noise between 7:00 p.m. and 10:00 p.m. and a 10 dBA penalty assigned to noise between 10:00 p.m. and 7:00 a.m. Due to fluctuations in community noise over time, a single measurement called the equivalent sound level (L_{eq}) is often used to describe the time-varying character of community noise. The L_{eq} is the energy-averaged A-weighted sound level during a measured time interval, and it is equal to the level of a continuous, steady sound containing the same total acoustical energy over the averaging time period as the actual time-varying sound.

To respond to the human ear's sensitivity to sound, the range of audible sounds exist on a logarithmic scale that takes into account the large differences in audible sound intensities. On this scale, for example, a 10 dBA increase is normally perceived as a doubling of sound. A sound level of 0 dBA is approximately the threshold of human hearing. Normal speech has a sound level of approximately 60 dBA. To the human ear, sound levels above about 120 dBA begin to be felt as discomfort and eventually as pain at slightly higher levels. The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB.

There are three conceptual components to noise: the source, the transmission path, and the receiver. Noise can be reduced by minimizing noise at its source; by lengthening or interrupting the transmission path through diversion, absorption, or dissipation; or by protecting the receiver through noise insulation. The most efficient and effective means of abating noise is to reduce noise at its source. The source noise can be controlled through regulation, such as restrictions outlined in noise ordinances; muffling techniques; or soundproofing. The transmission path can be interrupted by creating a buffer between the source and the receiver, such as a noise wall, earth embankment, or a building. The receiver can be protected from noise impacts through insulation, building orientation, or shielded areas.

Noise sources can be classified in two forms: (1) point sources, such as stationary equipment (pumps), and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dBA for each doubling of distance from the source to the receptor. For example, a 60 dBA noise level measured at 50 feet from a point source would be 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively. Typical sound levels generated by various activities are indicated in Table 4.9-1.

Table 4.9-1
Typical Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	80	Garbage disposal at 3 feet

Table 4.9-1
Typical Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban area, daytime	50	Dishwasher next room
Quiet urban area, nighttime	40	Theater, large conference room (background)
Quiet suburban area, nighttime		
	30	Library
Quiet rural area, nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 1998.

Sound levels can also be attenuated by man-made or natural barriers. Intervening noise barriers, such as solid walls or berms, typically reduce noise levels by 5 to 10 dBA. Structures can also provide noise reduction by insulating interior spaces from outdoor noise. The exterior-to-interior noise attenuation provided by typical California building structures ranges from 15 to 25 dBA with windows open and closed, respectively. Acoustically designed enclosures and buildings can provide up to approximately 50 dBA of noise reduction, depending on the noise abatement treatments.

Vibration tolerance typically depends on the type of structures that are affected. Structural response to vibration is typically evaluated in terms of peak particle velocity. Peak particle velocity is often used since it is related to the stresses that are experienced by the buildings. Various general standards are contained in the International Standards Organization's standards 3945, 4866, and 7626-1. Limits set by these standards indicate a low probability of structural damage occurring to common structures at a peak particle velocity of 2.0 inches per second. Older (and non-reinforced) masonry structures would have a limit of 0.75 to 1.0 inch per second (Caltrans 2004). The Federal Transit Administration identifies a vibration damage threshold criterion of 0.20 inch per second for non-engineered timber and masonry buildings (i.e., fragile buildings), or 0.12 inch per second for buildings extremely susceptible to vibration (i.e., fragile historic buildings) (DOT 2006).

4.9.1.2 Existing Noise Environment

The project site is bounded by McFadden Avenue to the north, Edinger Avenue to the south, Gothard Street to the east, and Goldenwest Street to the west. The City of Westminster is immediately north of the campus across McFadden Avenue and is characterized by low-density housing near the campus. More low-density neighborhoods are located to the west of Goldenwest Street (south of Edinger Avenue). East of Gothard Street (on the south side of the Bella Terra Shopping Center) are commercial/retail neighborhoods that the City of Huntington Beach (City) identified as a mixed-use area on the General Plan Map (City of Huntington Beach 2011). A CVS Pharmacy in the northwest corner of the campus is located on land owned by the Coast Community College District (District). A retail center not owned by the District is next to the southeast edge of the campus. Additionally, a church (Latter Day Saints Institute, Huntington Beach, California) is on the west side of Goldenwest Street, and two parks (Greer Park and College Park) are located north of McFadden Avenue.

A sound level survey was conducted on October 15, 2013, to evaluate existing sound levels and assess potential project noise impacts on the surrounding area. Short-term sound levels were measured at existing noise-sensitive receptors adjacent to and within the project area, as shown in Figure 4.9-1, Noise Measurement Locations. Noise measurements were taken at a nearby residence (M-1), on the GWC campus (M-2), and at a nearby residence (M-3).

Short-term (1-hour or less) attended sound level measurements were taken with a Rion NL-32 sound level meter. This instrument is categorized as Type 1, Precision Grade. Noise was measured at three representative locations adjacent to and within the project site.

The sound measuring instrument used for the survey was set to the “Slow” time response and the dBA scale was set for all noise measurements. To ensure accuracy, the laboratory calibration of the instrument was field checked before and after each measurement period using an acoustical calibrator. The accuracy of the acoustical calibrator is maintained through a manufacturer’s program that is traceable to the National Institute of Standards and Technology. The sound measurement instrument meets the requirements of American National Standards Institute Standard S 1.4-1983 and International Electrotechnical Commission Publications 804 and 651. In all cases, the microphone was equipped with a windscreen and placed 5 feet above the ground.

During the field measurements, physical observations of the predominant noise sources were noted. The major noise source in the project area consisted of noise from vehicle traffic and student traffic. Secondary noise sounds included nearby conversations, rustling leaves, birds, distant aircraft overflights and other community noises. The results of the sound level measurements are summarized in Table 4.9-2. As shown in Table 4.9-2, measured noise levels varied from 54 dBA L_{eq} at M-2 to 61 dBA L_{eq} at M-1, when rounded to whole numbers as is customary for community noise measurements.

Table 4.9-2
Short-Term Sound Level Measurement Results

Site ID	Measurement Location	Measurement Period			Noise Sources	Measurement Results (dBA)					
		Date	*Start Time*	*Duration (minutes)*		L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}
M-1	Single-family residence west of campus, 15702 Sunburst Lane	10/15/13	10:22	15	Traffic, distant aircraft, birds	61.1	73.3	43.6	50.0	59.5	64.1
M-2	Campus Quad near the Student Dining Area	10/15/13	10:55	15	Student traffic, distant aircraft, distant traffic, distant train, rustling leaves, distant conversations /yelling	53.9	66.2	50.1	51.7	53.3	55.2
M-3	Single-family residence north of campus, 7312 Rockmount Avenue	10/15/13	11:40	15	Traffic, distant aircraft, rustling leaves, birds	59.2	69.3	45.7	49.4	57.3	62.6

Notes: See Appendix G for complete results.
ID = identification number on Figure 4.9-1; dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; L_{min} = minimum sound level during the measurement interval; L_{90} = sound level exceeded for 90% of the measurement period; L_{50} = sound level exceeded for 50% of the measurement period; L_{10} = sound level exceeded for 10% of the measurement period.

4.9.2 Relevant Plans, Policies, and Ordinances

The proposed project is in the City. Although the District and GWC are not subject to local plans, policies, and guidelines related to noise, this analysis uses relevant policies from the local jurisdiction as guidance.

Federal

The Noise Control Act of 1972 recognized the role of the federal government in dealing with major commercial noise sources, which require uniform treatment. Since Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The federal government specifically preempts local control of noise from aircraft, railroads, and interstate highways. The

U.S. Environmental Protection Agency has identified acceptable noise levels for various land uses with an adequate margin of safety to protect the public and has established noise emission standards for interstate commerce.

The Department of Housing and Urban Development standards define day/night equivalent sound levels (L_{dn}) below 65 dBA outdoors as acceptable for residential areas. Outdoor levels up to 75 dBA L_{dn} may be made acceptable through the use of insulation in buildings.

State

The pertinent State of California noise regulations are contained in the California Code of Regulations. Title 24, Noise Insulation Standards, establishes the acceptable interior environmental noise level (45 dBA L_{dn}) for multiple-family dwellings (may be extended by local legislative action to include single-family dwellings). Guidance in 24 CCR 65302(f) requires local land use planning jurisdictions to prepare a general plan. The Noise Element is a mandatory component of the general plan. It may include general community noise guidelines developed by the California Department of Health Services and specific planning guidelines for noise/land use compatibility developed by the local jurisdiction. The state guidelines also recommend that the local jurisdiction should consider adopting a local noise control ordinance. The California Department of Health Services has developed guidelines for community noise acceptability for use by local agencies. Selected relevant levels are as follows (L_{dn} may be considered nearly equivalent to CNEL):

- CNEL below 60 dBA—normally acceptable for low-density residential use
- CNEL of 55 to 70 dBA—conditionally acceptable for low-density residential use
- CNEL below 65 dBA—normally acceptable for high-density residential use
- CNEL of 60 to 70 dBA—conditionally acceptable for high-density residential use, transient lodging, churches, and educational and medical facilities
- CNEL below 70 dBA—normally acceptable for playgrounds and neighborhood parks (Office of Planning and Research. 2003)

"Normally acceptable" is defined as satisfactory for the specified land use, assuming that normal, conventional construction is used in buildings. "Conditionally acceptable" may require some additional noise attenuation or special study. Under most of these land use categories, overlapping ranges of acceptability and unacceptability are presented, leaving some ambiguity in areas where noise levels fall within the overlapping range.

The State of California also regulates the noise emission levels of licensed motor vehicles traveling on public thoroughfares, sets noise emission limits for certain off-road vehicles and watercraft, and establishes required sound levels for light-rail transit vehicle warning signals. For the most part, the extensive state regulations pertaining to worker noise exposure are applicable only to the construction phase of any project (e.g., the California Occupational Safety and Health Administration Occupational Noise Exposure Regulations) or to workers in a central plant and/or a maintenance facility or involved in the use of landscape maintenance equipment or heavy machinery.

Local

City of Huntington Beach, Code of Ordinances, Noise Control

The City's Code of Ordinances establishes allowable hours for construction and exterior and interior noise standards. Construction activities are allowable only on Monday through Saturday, 7:00 a.m. to 8:00 p.m. Construction activities are prohibited on Sundays and on specified federal holidays. Construction equipment, vehicles, and work are exempt from the interior and exterior noise level standards provided in Table 4.9-3, provided construction activities take place within the allowable time period, and a permit has been obtained from the City (City of Huntington Beach 2012).

Residential areas must follow the exterior noise standards outlined in Table 4.9-3.

Table 4.9-3
City of Huntington Beach Exterior Noise Standards

Noise Zone	A-Weighted Sound Level (dB)	Time Period
Residential properties	55	7:00 a.m.–10:00 p.m.
	50	10:00 p.m.–7:00 a.m.
Professional office and public institutional properties	55	Anytime
Commercial properties (with the exception of professional office properties)	60	Anytime
All industrial properties	70	Anytime
It is unlawful for noise levels to exceed:		
a) Noise level standards for a period of 30 minutes (cumulative) within a 1-hour time period		
b) Noise level standards plus 5 dBA for a period of 15 minutes (cumulative) within a 1-hour time period		
c) Noise level standards plus 10 dBA for a period of 5 minutes (cumulative) within a 1-hour time period		
d) Noise level standards plus 15 dBA for a period of 1 minute (cumulative) within a 1-hour time period		
e) Noise level standards plus 20 dBA for any period of time		

Source: City of Huntington Beach 2012.

Residential areas within the City must also follow the interior noise standards outlined in Table 4.9-4.

Table 4.9-4
City of Huntington Beach Interior Noise Standards

Noise Zone	A-Weighted Sound Level (Decibels)	Time Period
Residential properties	55	7:00 a.m.–10:00 p.m.
	45	10:00 p.m.–7:00 a.m.
Professional office and public institutional properties, commercial properties, industrial properties	55	Anytime
It is unlawful for noise levels to exceed:		
a) Noise level standards for a period of 5 minutes (cumulative) within a 1-hour time period		
b) Noise level standards plus 5 dBA for a period of 1 minute (cumulative) within a 1-hour time period		
c) Noise level standards plus 10 dBA for any period of time		

Source: City of Huntington Beach 2012.

City of Huntington Beach General Plan

The City's General Plan Noise Element (City of Huntington Beach 1996) is written to ensure compliance with federal and state requirements through a comprehensive, long-range program of achieving acceptable noise levels throughout the City. The Noise Element identifies noise-generating uses and activities within City limits, the most dominant of which include major freeways and highways; aircraft operations from the John Wayne International Airport, Long Beach Municipal Airport, and heliports throughout the City; railroad operations from the Southern Pacific Railroad and the U.S. Navy Railroad; and petroleum extraction activities from the Huntington Beach Oil Field. The City's Noise Element also presents goals, objectives, and policies relative to ambient and fixed-source noise conditions.

4.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to noise are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the project would:

1. ***Result in the 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.***
2. ***Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.***
3. ***Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.***

4. ***Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.***
5. ***Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and if so, the project would expose people residing or working in the project area to excessive noise levels.***
6. ***Be within the vicinity of a private airstrip, and if so, the project would expose people residing or working in the project area to excessive noise levels.***

As indicated in Threshold 1, noise levels must be analyzed in relation to standards established in the local general plan or noise ordinance. The project site is located within the City, but because GWC is not subject to local plans, policies, and guidelines related to noise, this analysis utilizes relevant policies from the jurisdiction as guidance only. Thresholds 5 and 6 were eliminated from further analysis in the Initial Study for the proposed project because the project site is located approximately 8 miles northwest of John Wayne International Airport and is located outside of the airport safety zone. Therefore, the project would not expose people to excessive noise levels. The proposed project is also not located within the vicinity of a private airstrip. No private airstrips exist within 2 miles of the proposed project site and people residing or working in the proposed project area would not be exposed to excessive noise levels from a private airstrip.

4.9.4 Impacts Analysis

Would the project result in the 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?

Implementation of the proposed project would result in two primary types of potential noise impacts: short-term (i.e., temporary) noise during construction and long-term noise during operation of the proposed facilities associated with the project.

Short-Term Construction Noise

Potential noise effects from construction activities were assessed using a standard reference for construction noise (EPA 1971).

Project construction would generally involve the following sequence for all phases of the proposed project: (1) site demolition, (2) site grading, (3) trenching, (4) building construction, (5) paving, and (6) architectural coating. Although specific project construction details and equipment fleet specifications are not available at this time, the following are typical types of construction equipment that would be expected:

- Concrete/industrial saws
- Crawler tractors

- Tractors/loaders/backhoes
- Excavators
- Forklifts
- Welders
- Cement and mortar mixers
- Cranes
- Off-highway water trucks
- Generator sets
- Paving equipment
- Trenching equipment
- Off-highway water trucks
- Pneumatic tools
- Graders
- Air compressors

As demonstrated by this list, construction equipment anticipated for all phases of project development would include standard equipment that would be employed for any routine construction project of this scale; construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment) would not be necessary for the proposed project.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time in use, condition of each piece of equipment, and number of pieces of equipment that will actually operate on site. The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 4.9-5. The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dBA at 50 feet from their operations. As one increases the distance between equipment, and/or the separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activities is generally lower, since maximum noise generation may only occur up to 50% of the time.

Table 4.9-5
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Pump	76
Saw	76
Backhoe	80
Air compressor	81
Generator	81
Compactor	82
Concrete pump	82

Table 4.9-5
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Crane, mobile	83
Compactor	82
Concrete mixer	85
Grader	85
Loader	85
Paver	89
Pneumatic tool	85
Truck	88

Source: DOT 2006.

As shown in Table 4.9-6, the closest off-site existing sensitive receptors to construction of proposed project buildings and facilities are single-family residences located 115 feet north of the proposed Central Warehouse/Corporation Yard expansion and the Physical Education Outdoor Labs site (SR-2). Multifamily residences are located 350 feet east of the proposed Criminal Justice Training Center Complex site (SR-4). Single-family residences and the Heritage Montessori School are located 530 feet west of the proposed Math/Science Building site (SR-3). Single-family residences are also located 530 feet west of the proposed Automotive Technology Building expansion, Cosmetology Building, and the Thermal Energy Storage Tank (SR-1) site (see Figure 4.9-2, Off-Site Sensitive Receptors).

Table 4.9-6
Off-Site Sensitive Receptors

Sensitive Receptor ID	Receptor Type	Address	Approximate Distance to Nearest Project (feet)
SR-1	Single-family residence	15702 Sunburst Lane	530
SR-2	Single-family residence	7312 Rockmount Avenue	115
SR-3	Heritage Montessori School	15881 Goldenwest Street	550
SR-4	Multi-family residences	15772–15838 Gothard Street	350

Note: ID = Identification number from Figure 4.9-2.

Routine noise levels from conventional construction activities (with a typical number of equipment operating on the site) range from 75 to 86 dBA L_{eq} at a distance of 50 feet. Due to improvements in construction equipment silencing technology, these sound levels are 3 dB lower than the noise levels reported in the 1971 reference study. Typically, the quietest phase of building site construction for similar projects (i.e., schools) is that associated with constructing foundations, producing 75 dBA L_{eq} at a distance of 50 feet. Typically, the loudest phases, producing 86 dBA L_{eq} at 50 feet, are those associated with grading and finishing activities. Noise levels from construction activities generally decrease at a rate of 6 dB per doubling of distance away from the activity. Thus, at a distance of 100 feet from the center of construction activities, construction noise levels would range from 69 to 80 dBA L_{eq}. At a distance of 500 feet from the center of construction activities, construction noise would range from 55 to 66 dBA L_{eq}. At a distance of 1,000 feet, construction noise could range up to 48 dBA L_{eq} to 60 dBA L_{eq}, but would likely be lower due to additional attenuation from ground effects, air absorption, and shielding from miscellaneous intervening structures.

Although GWC is a state agency subject to building permit approvals by the Division of the State Architect, the City's Noise Control Ordinance provides some guidance regarding normal hours for construction activities (Monday through Saturday, 7:00 a.m. to 8:00 p.m. (City of Huntington Beach 2012)). As part of the standard construction procedure for the project, the District would limit construction activities to Monday through Saturday, 7:00 a.m. to 8:00 p.m. No construction activities are expected on Sundays or during federal holidays, and construction is not expected to occur during nighttime hours. Accordingly, the proposed project would not result in exposure of persons to or generation of noise levels in excess of standards established in the City's Noise Control Ordinance or other applicable noise standards.

However, noise from construction would be audible and would temporarily elevate the local ambient noise level to some degree at distances greater than 100 feet from construction; therefore, impacts would be significant. In an effort to avoid construction noise impacts, Mitigation Measure (MM-) NOI-1 is required to control construction noise to the extent practicable and feasible. With implementation of MM-NOI-1, construction noise would have less-than-significant impacts. No additional mitigation is required for conventional construction activities.

Long-Term Operational Noise Impact

Off-Site Noise Impacts. As a result of regional population and employment growth, as well as campus growth under the proposed project, traffic on local arterial streets is expected to increase relative to current conditions. Potential noise effects from vehicular traffic were assessed using the Federal Highway Administration's Traffic Noise Model Version 2.5. Data used to model noise from vehicular traffic were derived from the project-specific traffic impact analysis report prepared by Linscott, Law and Greenspan (Appendix I). Information used in the model included the existing (Year 2013), existing plus project, Year 2024 with cumulative projects, and Year 2024 with and without the project traffic volumes and speeds. Noise levels were modeled at representative noise-sensitive receivers. The receivers were modeled to be 1.5 meters (5 feet) above the local ground elevation.

Two receptors (M1 and M3) represent existing off-site residences, and one receptor (M2) represents on-site receptors; M1 and M3 are adjacent to the major arterials in the vicinity of the proposed project. Traffic volumes were obtained from the traffic study conducted for the proposed project area for existing, existing plus project, 2024 with cumulative projects, and 2024 with and without project traffic conditions. These traffic volumes were used to model noise levels under those scenarios. Traffic noise impacts were calculated by comparing the existing (2013) baseline conditions, existing plus project, 2024 with cumulative projects, and 2024 with project traffic scenarios.

The information provided from this modeling, along with the results from ambient noise survey measurements, was compared to the noise impact significance criteria to assess whether project-related traffic noise would cause a significant impact and, if so, where these impacts would occur. The results of the comparisons are presented in Table 4.9-7.

Table 4.9-7
Project-Related Traffic Noise: Year 2024

Modeled Receptor	Receptor Address	Roadway Intersection	Existing (2013)	Existing Plus Project	2024 with Cumulative Projects	2024 with Project	Maximum Project-Related Noise Level Increase (dB)
SR-1/M1: Single-family residences, west of campus	15702 Sunburst Lane	Goldenwest Street at Driveway No. 9	62	62	63	63	0
SR-2/M3: Single-family residences, north of campus	7312 Rockmount Avenue	Vermont Street and Gothard Avenue	62	62	63	63	0
SR-3: Heritage Montessori School, west of campus	15881 Goldenwest Street	Goldenwest Street at Driveway No. 7	69	69	70	70	0
SR-4: Multifamily residences, east of campus	15772–15838 Gothard Street	Gothard Street and Edinger	67	67	68	69	1

Source: FHWA 2004.
Note: Project-related traffic noise levels are rounded to the nearest whole numbers.

As Table 4.9-7 shows, the proposed project would increase the noise level along these roads by 1 dB or less (rounded to whole numbers) along the study area roads in the vicinity of the campus. A change of 1 dB or less is within the tolerance limit of traffic noise prediction models. In community noise assessments, a 1 dB increase is not noticeable to the human ear. Therefore, due to the amount of increase in noise level (1 dB or less), noise impacts due to project-related traffic would not be significant. The proposed project is not anticipated to result in significant noise increases or cause an exceedance of applicable noise standards. Therefore, the impact from traffic noise associated with the proposed project would be less than significant.

Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Construction activities that might expose persons to excessive groundborne vibration or groundborne noise could cause a potentially significant impact. Groundborne vibration information related to construction activities has been collected by the California Department of Transportation (Caltrans 2004). Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. Groundborne vibration is typically attenuated over short distances.

The closest off-site existing sensitive receptors to construction of proposed project buildings and facilities are single-family residences located 115 feet north of the proposed Central Warehouse/Corporation Yard expansion and the Physical Education Outdoor Labs site. The heavier pieces of construction equipment, such as large bulldozers, graders, water trucks, pavers and loaded trucks, would have peak particle velocities of approximately 0.089 inch/second or less at a distance of 25 feet (DOT 2006). At these distances (i.e., more than 100 feet away) and with the anticipated construction equipment, the peak particle velocity would be approximately 0.011 inch/second at the adjacent residences, which would be well below 0.1 inch/second. Vibration is subjective, and some people may be annoyed at continuous vibration levels near the level of perception (or approximately a peak particle velocity of 0.01 inch/second). However, construction activities are not anticipated to result in continuous vibration levels that typically annoy people. Pile driving, blasting, or other special construction techniques are not anticipated to be used for construction of the proposed project; therefore, excessive groundborne vibration and groundborne noise would not be generated. Additionally, groundborne vibration and groundborne noise would not be associated with the proposed project following construction activities. Therefore, impacts related to groundborne vibration and ground-borne noise would be less than significant.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Long-term operational noise would result from the proposed project, which could include noise associated with the renovated Central Warehouse/Corporation Yard expansion, Automotive Technology Building expansion, the renovated Physical Education Outdoor Labs, and the Criminal Justice Training Center Complex. However, these facilities already exist on campus; therefore, the operation of these facilities (and resulting noise) are anticipated to be similar to what currently exists on campus. Other proposed projects are considered to be academic land uses and are not anticipated to generate excessive noise. The project would also generate off-site traffic noise along adjacent roads, including Edinger Avenue, Goldenwest Street, McFadden Avenue, and Gothard Street, as well as overall traffic noise in the vicinity of the campus.

As mentioned previously and indicated in Table 4.9-7, the proposed project would increase the noise levels along local roadways by 1 dB or less (rounded to whole numbers) in the vicinity of the site. This increase is not readily noticeable to the human ear in the context of a community noise environment (i.e., outside of controlled listening lab conditions). Therefore, due to the increase in noise level (1 dB or less, rounded to whole numbers), noise impacts associated with project-related traffic would be less than significant.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As discussed previously, noise from construction activities at the nearest noise-sensitive receivers would range from approximately 69 to 80 dBA L_{eq}. Noise from construction would be audible and would temporarily elevate the local ambient noise level to some degree at distances greater than 100 feet from construction; therefore, impacts would be significant. In an effort to avoid construction noise impacts, MM-NOI-1 is required to control construction noise to the extent practicable and feasible. With the implementation of MM-NOI-1, construction noise would have less-than-significant impacts. No additional mitigation is required.

4.9.5 Mitigation Measures

The following mitigation measure would be required to reduce potentially significant impacts related to increases in noise levels from construction of the proposed project:

MM-NOI-1 Prior to initiation of campus construction, the Coast Community College District shall approve a construction noise mitigation program including but not limited to the following:

- Construction equipment shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise.
- Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses if feasible.
- Laydown and construction vehicle staging areas shall be located away from noise-sensitive land uses if feasible.
- Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.
- All construction projects pursuant to the proposed project would be required to implement the above measures for control of construction noise.

4.9.6 Level of Significance After Mitigation

MM-NOI-1, as described in Section 4.9.5, would reduce impacts associated with short-term construction noise to less than significant.

4.9.7 Cumulative Impacts

Construction noise impacts primarily affect the areas immediately adjacent to the construction site. The closest cumulative project, as listed in Table 3-9 of Chapter 3, Project Description, would include the Boardwalk mixed-use project, located at the northeast corner of Edinger Avenue and Gothard Street, and the Pedigo Apartments located at 7262, 7266, and 7280 Edinger Avenue and 16001 and 17091 Gothard Street. The Boardwalk mixed-use project and Pedigo Apartments would be located 80 feet east and 100 feet south, respectively, from the GWC campus. Temporary construction activities are likely to include standard construction equipment; no pile driving or blasting activities are expected. Additionally, the Boardwalk mixed-use project and Pedigo Apartments would need to comply with the City's Noise Control Ordinance related to construction activities (Monday through Saturday, 7:00 a.m. to 8:00 p.m.; no construction activities on Sundays or during federal holidays) (City of Huntington Beach 2012). Although several construction activities may occur simultaneously at several areas on campus and in the surrounding community, given the distance between the project site and the cumulative projects within the City and the cumulative projects' compliance with the local jurisdictional noise standards, it is unlikely that the noise increase would exceed 3 dB (the minimum change in the sound level of individual events that an average human ear can detect). Therefore, the increased noise would not result in significant cumulative impacts.

As shown in Table 4.9-7, the proposed project's traffic-related impacts would result in a 1 dB or less increase (rounded to whole numbers) along the adjacent roadways. Therefore, the increase in noise associated with cumulative traffic would not be cumulatively considerable and would be less than significant.

4.9.8 References

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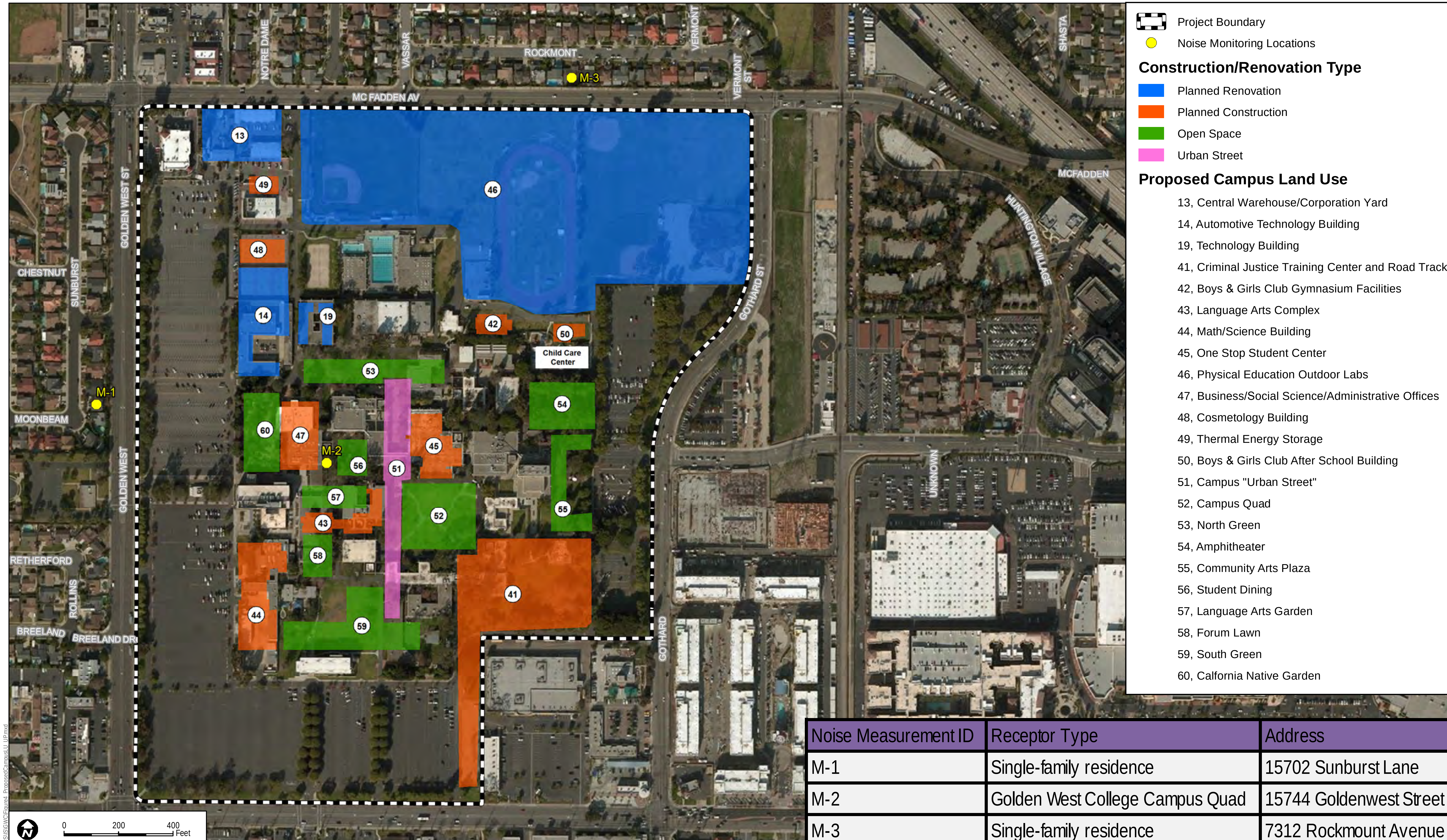

Noise Measurement ID	Receptor Type	Address
M-1	Single-family residence	15702 Sunburst Lane
M-2	Golden West College Campus Quad	15744 Goldenwest Street
M-3	Single-family residence	7312 Rockmont Avenue

GOLDEN WEST COLLEGE HUNTINGTON BEACH, CA GWC

7910.0001

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 4.9-1

Noise Measurement Locations

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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Project Boundary

Sensitive Receptor ID

Construction/Renovation Type

- Planned Renovation
- Planned Construction
- Open Space
- Urban Street

Proposed Campus Land Use

13, Central Warehouse/Corporation Yard
14, Automotive Technology Building
19, Technology Building
41, Criminal Justice Training Center and Road Track
42, Boys & Girls Club Gymnasium Facilities
43, Language Arts Complex
44, Math/Science Building
45, One Stop Student Center
46, Physical Education Outdoor Labs
47, Business/Social Science/Administrative Offices
48, Cosmetology Building
49, Thermal Energy Storage
50, Boys & Girls Club After School Building
51, Campus "Urban Street"
52, Campus Quad
53, North Green
54, Amphitheater
55, Community Arts Plaza
56, Student Dining
57, Language Arts Garden
58, Forum Lawn
59, South Green
60, Calfornia Native Garden

Sensitive Receptor ID	Receptor Type	Address	Approximate Distance to Nearest Project
SR-1	Single-family residence	15702 Sunburst Lane	530'
SR-2	Single-family residence	7312 Rockmont Avenue	115'
SR-3	Heritage Montessori School	15881 Goldenwest Street	550'
SR-4	Multi-family residence	15772-15838 Gothard Street	350'

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012; County of Orange, 2015.

FIGURE 4.9-2

Off-Site Sensitive Receptors

GOLDEN WEST COLLEGE
HUNTINGTON BEACH, CA

7910.0001

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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4.10 POPULATION AND HOUSING

This section describes the existing population and housing trends in Southern California, the County of Orange (County), and the Golden West College (GWC) campus. This section evaluates consistency with applicable plans, policies, and regulations as they relate to population and housing. It also evaluates potential impacts to population and housing related to implementation of the proposed GWC Vision 2020 Facilities Master Plan (proposed project). Data sources for this section include Southern California Association of Governments (SCAG) data, County data, and data from GWC.

4.10.1 Existing Conditions

The following subsections provide an overview of existing conditions related to population and housing in Southern California, the County, the City of Huntington Beach (City), and the GWC campus.

4.10.1.1 Regional Conditions

Population

The SCAG region is the second-most populous metropolitan region in the nation. The U.S. Census reported the 2010 population of the SCAG region was 18,051,534. Approximately 6% of the national population lives in the SCAG region, and for over half a century it has been home to approximately half of the population in California (SCAG 2012a). Southern California will lead the state's growth over the next 50 years (2010 to 2060), growing by 8.3 million to 31 million in population. The pattern in which population growth occurs will vary according to race, ethnicity, and geography. The patterns are related to the Baby Boomers and to various waves of domestic and international migration. Some of the more rural counties will see an older population gradually replaced, but growth will tend to be more limited. In areas closer to metropolitan areas, populations are likely to become more diverse, with younger populations moving in and contributing to more rapid growth (DOF 2013a). Between 2008 and 2030, the population in Southern California will increase by 4,195,000 people, which is equivalent to an increase of approximately 19%.

Housing

The recent housing shortfall has left California with one of the tightest and most expensive housing markets in the nation, despite the overall decline in median prices resulting from the current national recession. There are many reasons for the housing production shortfall, including the increasing cost of land, particularly in the coastal areas where housing demand is strongest. General economic and residential financing circumstances also come into play.

According to SCAG, Southern California is expected to add 1,511,000 households between 2008 and 2035, which is an increase of 20.6%. The average household size in the SCAG region is 3.05 persons per household. Of the 648,000 new housing units expected in 2020, 28% will be at a minimum 30 dwelling units per acre. Of the 1.5 million new housing units expected in 2035, 34% will be at a minimum 30 dwelling units per acre. These projected housing densities will help the region accommodate the projected housing needs at all income levels (SCAG 2012a).

Employment trends in Southern California have long followed a “boom and bust” cycle. Much of the 2000s saw a boom of housing development, particularly in the Inland Empire, only to be followed by a bust starting in 2008. This resulted in impacts to employment, particularly in the construction (housing) and service sectors. In 2010, Imperial County had the highest unemployment rate in the SCAG region (almost 30%), while Orange County had the lowest in the SCAG region (9.6%, on par with the national average) (SCAG 2012a).

Table 4.10-1 represents the forecasted population, households, and employment growth in Southern California from 2008 to 2035.

Table 4.10-1
Population, Households, and Employment Growth for the Southern California Region

	2008	2020	2035
Population	17,896,000	19,663,000	22,091,000
Households	5,814,000	6,458,000	7,325,000
Employment	7,738,000	8,414,000	9,441,000

Source: SCAG 2012b.

4.10.1.2 County Conditions

Population

As of the 2010 census, the County was the third-most populous county in California, behind the Counties of Los Angeles and San Diego. The County is also the sixth-most populous county in the United States as of 2009 and the smallest county in Southern California by area. The population density in the County is approximately 3,175 people per square mile, which is much greater than the national average density of approximately 81 people per square mile. The most prevalent race in the County is white, which represents 60.82% of the total population. The average education level in the County is higher than the state average and the national average (World Media Group 2014). Between 2008 and 2035, the County will have an approximate increase in population of 432,000 people, or 12.6%. According to the 2010 Census, 83.6% of the population (age 25+) in the County are high school graduates or higher (U.S. Department of Commerce 2010a). Estimates from the Department of Finance have determined that from 2000 to 2020, the under-20 age group will experience a decrease from 30% to 26%, which will hold steady through 2050, and the 20 to 24 age group will only show a slight decline from 7% in 2000 to 6% in 2030, which will hold steady through 2050. The population within the County will become more ethnically diverse, in line with state and national trends. Between 2010 and 2020, the County's Hispanic presence will grow from 33% to 38%. During the same period, the Asian population will increase from 17% to 19%, while the white population will decrease from 44% to 37% (DOF 2013b).

Housing

The housing needs of the County are determined by demographic characteristics of the population (i.e., age, household size, employment, and/or ethnicity), and the characteristics of housing availability to that population (e.g., number of units, tenure, size, cost). As County demographics and household socioeconomic conditions change, different housing opportunities arise and/or must be created to meet demand. Future housing needs are affected by the number and types of new jobs created within the upcoming years. The overall growth is expected to add 287,400 new jobs and bring the employment of the County to almost 1,887,000 by 2014. Generally, residents who are employed in high-paying occupations have less difficulty obtaining adequate housing than residents in low-paying occupations. The County has a fairly large population of affluent homeowners; therefore, future planning efforts need to be place greater attention on the affordability gap in the resale of smaller and more moderately priced homes to lower-income and first-time homebuyers (County of Orange 2005).

Table 4.10-2 presents the forecasted population, household, and employment growth in the County from 2008 to 2035.

Table 4.10-2
Population, Households, and Employment Growth for the County of Orange

	2008	2020	2035
Population	2,989,000	3,266,000	3,421,000
Households	987,000	1,049,000	1,125,000
Employment	1,624,000	1,626,000	1,779,000

Source: SCAG 2012b.

4.10.1.3 Local Conditions

Population

The population in the City (197,575 people) is approximately 6.3% of the total population in the County (3,114,363 people). The population in the City is expected to increase by 432,000 people, which is a 12.6% increase between 2008 and 2035. The population in the City is predominantly white at 66.3%. Blacks or African Americans account for 1.0% of the population, Hispanics or Latinos represent 17.1%, and Asians account for 11.1% of the population (U.S. Department of Commerce 2010b).

Housing

The City has a smaller average household size than the County and the state. This generally reflects a community where young families with children and young adults represent a smaller percentage of the community. However, consistent with countywide and statewide trends, average household size in the City has been steadily rising. Persons per household are 2.57 in the City, 3.01 in the County, and 2.93 in the State of California. According to the U.S Census, the majority of households in 2012 were valued at $526,000, $104,000 higher than that in the County overall (SCAG 2013). In 2012, total jobs in the City numbered 77,400, which was a decrease of 8.7% from 2007 (SCAG 2013).

Table 4.10-3 presents the forecasted population, household, and employment growth in the City from 2008 to 2035.

Table 4.10-3
Population, Households, and Employment Growth for the City of Huntington Beach

	2008	2020	2035
Population	189,700	199,800	205,500
Households	74,300	75,800	79,200
Employment	82,900	80,100	80,600

Source: SCAG 2012.

4.10.1.4 GWC Campus Conditions

Population

Based on an analysis of residential zip codes reported by enrolled students, an area of Orange County and adjacent Los Angeles County that encompasses a 9-mile radius comprises the territory effectively served by GWC. The population in this effective service area was 1,509,368 in 2000 and is projected to be at 1,592,900 by 2015. The area is expected to slowly grow at an annual rate of 0.15% as compared to the state's annual growth rate of 0.7%. Within the 9-mile effective service area, shifts in the ethnic composition of the population will not be as dramatic as they will be in the County as a whole, but there are parallels. The white population will decrease from 58% in 2000 to 50% in 2015 while the population identifying itself as Hispanic will grow from 38% to 44% of the population in just that 9-mile radius area. The Asian population in this 9-mile effective service area will also slowly grow from 16% to 21% (District 2011).

GWC had an enrollment of 12,746 students in 2013 (Flint and Nguyen, pers. comm. 2014), which is projected to grow to 15,391 students in 2020, representing a 1.14% annual average growth rate from the fall 2009 enrollment of 13,673 students as illustrated in Table 4.10-4 (District 2011). The Vision 2020 Facilities Master Plan identifies a need for an additional 20,000 assignable square feet, or 26,000 gross square feet,[1] of academic space at GWC by 2020 to accommodate this growth.

Table 4.10-4
GWC Planning Projections

Timing	Headcount Student Enrollment[a]
Fall 2013	12,746
Fall 2020	15,391

Sources: District 2011; Flint and Nguyen, pers. comm. 2014.
Note: [a]Headcount student enrollment represents the total number of students attending GWC, including online, day, and night classes.

From now until 2015, the traditional college age population (20 to 24 years of age) in the 9-mile effective service area will continue to grow slowly by 0.6%. For GWC, this college age population group (20 to 24 years of age) represents 64% of the student enrollment during 2007 through 2011 (District 2011). From 2001 to 2009, the number of GWC students from the City of Huntington Beach declined by 7.2%%.

Housing

No student or faculty housing currently exist on the GWC campus.

4.10.2 Relevant Plans, Policies, and Ordinances

There are no federal or state laws or regulations related to housing that are applicable to the proposed project.

Local Setting

City of Huntington Beach General Plan

<u>Public Facilities Element</u>

Goal PF 4 Promote a strong public school system which advocates quality education. Promote the maintenance and enhancement of the existing educational systems facilities, and opportunities for students and residents of the City to enhance the quality of life for existing and future residents.

[1] Assignable square feet is approximated as 78% of gross square feet of academic space. This is based on the ratio of assignable square feet to gross square feet of existing campus facilities.

Objective PF 4.1 Monitor new land use changes within the City and cooperate with the local school districts in the review of impacts on enrollment and the availability of present and future school facilities.

Policy PF 4.1.1 Continue the dialogue between the City of Huntington Beach and the local school districts regarding the review of measures to alleviate school overcrowding in some areas and available capacity in schools in other areas.

Objective 4.2 Monitor new development activities within the City and coordinate with local school districts to meet future educational needs in the undeveloped areas of Huntington Beach.

Policy PF 4.2.1 Continue communication and cooperation efforts between City officials and the local school districts especially in the areas of population projections, funding sources, and through annual monitoring of development activities, in order to promote a better quality of life for existing and future residents.

Policy PF 4.3.2 Investigate the feasibility of permitting and/or providing child or elderly day care services at public and private institutional facilities such as churches, temples, other religious buildings, hospitals, and schools.

Policy PF 4.3.3 Create, establish, and implement shared responsibility agreements between the City of Huntington Beach and the local school districts for the maintenance and operation of properties and facilities where public recreation activities occur at local school sites.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). According to Appendix G, a significant impact related to population and housing would occur if the project would:

1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
3. Displace substantial number of people, necessitating the construction of replacement housing elsewhere.

These three thresholds were analyzed in the 2013 Initial Study for the GWC Vision 2020 Facilities Master Plan and Thresholds 2 and 3 were determined to have no impact. Therefore, no further analysis is provided herein regarding Thresholds 2 and 3.

4.10.4 Impacts Analysis

Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Student Growth

The proposed project does not involve the development of campus housing; however, the proposed project would involve an increase in student enrollment. GWC had an enrollment of 12,746 students in 2013 (Flint and Nguyen, pers. comm. 2014), which is projected to grow to 15,391 students by 2020 (District 2011). This increase in student enrollment could result in an increase of GWC students and employees living within the vicinity of the proposed project.

Considering the projected enrollment growth and the popularity of general education courses, the Coast Community College District (District) proposes to construct a Math/Science Building, a Language Arts Complex, and a Business/Social Sciences/Administrative Office Building. Career and technical education makes up 10% of weekly student contact hours, and enrollment in these courses is expected to grow. The replacement of the Criminal Justice Building, renovation of the Technology Building and the Automotive Technology Building, and construction of a new Cosmetology Building are all intended to address building deficiencies and support the instructional needs of these programs. The District proposes the renovation of the Physical Education Outdoor Labs and Central Warehouse/Corporation Yard, and the new construction of the One Stop Student Center, to accommodate the growing student body and to better serve students.

The construction and renovation of existing facilities on campus would have the potential to attract more students and increase the population in the area. However, the construction and renovation of these facilities is intended to accommodate the projected growth, not necessarily induce growth. However, these improved facilities would have the potential to indirectly induce growth. In comparison to the projected population increase in region, an increase in 2,645 students is not a substantial increase in population.

According to SCAG, the City is expected to have a population of 199,800 by 2020. The projected student enrollment at GWC by 2015 would be 15,391, which accounts for 7.7% of SCAG's projected population for the City. However, the net increase of 2,645 students between 2013 and 2020 only represents 1.3% of SCAG's overall growth projections. Therefore, projections are consistent with SCAG's growth projections for the City and impacts as a result of increased student generation rates would not be substantial. Impacts associated with student generation would be less than significant.

Employee Growth

For the 2013 fall semester, the student headcount enrollment was 12,746 and the employee count was 618, representing a student to employee ratio of 21 to 1. Assuming that this same ratio is maintained upon buildout of the proposed project, this would result in an employee count of 733, or a net growth of 115 employees by the year 2020. Thus, GWC would experience a 15.6% increase in employees, which is only 0.14% of SCAG's overall growth projection of 80,100 employees for the City by 2020. Therefore, employee growth is consistent with SCAG's overall growth projections and would not result in a substantial increase in population growth. Impacts as a result of increase in employees would be less than significant.

Visitor Attraction

The District would like to increase entrepreneurial activities and attract visitors to the campus through the development of new facilities and by improving programs already in place. A joint venture with the Boys & Girls Club is currently in place that would include the construction of a gymnasium and improved after school facilities. The Boys & Girls Club–Robert Mayer Child Development Preschool and the Child Care Center currently occupies 13,110 gross square feet in the northeast portion of campus and has childcare programs available to GWC staff and the general public.

The District proposes to demolish the 4,360-square-foot Child Care Center and construct a 14,990-square-foot Boys & Girls Club After School Building, which would house the new Boys & Girls Club Twilight Program (i.e., after-school program). There would be a net increase of 25 children that would attend the Boys & Girls Club Twilight Program, 20% of which would be children of GWC employees and students (Flint and Hoxsie, pers. comm. 2014).

According to SCAG Profile of the City, the average household size in the year 2012 for the City was approximately 2.6 (SCAG 2013). This average household size would generate an average of 1 child per household. There were 77 GWC students with children enrolled in the 2013 fall semester, and if this is assumed to be a reasonable proxy of the GWC population with children, then approximately 0.6% of the GWC student body have children. Applying this same percentage to the projected enrollment for 2020, the result would be 92 GWC students with children, or a net growth of 16 children. This projection is also consistent with the City's average household size.

Applying the City's average household size (2.6 persons per household) and assuming that there is an average of 1 child per household, new GWC employees could introduce 115 children to the area who would attend nearby schools (if all new GWC employees were to live in the vicinity of GWC). New GWC students and employees combined could potentially introduce 131 children to the area (if all new students and employees were to live in the vicinity of GWC). The increase of 131 children does not represent a substantial increase in population.

In a joint venture with the Boys & Girls Club, the District proposes to construct a 9,794-square-foot gymnasium, which would be located next to the newly constructed Boys & Girls Club After School Building. The new gymnasium would attract visitors to the campus, especially since youth leagues would be able to use the gymnasium during certain hours for practices and games. People coming to the campus to use the gymnasium would represent a temporary increase in population that would not be substantial.

The new Cosmetology Building would also include retail/salon space. This retail/salon space would support an existing program on campus, which provides haircare to the surrounding community. The salon would expand their operation hours to Saturdays during the GWC swap meet. Weekday customer visits are not anticipated to increase with the new retail/salon space. However, this would also be considered a visitor attraction that would result in temporary, but not substantial, increases in population.

The public would also be encouraged to use the newly renovated athletic facilities and the conferencing facilities housed in the newly constructed Business/Social Sciences/Administrative Office Building. The development of conference space would be enhanced by the use of existing food service facilities. These facilities would meet the need for additional meeting space on campus. Although these facilities would be open for public use and could occasionally house special events, generally, GWC students and staff would be the primary users of these facilities. The newly renovated and constructed facilities would not result in substantial population growth.

Overall, the newly constructed and/or renovated facilities that would attract visitors would not result in substantial population growth or exceed the local population projections. The proposed project is not considered to be growth inducing and impacts would be less than significant. No mitigation is necessary.

4.10.5 Mitigation Measures

Impacts associated with population and housing are found to be less than significant, and no mitigation is required.

4.10.6 Level of Significance After Mitigation

Impacts associated with population and housing are found to be less than significant and no mitigation is required.

4.10.7 Cumulative Impacts

Cumulative impacts to population and housing would result from a combination of projects that induce population growth, displace substantial numbers of housing, or displace substantial numbers of people. The proposed project would not displace people or housing because the GWC campus does not have any existing housing facilities on campus. It was determined in the Initial Study that thresholds associated with the displacement of housing or people would have no impact and did not need further analysis. While the proposed project does not involve the development of campus housing, it would involve an increase in student enrollment, employment, and facilities that could attract additional visitors to the campus, all of which would result in a slight increase in population. However, the future projections for the campus and any indirect population growth in the city as a result of the proposed project are consistent with SCAG's growth projections for the City. A list of past, present, and reasonably foreseeable future projects that the City determined were most relevant to the project are provided in Table 3-9 of Chapter 3, Project Description. The City is a highly urbanized city and cumulative projects are primarily urban infill projects. While these urban infill projects are expected to increase growth within the City, these projects in combination with the student growth anticipated by the college remain within SCAG's population growth projections of 10,100 people from 2008 to 2020 for the City. In combination with the proposed project, impacts to population growth or housing availability would not be cumulatively considerable.

4.10.8 References

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4.11 PUBLIC SERVICES

This section describes the existing conditions with regard to fire and emergency services, police protection services, and schools within the project site and vicinity. This section also identifies associated regulatory requirements and evaluates the Golden West College (GWC) Vision 2020 Facilities Master Plan's (proposed project's) potential impacts to public services. Information provided in Section 4.11.1, Existing Conditions, is based on communications with individuals from the GWC Department of Public Safety, the Huntington Beach Fire Department (Fire Department), the Huntington Beach Police Department (Police Department), the Ocean View School District, the Westminster School District, and the Huntington Beach Union High School District. Online resources such as annual statistics and security, crime, and fire reports from the GWC Department of Public Safety, the Fire Department, and the Police Department were also used.

4.11.1 Existing Conditions

4.11.1.1 Fire Protection and Emergency Medical Response

The GWC Department of Public Safety is the first responder to emergency calls made on campus (Arnold, pers. comm. 2014). Department of Public Safety officers are trained in basic first aid and CPR. Officers are non-sworn but are required to successfully complete a minimum of 85 hours of instruction under California Penal Code Sections 832 (Powers of Arrest) and 832.2 (School Peace Officer Training) (GWC 2014a). On-duty officers are on patrol 24 hours a day and 7 days a week (GWC 2014b). The Department of Public Safety office is open from Monday through Friday, 8:00 a.m. to 5:00 p.m. (GWC 2014b).

Students and GWC employees can dial the 24-hour phone line at 714.895.8924 or the emergency line at 714.895.8999 to contact Department of Public Safety (GWC 2014a). Dialing 911 directly from a campus phone would reach the Huntington Beach Police and Fire Department dispatch center. The Department of Public Safety is automatically notified of these calls and is able to listen in to the calls (Arnold, pers. comm. 2014). The Department of Public Safety is not notified when 911 calls are dialed from cell phones on campus; therefore, dialing 911 from a campus land line will provide assistance faster than by dialing with a cell phone (Arnold, pers. comm. 2014; GWC 2014a).

As required by the Jeanne Clery Disclosure of Campus Security Policy and Crime Statistics Act (Clery Act) and the Higher Education Opportunity Act (Public Law 110-315), GWC publishes its Annual Report of Crime Statistics every year. This report includes crime statistics, security-related policies, campus alerts, and emergency response and evacuation procedures provided by the GWC Department of Public Safety. Table 4.11-1 presents a summary of these statistics for 2013.

Table 4.11-1
Golden West College Department of Public Safety Annual Statistics (2013)

Category	Number of Incidents (2013)
Medical aid	9
Attempted suicide	1
Assault	2
Assault with deadly weapon	2
Battery	1
Domestic violence	1
Dispute	1
Drug violation	3
Sexual offense/forcible	1
Indecent exposure	1
Vandalism	7
Property damage	1
Vehicle damage	2
Traffic collision	7
Hit and run	5
Suspicious circumstance or person	1
Disturbance	2
Under the influence	1
Injury/dog bite	1
Burglary	1
Grand theft	3
Petty theft	42
Attempted theft	2
Stolen vehicle or attempt	6
Found/lost property	2
Student misconduct/violation of student conduct code	3
Information report	3
Counterfeit bill or fraud	4
Total	**115**

Source: GWC 2014a.

The Department of Public Safety Office would contact the Fire Department during a fire or medical emergency on campus by dialing 911. The Murdy Fire Station No. 2 paramedic engine company would be the first-use responder to emergency calls made by GWC (Culhane, pers. comm. 2014; City of Huntington Beach 2014a). The truck company from Murdy Fire Station 2 would be the next responding unit if the Paramedic engine company is not available (Culhane, pers. comm. 2014). Fire Station No. 2 is located at 16221 Gothard Avenue, approximately 0.4 mile south of campus (see Figure 4.11-1, Existing Public Services). In addition to Station No. 2, the City of Huntington Beach (City) operates seven fire stations within the City (City of

Huntington Beach 2014a). Heil Fire Station No. 8, located 1.2 miles southwest of the campus, at 5891 Heil Avenue, would respond if additional support is needed in the event that Station No. 2 cannot meet the immediate needs of a call for service. In the case where Station No. 8 is unavailable, the Orange County Fire Authority Fire Station No. 64, located 1.5 miles north of the campus at 7351 Westminster Boulevard, would provide service to the campus (Culhane, pers. comm. 2014). Station No. 2 is equipped with a paramedic engine company, truck company, Advanced and Basic Life Support ambulance, and Urban Search and Rescue truck.

The Fire Department is staffed with 11 fire prevention personnel, 12 administrative personnel, 15 marine safety personnel, and 159 emergency response personnel (City of Huntington Beach 2013). The Fire Department has a fire/rescue/emergency medical response arrival time goal for the first engine company to reach their destination within 5 minutes, 80% of the time. The first ladder company response arrival time goals are within 10 minutes, 90% of the time, and in all cases, within 15 minutes. The first paramedic resource response arrival time goals are within 5 minutes, 80% of the time, and in all cases, within 10 minutes (City of Huntington Beach 2014a). The Fire Department maintains average response times of approximately 4 minutes and 59 seconds for all emergency calls (City of Huntington Beach 2014b).

Data provided in Table 4.11-2, Golden West College Calls to Huntington Beach Fire Department (2013), summarize calls received by the Fire Department from GWC requesting Fire Department services. Although the campus location for each of the generated calls was not recorded by the Fire Department, Table 4.11-2 categorizes vehicle- and traffic-related calls under the parking facility land use, and all other calls as calls from academic, administrative, auxiliary, and recreational land uses. GWC generated 37 calls during 2013 that necessitated assistance from the Fire Department (Culhane, pers. comm. 2014). The call data, presented as follows, assumes the Fire Department would respond to incidents including fires, fire alarms, requests for medical aid, and vehicle accidents. Medical aids could include but are not limited to seizures, unconscious patients, falls, overdoses, and assaults (Culhane, pers. comm. 2014). For 2013, the Fire Department averaged response times of 4 minutes and 11 seconds to calls generated by GWC (Culhane, pers. comm. 2014).

Table 4.11-2
Golden West College Calls to Huntington Beach Fire Department (2013)

Category	Number of Incidents
Calls from Golden West College Parking Facilities	
Traffic accident	2
Total calls from parking facilities	**2**
Average annual calls per parking lot square foot	**2/1,209,375 = 0.0000017**

Table 4.11-2
Golden West College Calls to Huntington Beach Fire Department (2013)

Category	Number of Incidents
Calls from Academic/General Administrative/Auxiliary/Recreational Campus Land Uses	
Medical aid	35
Total calls from academic/general administrative/auxiliary/recreational campus land uses	**35**
Average annual calls per gross square foot	**35/653,945= 0.000053**
Total calls received from Golden West College	**37**

Sources: Culhane, pers. comm. 2014; Flint, pers. comm. 2014a, 2014b.

A Student Health Center is stationed on campus to provide basic first aid, as needed, Monday through Friday. The Student Health Center is funded through a student health fee paid with tuition and only serves students attending GWC. The Student Health Center provides basic medical services where emergency services are not needed (GWC 2014c).

4.11.1.2 Police Protection

The Department of Public Safety is the primary law enforcement agency on campus. The Department of Public Safety does not have direct radio contact with the Police Department; therefore, the Department of Public Safety must call the Police Department dispatch directly (Arnold, pers. comm. 2014). Officers are non-sworn; however, they are authorized to make arrests by Section 837 of the penal code. Officers do not possess peace officer status (GWC 2014a).

Table 4.11-1 (see Section 4.11.1.1) presents a summary of data regarding criminal offenses, student code of conduct violations, incident reports, and enforcement provided by the Department of Public Safety for 2013.

The Department of Public Safety would contact the Police Department during an on-campus emergency when additional support is required. The Huntington Beach Police Station is located at 2000 Main Street, approximately 3.5 miles south of campus (see Figure 4.11-1). The Police Department is composed of 333.5 funded positions, which include 212 sworn personnel and 121.5 civilian employees (City of Huntington Beach 2014c). The Police Department provides continuously available 911 call reception and communication services. Divisions include Investigation, Uniform, and Administrative Operations (City of Huntington Beach 2014c).

The Police Department reported 5,321 Part 1 crimes, which include homicide, rape, robbery, aggravated assault, burglary, larceny, and arson for the year 2013. The majority of crimes were attributed to larceny, burglary, and auto theft. For 2013, the Police Department received 207,700 calls, for which communication operators generated over 94,490 calls for service to which officers responded (City of Huntington Beach 2014c). No official response time goals have been set for the department (Reinhart, pers. comm. 2014).

Table 4.11-3, Golden West College Calls to Huntington Beach Police Department (2013), summarizes the calls for service generated by GWC for 2013 as provided by the Police Department. The campus location for each of the generated calls was not recorded by the Police Department. Table 4.11-3 categorizes all calls as calls from academic, administrative, auxiliary, and recreational land uses. The Police Department received 26 calls for service from GWC for the year 2013.

Table 4.11-3
Golden West College Calls to Huntington Beach Police Department (2013)

Category	Number of Incidents (2013)
Calls from Academic/General Administrative/Auxiliary/Recreational Campus Land Uses	
Medical aid	10
Grand theft	2
Petty theft	3
Burglary	2
Found property	1
Drunk in public	1
Information report	1
Non-emergency calls	6
Total calls received from Golden West College	**26**
Average annual calls per gross square foot	**26/653,945= 0.000040**

Sources: Cañas, pers. comm. 2014; Flint, pers. comm. 2014a, 2014b

4.11.1.3 Schools

The City is served by the Ocean View School District and Huntington Beach Union High School District. In addition, the Westminster School District serves schools within the vicinity of the GWC campus. Public schools in the vicinity of the campus are provided in Figure 4.11-1, Existing Public Services, and Table 4.11-4, Public Schools in Project Vicinity and Associated Enrollment Levels (2014). Table 4.11-4 lists the public schools in the project vicinity (within 1 mile) and student enrollment levels for each school.

Table 4.11-4
Public Schools in Project Vicinity and Associated Enrollment Levels (2014)

School Name	Location	Enrollment
Elementary Schools		
College View Elementary[a]	6582 Lennox Drive, Huntington Beach	465
Sun View Elementary[a]	7721 Juliette Low Drive, Huntington Beach	265

Table 4.11-4
Public Schools in Project Vicinity and Associated Enrollment Levels (2014)

School Name	Location	Enrollment
Circle View Elementary[a]	6261 Hooker Drive, Huntington Beach	753
Westmont Elementary[a]	8521 Heil Avenue, Westminster	371
Star View Elementary [a]	8411 Worthy Drive, Midway City	579
Schroeder Elementary[b]	15151 Columbia Lane, Huntington Beach	640
Demille Elementary [b]	15400 Van Buren Street, Midway City	461
Middle Schools		
Spring View Middle School[a]	16662 Trudy Lane, Huntington Beach	772
High Schools		
Marina High School[c]	5682 Tilburg Drive, Huntington Beach	2557
Ocean View High School[c]	17071 Gothard Street, Huntington Beach	1514
Westminster High School[c]	14325 Goldenwest Street, Westminster	2586
Total enrollment of public schools in the vicinity of GWC		**10,963**

Sources: Duggins, pers. comm. 2014; O'Connor, pers. comm. 2014; Pulfer, pers. comm. 2014.
Notes: Enrollment data as of January 14, 2014.
a Ocean View School District.
b Westminster School District.
c Huntington Beach Union High School District.

Other schools in the area include Land School Preschool, Good Shepard Preschool, BrightStar Learning Center, Heritage Montessori School, Grace Lutheran Preschool, OC Montessori Academy, Montessori School, Fusion Academy, and Liberty Christian School.

4.11.2 Relevant Plans, Policies, and Ordinances

State

California Fire Code 2013

California Code of Regulations, Title 24, Part 9, incorporates adoption of the 2012 International Fire Code of the International Code Council with necessary California Amendments. The California Fire Code establishes minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. The California Fire Code applies to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure within the State of California (24 CCR, Part 9).

Local

Huntington Beach General Plan, Public Facilities, and Public Services Element

Fire/Paramedic

- **Policy PF 2.1**.1 Locate fire stations in a manner which will enable emergency fire response times to meet a five minute standard, 80 percent of the time.
- **PF 2.1.5** Consider requiring that new developments be assessed a pro-rated fee to pay for additional fire facilities and personnel.
- **PF 2.2.1** Provide paramedic units based in local fire stations throughout the City which will assure fast and efficient emergency health care in Huntington Beach by providing paramedic response times at a standard of five minutes, 80 percent of the time.
- **PF 2.3** Attempt to achieve "built in" fire protection for all structures.
- **PF 2.3.1** Continue to require all structures to follow all State and nationally recognized fire codes.
- **PF 2.3.2** Ensure that new construction is designed with fire and emergency access and safety in mind.
- **PF 2.3.3**. Ensure that existing buildings are maintained in a manner which is consistent with fire safety.

Police

- **Policy PF 1.1.2** Consider requiring that development projects contribute fees based on their proportional impact and demand for new resources, in accordance with State Nexus legislation.
- **PF 1.3.1** Ensure that project development site designs provide "defensible space."
- **PF 1.3.2** Ensure that new development and land use proposals are analyzed to determine the impact their operators, occupants, visitors or customers may have on the safety and welfare of the community.

Educational Facilities

- **Policy PF 4.2.2** Require new development projects to pay appropriate school impact fees to the local school districts.
- **PF 4.2.3** Ensure the development shall not occur without providing for adequate school facilities (City of Huntington Beach 1996).

Huntington Beach Fire Department City Specifications

- **No. 401** – "Minimum Standards for Fire Apparatus Access"
- **No. 403** – "Fire Access for Pedestrian or Vehicular Security Gates & Buildings"
- **No. 407** – "Fire Hydrant Installation Standards"
- **No. 415** – "Fire Lanes Signage and Markings on Private, Residential, Commercial and Industrial Properties"
- **No. 420** – "Automatic Sprinkler, Underground and Hydrant Systems" (City of Huntington Beach 2014d).

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines; 14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to public services would occur if the project would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
   a. Fire protection.
   b. Police protection.
   c. Schools.
   d. Parks.
   e. Other public facilities.

The Initial Study eliminated Thresholds 1(d) and 1(e) from further analysis; therefore, they are not covered in the impacts analysis. Threshold 1(d) was eliminated because the proposed project would have no impact on local parks. The proposed project area would experience an increase in GWC student enrollment and employees; however, the campus offers athletic fields and recreational opportunities, so nearby parks would not experience a significant increase in visitors, and acceptable service ratios would be maintained. Threshold 1(e) was eliminated because the proposed project would have no impact on libraries and other public facilities. GWC has a library on campus to serve the students; therefore, any increase in student enrollment would not adversely affect local libraries and acceptable service ratios would be maintained.

4.11.4 Impacts Analysis

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

The proposed project would generate additional demand for fire protection services by adding additional academic and auxiliary space and a general increase in the number of campus students.

Projected call ratios as presented in Table 4.11-5, Projected Fire Department Calls to Service from Golden West College, were formulated based on baseline call ratio data as presented in Table 4.11-2. Call ratios in Table 4.11-2 were categorized according to the land use in which the calls were generated. Table 4.11-5 shows the projected fire-related calls anticipated for the proposed project. As shown in Table 4.11-5, the proposed project would generate approximately 11 additional calls per year to the Fire Department upon completion of the proposed project.

Table 4.11-5
Projected Fire Department Calls to Service from Golden West College

Call Origin	Average Annual Calls per Square Foot/per Parking Lot Square Foot	Square Foot/Parking Lot Square Foot Net Increase	Projected Additional Calls (per Year)
Academic/general administrative/auxiliary/recreational	0.000053 per gross square foot	207,549 square feet[a]	11
Parking facilities	0.0000017 per square foot	0 new parking stalls[b]	0
	Total	—	**11**

Sources: Flint, pers. comm. 2014a, 2014b.
[a] Upon buildout of the proposed project, the campus will have 207,549 gross square feet of academic and auxiliary space in addition to the existing square footages on campus.
[b] The proposed project would not result in a net gain of parking spaces or parking lot square footage.

As discussed in Section 4.11.1.1, Fire Protection and Emergency Medical Response, the Fire Department maintains average response times of approximately 4 minutes and 59 seconds for all emergency calls (City of Huntington Beach 2014b). The Fire Department response times are compliant with the Huntington Beach General Plan response time standard of 5-minute standard, 80% of the time (City of Huntington Beach 2014a).

For the year 2012, the Fire Department reported 16,430 total incidents, 1,014 of which were incidents that occurred outside of Huntington Beach (City of Huntington Beach 2014b). Considering that the Fire Department maintains their response time goals and that the proposed project would contribute an additional 11 calls annually in comparison to 16,430 total incidents per year, representing a projected increase in annual calls of 0.07%, the proposed project would not result in potentially significant impacts relating to fire protection.

Additionally, the buildings constructed as part of the proposed project would be subject to the requirements of the 2013 California Fire Code (24 CCR, Part 9). The Fire Department, in the Notice of Preparation comment letter dated January 16, 2014, commented that per the Division of State Architect procedure (DSA 810 form), the Huntington Beach Fire Department would serve as the local fire authority. The local fire authority would have jurisdiction over all fire apparatus access lanes, access gates, fire hydrant/fire pump/fire department connections/post indicator valve/double check valve assembly locations associated with the proposed project (see Appendix A for Fire Department comment letter). The proposed project would be required to comply with all applicable Fire Department City Specifications related to apparatus access lanes; fire lane signage and striping; fire access gates; automatic sprinkler, underground, and hydrant systems; and elevators. Prior to Division of State Architect approval, the Fire Department would review site-specific plans to determine compliance with the Fire Department City Specifications.

Because the proposed project would result in a limited number of additional calls for fire service, in combination with the fact that the project would not result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, the proposed project would have a less-than-significant impact on fire protection services.

Police protection?

The proposed project would generate additional demand for police services by adding additional academic and auxiliary space and through a general increase in the number of campus students.

Projected call ratios as presented in Table 4.11-6, Projected Police Calls to Service from Golden West College, were formulated based on baseline call ratio data as presented in Table 4.11-3. Call ratios in Table 4.11-3 were categorized according to the land use in which the calls were generated. It was assumed that all calls were generated from academic, general administrative, auxiliary, and recreational land uses. Table 4.11-6 provides a projection of future calls to the Police Department. As shown in Table 4.11-6, the proposed project would generate approximately nine additional annual calls to the Police Department.

Table 4.11-6
Projected Police Calls to Service from Golden West College

Call Origin	Average Annual Calls per Square Foot/per Parking Lot Square Foot	Square Foot/Parking Lot Square Foot Net Increase	Projected Additional Calls (per Year)
Academic/general administrative/auxiliary/recreational	0.000040 per square foot	207,549 square feet[a]	8

Sources: Flint, pers. comm. 2014a, 2014b.

[a] Upon buildout of the proposed project, the campus will have 207,549 gross square feet of academic and auxiliary space in addition to the existing square footages on campus.

[b] The proposed project would not result in a net gain of parking spaces or parking lot square footage.

As described in Section 4.11.1.2, Police Protection, in 2013, the Police Department received 207,700 calls, for which communication operators generated over 94,490 calls for service to which officers responded (City of Huntington Beach 2014c). No official response time goals have been set for the department (Reinhart, pers. comm. 2014).

With the addition of 8 calls annually, in comparison to 207,700 emergency and non-emergency calls per year received by the Police Department, the proposed project would result in a marginal increase (0.004%) in annual calls. In addition, GWC Department of Public Safety would continue to be the primary law enforcement agency on campus, and the proposed project area is already part of the normal patrol and enforcement area of the Department of Public Safety. The Police Department would only provide additional support if required.

Therefore, in light of the proposed project's forecasted effect on existing response times, in combination with the fact that project implementation would not result in the need for new or physically altered governmental facilities, the proposed project would not result in potentially significant impacts to police services, and no mitigation is necessary.

Schools?

The proposed project does not involve the development of campus housing; however, the proposed project would involve an increase in student enrollment. GWC had an enrollment of 12,746 students in 2013 (Flint and Nguyen, pers. comm. 2014), which is projected to grow to 15,391 students in 2020 (District 2011).This increase in student enrollment could result in an increase of GWC students and employees living in the vicinity of the proposed project.

For the 2013 fall semester, 77 GWC students were enrolled in California Work Opportunity and Responsibility to Kids (CalWORKs) (CCCCO 2014). CalWORKS is a welfare program that gives cash aid services to eligible needy families (CDSS 2014). GWC students with children may be eligible for CalWORKs cash aid. There were 77 GWC students with children enrolled in the 2013 fall semester, and if this is assumed to be a reasonable proxy of the GWC population with children, then approximately 0.6% of the GWC student body have children. Applying this same percentage to the projected enrollment for 2020, the result would be 92 GWC students with children, or a net growth of 16 children. According to the Southern California Association of Governments' Profile of the City of Huntington Beach, the average household size in the year 2012 for the City was approximately 2.6 (SCAG 2013). Assuming this average household size represents 1 child per household, then new GWC students could introduce 16 children to the area who would attend nearby schools (if all new GWC students were to live in the area).

For the 2013 fall semester, the student headcount enrollment was 12,746 and the employee count was 618 (Flint and Nguyen, pers. comm. 2014; CCCCO 2014), representing a student to employee ratio of 21 to 1. Assuming that this same ratio is maintained upon buildout of the proposed project, this would result in an employee count of 733, or a net growth of 115 employees. Applying the City's average household size (SCAG 2013) and assuming that there is an average of one child per household, new GWC employees could introduce 115 children to the area who would attend nearby schools (if all new GWC employees were to live in the vicinity of GWC).

New GWC students and employees could potentially introduce 131 children to the area who would attend nearby schools (if all new students and employees were to live in the vicinity of GWC). As discussed in Section 4.11.1.3, the 2014 enrollment totals for public schools within the vicinity of GWC was approximately 10,963. Upon comparing this 2014 enrollment total to the projected increase of children in the area who would be introduced by GWC students and employees, this could result in a 1.2% increase in enrollment of public schools within the vicinity of GWC.

Considering the proposed project would result in a marginal increase in public school enrollment within the vicinity of GWC, and project implementation would not result in the need for new or physically altered governmental facilities, impacts would be less than significant, and no mitigation is required.

4.11.5 Mitigation Measures

Impacts related to public services were found to be less than significant; therefore, no mitigation measures are necessary.

4.11.6 Level of Significance After Mitigation

Since there are no significant impacts requiring mitigation, residual impacts would be less than significant.

4.11.7 Cumulative Impacts

Section 15130(b)(1)(A) of the CEQA Guidelines allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. This discussion uses the following approach: an initial list and description of all related projects are presented and followed by a discussion of the effects that the project may have on each environmental category of concern. Consistent with CEQA (California Public Resources Code, Section 21000 et seq.), this discussion is guided by the standards of practicality and reasonableness. A list of past, present, and reasonably foreseeable projects that the City determined were most relevant to the project are provided in Table 3-9 of Chapter 3, Project Description.

The geographic extent for the analysis of cumulative impacts associated with public services consists of the City of Huntington Beach because public services are provided by the City.

As described in Section 4.11.1.1, Fire Protection and Emergency Medical Response, the Murdy Fire Station No. 2 paramedic engine company would be the first-use responder to emergency calls made by GWC (Culhane, pers. comm. 2014; City of Huntington Beach 2014a). Heil Fire Station No. 8 would respond if additional support is needed in the event that Station No. 2 cannot meet the immediate needs of a call for service (Culhane, pers. comm. 2014). As described in Section 4.11.4, Impacts Analysis, the proposed project is not anticipated to have a significant impact with regard to fire protection services. Considering that the Fire Department maintains their response time goals and that the proposed project would contribute an additional 11 calls annually, the proposed project would not act in conjunction with projects in the vicinity to contribute to significant cumulative impacts; therefore, cumulative impacts would be less than significant.

As described in Section 4.11.4, Impacts Analysis, the proposed project would result in increased calls to service to the Police Department. Based on the marginal projected increase in calls, response times would continue to be at similar levels at project buildout. Cumulative projects as described in Table 3-9 include multiple residential developments and would contribute to an additional demand for police services. However, GWC Department of Public Safety would be the primary police service provider on the GWC campus, and the Police Department would only provide additional support if required. The proposed project would not combine with projects in the vicinity to contribute to significant impacts; therefore, cumulative impacts would be less than significant.

As described in Section 4.11.4, the proposed project does not involve the development of campus housing; however, the proposed project would involve an increase in student enrollment. This increase in student enrollment could result in an increase of GWC students and employees living within the vicinity of the proposed project. As described in Section 4.11.4, Impacts Analysis, the proposed project is not anticipated to have a significant impact with regard to schools, considering that there would be a marginal increase in new employees and students over the planning horizon of 10 years. Although the cumulative projects described in Table 3-10 would potentially create additional demand for nearby elementary and secondary schools, the proposed project would not contribute to a significant cumulative impact.

4.11.8 References

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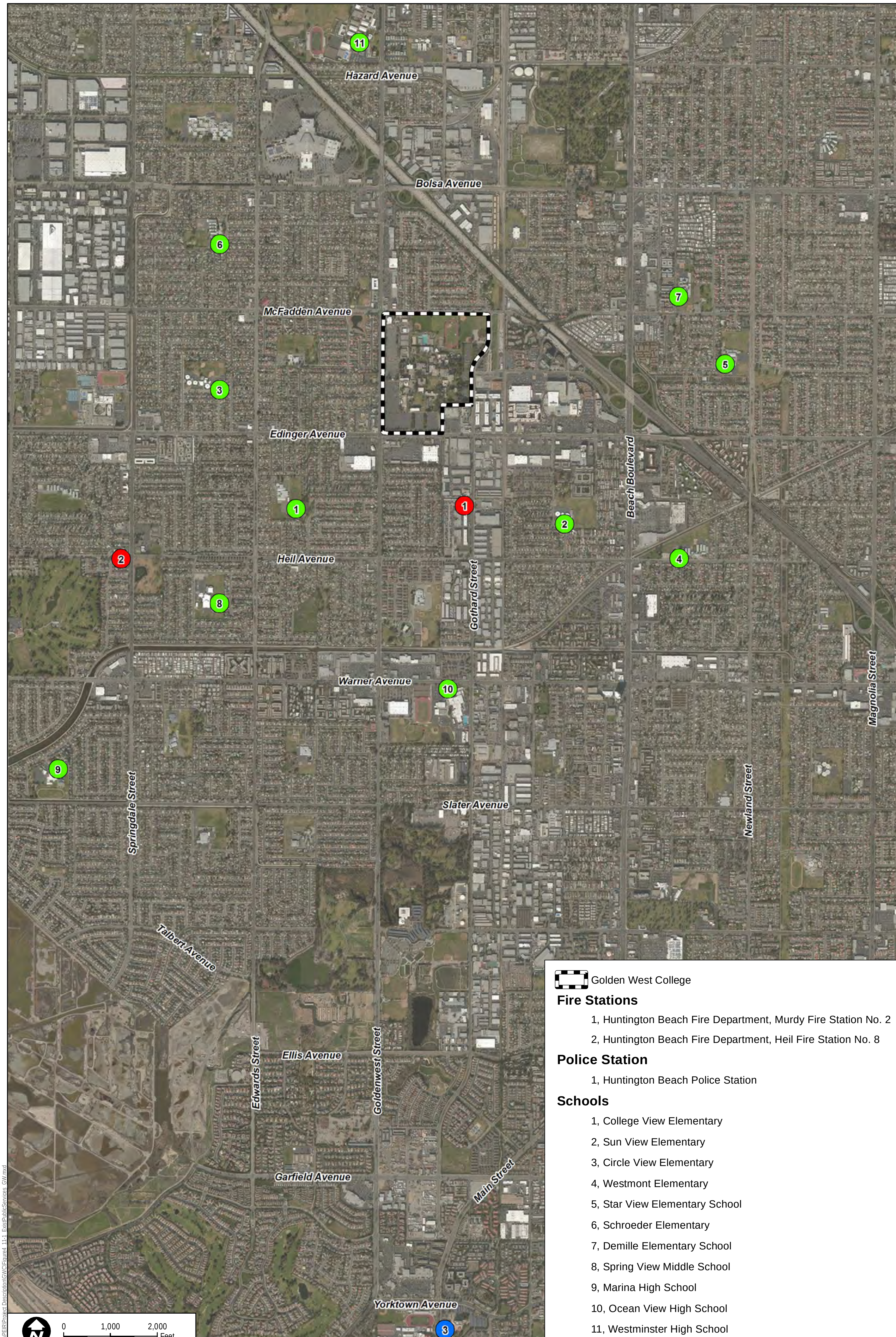

SOURCE: Bing Imagery, 2015; Coast Community College Vision Plan, 2012.

FIGURE 4.11-1

Existing Public Services

7910.0001

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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4.12 TRAFFIC AND CIRCULATION

This section describes the existing traffic/circulation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project). The analysis in this section is based on the traffic impact analysis report prepared by Linscott, Law & Greenspan, Engineers (Appendix I). The traffic analysis evaluates the existing operating conditions at 26 key study intersections within the project vicinity, estimates the trip-generation potential of the proposed project, superimposes the project-related traffic volumes on the circulation system as it currently exists, and forecasts future operating conditions with and without the proposed project. Where necessary, intersection improvements (mitigation measures) are identified.

4.12.1 Existing Conditions

Existing Street System

The principal local network of streets serving the project site is made up of McFadden Avenue, Gothard Street, Edinger Avenue, and Goldenwest Street. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Goldenwest Street is generally a six-lane, divided roadway oriented in the north–south direction. Goldenwest Street borders the project site to the west and provides access to the campus via one signalized driveway and five unsignalized driveways. The posted speed limit on Goldenwest Street is 45 miles per hour (mph). On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Goldenwest Street at the I-405 ramps, Bolsa Avenue, McFadden Avenue, Driveway No. 9 (GWC), Edinger Avenue, and Heil Avenue.

Gothard Street is generally a four-lane, divided roadway oriented in the north–south direction. Gothard Street borders the project site to the east and currently provides access to the site via one signalized driveway located directly opposite Center Avenue and two unsignalized driveways. The posted speed limit on Gothard Street is 40 mph. On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Gothard Street at McFadden Avenue, Driveway No. 2/Center Avenue, Edinger Avenue, and Heil Avenue.

McFadden Avenue is generally a four-lane, divided roadway oriented in the east–west direction and borders the project site to the north. The posted speed limit on McFadden Avenue is 45 mph west of Goldenwest Street and 40 mph east of Goldenwest Street. On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of McFadden Avenue at Edwards Street, Goldenwest Street, Vermont Street/ Gothard Street, and Beach Boulevard.

Edinger Avenue is generally a six-lane, divided roadway oriented in the east–west direction. Edinger Avenue borders the project site to the south and currently provides access to the site via one signalized driveway and two unsignalized driveways. The posted speed limit on Edinger Avenue is 45 mph west of Goldenwest Street and 40 mph east of Goldenwest Street. On-street parking is generally not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Edinger Avenue at Edwards Street, Goldenwest Street, Driveway No. 6 (GWC), Gothard Street, and Beach Boulevard.

Existing Traffic Volumes

A total of 26 key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the project. Existing a.m. peak hour and p.m. peak hour traffic volumes for the 26 key study intersections evaluated in the traffic report were obtained from manual turning movement counts conducted by Transportation Studies Inc. in October 2013 and November 2013. Since the campus driveways/access points are included in the list of 26 intersections where traffic data were collected, the traffic data at these locations were used to establish the existing daily a.m. peak hour and p.m. peak hour trip generations for the campus. The existing trip generation represents an existing baseline enrollment of 12,746 students.

The following 26 locations listed provide regional and local access to the study area and define the extent of the boundaries for this traffic impact investigation. Twenty-four of these intersections are located within the City of Huntington Beach (City), and two are located within the City of Westminster. These intersections are shown on Figure 4.12-1.

Key Study Intersections

1. Edwards Street at McFadden Avenue (City)
2. Edwards Street at Edinger Avenue (City)
3. Goldenwest Street at I-405 southbound (SB) ramps (City of Westminster)
4. Goldenwest Street at Bolsa Avenue (City)
5. Goldenwest Street at McFadden Avenue (City)
6. Goldenwest Street at Driveway No. 12 (City)

7. Goldenwest Street at Driveway No. 11 (City)
8. Goldenwest Street at Driveway No. 10 (City)
9. Goldenwest Street at Driveway No. 9 (City)
10. Goldenwest Street at Driveway No. 8 (City)
11. Goldenwest Street at Driveway No. 7 (City)
12. Goldenwest Street at Edinger Avenue (City)
13. Goldenwest Street at Heil Avenue (City)
14. Driveway No. 6 at Edinger Avenue (City)
15. Driveway No. 5 at Edinger Avenue (City)
16. Driveway No. 4 at Edinger Avenue (City)
17. Vermont Street/Gothard Street at McFadden Avenue (City)
18. Gothard Street at Driveway No. 1 (City)
19. Gothard Street at Driveway No. 2/Center Avenue (City)
20. Gothard Street at Driveway No. 3 (City)
21. Gothard Street at Edinger Avenue (City)
22. Gothard Street at Heil Avenue (City)
23. I-405 SB ramps at Center Avenue (City)
24. Beach Boulevard at McFadden Avenue (City of Westminster)
25. Beach Boulevard at Center Avenue (City)
26. Beach Boulevard at Edinger Avenue (City)

Figures 4.12-2 and 4.12-3 illustrate the existing a.m. and p.m. peak hour traffic volumes at the 26 key study intersections. Appendix A in the traffic impact analysis report contains the detailed peak hour count sheets for the key intersections and includes a summary of the existing daily a.m. peak hour, and p.m. peak hour trip generations for the campus.

Existing Intersection Conditions

Existing a.m. and p.m. peak hour operating conditions for the 26 key study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000* (HCM 2000) for unsignalized intersections.

In conformance with City and Orange County Congestion Management Program requirements, existing a.m. and p.m. peak hour operating conditions for the key signalized study intersections were evaluated using the ICU method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per City requirements, the ICU calculations use a lane capacity of 1,700 vehicles per hour for left-turn lanes, through lanes, and right-turn lanes. The City does make adjustments for clearance intervals, so a clearance adjustment factor of 0.05 was added to each level of service (LOS) calculation. For the two signalized study intersections in the City of Westminster (i.e., Goldenwest Street/I-405 SB ramps and Beach Boulevard/McFadden Avenue), the ICU calculations also use a lane capacity of 1,700 vehicles per hour for left-turn lanes, through lanes, and right-turn lanes. A clearance adjustment factor of 0.05 was added to each LOS calculation.

The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical V/C ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. The six qualitative categories of LOS along with the corresponding ICU value range have been defined and are shown in Table 4.12-1.

Table 4.12-1
Level of Service Criteria for Signalized Intersections

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	LOS Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601–0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701–0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801–0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.

Table 4.12-1
Level of Service Criteria for Signalized Intersections

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	LOS Description
E	0.901–1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

The HCM 2000 unsignalized methodology for stop-controlled intersections was used for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the LOS for each movement. For all-way stop-controlled intersections, the overall average control delay is measured in seconds per vehicle (s/v). LOS is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in s/v, and determines the LOS for that approach. The HCM 2000 control delay value translates to an LOS estimate, which is a relative measure of the intersection performance. The six qualitative categories of LOS along with the corresponding HCM 2000 control delay value range have been defined, as shown in Table 4.12-2.

Table 4.12-2
Level of Service Criteria For Unsignalized Intersections

Level of Service (LOS)	Highway Capacity Manual Delay Value (s/v)	LOS Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

Source: Appendix I.

According to City criteria, LOS C (ICU = 0.801–0.900) is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours for “Secondary Intersections.” LOS D is the minimum acceptable condition that should be maintained during the peak commute hours for “Principal Intersections.” LOS E is the minimum acceptable condition that should be maintained during the peak commute hours for “Critical Intersections.” According to the City of Westminster, LOS D is the minimum acceptable condition that should be maintained at all key intersections during the peak commute hours. These LOS requirements for key intersections are detailed in Table 4.12-3.

Table 4.12-3
Level of Service Required for Key Study Intersections

LOS C Requirements
1. Edwards Street at McFadden Avenue (HB)
2. Edwards Street at Edinger Avenue (HB)
13. Goldenwest Street at Heil Avenue (HB)
17. Vermont Street/Gothard Street at McFadden Avenue (HB)
18. Gothard Street at Driveway No. 1 (HB)
19. Gothard Street at Driveway No. 2/Center Avenue (HB)
20. Gothard Street at Driveway No. 3 (HB)
21. Gothard Street at Edinger Avenue (HB)
22. Gothard Street at Heil Avenue (HB)
LOS D Requirements
3. Goldenwest Street at I-405 SB ramps (WM)
4. Goldenwest Street at Bolsa Avenue (HB)
5. Goldenwest Street at McFadden Avenue (HB)
6. Goldenwest Street at Driveway No. 12 (HB)
7. Goldenwest Street at Driveway No. 11 (HB)
8. Goldenwest Street at Driveway No. 10 (HB)
9. Goldenwest Street at Driveway No. 9 (HB)
10. Goldenwest Street at Driveway No. 8 (HB)
11. Goldenwest Street at Driveway No. 7 (HB)
12. Goldenwest Street at Edinger Avenue (HB)
14.Driveway No. 6 at Edinger Avenue (HB)
15. Driveway No. 5 at Edinger Avenue (HB)
16. Driveway No. 4 at Edinger Avenue (HB)
23. I-405 SB ramps at Center Avenue (HB)
24. Beach Boulevard at McFadden Avenue (WM)
25. Beach Boulevard at Center Avenue (HB)
LOS E Requirements
26. Beach Boulevard at Edinger Avenue (HB)

Note: HB = City and WM = City of Westminster

Table 4.12-4 summarizes the existing peak hour service level calculations for the 26 key study intersections based on existing traffic volumes and current street geometrics. Table 4.12-4 indicates that 24 of the 26 key study intersections currently operate at an acceptable service level during the a.m. and p.m. peak hours while 2 are failing to operate efficiently. These two failing intersections are Goldenwest Street at Driveway No. 11 and Driveway No. 4 at Edinger Avenue.

Table 4.12-4
Existing Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Minimum Acceptable LOS	Control Type	ICU/HCM	LOS
1.	Edwards Street at McFadden Avenue (HB)	a.m. p.m.	LOS C	8∅ traffic signal	0.507 0.495	A A
2.	Edwards Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	8∅ traffic signal	0.568 0.517	A A
3.	Goldenwest Street at I-405 SB ramps (WM)	a.m. p.m.	LOS D	2∅ traffic signal	0.420 0.568	A A
4.	Goldenwest Street at Bolsa Avenue (HB)	a.m. p.m.	LOS D	8∅ traffic signal	0.537 0.787	A C
5.	Goldenwest Street at McFadden Avenue (HB)	a.m. p.m.	LOS D	8∅ traffic signal	0.585 0.704	A C
6.	Goldenwest Street at Driveway No. 12 (HB)	a.m. p.m.	LOS D	One-way stop	10.9 s/v 12.7 s/v	B B
7.	Goldenwest Street at Driveway No. 11 (HB)	a.m. p.m.	LOS D	Two-way stop	25.8 s/v **222.4 s/v**	D **F**
8.	Goldenwest Street at Driveway No. 10 (HB)	a.m. p.m.	LOS D	One-way stop	10.7 s/v 12.9 s/v	B B
9.	Goldenwest Street at Driveway No. 9 (HB)	a.m. p.m.	LOS D	3∅ traffic signal	0.303 0.385	A A
10.	Goldenwest Street at Driveway No. 8 (HB)	a.m. p.m.	LOS D	One-way stop	10.8 s/v 12.0 s/v	B B
11.	Goldenwest Street at Driveway No. 7 (HB)	a.m. p.m.	LOS D	One-way stop	10.9 s/v 12.0 s/v	A A
12.	Goldenwest Street at Edinger Avenue (HB)	a.m. p.m.	LOS D	8∅ traffic Signal	0.571 0.669	A B
13.	Goldenwest Street at Heil Avenue (HB)	a.m. p.m.	LOS C	5∅ traffic signal	0.500 0.535	A A
14.	Driveway No. 6 at Edinger Avenue (HB)	a.m. p.m.	LOS D	5∅ traffic signal	0.313 0.360	A A
15.	Driveway No. 5 at Edinger Avenue (HB)	a.m. p.m.	LOS D	One-way stop	10.1 s/v 11.6 s/v	B B
16.	Driveway No. 4 at Edinger Avenue (HB)	a.m. p.m.	LOS D	Two-way stop	**35.3 s/v** **102.9 s/v**	**E** **F**
17.	Vermont Street/Gothard Street at McFadden Avenue (HB)	a.m. p.m.	LOS C	6∅ traffic signal	0.522 0.674	A B
18.	Gothard Street at Driveway No. 1 (HB)	a.m. p.m.	LOS C	One-way stop	11.1 s/v 12.2 s/v	B B
19.	Gothard Street at Driveway No. 2/Center Avenue (HB)	a.m. p.m.	LOS C	2∅ traffic signal	0.309 0.648	A B
20.	Gothard Street at Driveway No. 3 (HB)	a.m. p.m.	LOS C	One-way stop	11.3 s/v 11.9 s/v	B B
21.	Gothard Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	8∅ traffic signal	0.505 0.638	A B

Table 4.12-4
Existing Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Minimum Acceptable LOS	Control Type	ICU/HCM	LOS
22.	Gothard Street at Heil Avenue (HB)	a.m. p.m.	LOS C	2∅ traffic signal	0.450 0.520	A A
23.	I-405 SB ramps at Center Avenue (HB)	a.m. p.m.	LOS D	3∅ traffic signal	0.503 0.824	A D
24.	Beach Boulevard at McFadden Avenue (WM)	a.m. p.m.	LOS D	8∅ traffic signal	0.736 0.751	C C
25.	Beach Boulevard at Center Avenue (HB)	a.m. p.m.	LOS D	2∅ traffic signal	0.670 0.786	B C
26.	Beach Boulevard at Edinger Avenue (HB)	a.m. p.m.	LOS E	8∅ traffic signal	0.670 0.786	B C

Notes:
Bold ICU/LOS or **HCM/LOS** values indicate adverse service levels based on City and City of Westminster LOS standards.
HB = City and WM = City of Westminster
s/v = seconds per vehicle
∅ = phase

4.12.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations for traffic and circulation that would be applicable to the proposed project or the project area.

State

California Department of Transportation

In conformance with the current California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies*, existing and projected a.m. and p.m. peak hour operating conditions at the five state-controlled study intersections within the study area have been evaluated using the HCM 2000 (for signalized intersections) operations method of analysis. These state-controlled locations include the following 5 of the 26 study intersections:

3. Goldenwest Street at I-405 SB ramps

23. I-405 SB ramps at Center Avenue

24. Beach Boulevard at McFadden Avenue

25. Beach Boulevard at Center Avenue

26. Beach Boulevard at Edinger Avenue

Caltrans "endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities"; it does not require that LOS "D" (shall) be maintained. However, Caltrans acknowledges that LOS D may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS (Caltrans 2002). For this analysis, LOS D is the target LOS standard for four of the five state-controlled intersections. The exception is the Congestion Management Program intersection of Beach Boulevard/ Edinger Avenue, where LOS E is the target LOS standard and consistent with the City requirements. The aforementioned LOS standards will be used to assess the project impacts at the state-controlled study intersections.

Local

City of Huntington Beach General Plan Circulation Element

The following policies are included in the City's circulation element of the General Plan (City of Huntington Beach 2013) and would be applicable to the proposed project:

CE 1: Provide a balanced transportation system that moves people and goods throughout the City efficiently, promotes economic development, preserves residential neighborhoods, meets safety standards, and minimizes environmental impacts.

CE 2: Provide a circulation system that supports existing, approved, and planned land uses throughout the City while maintaining a desired level of service and capacity on all streets and at all intersections.

CE-3: Protect residential neighborhoods from adverse conditions associated with cut-through and non-residential traffic.

CE-4: Create a balanced and integrated multi-modal transportation system that increases mass-transit opportunities for Huntington Beach residents.

CE-5: Maximize use of transportation demand management strategies to reduce total vehicle miles traveled and improve regional air quality.

CE-6: Ensure that the parking demands of non-residential uses do not adversely impact the City's residential neighborhoods, that the City's parking policies support reduced reliance on personal auto use, and that parking supply is adequate to meet City economic development objectives.

CE-7: Provide a system of bicycle, pedestrian, and equestrian paths, and waterways for commuter, school, and recreational use.

CE-8: Maintain and enhance visual quality and scenic views along designated scenic corridors.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to traffic and circulation are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to traffic and circulation would occur if the project would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance or the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
4. Substantially increase hazards due to a design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment).
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Threshold 3 was eliminated from further analysis in the initial study because the proposed project site is not located within the vicinity of an airport or private airstrip. The nearest airport is John Wayne International Airport, located 8 miles south of the proposed project site. No private airstrips exist within 2 miles of the proposed project site; thus, air traffic patterns would not be affected by the proposed project.

4.12.4 Impacts Analysis

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

In order to estimate the traffic impact characteristics of the proposed project, a multistep process has been used. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated, and the significance of the project's impacts can be identified.

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are typically found in the 9th edition of *Trip Generation*, published by the Institute of Transportation Engineers (2012).

Table 4.12-5 summarizes the trip generation rates used in forecasting the vehicular trips generated by the two components of the proposed project (i.e., student growth and the Boys & Girls Club After School Building/Gymnasium Facilities). As shown, the trip generation potential of the student growth project component was estimated using the empirical rates developed from the existing driveway counts for an existing baseline enrollment of 12,746 students. The trip generation potential of the Boys & Girls Club facilities was estimated using Institute of

Transportation Engineers Land Use 495: Recreational Community Center trip rates and based on the proposed operations of youth leagues that would occur in the gymnasium.

Table 4.12-5
Project Traffic Generation Rates

Project Description	Daily Two-Way	A.M. Peak Hour			P.M. Peak Hour		
		Enter	*Exit*	*Total*	*Enter*	*Exit*	*Total*
Student Growth							
GWC empirical rate (trip ends/student)[1]	1.141	0.070	0.018	0.088	0.050	0.058	0.108
Boys & Girls Club After School Building							
Based on proposed operations[2]	–	–	–	–	–	–	–
Boys & Girls Club Gymnasium Facilities							
495: Recreational community center (trip ends/1000 SF)	33.82	1.35	0.70	2.05	1.34	1.40	2.74
Youth leagues (Based on proposed operations)[3]	–	–	–	–	–	–	–

Source: ITE 2012.

1 The trip generation rates for the student growth project component were developed based on existing daily a.m. peak hour, and p.m. peak hour traffic counts collected at the GWC driveways in October 2013. The traffic counts revealed that, on a typical weekday, the GWC campus generates 14,541 daily trips, 1,123 a.m. peak hour trips (888 inbound, 235 outbound), and 1,375 p.m. peak hour trips (640 inbound, 735 outbound). The aforementioned trips where then divided by the existing number of students (i.e., 12,746 students) to determine the daily a.m. peak hour, and p.m. peak hour rates per student.

2 **Source:** Appendix I.

3 Based on the proposed operations of youth leagues (i.e., 2 games per evening, 16 youths maximum per game, and 1 referee per game). To provide a conservative forecast, it is assumed that all teams and referees arrive prior to 6:00 p.m. during the commuter p.m. peak period, resulting in 34 p.m. peak hour inbound trips (i.e., 32 inbound trips for the 32 youth participants [dropped off by their parents] and 2 inbound trips for the 2 referees).

Existing Plus Project Traffic Conditions

The student growth component of the proposed project (i.e., net increase of 2,645 students) is forecast to generate 3,018 daily trips, with 233 trips forecast during the a.m. peak hour and 285 trips forecast during the p.m. peak hour. The Boys & Girls Club After School Building component of the proposed project is forecast to generate 258 daily trips, with 2 trips forecast during the a.m. peak hour and 190 trips forecast during the p.m. peak hour. The Boys & Girls Club Gymnasium Facilities component of the proposed project is forecast to generate 399 daily trips, with 20 trips forecast during the a.m. peak hour and 61 trips forecast during the p.m. peak hour. These rates are summarized in Table 4.12-6.

Overall, the proposed project is forecast to generate approximately 3,675 daily trips, with 255 trips (200 inbound, 55 outbound) produced in the a.m. peak hour and 536 trips (270 inbound, 266 outbound) produced in the p.m. peak hour on a typical weekday.

Table 4.12-6
Project Traffic Generation Forecast

Project Description	Daily Two-Way	A.M. Peak Hour			P.M. Peak Hour		
		Enter	*Exit*	*Total*	*Enter*	*Exit*	*Total*
Student Growth							
Net increase of 2,645 students	3,018	185	48	233	132	153	285
Boys & Girls Club After School Building							
255 students/17 staff members[1]	258	2	0	2	91	99	190
Boys & Girls Club Gymnasium Facilities							
Gymnasium (9,794 square feet)	331	13	7	20	13	14	27
Youth Leagues – 2 games per evening (16 youths max and 1 referee per game)[2]	68	0	0	0	34	0	34
Total Boys & Girls Club Gymnasium Facilities	399	13	7	20	47	14	61
Total Trip Generation Potential	**3,675**	**200**	**55**	**255**	**270**	**266**	**536**

Notes:
1 **Source:** Appendix I.
2 Based on the proposed operations of the youth leagues (i.e., 2 games per evening, 16 youths max per game, and 1 referee per game). To provide a conservative forecast, it is assumed that all teams and referees arrive prior to 6:00 p.m. during the commuter p.m. peak period, resulting in 34 p.m. peak hour inbound trips (i.e., 32 inbound trips for the 32 youth participants [dropped off by their parents] and 2 inbound trips for the 2 referees).
SF = square feet

Figures 4.12-4 and 4.12-5 present projected a.m. and p.m. peak hour traffic volumes at the 26 key study intersections, with the addition of the trips generated by the proposed project to existing traffic volumes, respectively.

Table 4.12-7 indicates that, when compared to the LOS standards and significant impact criteria specified in the traffic report, traffic associated with the proposed project would significantly impact 2 of the 26 key study intersections. The remaining 24 key study intersections currently operate and are forecast to continue to operate at an acceptable LOS during the a.m. and p.m. peak hours, with the addition of project-generated traffic to existing traffic. These two intersections are Goldenwest Street at Driveway No. 11 and Driveway No. 4 at Edinger Avenue.

Table 4.12-7
Existing Plus Project Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
				ICU/HCM	*LOS*	*ICU/HCM*	*LOS*	*Increase*	*Yes/No*
1.	Edwards Street at McFadden Avenue (HB)	a.m. p.m.	LOS C	0.507 0.495	A A	0.507 0.498	A A	0.000 0.003	No No
2.	Edwards Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	0.568 0.517	A A	0.570 0.519	A A	0.002 0.002	No No

Table 4.12-7
Existing Plus Project Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
				ICU/HCM	*LOS*	*ICU/HCM*	*LOS*	*Increase*	*Yes/No*
3.	Goldenwest Street at I-405 SB ramps (WM)	a.m. p.m.	LOS D	0.420 0.568	A A	0.421 0.584	A A	0.001 0.016	No No
4.	Goldenwest Street at Bolsa Avenue (HB)	a.m. p.m.	LOS D	0.537 0.787	A C	0.539 0.796	A C	0.002 0.009	No No
5.	Goldenwest Street at McFadden Avenue (HB)	a.m. p.m.	LOS D	0.585 0.704	A C	0.599 0.729	A C	0.014 0.025	No No
6.	Goldenwest Street at Driveway No. 12 (HB)	a.m. p.m.	LOS D	10.9 s/v 12.7 s/v	B B	11.0 s/v 13.0 s/v	B B	0.1 s/v 0.3 s/v	No No
	Goldenwest Street at Driveway No. 11 (HB)	a.m. p.m.	LOS D	25.8 s/v 222.4 s/v	D F	41.4 s/v 620.8 s/v	E F	15.6 s/v 398.4 s/v	Yes Yes
	With improvements	a.m. p.m.	LOS D	— —	— —	17.9 s/v 18.0 s/v	C C	— —	— —
7.	Goldenwest Street at Driveway No. 10 (HB)	a.m. p.m.	LOS D	10.7 s/v 12.9 s/v	B B	10.8 s/v 13.1 s/v	B B	0.1 s/v 0.2 s/v	No No
8.	Goldenwest Street at Driveway No. 9 (HB)	a.m. p.m.	LOS D	0.303 0.385	A A	0.319 0.403	A A	0.016 0.078	No No
9.	Goldenwest Street at Driveway No. 8 (HB)	a.m. p.m.	LOS D	10.8 s/v 12.0 s/v	B B	10.9 s/v 12.2 s/v	B B	0.1 s/v 0.2 s/v	No No
10.	Goldenwest Street at Driveway No. 7 (HB)	a.m. p.m.	LOS D	10.9 s/v 12.0 s/v	B B	11.1 s/v 12.2 s/v	B B	0.2 s/v 0.2 s/v	No No
11.	Goldenwest Street at Edinger Avenue (HB)	a.m. p.m.	LOS D	0.571 0.669	A B	0.577 0.687	A B	0.006 0.018	No No
12.	Goldenwest Street at Heil Avenue (HB)	a.m. p.m.	LOS C	0.500 0.535	A A	0.500 0.541	A A	0.000 0.006	No No
13.	Driveway No. 6 at Edinger Avenue (HB)	a.m. p.m.	LOS D	0.313 0.360	A A	0.317 0.374	A A	0.004 0.014	No No
14.	Driveway No. 5 at Edinger Avenue (HB)	a.m. p.m.	LOS D	10.1 s/v 11.6 s/v	B B	10.2 s/v 11.8 s/v	B B	0.1 s/v 0.2 s/v	No No
15.	Driveway No. 4 at Edinger Avenue (HB)	a.m. p.m.	LOS D	35.3 s/v 102.9 s/v	E F	39.9 s/v 143.9 s/v	E F	4.6 s/v 41.0 s/v	Yes Yes
	With improvements		LOS D	— —	— —	10.9 s/v 12.4 s/v	B B	— —	— —
16.	Vermont Street/Gothard Street at McFadden Avenue (HB)	a.m. p.m.	LOS C	0.522 0.674	A B	0.541 0.726	A C	0.019 0.052	No No
17.	Gothard Street at Driveway No. 1 (HB)	a.m. p.m.	LOS C	11.1 s/v 12.2 s/v	B B	11.5 s/v 13.9 s/v	B B	0.4 s/v 1.7 s/v	No No

Table 4.12-7
Existing Plus Project Peak Hour Intersection Capacity Analysis

	Key Intersection	Time Period	Minimum Acceptable LOS	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact	
				ICU/HCM	*LOS*	*ICU/HCM*	*LOS*	*Increase*	*Yes/No*
18.	Gothard Street at Driveway No. 2/Center Avenue (HB)	a.m. p.m.	LOS C	0.309 0.648	A B	0.317 0.699	A B	0.008 0.051	No No
19.	Gothard Street at Driveway No. 3 (HB)	a.m. p.m.	LOS C	11.3 s/v 11.9 s/v	B B	11.4 s/v 14.1 s/v	B B	0.1 s/v 2.2 s/v	No No
20.	Gothard Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	0.505 0.638	A B	0.510 0.684	A B	0.005 0.046	No No
21.	Gothard Street at Heil Avenue (HB)	a.m. p.m.	LOS C	0.450 0.520	A A	0.450 0.537	A A	0.000 0.017	No No
22.	I-405 SB ramps at Center Avenue (HB)	a.m. p.m.	LOS D	0.503 0.824	A D	0.507 0.842	A D	0.004 0.018	No No
23.	Beach Boulevard at McFadden Avenue (WM)	a.m. p.m.	LOS D	0.736 0.751	C C	0.740 0.755	C C	0.004 0.004	No No
24.	Beach Boulevard at Center Avenue (HB)	a.m. p.m.	LOS D	0.596 0.701	A C	0.600 0.701	B C	0.004 0.000	No No
25.	Beach Boulevard at Edinger Avenue (HB)	a.m. p.m.	LOS E	0.670 0.786	B C	0.675 0.794	B C	0.005 0.008	No No

Notes:
Bold ICU/LOS or **HCM/LOS** values indicate adverse service levels based on City and City of Westminster LOS standards.
HB = City and WM = City of Westminster
s/v = seconds per vehicle

Year 2024 Cumulative Traffic Conditions

Background traffic growth estimates for the horizon year 2024 were calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at 2% per year. This factor results in a 22% growth in existing volumes from 2013 to horizon year 2024.

Cumulative Projects

Other known development projects in the City and the City of Westminster were researched. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development.

There are seven cumulative projects in the City and eight cumulative projects in the City of Westminster that have either been built, but not yet fully occupied, or are being processed for approval. These 15 cumulative projects have been included as part of the cumulative background setting.

Table 4.12-8 provides the location and a brief description for each of the 15 cumulative projects; Figure 4.12-6 illustrates the location of the cumulative projects. These cumulative projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Table 4.12-8
Locations and Descriptions of Cumulative Projects

No.	Cumulative Project	Location/Address	Description
City of Huntington Beach Development			
1.	Edinger Walmart	6912 Edinger Avenue	100,865 SF Walmart
2.	Huntington Beach Lofts	7302 Center Avenue	385 luxury residential units and 10,000 SF retail
3.	The Boardwalk	Edinger Avenue and Gothard Street	487 dwelling unit, 14,000 SF commercial and 0.5 acre park
4.	Pedigo Apartments	7262 Edinger Avenue	510 apartments
5.	Parkside Estates	Graham Street and Warner Avenue	111 single-family homes and 1.6 acre neighborhood park
6.	Skate Park Project	7461 Center Avenue	45,000 SF skate park
7.	The Village at Bella Terra	7777 Edinger Avenue	467 multifamily dwelling units, 17,500 SF mixed-use retail/restaurants and 12,000 SF retail/restaurants
City of Westminster Development			
8.	Chuze Gym	1025 Westminster Mall Road	17,781 SF gym
9.	Fitness Facility (2104-30)	15320 Goldenwest Street	3,000 SF fitness facility
10.	Popeye's Restaurant	14542 Beach Boulevard	2,509 SF fast-food restaurant
11.	Dunkin' Donuts	15482 Goldenwest Street	2,251 SF drive-thru donut shop
12.	Live-Work Units (2014-84)	6302 Maple Street	37 live-work units
13.	Condominiums (2014-69)	14260 Willow Lane	79 detached condos
14.	Retail (2014-70)	14361 Beach Boulevard	23,262 SF retail
15.	Adult School (2014-72)	1025 Westminster Mall Road	7,823 SF adult school

Source: Appendix I.
Note: SF = square feet

Table 4.12-9 presents the resultant trip generation for the 15 cumulative projects. As shown, the 15 cumulative projects are forecast to generate a combined total of 22,794 daily trips, with 1,327 trips (416 inbound and 911 outbound) forecast during the a.m. peak hour and 1,904 trips (1,124 inbound and 780 outbound) forecast during the p.m. peak hour. The a.m. and p.m. peak hour traffic volumes associated with the 15 cumulative projects are presented in Figures 4.12-7 and 4.12-8, respectively.

Table 4.12-9
Cumulative Projects Traffic Generation Forecast

	Related Project Description	Daily Two-Way	A.M. Peak Hour			P.M. Peak Hour		
			Enter	*Exit*	*Total*	*Enter*	*Exit*	*Total*
1.	Edinger Walmart[1]	5,359	95	73	168	228	237	465
2.	Huntington Beach Lofts	1,509	-11	132	121	106	16	122
3.	The Boardwalk	3,796	58	202	260	213	125	338
4.	Pedigo Apartments	3,392	52	208	260	205	111	312
5.	Parkside Estates	1,057	21	62	83	70	41	111
6.	Skate Park Project[2]	416	7	6	13	29	33	62
7.	The Village at Bella Terra	2,396	34	70	104	103	79	182
8.	Chuze Gym	630	13	12	25	36	27	63
9.	Fitness Facility (2014-30)	110	2	2	4	6	5	11
10.	Popeye's Restaurant	964	49	33	82	25	24	49
11.	Dunkin' Donuts	1,382	57	56	113	24	24	48
12.	Live-Work Units (2014-84)	215	3	13	16	13	6	19
13.	Condominiums (2014-69)	459	6	29	35	27	14	41
14.	Retail (2014-70)	894	13	7	20	27	30	57
15.	Adult School (2014-72)	215	17	6	23	12	8	20
Cumulative projects trip generation potential		**22,794**	**416**	**911**	**1,327**	**1,124**	**780**	**1,904**

Source: ITE 2012.
1 **Source:** Appendix I.
2 **Source:** Appendix I.

Year 2024 Cumulative Plus Project Traffic Conditions

An analysis of future (Year 2024) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic would adversely impact 9 of the 26 key study intersections. Table 4.12-10 summarizes these results. Figures 4.12-9 and 4.12-10 present the Year 2024 a.m. and p.m. peak hour cumulative traffic volumes at the 26 key study intersections, respectively. Figures 4.12-11 and 4.12-12 illustrate the Year 2024 forecast a.m. and p.m. peak hour traffic volumes with the inclusion of the trips generated by the proposed project, respectively.

The remaining 17 key study intersections are forecast to continue to operate at acceptable levels of service during the a.m. and p.m. peak hours, with the addition of ambient traffic growth and cumulative projects' traffic.

Table 4.12-10
Year 2024 Peak Hour Intersection Capacity Analysis

Key Intersection		Time Period	Minimum Acceptable LOS	Existing Traffic Conditions		Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Significant Impact		With Improvements	
				ICU/HCM	*LOS*	*ICU/HCM*	*LOS*	*ICU/HCM*	*LOS*	*Increase*	*Yes/ No*	*ICU/HCM*	*LOS*
1.	Edwards Street at McFadden Avenue (HB)	a.m. p.m.	LOS C	0.507 0.495	A A	0.628 0.609	B B	0.628 0.612	B B	0.000 0.003	No No	— —	— —
2.	Edwards Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	0.568 0.517	A A	0.689 0.635	B B	0.692 0.637	B B	0.003 0.002	No No	— —	— —
3.	Goldenwest Street at I-405 SB ramps (WM)	a.m. p.m.	LOS D	0.420 0.568	A A	0.530 0.719	A C	0.538 0.735	A C	0.008 0.016	No No	__ __	__ __
4.	Goldenwest Street at Bolsa Avenue (HB)	a.m. p.m.	LOS D	0.537 0.787	A C	0.676 0.976	B E	0.678 0.986	B E	0.002 0.010	No Yes	0.620 0.946	B E
5.	Goldenwest Street at McFadden Avenue (HB)	a.m. p.m.	LOS D	0.585 0.704	A C	0.723 0.882	C D	0.737 0.907	C E	0.014 0.025	No Yes	0.737 0.855	C D
6.	Goldenwest Street at Driveway No. 12 (HB)	a.m. p.m.	LOS D	10.9 s/v 12.7 s/v	B B	12.1 s/v 15.2 s/v	B C	12.2 s/v 15.7 s/v	B C	0.1 s/v 0.5 s/v	No No	— —	— —
7.	Goldenwest Street at Driveway No. 11 (HB)	a.m. p.m.	LOS D	25.8 s/v 222.4 s/v	D F	61.3 s/v 1391.5 s/v	F F	99.3 s/v 3094.5 s/v	F F	38.0 s/v 1703.0 s/v	Yes Yes	27.1 s/v 31.1 s/v	D D
8.	Goldenwest Street at Driveway No. 10 (HB)	a.m. p.m.	LOS D	10.7 s/v 12.9 s/v	B B	11.8 s/v 15.7 s/v	B C	11.9 s/v 16.1 s/v	B C	0.1 s/v 0.4 s/v	No No	— —	— —
9.	Goldenwest Street at Driveway No. 9 (HB)	a.m. p.m.	LOS D	0.303 0.385	A A	0.379 0.481	A A	0.395 0.499	A A	0.016 0.018	No No	— —	— —
10.	Goldenwest Street at Driveway No. 8 (HB)	a.m. p.m.	LOS D	10.8 s/v 12.0 s/v	B B	11.9 s/v 13.8 s/v	B B	12.0 s/v 14.1 s/v	B B	0.1 s/v 0.3 s/v	No No	— —	— —
11.	Goldenwest Street at Driveway No. 7 (HB)	a.m. p.m.	LOS D	10.9 s/v 12.0 s/v	B B	12.1 s/v 14.0 s/v	B B	12.3 s/v 14.2 s/v	B B	0.2 s/v 0.2 s/v	No No	— —	— —
12.	Goldenwest Street at Edinger Avenue (HB)	a.m. p.m.	LOS D	0.571 0.669	A B	0.743 0.905	C E	0.749 0.923	C E	0.006 0.018	No Yes	0.749 0.881	C D
13.	Goldenwest Street at Heil Avenue (HB)	a.m. p.m.	LOS C	0.500 0.535	A A	0.616 0.676	B B	0.617 0.677	B B	0.001 0.001	No No	— —	— —

Table 4.12-10
Year 2024 Peak Hour Intersection Capacity Analysis

	Key Intersection	Time Period	Minimum Acceptable LOS	Existing Traffic Conditions		Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Significant Impact		With Improvements	
				ICU/HCM	*LOS*	*ICU/HCM*	*LOS*	*ICU/HCM*	*LOS*	*Increase*	*Yes/ No*	*ICU/HCM*	*LOS*
14.	Driveway No. 6 at Edinger Avenue (HB)	a.m. p.m.	LOS D	0.313 0.360	A A	0.383 0.464	A A	0.387 0.478	A A	0.004 0.014	No No	— —	— —
15.	Driveway No. 5 at Edinger Avenue (HB)	a.m. p.m.	LOS D	10.1 s/v 11.6 s/v	B B	11.1 s/v 13.4 s/v	B B	11.2 s/v 13.7 s/v	B B	0.1 s/v 0.3 s/v	No No	— —	— —
16.	Driveway No. 4 at Edinger Avenue (HB)	a.m. p.m.	LOS D	35.3 s/v 102.9 s/v	E F	78.2 s/v 763.9 s/v	F F	92.5 s/v 1056.3 s/v	F F	14.3 s/v 292.4.s/v	Yes Yes	13.3 s/v 16.6 s/v	B C
17.	Vermont/Gothard at McFadden Avenue (HB)	a.m. p.m.	LOS C	0.522 0.674	A B	0.651 0.851	B D	0.671 0.904	B E	0.020 0.053	No Yes	0.613 0.778	B C
18.	Gothard Street at Driveway No. 1 (HB)	a.m. p.m.	LOS C	11.1 s/v 12.2 s/v	B B	12.2 s/v 14.6 s/v	B B	12.6 s/v 17.5 s/v	B C	0.4 s/v 2.9 s/v	No No	— —	— —
19.	Gothard Street at Driveway No. 2 (HB)	a.m. p.m.	LOS C	0.309 0.648	A B	0.434 s/v 0.878 s/v	A D	0.442 0.929	A E	0.008 0.051	No Yes	0.457 0.792	A C
20.	Gothard Street at Driveway No. 3 (HB)	a.m. p.m.	LOS C	11.3 s/v 11.9 s/v	B B	13.7 s/v 14.5 s/v	B B	13.9 s/v 19.0 s/v	B C	0.2 s/v 4.5 s/v	No No	— —	— —
21.	Gothard Street at Edinger Avenue (HB)	a.m. p.m.	LOS C	0.505 0.638	A B	0.669 0.897	B D	0.674 0.942	B E	0.005 0.045	No Yes	0.674 0.884	B D
22.	Gothard Street at Heil Avenue (HB)	a.m. p.m.	LOS C	0.450 0.520	A A	0.555 0.671	A B	0.555 0.680	A B	0.000 0.009	No No	— —	— —
23.	I-405 SB ramps at Center Avenue (HB)	a.m. p.m.	LOS D	0.503 0.824	A D	0.621 1.007	B F	0.625 1.026	B F	0.004 0.019	No Yes	0.464 0.805	A D
24.	Beach Boulevard at McFadden Avenue (WM)	a.m. p.m.	LOS D	0.736 0.751	C C	0.905 0.926	E E	0.913 0.930	E E	0.008 0.004	No No	— —	— —
25.	Beach Boulevard at Center Avenue (HB)	a.m. p.m.	LOS D	0.596 0.701	A C	0.725 0.854	C D	0.729 0.854	C D	0.004 0.000	No No	— —	— —
26.	Beach Boulevard at Edinger Avenue (HB)	a.m. p.m.	LOS E	0.670 0.786	B C	0.840 0.985	D E	0.842 0.993	D E	0.002 0.008	No No	__ __	__ __

Notes: Bold ICU/LOS or **HCM/LOS** values indicate adverse service levels based on the City and City of Westminster LOS standards
s/v = seconds per vehicle
HB=City and WM=City of Westminster

The results of the intersection capacity analysis presented in Table 4.12-10 shows that the proposed project will cumulatively impact 9 of the 26 key study intersections under the "Year 2024 Plus Project" traffic scenario. Without the application of mitigation, this impact would be considered significant and adverse.

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

An analysis of future (Year 2024) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic would adversely impact three of the five state-controlled study intersections. The state-controlled study intersections of the I-405 SB ramps/Center Avenue, Beach Boulevard/McFadden Avenue, and Beach Boulevard/Edinger Avenue are forecast to operate at an unacceptable LOS E and/or LOS F during the a.m. and/or p.m. peak hours. Table 4.12-11 shows existing plus project peak hour intersection capacity, and Table 4.12-12 shows Year 2024 peak hour intersection capacity. The implementation of improvements at the impacted state-controlled intersections would offset the impact of the proposed project.

Table 4.12-11
Existing Plus Project Peak Hour Intersection Capacity Analysis – Caltrans

Key Intersection		Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact	With Improvements	
			HCM	*LOS*	*HCM*	*LOS*	*Yes/No*	*HCM*	*LOS*
3.	Goldenwest Street at I-405 SB ramps	a.m.	13.6 s/v	B	14.0 s/v	B	No	—	—
		p.m.	13.0 s/v	B	13.5 s/v	B	No	—	—
23.	I-405 SB ramps at Center Avenue	a.m.	19.0 s/v	B	19.2 s/v	B	No	—	—
		p.m.	35.7 s/v	D	38.2 s/v	D	No	—	—
24.	Beach Boulevard at McFadden Avenue	a.m. p.m.	39.6 s/v 40.0 s/v	D D	39.9 s/v 40.6 s/v	D D	No No	—	—
25.	Beach Boulevard at Center Avenue	a.m. p.m.	10.7 s/v 21.9 s/v	B C	10.7 s/v 21.9 s/v	B C	No No	—	—
26.	Beach Boulevard at Edinger Avenue	a.m. p.m.	35.6 s/v 45.5 s/v	D D	35.6 s/v 46.2 s/v	D D	No No	—	—

Notes:
s/v = seconds per vehicle

Table 4.12-12
Year 2024 Peak Hour Intersection Capacity Analysis – Caltrans

Key Intersection		Time Period	Existing Traffic Conditions		Year 2024 Cumulative Traffic Conditions		Year 2024 Cumulative Plus Project Traffic Conditions		Significant Impact	With Improvements	
			HCM	*LOS*	*HCM*	*LOS*	*HCM*	*LOS*	*Yes/No*	*HCM*	*LOS*
3.	Goldenwest Street at I-405 SB ramps	a.m.	13.6 s/v	B	14.0 s/v	B	15.0 s/v	B	No	—	—
		p.m.	13.0 s/v	B	13.5 s/v	B	17.2 s/v	B	No	—	—
23.	I-405 SB ramps at Center Avenue	a.m.	19.0 s/v	B	19.2 s/v	B	21.8 s/v	C	No	17.1 s/v	B
		p.m.	35.7 s/v	D	38.2 s/v	D	74.4 s/v	E	Yes	29.6 s/v	C
24.	Beach Boulevard at McFadden Avenue	a.m.	39.6 s/v	D	39.9 s/v	D	73.2 s/v	E	Yes	49.5 s/v	D
		p.m.	40.0 s/v	D	40.6 s/v	D	76.2 s/v	E	Yes	53.8 s/v	D
25.	Beach Boulevard at Center Avenue	a.m.	10.7 s/v	B	10.7 s/v	B	13.1 s/v	B	No	—	—
		p.m.	21.9 s/v	C	21.9 s/v	C	36.2 s/v	D	No	—	—
26.	Beach Boulevard at Edinger Avenue	a.m.	35.6 s/v	D	35.6 s/v	D	52.8 s/v	D	No	43.7 s/v	D
		p.m.	45.5 s/v	D	46.2 s/v	D	97.6 s/v	F	Yes	78.1 s/v	E

Notes:
s/v = seconds per vehicle

Would the project substantially increase hazards due to a design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Vehicular access to the campus would continue to be provided from McFadden Avenue, Goldenwest Street, Gothard Street, and Edinger Avenue. The vehicular entries from Goldenwest Street, Edinger Avenue, and Gothard Street would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. Therefore, the proposed project would not increase hazards due to a design feature, but it would enhance vehicular entryways to the campus with signage, designation of formal gateways, and marked drop-off points. These proposed modifications would reduce any existing hazards and would increase wayfinding to the campus by making campus entries more visible. The proposed project would have no adverse impact on safety based on design features, nor would it increase hazards due to an incompatible use.

Would the project result in inadequate emergency access?

As stated previously, vehicular access to the campus would continue to be provided from McFadden Avenue, Goldenwest Street, Gothard Street, and Edinger Avenue. The vehicular entries from Goldenwest Street, Edinger Avenue, and Gothard Street would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. These enhancements could assist in visibility of campus entry points for emergency vehicles. The proposed project would have no adverse impact to emergency access to the campus.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrians. The Golden West Transportation Center is located just east of the campus on Gothard Street and Center Avenue. GWC is currently served by the following Orange County Transportation Authority bus lines: 25, 29, 66, 70, 211, and 701 (OCTA 2014a). Orange County Transportation Authority offers a college pass (a reduced fare) for students attending Orange Coast College (OCTA 2014b). Any construction that would require the temporary closure of a bus stop would require coordination with Orange County Transportation Authority to move the bus stop and continue bus service. The proposed project would not interrupt bus service to the campus.

Currently, the campus is designed with pedestrian walkways and access points that separate pedestrians from on-campus vehicular routes. These vehicular routes are proposed for enhancement as part of the Master Plan (Figure 3-6 in Chapter 3, Project Description). Furthermore, the campus has bike racks to accommodate bicyclists, and these facilities would not be impacted by the proposed project. Therefore, the proposed project would have no adverse impact on alternative modes of transportation.

4.12.5 Mitigation Measures

The following mitigation measures would be required to reduce the existing plus project traffic impacts and the Year 2024 plus project impacts:

MM-TRA-1 The Coast Community College District shall restrict westbound left turns out of the project site during the AM peak period (7:00 a.m.–9:00 a.m.) and PM peak period (4:00 p.m.–6:00 p.m.) on Goldenwest Street at Driveway No. 11.

MM-TRA-2 Coast Community College District shall restrict southbound left turns out of the project site during the AM peak period (7:00 a.m.–9:00 a.m.) and PM peak period (4:00 p.m.–6:00 p.m.) on Edinger Avenue at Driveway No. 4.4.

The following mitigation measures would be required to reduce the Year 2024 cumulative impacts:

MM-TRA-3 Coast Community College District shall widen and/or restripe Goldenwest Street at Bolsa Avenue to provide a second southbound left-turn lane, and shall modify the existing traffic signal.

MM-TRA-4 Coast Community College District shall widen and/or restripe McFadden Avenue at Goldenwest Street to formalize the existing westbound de facto right-turn lane. The District shall modify the existing traffic signal by installing a westbound right-turn overlap phase. Implementation of the westbound right-turn overlap phase will require the installation of a no U-turn sign for southbound left-turning vehicles.

MM-TRA-5 Coast Community College District shall widen and/or restripe Edinger Avenue at Goldenwest Street to provide an exclusive westbound right-turn lane, and shall modify the existing traffic signal.

MM-TRA-6 Coast Community College District shall modify the existing traffic signal by installing a northbound right-turn overlap phase on McFadden Avenue at Vermont Street/Gothard Street.

MM-TRA-7 Coast Community College District shall restripe the westbound approach to provide dual left-turn lanes and a shared through/right-turn lane on Gothard Street at Driveway No. 2/Center Avenue. Coast Community College District shall modify the existing traffic signal to provide protected left-turn phasing in the eastbound and westbound directions.

MM-TRA-8 Coast Community College District shall widen and/or restripe Edinger Avenue at Gothard Street to provide an exclusive westbound right-turn lane, and shall modify the existing traffic signal.

The following mitigation measures would be required to reduce the Year 2024 Plus Project cumulative impact at three state-controlled intersections:

MM-TRA-9 Coast Community College District shall contribute its fair or appropriate share toward the modification of the existing traffic signal to install a westbound right-turn overlap phase at the Interstate 405 southbound ramps at Center Avenue.

MM-TRA-10 Coast Community College District shall contribute its fair or appropriate share toward improvement of the intersection of Beach Boulevard at McFadden Avenue. The identified improvements are to (1) widen and/or restripe Beach Boulevard to provide an exclusive northbound right-turn lane and an exclusive southbound right-turn lane, and (2) modify the existing traffic signal.

MM-TRA-11 Coast Community College District shall contribute its fair or appropriate share toward improvement of the intersection of Beach Boulevard at Edinger Avenue. The identified improvements are to (1) widen and/or restripe Beach Boulevard to provide a fourth northbound through lane, and (2) modify the existing traffic signal.

4.12.6 Level of Significance After Mitigation

With implementation of MM-TRA-1 through MM-TRA-11, traffic and circulation impacts would be considered less than significant.

4.12.7 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

Caltrans (California Department of Transportation). 2002. *Guide for the Preparation of Traffic Impact Studies.* California: Caltrans. December 2002. http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf.

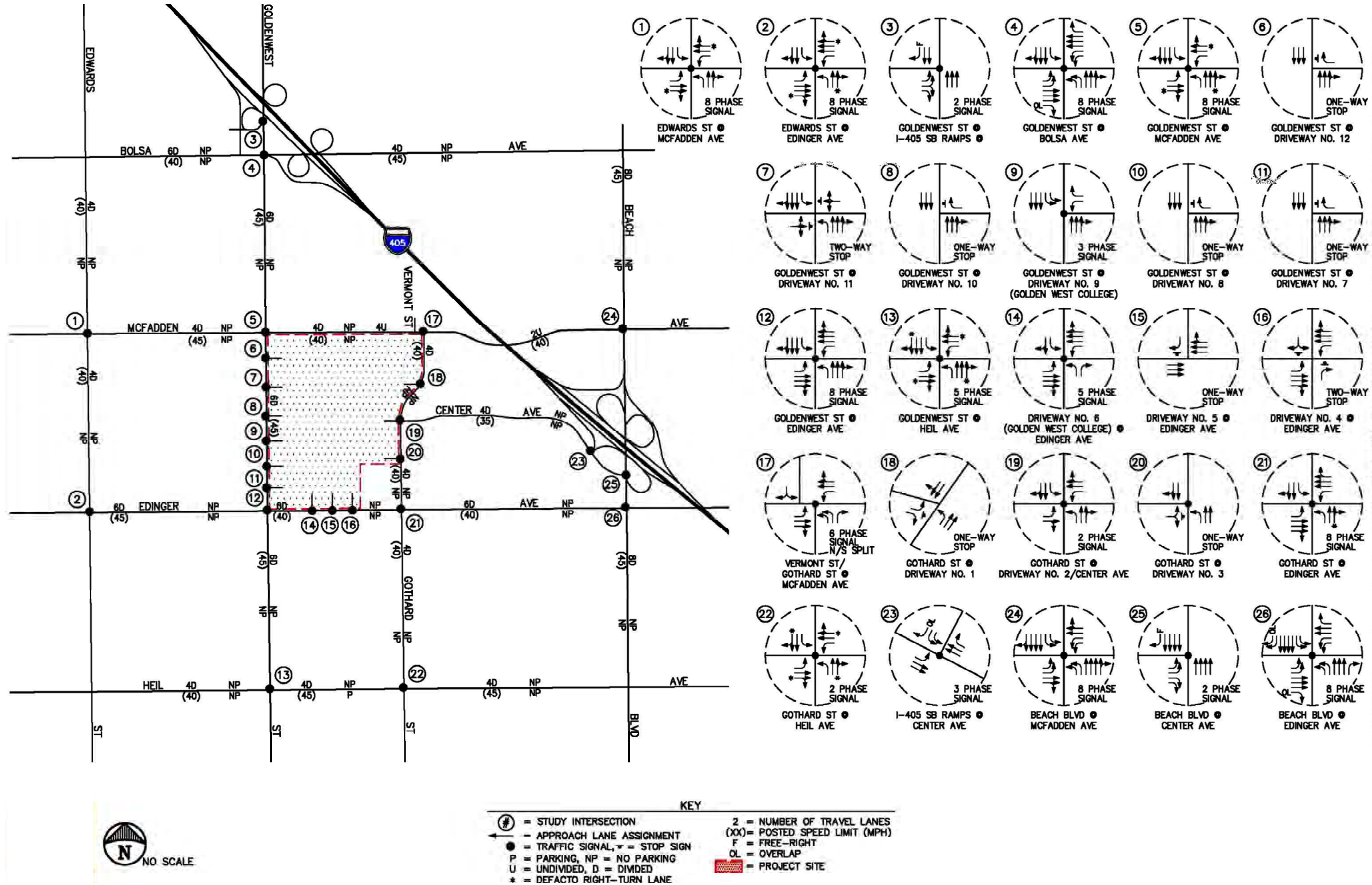
City of Huntington Beach. 2013. "Chapter 3: Infrastructure and Community Services, Circulation Element." In *City of Huntington Beach General Plan.* Prepared by Envicom Corporation. Agoura Hills, California: Envicom Corporation. Adopted in 2013.

ITE (Institute of Transportation Engineers). 2012. *Trip Generation*, 9th Edition, Institute of Transportation Engineers, Washington, D.C.

Linscott, Law & Greenspan Engineers. 2015. *Traffic Impact Analysis Report Golden West College Vision 2020 Facilities Master Plan*. March 31, 2015. Prepared for Dudek. Irvine, California: Linscott, Law & Greenspan.

OCTA (Orange County Transportation Authority). 2014a. *October 12, 2014 Bus Book*. Orange County Transportation Authority Website. Accessed December 23, 2014. http://www.octa.net/ebusbook/CompleteEBusbook.pdf.

OCTA. 2014b. "College Pass." Orange County Transportation Authority Website. Accessed July 15, 2015. http://www.octa.net/Bus-Transit/Fares-and-Passes/College-Pass---College-Fare-ID/.



SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-1

Existing Roadway Conditions and Intersection Controls

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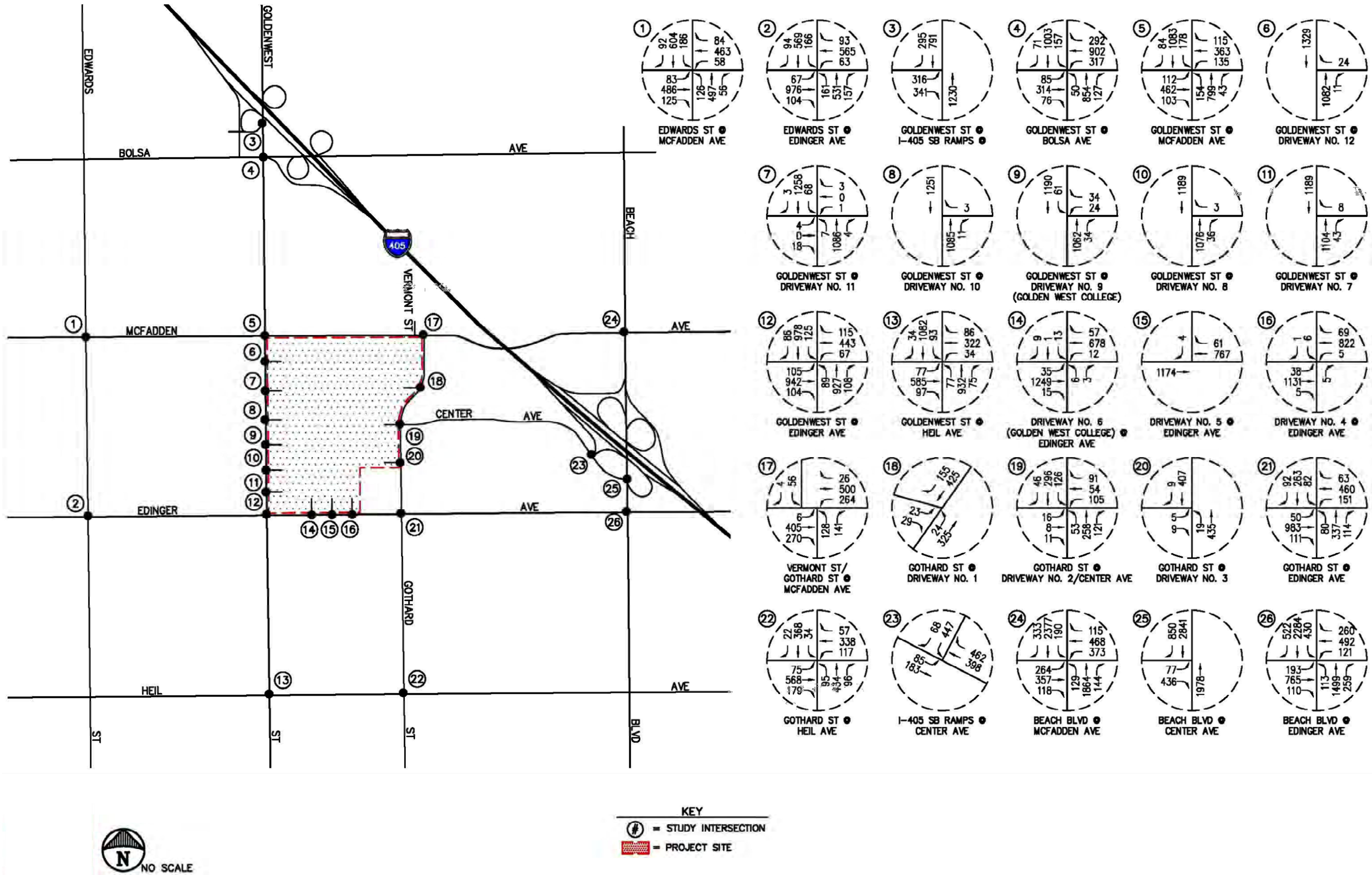

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-2

Existing AM Peak Hour Traffic Volumes

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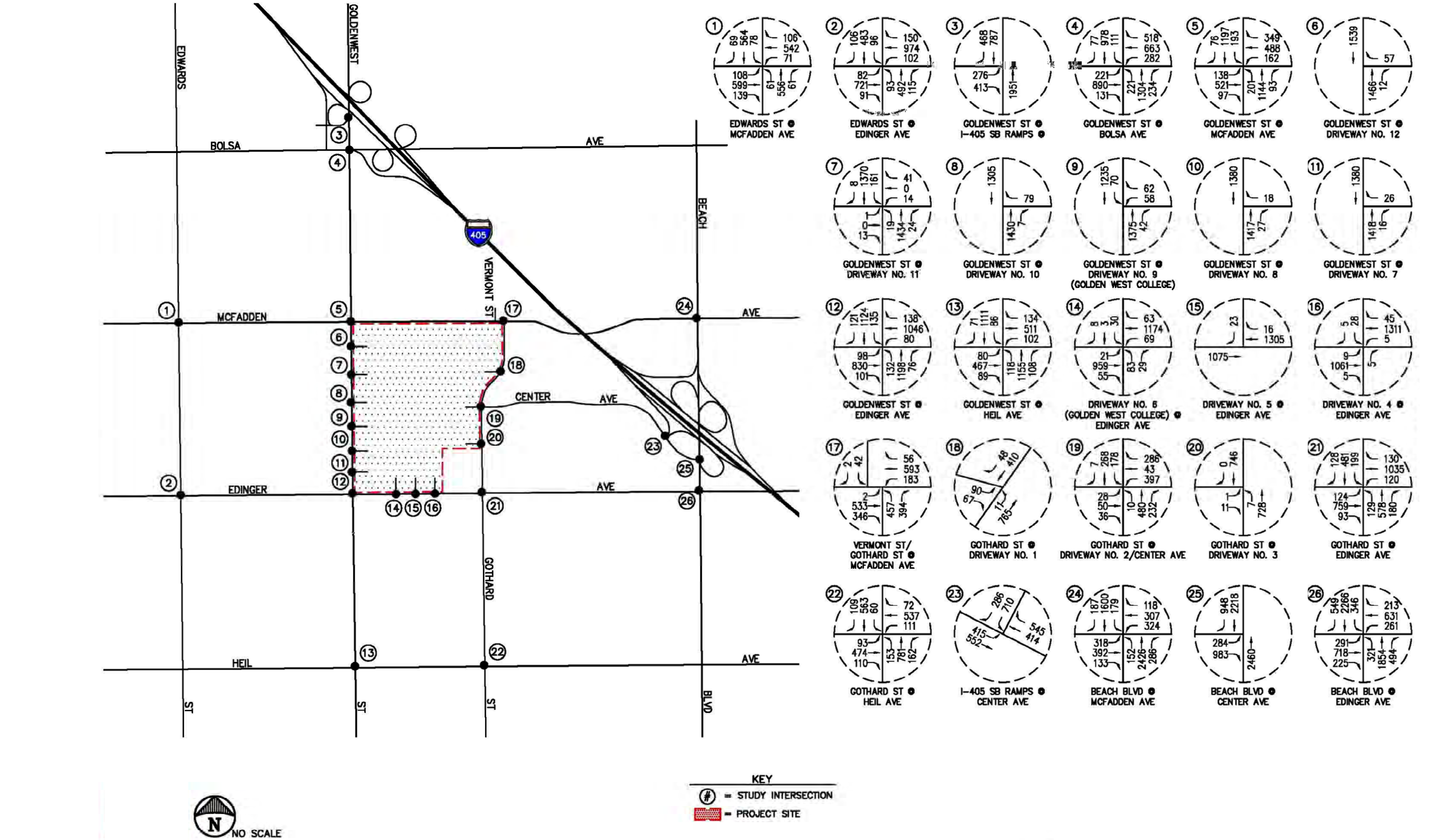

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-3

Existing PM Peak Hour Traffic Volumes

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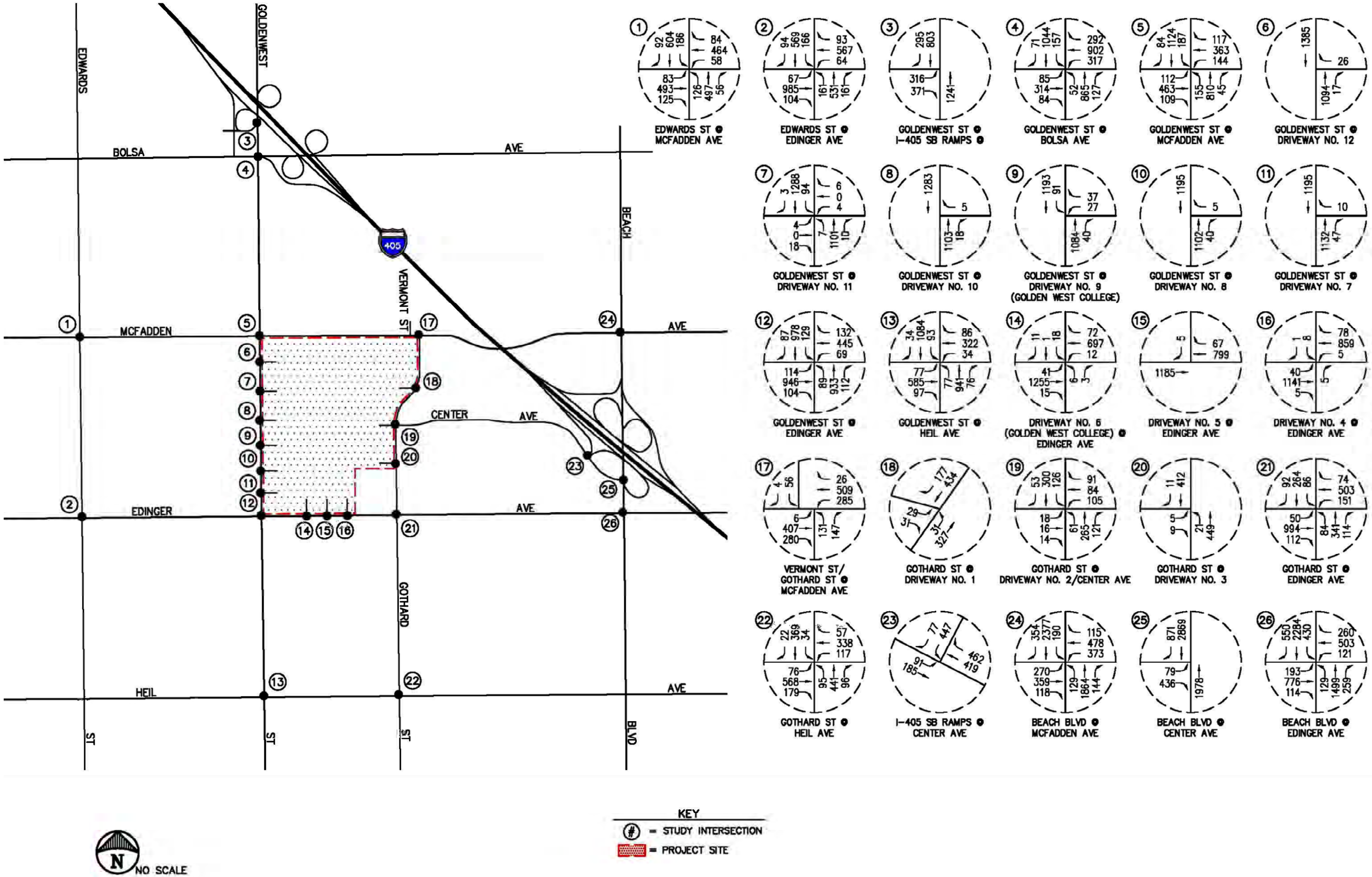

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-4
Existing Plus Project AM Peak Hour Traffic Volumes

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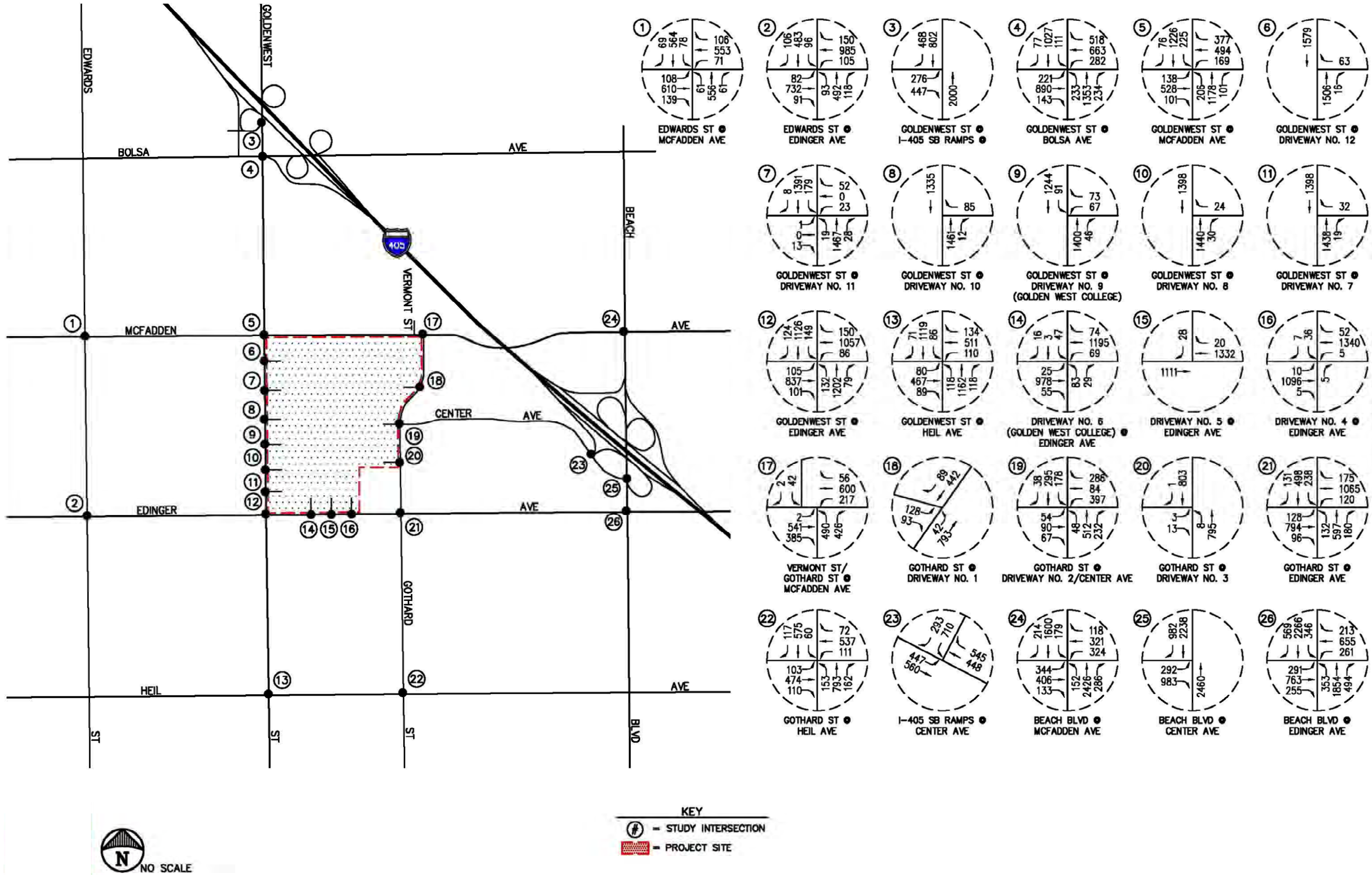

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-5

Existing Plus Project PM Peak Hour Traffic Volumes

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

7910.0001

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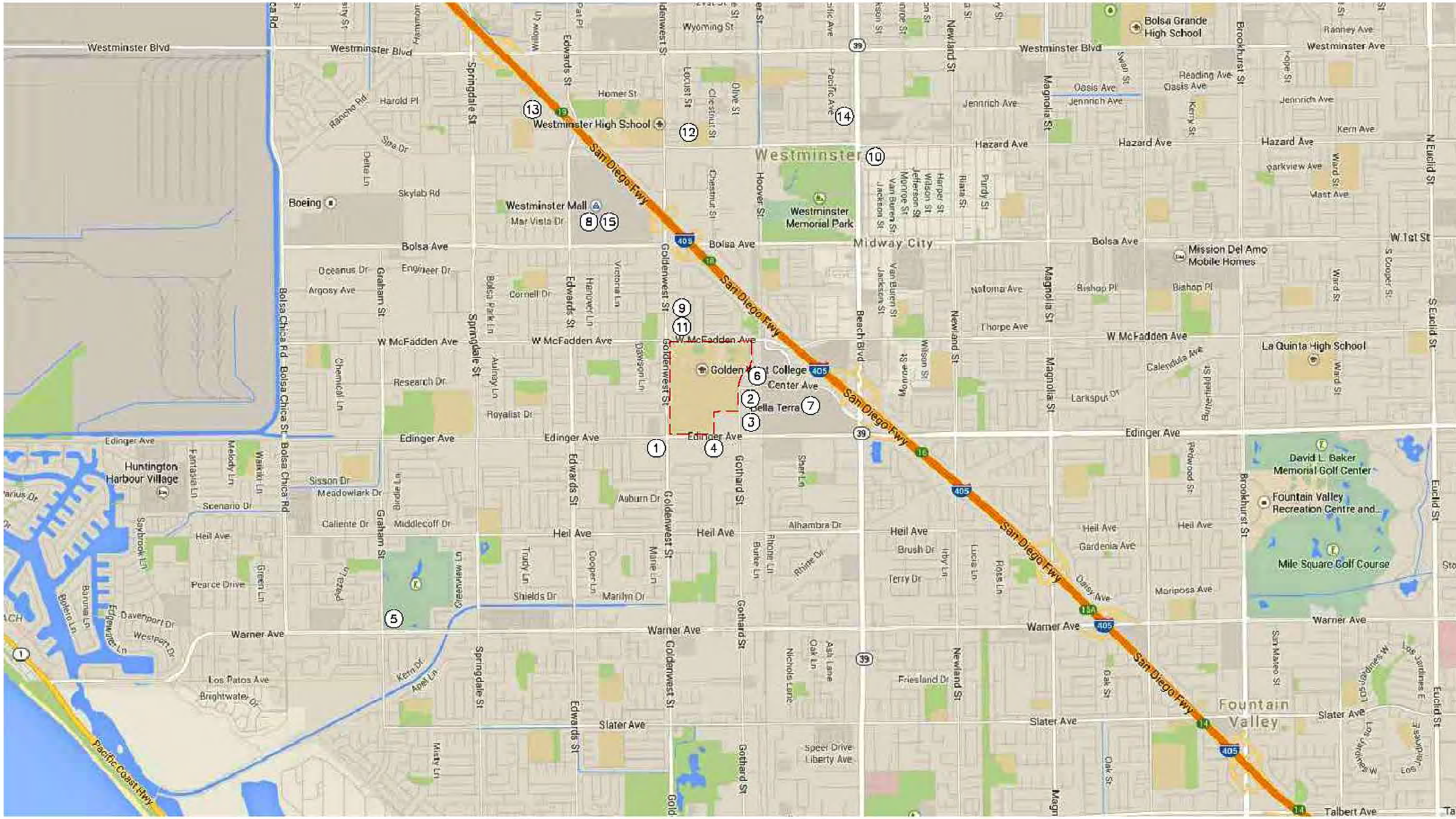

SOURCE: GOOGLE

KEY

(#) = LOCATION OF CUMULATIVE PROJECT

[ ] = PROJECT SITE

N

NO SCALE

GOLDEN WEST COLLEGE HUNTINGTON BEACH, CA

7910.0001

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-6

Locations of Cumulative Projects

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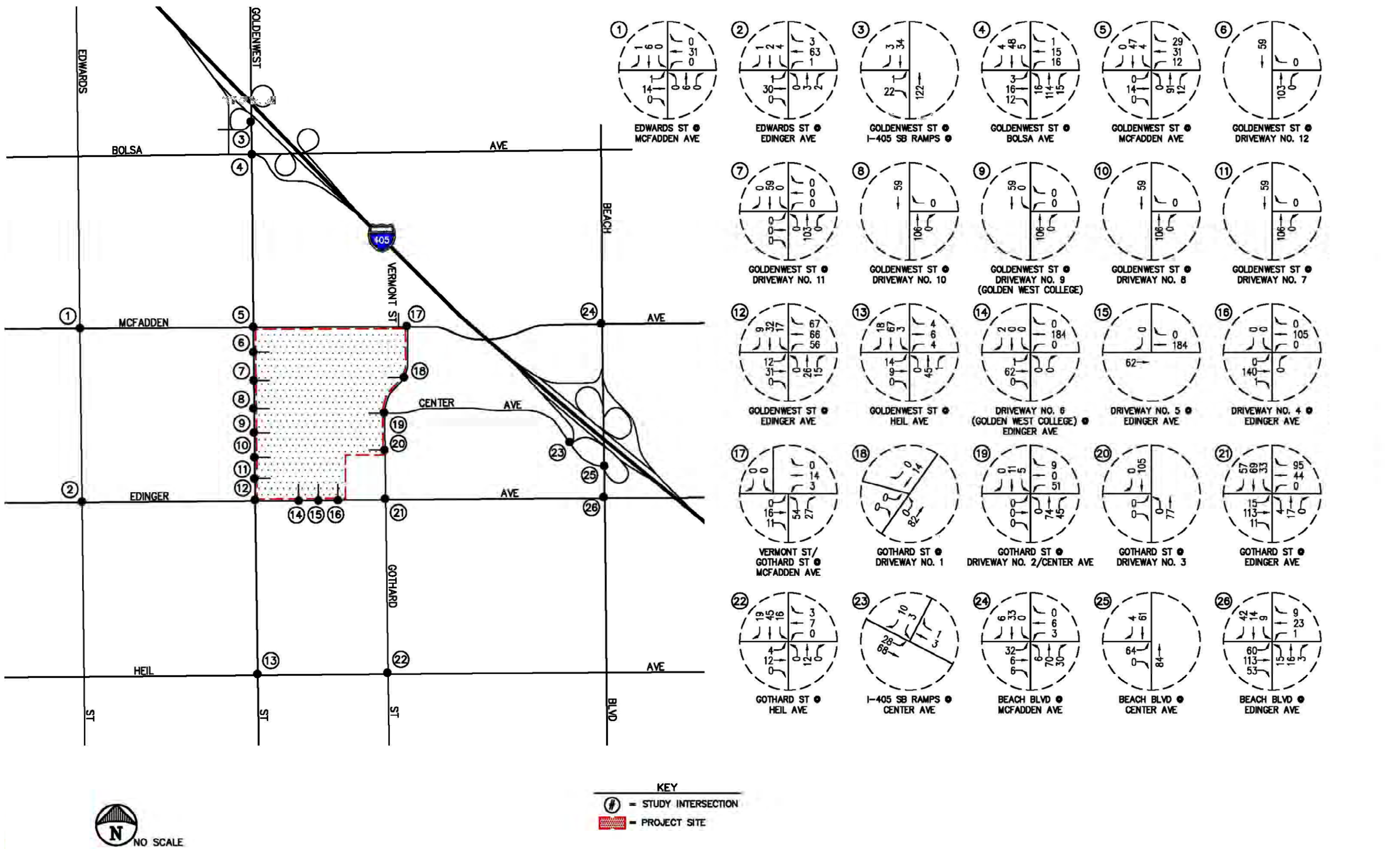

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-7

AM Peak Hour Cumulative Project Traffic Volumes

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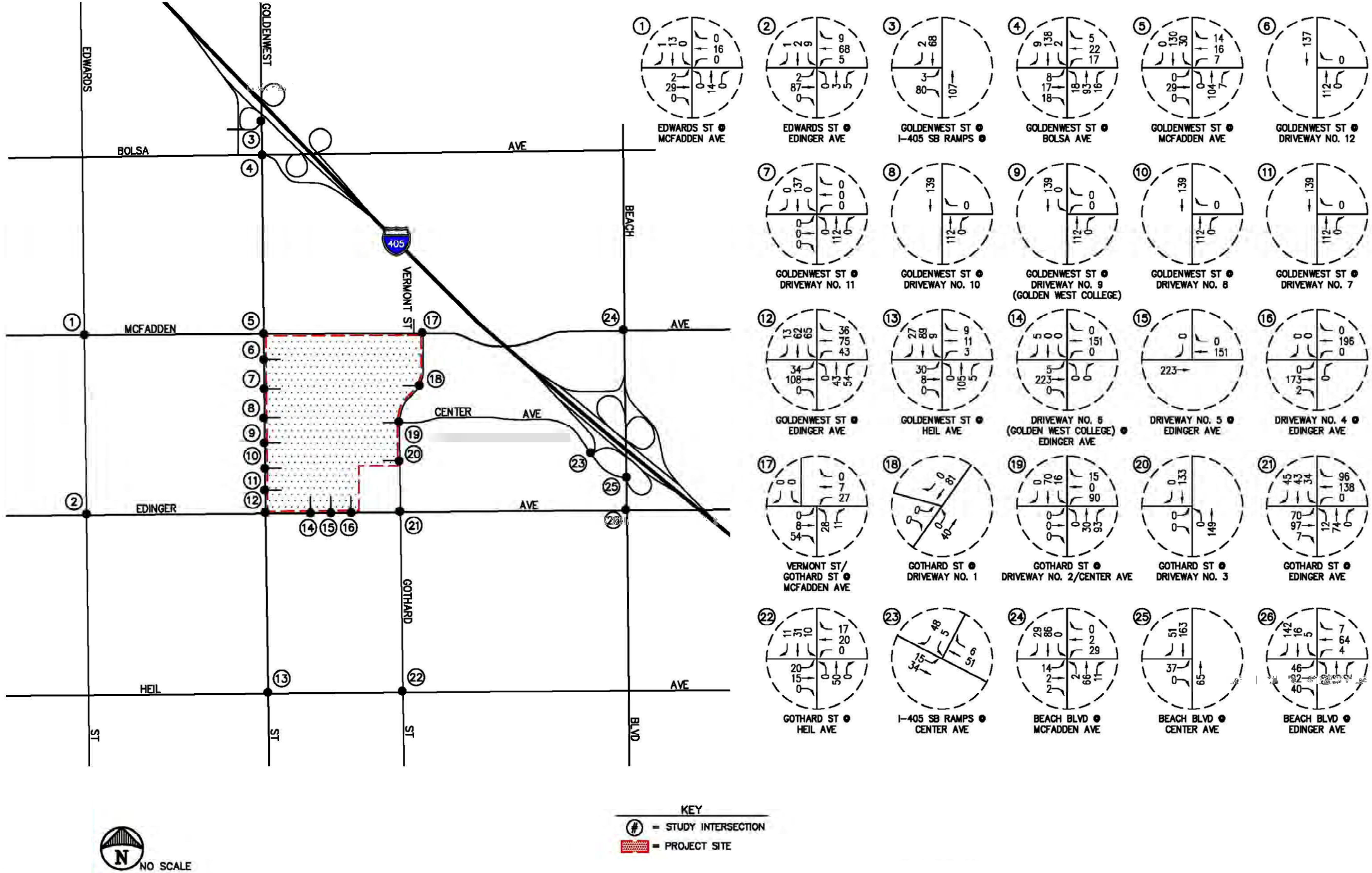

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-8

PM Peak Hour Cumulative Project Traffic Volumes

GOLDEN WEST COLLEGE
GWC
HUNTINGTON BEACH, CA
7910.0001

GOLDEN WEST COLLEGE VISION 2020 FACILITIES MASTER PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT

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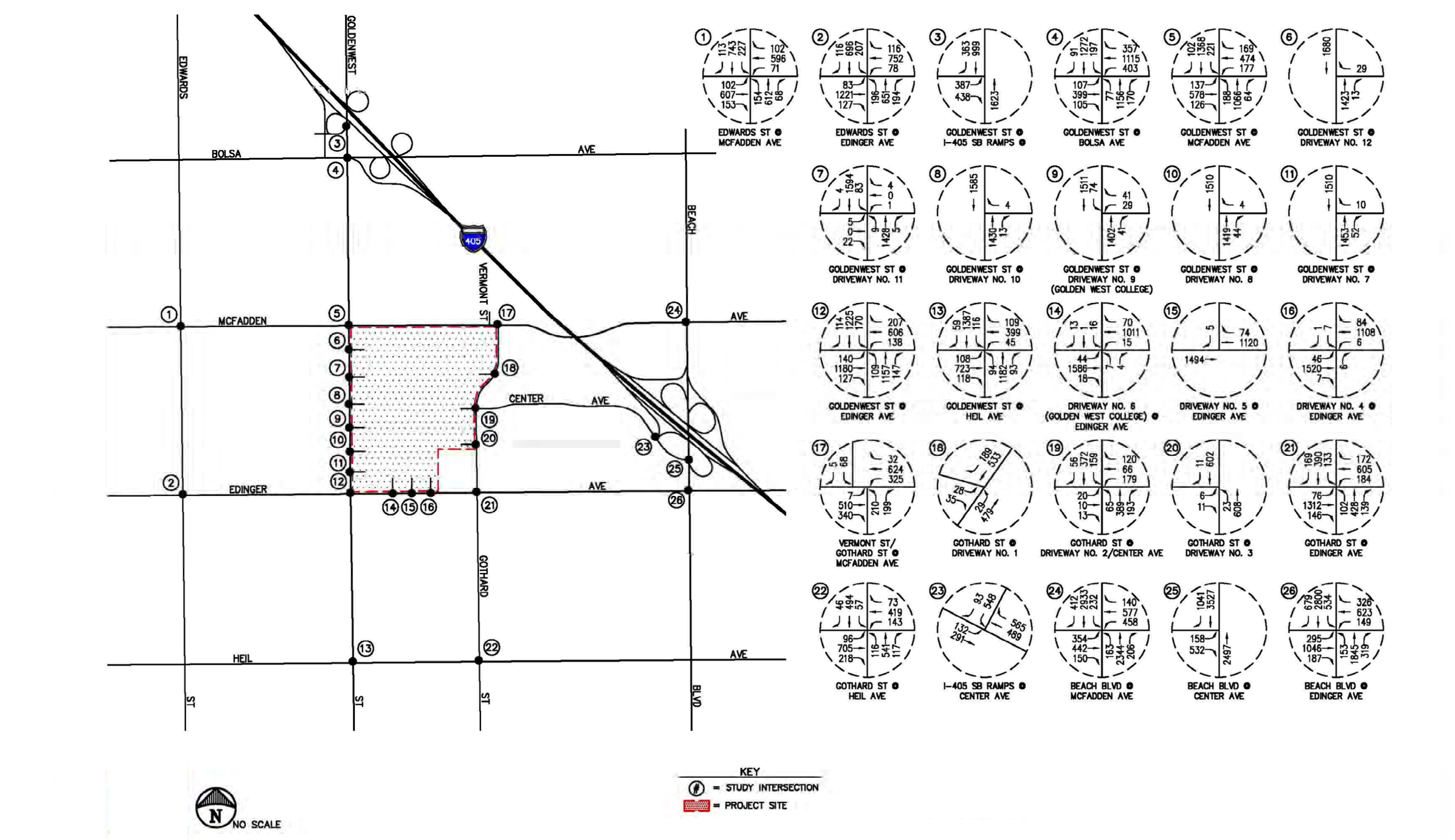

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-9

Year 2024 Cumulative AM Peak Hour Traffic Volumes

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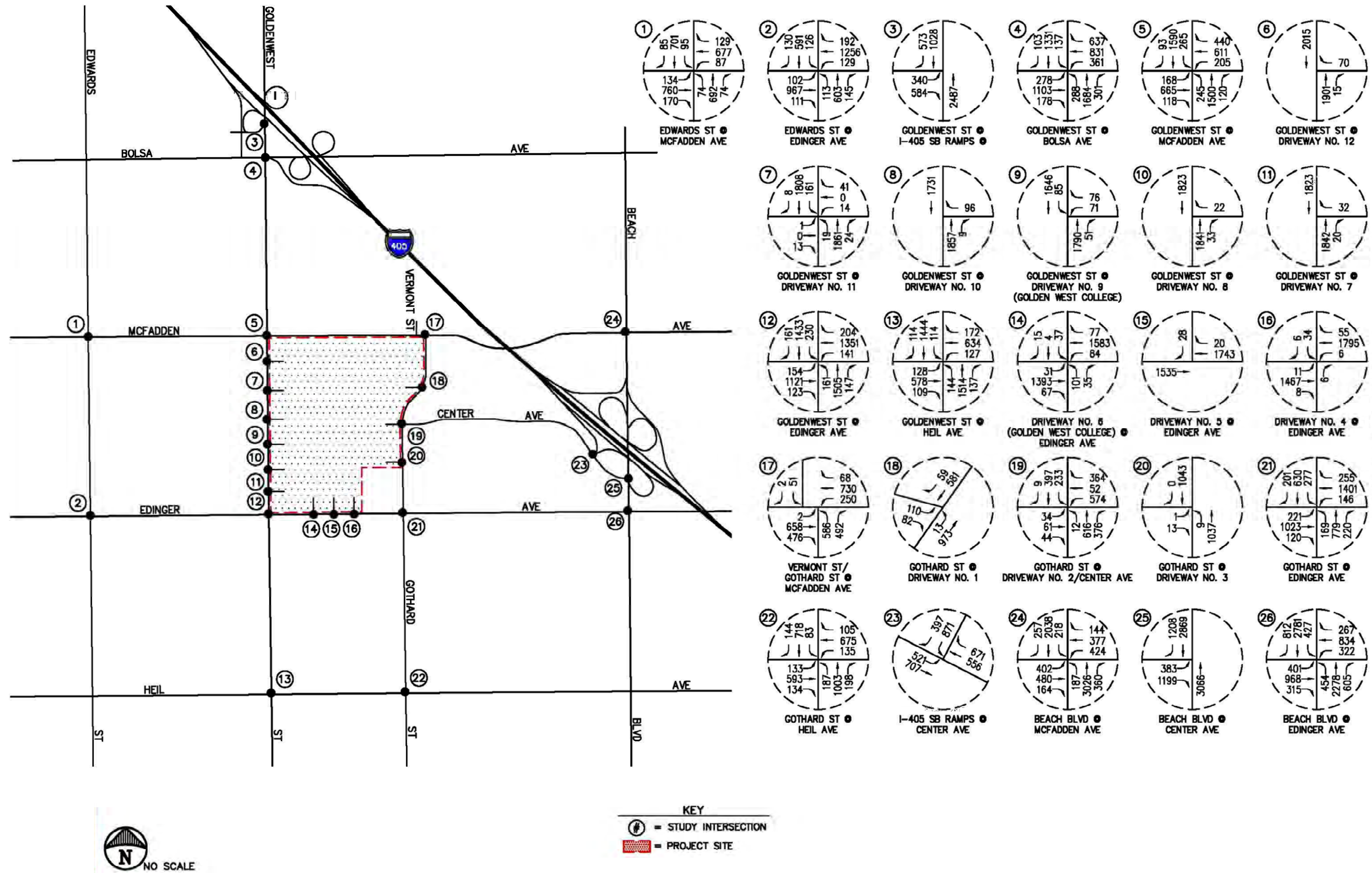

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

FIGURE 4.12-10
Year 2024 Cumulative PM Peak Hour Traffic Volumes

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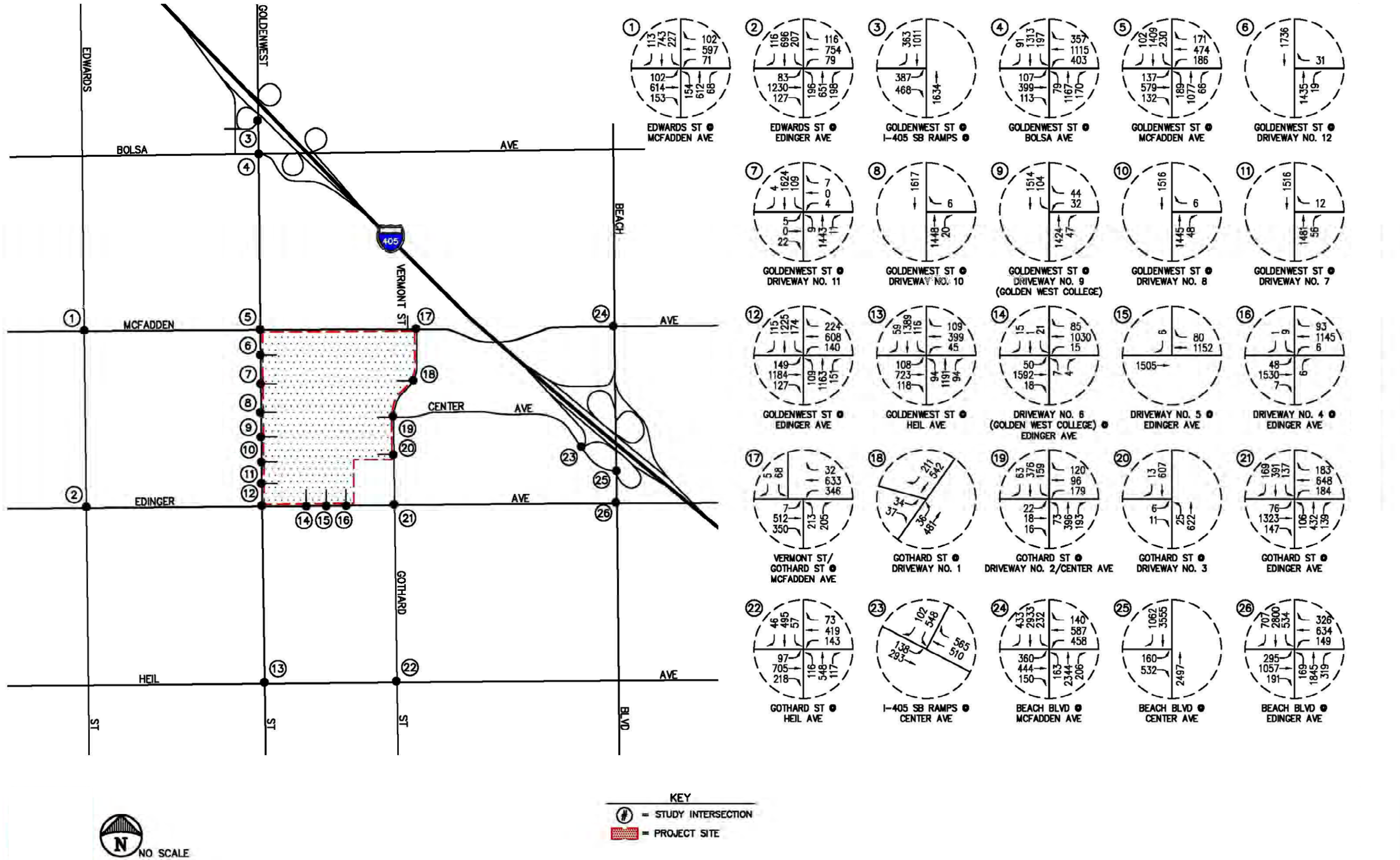

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

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FIGURE 4.12-11

Year 2024 Cumulative Plus Project AM Peak Hour Traffic Volumes

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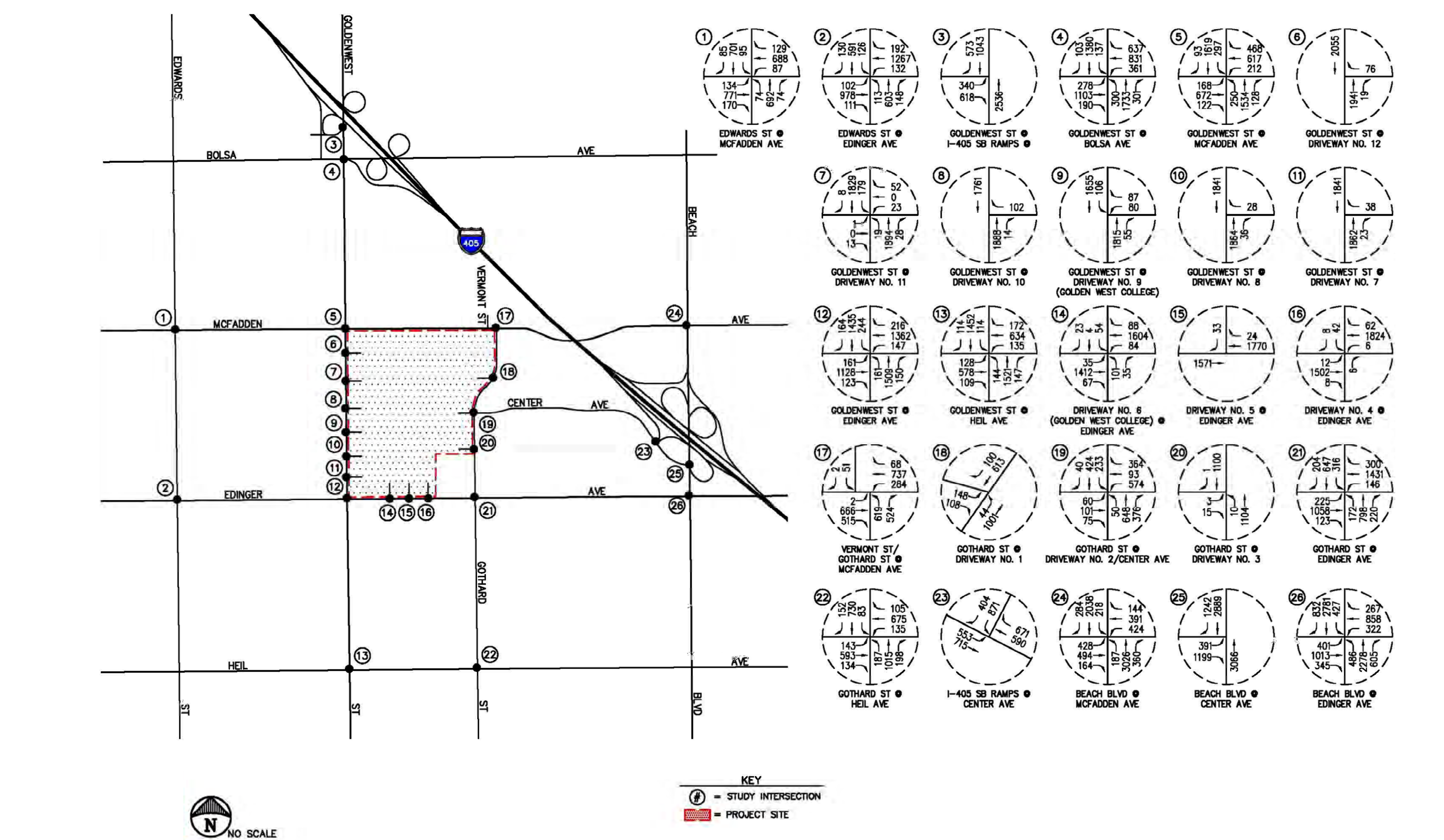

SOURCE: Linscott, Law & Greenspan, Engineers, 2015.

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FIGURE 4.12-12

Year 2024 Cumulative Plus Project PM Peak Hour Traffic Volumes

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4.13 UTILITIES AND SERVICE SYSTEMS

This section evaluates the potential effects of implementation of the proposed Golden West College (GWC) Vision 2020 Facilities Master Plan (proposed project) on utilities including sewer infrastructure, water supply and service systems, recycled water, stormwater systems, solid waste disposal, and energy. Information provided in Section 4.13.1, Existing Conditions, is based on communications with individuals from GWC Maintenance and Operations. The evaluation is based on data, publications, and resources prepared by utility and service system providers such as the City of Huntington Beach (City), CR&R Waste and Recycling Services, Southern California Edison, and the Southern California Gas Company.

4.13.1 Existing Conditions

4.13.1.1 Wastewater

The City provides sewer collection for the majority of Huntington Beach, including the GWC campus. The City maintains 350 miles of pipeline and 27 lift stations, which transport approximately 24.3 million gallons a day (mgd) of wastewater (City of Huntington Beach 2014a). Wastewater generated by GWC is collected by the City and treated by the Orange County Sanitation District (OCSD) treatment plants in Huntington Beach and Fountain Valley (City of Huntington Beach 1996).

OCSD maintains and operates Reclamation Plant No. 1 and Treatment Plant No. 2, located in Fountain Valley and Huntington Beach, respectively, as well as 15 pump stations located in the OCSD service area (479 square miles) (OCSD 2009). The OCSD treatment plants combined processed 201 mgd for the 2011–2012 fiscal period and have a combined primary treatment capacity of 372 mgd (OCSD 2009, 2012). Plant No. 1 has a primary capacity of 204 mgd and treats water later to be reclaimed by Orange County Water District for landscape irrigation use and groundwater replenishment. Additional treated effluent from Plant No. 1 is also sent to Plant No. 2, where effluents are mixed, dechlorinated with sodium bisulfite, and disposed of in the ocean (OCSD 2011). Both plants involve a primary treatment where barscreens and aerated grit chambers are used to separate large solids from wastewater. Secondary treatment involves the use of anaerobic digesters for organic waste stabilization and pathogen destruction (OCSD 2011).

A 12-inch private sewer line, maintained by GWC, connects to a City line at the southwest corner of campus on Goldenwest Street and extends northeast to the center of the campus. Another point of connection occurs at the northwest corner of campus and runs south to serve the maintenance/receiving facility. Private lines are made of vitrified clay pipe and cast-iron pipe (GWC 2005a).

4.13.1.2 Potable Water

GWC receives potable water from a blend of groundwater and imported water sources. In 2012, the City water supply consisted of 66% local groundwater provided by the Orange County Water District and 34% imported treated water from the Municipal Water District of Orange County, which is distributed by the Metropolitan Water District. The Orange County Water District manages the Lower Santa Ana Basin, which provides groundwater to the City. The City operates 10 groundwater wells and 3 imported surface water connections (City of Huntington Beach 2013). Imported water sources originate from the Colorado River Aqueduct system as well as from State Water Projects (City of Huntington Beach 1996).

Water supplied by the City is distributed on the GWC campus through a dual-feed system, which is divided into irrigation and domestic water lines. The City's water lines are connected to two 8-inch main feed lines at the center of Goldenwest Street and Gothard Street. Water is distributed via transite pipes (Dowling, pers. comm. 2014). From January to December 2013, GWC used an average of 125,914 gallons of water per day (87 gallons per minute) (Higgins, pers. comm. 2014a).

4.13.1.3 Recycled Water

Currently, the City does not use or serve directly applied recycled water to any of its customers. However, the City does receive a partial credit for recycled water produced by the joint Orange County Water District/OCSD Groundwater Replenishment System from wastewater generated within the City of Huntington Beach (City of Huntington Beach 2011).

4.13.1.4 Stormwater

Surface water runoff from the project site consists primarily of runoff generated within the boundaries of GWC, with minimal offsite surface flow contribution. The GWC campus is made up of a combination of pervious and impervious surfaces that influence where and how quickly stormwater collects and drains. Based on vegetation mapping of the site, the impervious surfaces on site, which consist of structures, paved walkways, and parking lots, make up approximately 61% of the surfaces on campus, with the rest consisting of landscape areas, vacant lots, and/or isolated patches of ruderal grasses, eucalyptus, and scrub (see Appendix C). Surface water runoff due to storm events flows down roof drains; across pavement; and into curbs, gutters, and inlets to the City's municipal storm drain system—which consists of a 63- to 75-inch underground storm drain that runs through the campus from north to south (OCFCD 2000). This underground pipe collects and conveys water about a mile south to the East Garden Grove–Wintersburg Channel, which is an earthen flood control channel maintained by the Orange County Flood Control District (OCFCD 2000). The East Garden Grove–Wintersburg Channel runs in a generally westerly direction until it discharges to Bolsa Bay, which is connected to the Pacific Ocean through Huntington Harbor and Anaheim Bay.

4.13.1.5 Solid Waste and Recycling

GWC's solid waste stream is managed and hauled by CR&R Waste and Recycling Services. The GWC campus generated approximately 215 tons of solid waste in 2011. Approximately 50% of all waste recovered from Coast Community College District (District) campus locations, which includes GWC, were recycled (CR&R 2012). All of the collected solid waste is transported to either the CR&R Waste and Recycling Services material recovery facility (MRF) in Stanton or the San Juan Capistrano MRF, where recyclable and solid waste material is separated. The residual solid waste stream recovered from the Stanton MRF is then transported to the Frank R. Bowerman Landfill in Irvine. Solid waste recovered from the San Juan Capistrano MRF is transported to the Prima Deshecha Landfill in San Juan Capistrano (Jones, pers. comm. 2013). The Frank R. Bowerman landfill permits a maximum of 11,500 tons of waste a day and does not accept public dumping. Prima Deshecha accepts public dumping and permits a maximum of 4,000 tons per day (County of Orange 2013). Information regarding the Prima Deshecha and Frank R. Bowerman Landfills is presented in Table 4.13-1.

Table 4.13-1
Existing Landfills

Landfill	Remaining Capacity (cubic yards)[a]	Maximum Permitted Capacity (cubic yards)[a]	Estimated Close Date	Maximum Permitted Daily Load (tons/day)	Data Year
Frank R. Bowerman	205 million	266 million	12/31/2053	11,500	2/29/2008
Prima Deshecha	87 million	173 million	12/31/2067	4,000	8/1/2005
Total	**292 million**	**439 million**	**NA**	**15,500**	**NA**

Source: CalRecycle 2005, 2008.
Notes: NA = not applicable
[a] Maximum Permitted Capacity indicates the amount of total landfill space available for solid waste. Remaining Capacity indicates the remaining landfill space available for solid waste.

4.13.1.6 Energy

Electricity

Southern California Edison is the main supplier of electricity to Huntington Beach (City of Huntington Beach 1996). GWC purchases direct access electricity from Constellation Energy, with electrical transmission/distribution managed by Southern California Edison. The main utility service enters the campus from the main switchgear, which is located in the north end of campus. Electricity runs south from the main switchgear and is distributed underground via a dual feed of 12- and 4,160-kilovolt lines (Dowling, pers. comm. 2014).

Based on data from February 2013 to January 2014, the GWC campus consumed approximately 7,706,217 kilowatt-hours (kWh) of electricity (SCE 2014).

Natural Gas

Natural gas service to the campus is provided by Southern California Gas Company through two main points of connection on the north end of campus. From the point of connection with the gas company main line, service to the campus is provided through two 4-inch lines that run south to the center of campus from their respective connection points (GWC 2005b; Dowling, pers. comm. 2014).

Based on data from November 2012 to November 2013, the GWC campus used approximately 211,705 therms of natural gas (Higgins, pers. comm. 2014b).

4.13.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Clean Water Act of 1977

Section 401 of the Clean Water Act (CWA) requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers Section 404 permit) obtain certification from the state that the discharge would comply with other provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain a water quality certification per Section 401 of the CWA. Section 404 requires a permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States unless such a discharge is exempt from CWA Section 404.[1] For the project area, the Santa Ana Regional Water Quality Control Board (RWQCB) must provide the water quality certification required under Section 401 of the CWA. Water quality certification under Section 401, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

Section 402 of the CWA established the National Pollutant Discharge Elimination System to regulate the discharge of pollutants from point sources. Section 404 of the CWA established a permit program to regulate the discharge of dredged or fill material into waters of the United States. Section 303 of the CWA requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology (33 U.S.C. Section 1251 et seq.).

1 The term "waters of the United States" as defined in the Code of Federal Regulations (40 CFR 230.3(s)) includes all navigable waters and their tributaries.

State

Protection of Underground Infrastructure

California Government Code, Section 4216 et seq., requires an excavator to contact a regional notification center (e.g., Underground Service Alert (USA) or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call USA Southern California, the regional notification center for Southern California. USA will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities, once notified, are required to mark the specific locations of their facilities within the work area prior to the start of project activities.

Recycled Water Policy

On January 22, 2013, the California State Water Resources Control Board adopted a revision of a statewide recycled water policy adopted in 2009, with the ultimate goal of increasing the use of recycled water from municipal wastewater sources. Included in the statewide policy is the mandate to increase the use of recycled water in California from 2002 levels by 1 million acre-feet per year by 2020, and an additional 2 million acre-feet per year by 2030.The plan also states that the State Water Resources Control Board expects to increase the use of stormwater from 2007 levels to at least 500,000 acre-feet per year by 2020 and 1 million acre-feet per year by 2030 (SWRCB 2013).

Porter-Cologne Water Quality Control Act

In the State of California, the State Water Resources Control Board and nine RWQCBs are responsible for implementing the CWA and the state Porter–Cologne Water Quality Control Act (Porter-–Cologne Act).

The Porter–Cologne Act, Section 13000, directs each RWQCB to develop a Water Quality Control Plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory programs. The proposed project is located within the purview of the Santa Ana RWQCB (Region 8) and must comply with applicable elements of the region's Basin Plan as well as the Porter–Cologne Act.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Assembly Bill (AB) 939), administered by the California Integrated Waste Management Board, regulates nonhazardous solid waste. The law provides a solid waste management system to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible and in an efficient and cost-effective manner to conserve natural resources, protect the environment, and improve landfill safety. Local agencies are required to establish recycling programs, reduce paper waste, purchase recycled products, and implement integrated waste management programs that conform to the state's requirements (California Public Resources Code, Section 40000 et seq.). AB 939 specifically required that each city and county in California divert 25% of its waste stream by 1995 and 50% by 2000 (CalRecycle 1997). The bill also required each state agency to develop and adopt an integrated waste management plan, in consultation with the Waste Management Board, before July 1, 2000.

Senate Bill X7-7

Senate Bill (SB) X7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package (SB X7-1, Delta Governance/Delta Plan). It seeks to implement water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. The bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SB X7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier still has to report the water use target for its individual service area. The bill also includes reporting requirements in the 2010, 2015, and 2020 Urban Water Management Plans.

State Agency Model Integrated Waste Management Act of 1999

The State Agency Model Integrated Waste Management Act mandated that state agencies develop and implement an integrated waste management plan. The act also mandated that community service districts providing solid waste services report disposal and diversion information to the city, county, or regional agency in which the community service district is located. Provisions of the act require all state agencies and large state facilities to divert at least 50% of solid waste from landfills after 2004 and that each state agency and large facility submit an annual report to the California Department of Resources Recycling and Recovery summarizing its yearly progress in implementing waste diversion programs (CalRecycle 2012).

Energy Conservation Policies

The following energy conservation policies pertain to the proposed project:

- Executive Order S-12-04. This order requests the participation of all state agencies under the authority of the Governor and other entities not under the direct authority of the Governor to institute energy conservation measures that will reduce energy consumption. Additionally, the order requests that all state agencies review and assess energy conservation policies currently in place and expand those measures to all applicable facilities (State of California 2004a).

- Executive Order S-20-04. This order requires the state to commit to "aggressive" action to reduce state building energy usage by retrofitting, building, and operating energy and resource efficient buildings, and by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded, or leased by the state. Executive Order S-20-04 requests that California Community Colleges participate in the effort to reduce energy usage (State of California 2004b).
- State Executive Order S-3-05. This order directs the state to reduce greenhouse gas emissions, which are linked to energy efficiency (State of California 2005).

Title 24 of the California Code of Regulations

Energy consumption by new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in Title 24 guidelines.

Local

City of Huntington Beach 2010 Urban Water Management Plan

GWC is within the City of Huntington Beach service area that uses imported water and groundwater to serve the water needs of the campus. The District Urban Water Management Plan was adopted in July of 2011 and outlined current water services as of 2010 and future projections for the service area. By law, all water agencies are required to update their Urban Water Management Plan every 5 years (the previous plan was adopted in 2005). Accordingly, the recently adopted 2010 Urban Water Management Plan reflects new development projects and assesses ongoing water supply issues, such as drought.

Regional Landfill Options for Orange County

The County of Orange Integrated Waste Management Department prepared a long-term plan to meet the solid waste disposal needs of Orange County residents. This plan specifically discusses the three active landfills within Orange County (the Olinda Alpha, Frank R. Bowerman, and Prima Desecha Landfills), their expected closure dates, and strategies to expand their capacities. Short-term strategies include maximizing operation efficiency through new compacting practices and technology and biocell technology, vertical expansion of the Frank R. Bowerman landfill, vertical and horizontal expansion of the Olinda Alpha Landfill, and promoting solid waste diversion and recycling. Long-term strategies include determining whether there is a need to increase daily permitted waste at the Prima Desecha Landfill, identifying strategies and technologies to maximize landfill capacities, and conducting a feasibility study of the expansion of the Frank R. Bowerman Landfill. The plan also emphasizes public disclosure and discussion in order to address the community's concerns.

Countywide Drainage Management Plan

Within the purview of the Municipal Separate Storm Sewer System (MS4) permit requirements, the municipalities (permittees) of Orange County have jurisdiction over and/or maintenance responsibility for stormwater conveyance systems that they own. The 2007 Drainage Area Management Plan was developed by the permittees in response to the requirements of the MS4 permit. It contains model programs and guidance for complying with the MS4 permit requirements, including a model water quality management plan (WQMP) for use by each permittee in developing its individual stormwater programs. To describe in detail how the model programs of the 2007 Drainage Area Management Plan are being implemented on a local level, each permittee, including the City, has adopted a Local Implementation Plan. General Plans, California Environmental Quality Act (CEQA) review processes, and ordinances (water quality, grading, fats/oils/grease) have been adopted and/or updated to meet MS4 permit requirements and establish necessary legal authority. This combination of programs, policies, and legal authority is used to ensure that pollutant loads resulting from urbanization are properly controlled and managed.

Huntington Beach General Plan

<u>Potable Water</u>

Objective U 1.3 Minimize water consumption rates through site design, use of efficient systems, proper maintenance, and other techniques.

Policy U 1.2.1 Require that new development, redevelopment, and existing development contain protective safeguards and mitigation measures preventing degradation.

Policy U 1.2.2 Require new developments to connect to the sewer system.

Policy U 1.3.2 Continue to require the incorporation of water conservation features in the design of all new and existing uses, such as the use of native plants, low flow toilets, and water efficient appliances.

Policy U 1.3.4 Require the use of reclaimed water in the City of Huntington Beach for landscaped irrigation, grading, and other non-contact uses in the new developments, where available or expected to be available.

Policy U 1.4.1 Require the costs of improvements to the existing water supply and distribution facilities necessitated by new development and redevelopment be borne by the new development benefiting from the improvements, either through the payment of fees, or by the actual construction of the improvements in accordance with State Nexus Legislation.

Wastewater

Policy U 2.1.6 Require that sewer capacity is available before building permits are issued for new development.

Policy U 2.2.1 Require the costs of improvements to the existing wastewater facilities necessitated by new development and redevelopment be borne by the new development benefiting from the improvements, either through the payment of fees, or by the actual construction of the improvements in accordance with State Nexus Legislation.

Storm Drainage

Policy U 3.2.1 Require improvements to the existing storm drain and flood control facilities necessitated by new development and redevelopment be borne by new development be borne by the new development benefiting from the improvements; either through the payment of fees, or by the actual construction of the improvements in accordance with State Nexus Legislation.

Policy U 3.1.6 During development review, determine if any structures meant for human habitation are constructed within the 100 year flood plain. If necessary, evaluate the structures' flood safety, and require remedial actions.

Policy U 3.3.3 Require that new developments employ the most efficient drainage technology to control drainage and minimize damage to environmentally sensitive areas.

Policy U 3.3.4 In areas of known subsidence, require new development to minimize the use of cross gutters and utilized technology such as low flow storm drains.

Solid Waste

Objective U 4.2 Recycle solid waste to reduce the amount of bulk, which must be disposed in area landfill, to conserve energy resources and to be consistent with the provisions of the California Integrated Waste Management Act of 1989.

Huntington Beach Municipal Code

Huntington Beach Municipal Code, Title 14 (City of Huntington Beach 2014b), includes regulations with regards to water distribution, use, and pollution; stormwater and urban runoff; sewer system service connections; drainage; and water-efficient landscape requirements.

Huntington Beach Municipal Code, Title 8, Chapter 21, specifies the requirements for the handling and the collection of solid waste and recycling materials (City of Huntington Beach 2014b).

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the proposed project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the project would:

1. ***Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.***
2. ***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.***
3. ***Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction or which could cause significant environmental effects.***
4. ***Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.***
5. ***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.***
6. ***Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.***
7. ***Comply with federal, state, and local statutes and regulations related to solid waste.***

Appendix G of the CEQA Guidelines does not contain significance thresholds related to energy, so Appendix F, Energy Conservation, was used as guidance. For the purposes of this analysis, the following threshold was used. A significant impact related to utilities and service systems would occur if the project would:

8. ***Result in potentially significant energy impacts due to the use of:***
    a. ***Excessive amounts of fuel or energy (i.e., natural gas).***
    b. ***Excessive amounts of power.***

No topics related to utilities and service systems were eliminated in the Initial Study; therefore, all topics are covered in the impacts analysis.

4.13.4 Impacts Analysis

Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The City provides sewer collection for the majority of Huntington Beach, including the GWC campus. Wastewater collected by the City is treated by the OCSD (City of Huntington Beach 1996). The OCSD is the National Pollutant Discharge Elimination System permit holder for the Fountain Valley Reclamation Plant No. 1 and Huntington Beach Treatment Plant No. 2, and it is responsible for compliance with the wastewater treatment requirements in the National Pollutant Discharge Elimination System permit, Order No. R8-2012-0035/CA0110604 (Santa Ana RWQCB 2010). Upon connection to City wastewater facilities, the proposed project would be in compliance with the wastewater treatment requirements of the RWQCB. Therefore, the proposed project would not exceed the wastewater treatment requirements of the applicable RWQCB and impacts would be less than significant.

Would the project 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?

Wastewater

As discussed in Section 4.13.1.1, Wastewater, two main private sewer lines maintained by GWC are currently in operation on campus. These private sewer lines are connected to lines maintained by the City, and effluent is treated by the OCSD treatment plants in Huntington Beach and Fountain Valley (City of Huntington Beach 1996).

The proposed project would generate additional wastewater discharges by adding academic and auxiliary space and through a general increase in the number of campus students. This additional wastewater flow would result in an increased demand on the local wastewater treatment infrastructure. According to Table 4.13-2, Projected Increase in Wastewater Generation, the proposed project is anticipated to generate an increase of 41,510 gallons per day or 15,150,000 gallons per year of wastewater upon buildout.

Table 4.13-2
Projected Increase in Wastewater Generation

Campus Land Use	Projected Land Use GSF Net Increase	Duty Factor (gpd/TSF)[a]	Projected Increase in Wastewater Generation (gpd)
Academic	207,630	200	41,526
General administrative	−13,380	200	-2,676
Auxiliary	15,219	200	3,044
Recreational	-1,920	200	-384
Total	**207,549**	**—**	**41,510**

Sources: Flint, pers. comm. 2014a; City of Huntington Beach 2009.
[a] Based on the City of Huntington Beach duty factors provided in City of Huntington Beach 2009. Where commercial land uses generate 200 gallons per day/thousand square feet. Academic, general administrative, and auxiliary land use generation rates were approximated using commercial duty factors. Recreational duty factors were not available.
GSF = gross square feet; gpd = gallons per day; TSF = thousand square feet; NA = not available

According to the City's Beach and Edinger Corridors Specific Plan Sewer Analysis Report, the amount of wastewater generated by the City in 2005 was approximately 21 mgd of wastewater. It is anticipated that the City would generate 26 mgd of wastewater by 2030 (City of Huntington Beach 2009).[2] As described in Table 4.13-2, the proposed project would result in the generation of 41,510 gallons of wastewater per day upon buildout. This projected increase in wastewater generation represents approximately 0.2% of the City's projected wastewater generation for 2030. Therefore, the amount of wastewater generated by the proposed project would be a minor contribution to the City's total wastewater generation.

Provided that the OCSD treatment plants have the capacity to process 372 mgd and are currently processing 201 mgd, the increase in demand created by the proposed project would be relatively minor in the context of the overall treatment capacity of the OCSD. Upon review of the final site engineering and design plans, the District will coordinate with the City to determine whether the existing sewer lines have the capacity and are in good enough condition to handle the increase in wastewater flow. A service agreement, and if applicable, payment of impact fees would be required prior to initiating new sewer connections with the City. The City, in the Notice of Preparation comment letter dated February 10, 2014, requested that a hydraulic analysis of the proposed project be completed to assess impacts to the City's water lines (see Appendix A for City comment letter). Because the proposed project is a master plan, and building or facility specific site plans are not available, a hydraulic analysis at the Program Environmental Impact Report stage of analysis is premature. However, when specific building site plans are available, a

[2] No data was provided for the City's wastewater generation in the year 2020. Therefore, generation projection data for the year 2030 was used instead.

hydraulic analysis will be conducted to assess impacts to the City's sewer lines prior to Division of the State Architect approval as specified in Mitigation Measure (MM)-UTL-1 (see Section 4.13-5, Mitigation Measures). Implementation of MM-UTL-1 would result in impacts that would be less than significant.

Potable Water

The proposed project would create additional potable water demand by adding academic and auxiliary space and through a general increase in the number of campus students. According to Table 4.13-3, Projected Increase in Potable Water Consumption, the proposed project is anticipated to demand an increase in approximately 14,591,000 gallons per year of potable water.

Table 4.13-3
Projected Increase in Potable Water Consumption

Existing Campus Facilities (GSF)	Existing Water Consumption (gpy)	Water Consumption Rate (per square foot)	Net Increase in GSF	Total Projected Increased Potable Water Demand (gpy)
653,945	45,958,616	70.3	207,549	14,590,695

Sources: Flint, pers. comm. 2014a.
GSF = gross square feet; gpy = gallons per year

Water service for GWC would continue to be through purchase of municipal water from the City. According to the City's 2010 Urban Water Management Plan, water demand is expected to increase from 32,367 acrefeet per year for 2010 to 32,620 acre-feet per year for 2015 and to 33,040 acre-feet per year for 2020. In the 2010 water year, the City pumped approximately 62% of its water supply from groundwater wells accessing the Santa Ana River groundwater basin and purchased 38% from the Metropolitan Water District. For 2020, water demand would maintain this same trend and is projected to be composed of 62% local groundwater and 38% imported water (City of Huntington Beach 2011).

The City serves a population of 204,831 and has over 52,300 service connections, with both numbers growing only slowly since the service area is already completely built out. In this context, any increase in demand resulting from the proposed project—when taken in the context of total water deliveries—would be relatively minor and incremental in nature. Nevertheless, the proposed project would still entail incremental increases in water demands associated with maintenance, landscaping, and restroom facilities necessary to accommodate the anticipated increased enrollment of approximately 2,645 additional students by 2020. The City would require approval of all water utility connection proposed by the District.

Upon buildout of the proposed project, GWC is anticipated to increase potable water demand by 14,591,000 gallons per year, or 45 acre-feet per year. According to the City's 2010 Urban Water

Management Plan (2011), the water demand for the City in 2020 is projected to be 33,040 acre-feet per year, making GWC's usage 0.1% of the City's total projected water demand. Compared to the City's total projected water demand for 2020, the increase in demand as a result of the proposed project would be negligible and would be far less than the variation in demand due to climatic conditions (City of Huntington Beach 2011). A water service agreement, and if applicable, payment of impact fees to the City would be required prior to initiating new water connections. The City, in the Notice of Preparation comment letter dated February 10, 2014, requested that a hydraulic analysis of the proposed project be completed to assess impacts to the City's water lines (see Appendix A for the City comment letter). Because the proposed project is a master plan and building- or facility-specific site plans are not available, a hydraulic analysis at the Program Environmental Impact Report stage of analysis is premature. However, when specific building site plans are available, a hydraulic analysis will be conducted to assess impacts to the City's water lines prior to Division of the State Architect approval as specified in MM-UTL-1. In addition, implementation of MM-HYD-3 (see Section 4.8.5) would ensure that water is not used in a wasteful manner, which would also further ensure that impacts relating to the construction of new water treatment facilities or expansion of existing facilities would be less than significant with mitigation.

Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?

As discussed in Section 4.8, Hydrology and Water Quality, there are approximately 72 impervious acres and 46 pervious acres on site, which means that impervious surfaces such as structures, paved walkways, and parking lots currently make up approximately 61% of the campus, with the rest consisting of landscaped areas and/or vacant lots. Much of the new construction and land uses proposed would occur on previously paved surfaces such as parking lots and walkways and within the footprint of demolished facilities. Proposed renovations would not substantially change the amount or distribution of impervious surfaces on campus, and much of the proposed demolition would serve to free up the central quad for pedestrian circulation and landscaping. Certain proposed facilities could increase the amount of impervious surfaces relative to existing conditions because their proposed footprints include areas that are currently pervious (i.e., undeveloped/bare ground).

Because many of the facilities in the Vision 2020 Facilities Master Plan are in the initial planning stages (i.e., no detailed layout or designs are available), the increase or decrease in impervious surfaces that would occur campuswide as a result cannot be quantified at this time. However, because the campus is already largely built out, is located on level topography, and is surrounded by urban land uses, the proposed project components are not anticipated to substantially modify existing topography, drainage-shed boundaries, or runoff rates/patterns. Furthermore, new facilities proposed under the Vision 2020 Facilities Master Plan would be subject to the most current standards for drainage design as well as the regional MS4 permit, which generally requires developers to mimic pre-construction drainage patterns when designing the drainage plan for a site.

Because the drainage sheds would maintain the same boundaries, and because changes in impervious surfaces would be relatively minor, the proposed project is not anticipated to exceed the capacity of existing off-site stormwater drainage system. Some on-site modifications to the drainage system may be undertaken, if required, as part of facility construction under the proposed project. Implementation of MM-HYD-1 (see Section 4.8.5) would require preparation of a WQMP that is consistent with guidance in the Orange County Drainage Area Management Plan and the City of Huntington Beach Local Implementation Plan. Implementation of the WQMP would ensure that the proposed project includes design features that slow and retain stormwater runoff. For these reasons, the proposed project would not require the construction of new stormwater drainage facilities or the expansion of existing facilities, and impacts would be less than significant.

Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As previously discussed, GWC currently purchases potable water from the City. The City's Urban Water Management Plan was adopted in July 2011 outlining water services as of 2010 and future projections for the service area (City of Huntington Beach 2011).

Upon buildout of the proposed project, GWC is anticipated to increase potable water demand by 14,591,000 gallons per year, or 45 acre-feet per year. According to the City's 2010 Urban Water Management Plan (2011), the water demand for the City in 2020 is projected to be 33,040 acre-feet per year, making GWC's usage 0.1% of the City's total projected water demand. Compared to the City's total projected water demand for 2020, the increase in demand as a result of the proposed project would be negligible and would be far less than the variation in demand due to climatic conditions (City of Huntington Beach 2011). In addition, implementation of MM-HYD-3 (see Section 4.8.5) would ensure that water is not used in a wasteful manner, which would also further ensure that impacts relating to new or expanded entitlements would be less than significant with mitigation.

Would the project 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?

The proposed project would generate additional wastewater discharges by adding additional academic and auxiliary space and through a general increase in the number of campus students. This additional wastewater flow would result in an increased demand on the local wastewater treatment infrastructure. According to Table 4.13-2, Projected Increase in Wastewater Generation, the proposed project is anticipated to generate an increase of 41,510 gallons per day of wastewater.

According to the City's Beach and Edinger Corridors Specific Plan Sewer Analysis Report, the amount of wastewater generated by the City in 2005 was approximately 21 mgd. It is anticipated that the City would generate 26 mgd of wastewater by 2030 (City of Huntington Beach 2009). The proposed project's anticipated increase in wastewater generation by 41,510 gallons of wastewater per day represents approximately 0.2% of the City's projected average daily wastewater generation for 2030. Therefore, the amount of wastewater generated by the proposed project would be a minor contribution to the City's total wastewater generation.

Provided that the OCSD treatment plants have the capacity to process 372 mgd and are currently processing 201 mgd, the increase in demand created by the proposed project would be relatively minor in the context of the overall treatment capacity of the OCSD. Upon review of the final site engineering and design plans, the District will coordinate with the City to determine whether the existing sewer lines have the capacity and are in good enough condition to handle the increase in wastewater flow. A service agreement, and if applicable, payment of impact fees would be required prior to initiating new sewer connections with the City of Huntington Beach. Considering the proposed project would result in minor contributions to the City's total wastewater generation and the District would coordinate with the City prior to any sewer connections, impacts would be less than significant.

Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction of the proposed project would generate construction waste (e.g., concrete rubble, asphalt rubble, wood, drywall) that would result in an increased demand for solid waste collection and disposal capacity. The County of Orange Waste & Recycling will require the completion and submittal of a construction and demolition waste reduction and recycling application to the County for approval prior to issuance of the final Certificate of Occupancy permit for the site, which is, therefore, included as MM-UTL-2. The construction and demolition waste reduction and recycling application will identify and estimate the materials to be recycled during construction and demolition activities and will name the County-approved facility used to recycle the waste. A construction and demolition waste reduction and recycling application that demonstrates that the project recycled a minimum of 50% of its construction and demolition waste will then be approved by Orange County Planning prior to issuance of the final Certificate of Occupancy permit (County of Orange 2014).

The GWC campus generated approximately 215 tons of solid waste in 2011 and approximately 50% of all waste recovered from District campus locations, which includes GWC, was recycled.

It is therefore assumed that 50% of waste generated by GWC was recyclable material, and solid waste generation can be approximated as 108 tons for the year 2011 (CR&R 2012). Table 4.13-4, Existing and Projected Solid Waste Demand (tpy), shows that upon buildout of the proposed project, an additional 35 tons of solid waste would be generated, resulting in a total campus generation amount of 144 tons per year (tpy).

Table 4.13-4
Existing and Projected Solid Waste Demand (tpy)

Existing Campus Facilities (GSF)	Existing Solid Waste Generation (tpy)	Solid Waste Generation Rate (per 10,000 square feet)	Net Increase in GSF	Total Projected Increased Solid Waste Generation (tpy)
653,945	108	1.7	207,549	35

Sources/ Calculation/ Notes:
Existing Campus Facilities (gross square feet): Flint, pers. comm. 2014a.
Existing Solid Waste Generation: CR&R 2012.
Solid Waste Generation per 10,000 square feet: 108/652,025×10,000
Net increase in gross square feet: See Table 3-4, of Chapter 3 (476,002–266,533).
Total Projected Increase Solid Waste Generation: 209,469×1.7/10,000

It is anticipated that the proposed project's solid waste disposal needs would continue to be served by CR&R Waste and Recycling Services, and all solid waste generated on campus would continue to be transported to the Stanton or San Juan Capistrano MRF. The residual solid waste stream recovered from the Stanton MRF is then transported to the Frank R. Bowerman Landfill. Solid waste recovered from the San Juan Capistrano MRF is transported to the Prima Deshecha Landfill (Jones, pers. comm. 2013).

Consistent with the GWC campus's ongoing recycling programs, all recyclable materials generated as a result of construction/demolition and proposed project operation would continue to be sent to the Stanton and San Juan Capistrano MRFs. If a conservative recycling rate of 50% is assumed, then the proposed project would send approximately 0.1 ton per day to an area landfill. These amounts represent approximately 0.001% and 0.002% of the total maximum permitted capacity of 11,500 and 4,000 tons per day for the Frank R. Bowerman and Prima Desecha Landfills, respectively, as listed in Table 4.13-1. Therefore, the amount of solid waste generated and disposed of in nearby landfills during operation of the proposed project is expected to be within the permitted capacity of the landfills. Given these considerations, and with recycling required by the County implemented during all construction phases of the project with the incorporation of MM-UTL-2, potential impacts associated with solid waste capacity would be considered less than significant with mitigation incorporated.

Would the project comply with federal, state, and local statutes and regulations related to solid waste?

All of the District campuses, including GWC, divert over 50% of their solid waste to a licensed recycling facility. Solid waste generated from construction and operation of the proposed project would be consistent with the GWC campus's ongoing recycling programs, which historically have been successful at diverting at least 50% of on-campus-generated solid waste from a landfill to an appropriate recycling facility. Maintaining the existing diversion rate would ensure compliance with AB 75, which requires all large state facilities to divert at least 50% of solid waste from landfills. Therefore, a less-than-significant impact to solid waste policies and programs would occur.

Would the project result in potentially significant energy impacts due to the use of:

- ***i. Excessive amounts of fuel or energy (i.e., natural gas)?***
- ***ii. Excessive amounts of power?***

The proposed project would create additional electricity and natural gas demand by adding additional academic and auxiliary space and through a general increase in the number of campus students. The proposed project would involve the demolition of 268,453 gross square feet of existing facilities on campus and would involve the construction of 476,002 gross feet square of new campus facilities. The proposed project would replace these existing facilities with more energy-efficient buildings. New facilities associated with the proposed project would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards would apply to new construction of campus buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. These building efficiency standards would be enforced through the Division of the State Architect plan review and approval.

Based on data from February 2013 to January 2014, GWC used approximately 7,706,000 kWh of electricity (SCE 2014). Based on data from November 2012 to November 2013, GWC used approximately 211,700 therms of natural gas (Higgins, pers. comm. 2014b). Building electricity and natural gas usage associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2 (available online at www.caleemod.com). CalEEMod default values for indoor and outdoor water use and electricity and natural gas consumption (through Title 24, non-Title 24, and lighting energy intensities and Title 24 and non-Title 24 natural gas energy intensities) were used for the new facilities constructed as part of the proposed project. Default values for electricity and natural gas consumption through Title 24 and non-Title 24 natural gas energy intensities and Title 24, non-Title 24, and lighting energy intensities were adjusted to reflect historical energy use of existing facilities. Once operational, the proposed project would result in the use of approximately 3,348,000 kWh of electricity (6,511,000 kWh associated with new facilities and a reduction in 3,163,000 kWh associated with the demolition of existing facilities) per year (see Appendix B for calculations). The proposed project would result in the reduction of 12,200 therms of natural gas (74,600 therms associated with new facilities and a reduction in 86,800 therms associated with the demolition of existing facilities) per year (see Appendix B). The proposed project would increase electricity demand by 30.3% and decrease natural gas demand by 5.8%.

As part of the proposed project, a thermal energy storage unit would be installed just north of the current Central Plant. This system would store energy to be used later for heating, cooling, or power generation. The storage tank volume would be approximately 116,000 cubic feet or 867,740 gallons (Flint, pers. comm. 2014b). Other specifications for the proposed thermal energy storage tank are not available at this time. However, a 1996 study by the California Energy Commission provided case studies for three colleges located in Texas, Arizona, and California. These colleges used chilled water thermal energy storage tanks on campus and achieved an 8% to 13% savings in energy used to cool their facilities (CEC 1996). Although thermal energy storage tank system technologies have improved since the publication of this study, an 8% reduction in the estimated electricity consumption used for campus cooling associated with the proposed project can be applied to provide a conservative estimate of energy savings. According to Southern California Edison, on average, 23.3% of college and university electricity usage is attributed to space cooling (SCE 2013). Applying this 8% reduction to GWC's electricity consumption for space cooling, the thermal energy storage tank could result in an offset of 206,100 kWh in electricity consumption. If this offset occurred, the GWC campus would use approximately 10,852,000 kWh of electricity upon buildout of the proposed project. The proposed project would result in a reduction of natural gas consumption from existing conditions by 5.8%, which is attributed to the demolition of existing facilities and the construction of new buildings, which would meet the State Building Energy Efficiency Standards embodied in Title 24 of the California Code of Regulations. The proposed thermal energy storage unit would result in the offset of 206,100 kWh of electricity per year. Therefore, the proposed project would not result in the excessive use of fuel or energy or in excessive amounts of power, and impacts would be less than significant.

4.13.5 Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to water and sewer infrastructure (MM-UTL-1), solid waste (MM-UTL-2), stormwater runoff (MM-HYD-1), and water conservation (MM-HYD-3) issues discussed in Section 4.13.4. Because impacts to other utilities and service systems as a result of the project are found to be less than significant, no additional mitigation measures are necessary.

MM-UTL-1 Prior to the Department of State Architects design review approval, and when building specific plans are available, Coast Community College District shall coordinate with the City of Huntington Beach's water and sewage department to conduct a hydraulic analysis to determine the specific impacts to the city's water and sewer infrastructure. The analysis shall demonstrate to the satisfaction of the City engineer that adequate on-site water and sewer infrastructure will be available to support the proposed facilities. The hydraulic analysis shall include the following information:

a. Existing pipeline locations, size, and capacity

b. Proposed system and points of connection

c. Estimated water demands and and/or sewer flow calculations

d. Huntington Beach Fire Department flow requirements

MM-UTL-2 Prior to issuance of the final Certificate of Occupancy permit, the Coast Community College District (District) shall complete a construction and demolition waste reduction and recycling application and submit the application to the County of Orange (County) Waste & Recycling for approval. The construction and demolition waste reduction and recycling application will identify and estimate the materials to be recycled during construction and demolition activities and will name the County-approved facility used to recycle the waste. Compliance with the plan will be a requirement in all construction contracts. The County-approved application will be attached to all construction plans and distributed to all construction contractors. Once construction is complete, Coast Community College District will be responsible for preparing a tonnage report that demonstrates that the proposed project recycled a minimum of 50% of its construction and demolition waste. The tonnage report must be submitted to and approved by the County prior to issuance of the final Certificate of Occupancy permit. Since this proposed project will be developed in phases over time, review and approval of the construction and demolition waste reduction and recycling application can be submitted by phase or building. However, for each demolition waste reduction and recycling application submitted and approved, a corresponding tonnage report should also then be submitted for approval.

MM-HYD-1 See Section 4.8.5.

MM-HYD-3 See Section 4.8.5.

4.13.6 Level of Significance After Mitigation

Implementation of MM-UTL-1, MM-UTL-2, MM-HYD-1, and MM-HYD-4 would ensure that all impacts identified would be reduced to a less-than-significant level.

4.13.7 Cumulative Impacts

Section 15130(b)(1)(A) of the CEQA Guidelines (14 CCR 15000 et seq.) allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. This discussion uses the following approach: an initial list and description of all related projects is presented, followed by a discussion of the effects that the project may have on each environmental category of concern. Consistent with CEQA (California Public Resources Code, Section 21000 et seq.), this discussion is guided by the standards of practicality and reasonableness. A list of past, present, and reasonably foreseeable future projects that the City determined were most relevant to the project are provided in Table 3-10 of Chapter 3, Project Description.

The geographic extent for the analysis of cumulative impacts associated with utilities consists of the City of Huntington Beach because utilities are provided by local jurisdictions or districts.

The proposed project would have less-than-significant impacts with regard to wastewater treatment facilities, the expansion of existing facilities, and the capacity of wastewater treatment providers. All foreseeable projects would need to evaluate their wastewater generation prior to development, and upon review of the final site engineering and design plans, would be required to coordinate with the City or the applicable sewer system jurisdiction. Implementation of MM-UTL-1 would mean that the project would not have unanticipated impacts to the City's wastewater infrastructure and that there is sufficient capacity within the system to accommodate the proposed project. A service agreement, and if applicable, payment of impact fees would be required prior to initiating new sewer connections. Considering that the proposed project and additional projects in the vicinity would be subject to these requirements, cumulative impacts would be less than significant.

Because of the cumulative nature of potable water impacts, the project's increase in demand on potable water, even if individually minor, could be cumulatively considerable, particularly in the context of climate change, existing drought conditions, and the trend toward increased reliance on local supplies. Implementation of MM-HYD-3 would ensure that water is not used in a wasteful manner, which would also further ensure that the contribution to cumulative impacts related to water demand would be less than significant with mitigation. Implementation of MM-UTL-1 would mean that the project would not have unanticipated impacts to the City's water infrastructure and that there is sufficient capacity within the system to accommodate the proposed project. Therefore, the impacts related to construction or expansion of water facilities and new or expanded entitlements would be less than significant with mitigation.

Because the drainage sheds would maintain the same boundaries, and because changes in impervious surfaces would be relatively minor, the proposed project is not anticipated to exceed the capacity of existing off-site stormwater drainage system. Some on-site modifications to the drainage system may be undertaken, if required, as part of facility construction under the proposed project. Implementation of MM-HYD-1 would require preparation of a WQMP that is consistent with guidance within the Orange County Drainage Area Management Plan and the City of Huntington Beach Local Implementation Plan. Implementation of the WQMP would ensure that the proposed project includes design features that slow and retain stormwater runoff. For these reasons, the proposed project would not require the construction of new stormwater drainage facilities or the expansion of existing facilities. Other projects within the vicinity of the proposed project would need to be evaluated on an individual basis with regard to stormwater drainage facilities. There are existing stormwater conveyance facilities in the area, and combined with other projects, the proposed project is not expected to cause a significant impact related to stormwater runoff since all projects would be designed to meet stormwater capacity. The proposed project would not substantially change total surface runoff and would not combine with surrounding projects to contribute to significant cumulative impacts; therefore, cumulative impacts would be less than significant with mitigation.

Implementation of MM-UTL-2 would ensure that prior to the final Certificate of Occupancy permit issuance, a construction and demolition waste reduction and recycling application and tonnage report for the proposed project would be submitted to the County for review and approval (County of Orange 2014). The amount of solid waste generated and disposed of in nearby landfills during operation of the proposed project is expected to be within the permitted capacity of the landfills, as discussed in Section 4.13.4. In addition, all foreseeable projects would need to submit this information and evaluate the project's anticipated solid waste generation prior to development, and cumulative impacts would be considered in relation to landfill capacity. As such, cumulative impacts to landfill capacity would be less than significant with mitigation.

The proposed project would have less-than-significant impacts with regard to energy because the project would result in a 5.8% reduction of natural gas consumption from existing conditions, which is attributed to the demolition of existing facilities and the construction of new buildings, which would meet the Title 24 of the California Code of Regulations energy efficiency standards. The proposed thermal energy storage unit would result in the offset of 206,100 kWh of electricity per year. In addition, new facilities associated with all foreseeable projects would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. These building efficiency standards would be enforced through the local building permit process. Therefore, the proposed project would not combine with projects in the vicinity to result in cumulatively considerable impacts, and cumulative impacts would be less than significant.

4.13.8 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

33 U.S.C. Section 1251 et seq. Clean Water Act.

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CHAPTER 5
OTHER CEQA CONSIDERATIONS

This chapter includes the following other considerations that are required in an Environmental Impact Report (EIR) for the proposed Golden West College Vision 2020 Facilities Master Plan (proposed project):

- Significant and Unavoidable Environmental Impacts (Section 5.1)
- Significant and Irreversible Environmental Effects (Section 5.2)
- Growth Inducement (Section 5.3)
- Effects Found Not to Be Significant (5.4)

5.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Implementation of the project-specific mitigation measures identified in the Chapter 4 analysis would reduce all significant impacts to below a level of significance, with the exception of the significant impact due to the loss of historical resources. The substantial demolition of the buildings, structures, objects, features, and landscape elements that comprise the Golden West College (GWC) Campus Historic District would result in a substantial adverse change to the historic property (i.e., the historic district) and the environment. Nevertheless, the measures outlined for documentation of the historic district, the salvage and reuse of significant character-defining features, and the development of an interpretive educational program are important to ensure that information regarding the historical development of the college campus, its association with master architect William Pereira, and its physical manifestation of Modern-style educational facilities are documented, retained, and archived. The impact to the GWC Campus Historic District cannot be mitigated to a less-than-significant level. Impacts would remain significant and unavoidable.

5.2 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL EFFECTS

California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) mandate that an EIR must address any significant irreversible environmental changes that would result from the proposed project should it be implemented. An impact would fall into this category if:

- The project would involve a large commitment of nonrenewable resources
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses

- The project involves uses in which irreversible damage could result
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy) (14 CCR 15126.2(c)).

Determining whether the proposed project may result in significant and irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them.

Intensification of Land Use

As a result of implementation of the proposed project, some of the existing structures on the GWC campus would be demolished, renovated, vacated, and/or relocated to permit the redevelopment/construction of more intensive land uses to accommodate future growth. Redevelopment of the campus to accommodate these more intensive land uses would result in further urbanization of the area and would represent a long-term commitment to an increasingly dense urban environment. Part of the proposed project is to improve integration of land use and functional use of space within the GWC campus, as well as to accommodate future growth. The conversion to more intense land uses would not constitute the commitment of a "nonrenewable resource," as described in Section 15126.2(c) of the CEQA Guidelines, because the intensification of land uses on the campus would also lead to more opportunities for pedestrians to walk between adjacent uses on campus.

Future Similar Uses

Facilities and improvements developed under the proposed project can be expected to have a life span of approximately 50 to 70 years. Future generations would likely continue to use GWC for educational and community purposes. Therefore, primary and secondary impacts of the proposed project would generally commit future generations to similar uses. However, the proposed project would not preclude use of the site for other purposes in the future.

Environmental Accident

Due to the age of the buildings, demolition activities could result in the release of contaminated materials and hazardous substances, such as lead-based paint or asbestos. Potential release of these hazardous materials may expose construction workers and the public to potential health hazards during demolition and construction activities. An underground gas tank leak occurred in the area of the Central Warehouse/Corporation Yard. Impacted soils may still be present and therefore could be encountered during construction in that area, which would potentially expose construction workers and the public to hazardous conditions. Furthermore, because the property was formerly used for agricultural purposes, residual pesticides and metals may still be present in the soil, which could also present a potentially hazardous condition. Mitigation measures, such as conducting a lead-based paint and asbestos survey prior to demolition, as well as conformance to a hazardous materials contingency plan, would be required. Compliance with all mitigation measures herein would reduce impacts to less than significant.

Additionally, while the site is located within a seismically active region and would be exposed to ground shaking in the event of a seismic event, conformance with the regulatory provisions of the Uniform Building Code requirements pertaining to construction standards would minimize damage and injuries in the event of such an occurrence.

Proposed uses of the GWC campus would be expected to use and store chemicals and/or substances typically found in such settings. The types of hazardous materials associated with routine, day-to-day operation of the proposed project would include chemical reagents, solvents, fuels, paints, cleansers, and miscellaneous organics and inorganics that are used as part of building and grounds maintenance, as well as vehicle maintenance. Given federal, state, and local regulations governing the use of such substances, the proposed project is not expected to involve activities that would damage the environment or pose a risk to public health. Therefore, for the reasons listed previously, impacts as a result of the proposed project would not create significant and irreversible effects. (See Section 4.7, Hazards and Hazardous Materials, of this Program EIR (PEIR) for analysis of the proposed project's impacts relative to hazardous waste and materials.)

Nonrenewable Energy Consumption

Construction of each of the proposed project components would result in the use of nonrenewable resources and energy sources, including fossil fuels, natural gas, and electricity. Fossil fuels would be used to power construction equipment, vehicles and equipment used for delivery of construction materials, and employee vehicles. Construction equipment would also use electricity and natural gas. Use of these energy sources would be considered a permanent commitment of resources. In addition, a variety of resource materials would be used during the construction process, including steel, wood, concrete, and fabricated materials. Once these materials and fuels are used for purposes of construction, the commitment of such materials and fuels would be considered irreversible.

Once operational, the project components would consume more energy on a daily basis than is currently generated on site. The proposed project would include a thermal energy storage unit. This system would store energy to be used later for heating, cooling, or power generation. The proposed project would also replace existing facilities with more energy-efficient buildings. New facilities associated with the proposed project would be subject to California's Building Energy Efficiency Standards in the California Code of Regulations, Title 24. The efficiency standards apply to new construction of both residential and nonresidential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

Natural resources in the form of construction materials would be utilized in the construction of the proposed project; however, their use is not expected to negatively impact the availability of these resources. Due to the scale of the proposed project, the use of construction materials and nonrenewable resources is not unusual or extraordinary; as a result, there would be no significant and irreversible environmental effects related to resource consumption during construction. On a permanent, long-term basis, the proposed project would consume energy; however, the proposed thermal energy storage unit would offset some electricity usage to provide for the existing electricity demand, as well as the additional demand created by the proposed project, and all facilities associated with the proposed project would be subject to California's Building Energy Efficiency Standards. Therefore, the proposed project would not result in the excessive use of fuel or energy, or the use of excessive amounts of power, and impacts would not be irreversible. (See Section 4.13, Utilities and Service Systems, of this PEIR for analysis of the proposed project's impacts relative to energy).

5.3 GROWTH INDUCEMENT

CEQA requires a discussion of ways the proposed project could be growth inducing. The CEQA Guidelines identify a project as growth inducing if it fosters economic or population growth, or results in the construction of additional housing, either directly or indirectly, in the surrounding environment (14 CCR 15126.2(d)). New employees from commercial or industrial development and new population from residential development represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area. A project could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors.

Direct growth-inducing impacts are commonly associated with the extension of new public services, utilities, and roads into areas that have previously been undeveloped. The extension of such infrastructure into a non-serviced area can represent the elimination of a growth-limiting factor, thereby inducing growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities and ultimately resulting in an increase in the pace of development or the density of the existing surrounding development. Indirect growth-inducing impacts include an increased demand for housing, commodities, and services that new development causes or attracts by increasing the population or job growth in an area.

The construction and renovation of existing facilities on campus would have the potential to attract more students and increase the population in the area. However, the construction and renovation of these facilities is intended to accommodate the projected growth, not necessarily induce growth. However, these improved facilities would have the potential to indirectly induce growth. In comparison to the projected population increase in region, an increase in 2,645 students is not a substantial increase in population.

According to the Southern California Association of Governments (SCAG), the City of Huntington Beach (City) is expected to have a population of 199,800 by 2020. The projected student enrollment at GWC by 2015 would be 15,391, which accounts for 7.7% of SCAG's projected population for the City. However, the net increase of 2,645 students between 2013 and 2020 only represents 1.3% of SCAG's overall growth projections. Therefore, projections are consistent with SCAG's growth projections for the City, and impacts as a result of increased student generation rates would not be substantial.

For the 2013 fall semester, the student headcount enrollment was 12,746 and the employee count was 618, representing a student to employee ratio of 21 to 1. Assuming that this same ratio is maintained upon buildout of the proposed project, an employee count of 733, or a net growth of 115 employees, by the year 2020 would occur. Thus, GWC would experience a 15.6% increase in employees, which is only 0.14% of SCAG's overall growth projection of 80,100 employees for the City, by 2020. Therefore, employee growth is consistent with SCAG's overall growth projections and would not result in a substantial increase in population growth.

5.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires an EIR to contain a statement briefly indicating the reasons why various potentially significant impacts of a project were not discussed in detail in the EIR. This PEIR contains an analysis of the potential significant environmental impacts associated with the proposed project that is based in part on an Initial Study (IS) prepared by the Coast Community College District (District) and is attached as Appendix A.

5.4.1 Aesthetics

Scenic Vista Effects

The City's 1996 General Plan does not identify any scenic areas, vistas, or corridors in the vicinity of the campus (City of Huntington Beach 1996). Analysis performed during the IS phase of the proposed project determined that impacts to a scenic vista would be less than significant, and further analysis in the PEIR was not required.

Scenic Resource Damage

There are no designated scenic roadways within the project vicinity. There are no other scenic resources near or within the proposed project site that are visible from a scenic roadway. Analysis performed during the IS phase of the proposed project determined that impacts to scenic resources within a state scenic highway would be less than significant, and further analysis in the EIR was not required.

5.4.2 Agricultural Resources

The IS determined that all impacts associated with agricultural resources would be less than significant, and no additional analysis in the PEIR would be required. For a detailed discussion on less-than-significant impacts regarding agricultural resources, see Appendix A.

5.4.3 Air Quality

Conflict with Applicable Air Quality Plan

The proposed project does not involve the development of campus housing; however, the proposed project would involve an increase in student enrollment. However, this growth is consistent with SCAG's growth projections for the City. Because the planned growth of the proposed project has been factored into the underlying growth projections of the 2012 Air Quality Management Plan, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Analysis in this PEIR determined that impacts would be less than significant.

Violation of an Air Quality Standard

Construction and operation of the proposed project would not result in the emission of criteria air pollutants from mobile, area, and/or stationary sources, which would cause exceedances of federal and state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. Analysis in this PEIR determined that impacts would be less than significant.

Cumulatively Considerable Increase of a Criteria Pollutant

Cumulative localized impacts could occur if the construction of the proposed project component were to occur concurrently with another off-campus project. Construction schedules for potential future projects near the GWC campus are currently unknown; therefore, potential construction impacts associated with simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). However, air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the South Coast Air Quality Management District (SCAQMD).

Cumulative coarse particulate matter and fine particulate matter emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD. Impacts with regards to cumulative construction emissions would be less than significant.

Considering the proposed project would result in population growth that is consistent with the growth projections anticipated in the SCAQMD's 2012 Air Quality Management Plan, operation of the proposed project would not result in a cumulatively considerable contribution to the nonattainment pollutants in the basin, and this impact would be less than significant, as discussed in this PEIR.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Construction activities associated with the proposed project would result in temporary sources of fugitive dust and construction vehicle emissions. However, according to the localized significant thresholds analysis, in Section 4.2.4, Impacts Analysis, of this PEIR, construction activities would not generate emissions in excess of site-specific localized significant thresholds during the respective construction phases, and impacts to sensitive receptors in the vicinity of the project site would be less than significant. Long-term operation of the proposed project would result in daily vehicular trips that would generate local emissions that could expose sensitive receptors to substantial pollutant concentrations. However, according to the carbon monoxide hotspot analysis, in Section 4.2.4 of this PEIR, maximum carbon monoxide concentrations surrounding key intersections within the vicinity of the campus would be below the state's 1-hour carbon monoxide standard of 20 parts per million, and the 8-hour carbon monoxide concentrations would be below the state's carbon monoxide standard of 9.0 parts per million. Accordingly, impacts were determined to be less than significant, as discussed in this PEIR.

Objectionable Odors

Construction of proposed project components would result in the emission of diesel fumes and other odors typically associated with construction activities. However, typical construction techniques in compliance with SCAQMD rules would be used. Odors are highest near the source and would quickly dissipate off site. Any odors associated with construction activities would be temporary and would cease upon completion of construction.

Land uses and industrial operations that typically are associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Accordingly, it is not anticipated that any operational sources under the proposed project would result in objectionable odors. Analysis in this PEIR determined that impacts would be less than significant.

5.4.4 Biological Resources

Riparian Habitat or Natural Community

The project site is not located in riparian habitat or a sensitive natural community and would not have an adverse effect on these habitats.

Federally Protected Wetlands

The proposed project site does not contain federally protected wetlands; therefore, no impacts would occur.

Migratory Wildlife Corridors

Development is the dominant land cover type within the project area. No wildlife corridors are located on the site due to existing surrounding urban development. Therefore, no impacts related to wildlife corridors would occur. Additional information is provided in Section 4.3, Biological Resources, of this PEIR.

Conflict with Local Policies or Ordinances

The proposed project would not conflict with any local policies or ordinances. Implementation of the proposed project may result in removal, planting, and/or maintenance of trees protected under the Huntington Beach Municipal Code. Chapter 13.50 of the City's Municipal Code provides the regulation for trees growing in public places (City of Huntington Beach 2002). As such, the District should coordinate with the City's Director of Public Works to obtain necessary permits from the City prior to planting, replanting, relocating, removing, spraying, and/or maintaining (e.g., pruning or fertilizing) any trees associated with the proposed project. Compliance with all applicable laws, ordinances, regulations, and standards would avoid or minimize potential impacts to a less-than-significant level.

Conflict with a Habitat Conservation Plan or a Natural Community Conservation Plan

The proposed project is not located within any adopted habitat conservation plan, natural community conservation plan, or local or regional habitat conservation plan areas.

5.4.5 Cultural Resources

Disturbance of Human Remains

There is very low potential for human remains on the project site, and compliance with existing regulations pertaining to the discovery of human remains would be required. As a result, it was determined that the proposed project would result in less-than-significant impacts to human remains. Analysis is provided Section 4.4, Cultural Resources, of this PEIR.

5.4.6 Geology and Soils

Exposure to Faulting, Seismic Ground Shaking, Liquefaction, or Landslides

The projects contemplated in the Vision 2020 Facilities Master Plan would not be approved or built without adequately demonstrating to the Division of the State Architect and the California Geological Survey their compliance with the California Building Code and applicable geologic hazards regulations. For this reason, the proposed project would be designed and built in a manner that would reduce public exposure to geologic risks to acceptable levels, and the potential impacts of the proposed project would be less than significant. A more detailed analysis is provided in Section 4.5, Geology and Soils, of this PEIR.

Soil Erosion or Loss of Topsoil

Because the proposed project site is already developed and is not located in sloped areas, the potential for substantial soil erosion or significant loss of topsoil is generally low. Analysis found in this PEIR (Section 4.5, Geology and Soils, and Section 4.8, Hydrology and Water Quality) determined that impacts related to soil erosion or loss of topsoil would be less than significant.

Unstable Geologic Unit or Expansive Soils

Shrinking/swelling of soil, differential settlement potential, and high corrosion risks are common geotechnical issues in California, particularly within clay-rich residual soils, hydric soils, and wetland/estuarine peat/mud deposits. Standard engineering practices have been developed to effectively address such concerns. Projects contemplated in the Vision 2020 Facilities Master Plan would not be approved or built without adequately demonstrating to the Division of the State Architect and California Geological Survey their compliance with the California Building Code and applicable geologic hazards regulations. For these reasons, the potential impact of the proposed project with respect to expansive or otherwise unstable soils would be less than significant. Additional detail is provided in Section 4.5, Geology and Soils.

Septic Tanks or Alternative Wastewater Disposal Systems

The proposed project does not include septic tanks or alternative wastewater disposal systems; therefore, no impact would occur. The IS determined that this issue would not be analyzed further in the PEIR.

5.4.7 Greenhouse Gas Emissions

Greenhouse Gas Emissions

Construction of the proposed project would result in greenhouse gas (GHG) emissions that would primarily be associated with use of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. Operation of the proposed project would result in GHG emissions through energy use (natural gas and generation of electricity consumed by the project); motor vehicle trips to project land uses; generation of electricity associated with water supply, treatment, and distribution and wastewater treatment; and solid waste disposal. Compared to existing conditions, the proposed project would result in an addition of GHG emissions. The proposed project would incorporate project design features that would conserve energy through the use of renewable energy. In addition, several statewide GHG-reduction measures would reduce GHG emissions associated with motor vehicles and electrical generation over time. In Section 4.6.4, Impacts Analysis, of this PEIR, the benefits of these measures were compared to the GHG emissions that would be generated under a business-as-usual scenario. The proposed project, with implementation of the statewide measures, would result in a 25.8% reduction compared to business as usual. Accordingly, it would achieve an equivalent of the 21.7% statewide reduction required to meet the goal of Assembly Bill 32. On the basis of the comparison of the proposed project's GHG emissions to business as usual, the proposed project would result in an impact for GHG emissions that is less than significant.

Conflict with Applicable Greenhouse Gas Reduction Plan

GWC, local jurisdictions, and the SCAQMD have not adopted any GHG reduction measures that would apply to the GHG emissions associated with the proposed project. At this time, no mandatory GHG regulations or finalized agency guidelines would apply to implementation of this project, and no conflict would occur. Therefore, this impact would be less than significant, as discussed in this PEIR.

5.4.8 Hazards and Hazardous Materials

Near an Airport or within an Airport Land Use Plan Area

Proposed project activities would not pose a hazard for people residing or working in the project area because the campus is not near an airport or within an airport land use plan area (the proposed project site is approximately 8 miles northwest of John Wayne International Airport). The proposed project includes the construction of several multistory buildings. Although the height of these proposed buildings is not yet known, if they are designed to exceed 200 feet (approximately 10 stories), then federal and state law, as well as requirements set by the Airport Land Use Commission, would be followed, and a Notice of Landing Area Proposal (Form 7480-

I) would be filed. Impacts were determined in the IS to be less than significant, and no further analysis was included in this PEIR.

Within the Vicinity of a Private Airstrip

The proposed project is not located within the vicinity of a private airstrip. No private airstrips exist within 2 miles of the proposed project site; therefore, the IS determined that there was no impact.

Impaired Emergency Response

Permitting requirements mandate that the Huntington Beach Fire Department and the Division of the State Architect perform an access compliance review and a fire and life safety review, respectively, prior to approval of individual project drawings and specification documents. Therefore, emergency access would be ensured, and the proposed project would not interfere with an adopted emergency response or evacuation plan. Impacts were determined to be less than significant in this PEIR.

Wildland Fire Risks

The proposed project is in an urbanized area with no adjacent wildlands. The area surrounding the project site is generally urbanized and developed. Therefore, impacts were determined in the IS to be less than significant, and no further analysis was included in this PEIR.

5.4.9 Hydrology and Water Quality

Depleted Groundwater Supplies

The water needs of the proposed project would be met by the City. No on-site groundwater wells are proposed; therefore, impacts to groundwater supplies, depletion of aquifer volume, or lowering of the local groundwater table level would be limited to the well field from which the water district obtains its supplies. The City uses 10 groundwater wells, whose production varies year-to-year; however, they typically produce around 20,000 acre feet per year. Analysis in this PEIR determined that impacts would be less than significant.

Introduction of Housing within a Flood Hazard Area

According to the Federal Emergency Management Agency Flood Insurance Rate Map, the proposed project site is not located within the 100-year flood hazard area (FEMA 2009). Therefore, the proposed project would not locate housing in a 100-year flood hazard area. No impacts were determined in the IS phase.

Introduction of Structures That Would Impede or Redirect Flood Flows

As stated previously, the proposed project is not within a 100-year flood hazard area. Therefore, the proposed project would not place structures that would impede or redirect flood flows in a 100-year flood hazard area. No impacts were determined in the IS phase.

Loss, Injury, or Death Due to Dam Inundation

Due to the distance of dams from the campus and improvements that have been made to the Lower Santa Ana River channel, flooding due to levee or dam failure is unlikely. Impacts were determined to be less than significant in the IS phase.

Seiche, Tsunami, or Mudflow

According to the City's General Plan, the project site is not at risk for inundation by seiche, tsunami, or mudflow. This impact was eliminated, as it was determined "No Impact" during the IS phase.

5.4.10 Land Use and Planning

The IS determined that all impacts associated with land use and planning would be less than significant, and no additional analysis in the PEIR would be required. For a detailed discussion of less-than-significant impacts regarding land use and planning, see Appendix A.

5.4.11 Mineral Resources

The IS determined that no impacts associated with mineral resources would occur, and no additional analysis in the PEIR would be required. For a detailed discussion regarding mineral resources, see Appendix A.

5.4.12 Noise

Excessive Groundborne Vibration

Pile driving, blasting, or other special construction techniques are not anticipated to be used for construction of the facilities identified in the Vision 2020 Facilities Master Plan; therefore, excessive groundborne vibration and groundborne noise would not be generated. Additionally, groundborne vibration would not be associated with the proposed project following construction activities. Analysis in this PEIR determined that no impacts related to excessive groundborne vibration would occur.

Permanent Increase in Ambient Noise

Due to the amount of increase in noise level (less than 2 decibels, rounded to whole numbers), noise impacts due to project-related traffic are not anticipated to be significant. Analysis in this PEIR (Section 4.9, Noise) determined that impacts would be less than significant.

Exposing People to Excessive Noise near a Public Airport

John Wayne International Airport is the closest airport to the campus, but the airport is not within the vicinity of the project site. Therefore, the project would not expose people to excessive noise levels.

Exposing People to Excessive Noise near a Private Airstrip

The proposed project is not located within the vicinity of a private airstrip. No private airstrips exist within 2 miles of the proposed project site; therefore, there is no impact.

5.4.13 Population and Housing

Inducing Substantial Population Growth

According to SCAG, the City is expected to have a population of 199,800 by 2020. The projected student enrollment at GWC by 2015 would be 15,391, which accounts for 7.7% of SCAG's projected population for the City. However, the net increase of 2,645 students between 2013 and 2020 only represents 1.3% of SCAG's overall growth projections. Therefore, projections are consistent with SCAG's growth projections for the City, and impacts as a result of increased student generation rates would not be substantial. Impacts associated with student generation would be less than significant. In addition, the temporary increases in population due to visitors or tourists would not result in substantial population growth. Analysis in this PEIR determined that impacts would be less than significant.

Displacing Housing

The proposed project would not displace existing housing. No housing units currently exist on the campus.

Displacing People

The proposed project would not displace people, as development is proposed on an existing campus to provide additional education facilities and facilities that support the academic mission of the campus. There are no plans to move any facilities that would result in the displacement of people from the project area.

5.4.14 Public Services

Fire Protection

The proposed project would result in a limited number of additional calls for fire service and would not result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts.

Police Protection

In light of the proposed project's forecasted effect on existing response times, in combination with the fact that project implementation would not result in the need for new or physically altered governmental facilities, analysis in this PEIR determined that the proposed project would not result in potentially significant impacts to police services; no mitigation is necessary.

Schools

The proposed project would not generate substantial additional demand for elementary and secondary schools in the surrounding community; therefore, impacts would be less than significant.

Parks

The proposed project would have no impact on local parks. The proposed project area would experience an increase in population; however, the campus offers athletic fields and recreational opportunities, so nearby parks would not have a significant increase in visitors, and acceptable service ratios would be maintained.

Other Public Facilities

The project would have no impact on libraries and other public facilities. GWC has a library on campus to serve the students; therefore, any increase in student enrollment would not adversely affect local libraries, and acceptable service ratios would be maintained.

5.4.15 Recreation

The IS determined that all impacts associated with recreation would be less than significant, and no additional analysis in the PEIR would be required. For a detailed discussion on less-than-significant impacts regarding recreation, see Appendix A.

5.4.16 Traffic and Circulation

Change in Air Traffic Patterns

The proposed project site is not located within the vicinity of an airport or private airstrip. The nearest airport is John Wayne International Airport, located 8 miles east of the proposed project site. No private airstrips exist within 2 miles of the proposed project site. Air traffic patterns would not be affected by the proposed project.

Design Feature Hazard

Vehicular access to the campus would continue to be provided from McFadden Avenue, Goldenwest Street, Gothard Street, and Edinger Avenue. The vehicular entries from Goldenwest Street, Edinger Avenue, and Gothard Street would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. Proposed circulation modifications would increase wayfinding to the campus by making campus entries more visible. The proposed project would have no adverse impact on safety based on design features or increase hazards due to an incompatible use. The analysis in this PEIR determined that no adverse impacts would result.

Inadequate Emergency Access

Vehicular access to the campus would continue to be provided from McFadden Avenue, Goldenwest Street, Gothard Street, and Edinger Avenue. The vehicular entries from Goldenwest Street, Edinger Avenue, and Gothard Street would be enhanced with the addition of formal gateways and marked pedestrian drop-off points. These enhancements could assist in visibility of campus entry points for emergency vehicles. The proposed project would have no adverse impact to emergency access to the campus.

Conflict with Alternative Transportation

The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrians. The Golden West Transportation Center is located just east of the campus on Gothard Street and Center Avenue, and the campus is currently served by a number of bus lines. Currently, the campus is designed with pedestrian walkways and access points that separate pedestrians from on-campus vehicular routes. These vehicular routes are proposed for enhancement as part of the Golden West College Vision 2020 Facilities Master Plan (Figure 3-6 in Chapter 3, Project Description). Furthermore, the campus has bike racks to accommodate bicyclists, and these facilities would not be impacted by the proposed project. Therefore, the proposed project would have no adverse impact on alternative modes of transportation.

5.4.17 Utilities and Service Systems

Exceedance of Wastewater Treatment Requirements

The City provides sewer collection for the majority of Huntington Beach, including the GWC campus. Wastewater collected by the City is treated by the Orange County Sanitation District (City of Huntington Beach 1996). The Orange County Sanitation District is the National Pollutant

Discharge Elimination System permit holder for the Fountain Valley Reclamation Plant No. 1 and the Huntington Beach Treatment Plant No. 2, and it is responsible for compliance with the wastewater treatment requirements in the National Pollutant Discharge Elimination System permit, Order No. R8-2012-0035/CA0110604 (Santa Ana RWQCB 2010). Upon connection to City wastewater facilities, the proposed project would be in compliance with the wastewater treatment requirements of the RWQCB. Therefore, the proposed project would not exceed the wastewater treatment requirements of the applicable RWQCB and impacts would be less than significant.

Construction of New Drainage Facilities

The proposed project could slightly modify existing topography, drainage-shed boundaries, or runoff rates/patterns; however, changes would be minor and would not require the expansion of stormwater drainage facilities or construction of new facilities. The analysis in this PEIR determined that impacts would be less than significant.

Adequate Wastewater Treatment Capacity

The Orange County Sanitation District treatment plants have the capacity to process 372 million gallons per day and are currently processing 201 million gallons per day. Any increase in demand by the proposed project would be relatively minor in the context of the overall treatment capacity of the Orange County Sanitation District. A service agreement and, if required, payment of impact fees would be necessary prior to initiating new sewer connections. Therefore, the analysis in this PEIR determined that impacts with regard to wastewater treatment would be less than significant.

Conflict with Solid Waste Regulations

All of the District campuses, including GWC, typically divert over 50% of their solid waste to a licensed recycling facility. Maintaining the existing diversion rate would ensure compliance with Assembly Bill 75, which requires all large state facilities to divert at least 50% of solid waste from landfills. Therefore, the analysis in this PEIR determined that impacts with regard to wastewater treatment would be less than significant.

Excessive Use of Fuel/Energy and/or Excessive Use of Power

The proposed project would create additional electricity and natural gas demand by adding additional academic and auxiliary space and through a general increase in the number of campus students. Additional electricity demand associated with the proposed project would be partially offset by the construction of thermal energy storage unit. The proposed project would involve the demolition of 266,533 gross square feet of existing facilities on campus. The proposed project would replace these existing facilities with more energy-efficient buildings. New facilities associated with the proposed project would be subject to California's Building Energy Efficiency Standards in Title 24 of the California Code of Regulations. The proposed project would not result in the excessive use of fuel or energy, or in excessive amounts of power; therefore, impacts would be less than significant.

5.5 REFERENCES

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Huntington Beach. 1996. "Urban Design Element." *City of Huntington Beach General Plan*. Adopted in 1996.

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FEMA (Federal Emergency Management Agency). 2009. "Flood Insurance Rate Map" [map]. Map No. 06059C0266J. 1 centimeter = 500 feet. Washington, D.C.: FEMA. http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=49424426&IFIT=1.

Santa Ana RWQCB (Regional Water Quality Control Board). 2010. *Order No. R8-2009-0030 and NPDES [National Pollutant Discharge Elimination System] No. CAS618030, As amended by Order No. R8-2010-0062: Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff.* Adopted on October 29, 2010. Accessed December 9, 2013. http://www.waterboards.ca.gov/rwqcb8/board_decisions/adopted_orders/orders/2009/09_030_OC_MS4_as_amended_by_10_062.pdf.

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CHAPTER 6
ALTERNATIVES

6.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that Environmental Impact Reports (EIRs) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6(a)). The CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason." The alternatives selected for detailed review in the EIR may be limited to those that "would avoid or substantially lessen any of the significant effects of the project" and would "feasibly attain most of the basic objectives of the project" (14 CCR 15126.6(a)). The selection of alternatives and their discussion must "foster informed decision making and public participation" (14 CCR 15126.6(a)). This chapter identifies potential alternatives to the Vision 2020 Facilities Master Plan (proposed project) and evaluates them, as required by CEQA.

Project Objectives

The following objectives have been established for the proposed project and will aid decision makers in their review of the project, project alternatives, and associated environmental impacts (GWC 2015):

- Support the institutional mission and effectiveness
    - Provide current teaching and learning facilities with space, configuration, and technology adjacencies
- Enhance and improve academic degree programs
    - Provide long-term (beyond 2024) program flexibility to support the educational mission
- Provide optimal physical settings to support GWC's student learning programs and services
    - Provide efficient and effective One Stop Student Services Center to enhance student success
    - Enhance and increase campus student life to improve student success
    - Improve campus zoning (e.g., Student Services, Math and Science, Fine Arts, Athletics)
    - Provide a hierarchy of exterior socialization spaces
    - Construct a nationally recognized criminal justice training facility

    - Provide an efficient and consolidated Language Arts Complex
- Enhance use of resources
    - Maintain capacity-load ratios that allow the college to remain competitive for state capital dollars
    - Create defensible space (enhance lines of sight and eliminate hiding places) that will foster a sense of safety for campus users
    - Increase navigability of the campus and enhance wayfinding
    - Accommodate physical growth over the planning horizon (2024)
    - Reduce resource consumption and support environmentally responsible practices Mitigate recurring sinking buildings/spalling concrete issues
    - Improve total cost of ownership (initial cost, operating expenses in staffing and energy efficiency, and replacement cost)
    - Phase construction to minimize student impacts and the need to move staff, faculty, and students more than once
    - Minimize the use and cost of temporary space
    - Increase and enhance visual and physical access to campus
    - Enhance pedestrian access to the core of campus
- Support participatory governance and leadership
    - Construct physically flexible spaces to maximize building efficiency and future adaptability
    - Maintain consistency with the Vision 2020 Facilities Master Plan
- Support community engagement
    - Maintain consistency with Measure M/communication to constituents
    - Enhance the presence and connection of the campus within the community
    - Provide joint venture and entrepreneurial opportunities that support the academic needs and mission of the college

Pursuant to the guidelines stated previously, as well as the project objectives, a range of alternatives to the proposed project are considered and evaluated in this Program EIR (PEIR). In order to summarize these project alternatives, as suggested in CEQA Guidelines, Section 15126.6(d), a matrix has been prepared to summarize and compare the impacts of each project alternative (see Table 6-1, Comparison of Alternatives).

6.2 ALTERNATIVES CONSIDERED BUT ELIMINATED

The following is a discussion of the alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this PEIR.

Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen the significant effects of the project need be considered for inclusion in the EIR (Guidelines 15126.6 (f)(2)). Since the proposed project is a Master Plan update, an alternative site analysis is not appropriate. The site of the proposed project is Golden West College; moving the proposed project to another campus or off site would not meet the project objectives and would not be feasible. As a result, alternative development areas were rejected and are not analyzed in this PEIR.

6.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

The following two alternatives, in addition to the No Project/Existing Master Plan, were selected to represent a reasonable range of alternatives that has the potential to feasibly attain most of the basic objectives of the proposed project but may avoid or substantially lessen any of the significant effects of the proposed project. Because there would be a significant impact to historic resources on campus resulting from implementation of the Vision 2020 Facilities Master Plan, two alternatives that reduce impacts to these resources are included in this section. These alternatives include the Full Preservation and the Majority Reuse Alternative. An EIR must identify an "environmentally superior" alternative, and where the No Project/Existing Master Plan Alternative is identified as environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior. Each alternative's environmental impacts are compared to the proposed project and are determined to be environmentally superior, neutral, or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Environmental impacts involving historic resources were found to be significant and unavoidable. Section 6.4 identifies the Environmentally Superior Alternative.

6.3.1 No Project/Existing Master Plan Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the impacts of the No Project Alternative. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the No Project Alternative will be the continuation of the plan, policy, or operation into the future. Therefore, the No Project/Existing Master Plan Alternative, as required by the CEQA Guidelines, analyzes the effects of continued implementation of the Coast Community College District's (District's) existing *Golden West College Master Plan* and EIR adopted in 2007. This means that the campus would be built out according to the growth projections at that time, which would likely not accommodate the projected growth expected through 2024.

The 2007 Master Plan included the following construction and renovation components:

Renovation

- Modernization/refinishing of the swimming pool (completed)
- Modernization of the physical education locker rooms and the bleachers in gym (completed)
- Renovation of the Student Center building based on modification of design currently in the Division of the State Architect (completed)
- Renovation of the Math/Science Building (not completed)
- Renovation of the Music Building classrooms and equipment (completed)
- Improvement of the Maintenance and Operations Yard and covered storage (not completed)
- Use of the vacated KOCE Administration/Land and Studio (not completed)
- Renovation of the existing Community Theater (not completed)
- Renovation of the amphitheater (not completed)
- Renovation or demolition of the Cosmetology Building (not completed)
- Relocation of the Student Services building to the vacated Boyce Library (not completed)
- Relocation of the Humanities classrooms and faculty offices into the vacated Student Services/Administration Building (not completed)
- Relocation of the Cosmetology classrooms to the vacated Health Sciences Facility (not completed)
- Relocation of the Information Technology classrooms to the existing Cosmetology Building (not completed)
- Relocation of the Technology classrooms into the Humanities Building (not completed)

New Construction

- New Learning Resources Center (completed)

- Nursing Building
- Multipurpose Sports Facility (not completed)

What remains to be completed from the previous Master Plan are the following projects: a Multipurpose Sports Facility, renovation of the Math/Science Building which is now slated for new construction under the proposed project, renovation of the Central Warehouse/Corporation Yard, renovation of the Community Theater, renovation of the Cosmetology Building, and relocation of a number of classrooms and based on these projects. Many of these incompleted elements of the previous Master Plan were incorporated in the Vision 2020 Facilities Master Plan or were changed to meet current needs under the proposed project.

Aesthetics

The 2007 Master Plan included construction of new instructional buildings outside the inner quad of campus. Under this building plan, new buildings around the inner core (the Learning Resources Center and the Health Sciences Building) were implemented, but the vision for renovation and construction in the inner core of campus was never fully realized. The previous EIR recognized that the campus lacked a clear sense of identity and intended to implement rezoning of the interior of campus, reshape campus edges, and shape the west main entry with a student focus and better signage. Because of greater development at the campus periphery, lighting and glare impacts would increase in the 2007 and 2020 Master Plans. However, under both the 2007 Master Plan and the Vision 2020 Facilities Master Plan, lighting and glare impacts are considered less than significant with the implementation of mitigation. The Vision 2020 Facilities Master Plan does have a vision for the campus that addresses many of these identified failings that remain unaddressed in the previous master plan. Therefore, the No Project/Existing Master Plan Alternative is environmentally inferior to the proposed project in terms of aesthetics.

Air Quality

Under the No Project/Existing Master Plan Alternative, the campus would continue to function under the direction of the existing master plan, which is almost built out. Buildout under the existing master plan would not include large projects, like the new Criminal Justice Training Center Complex, new Math/Science Building, new Language Arts Complex, and Business/Social Science/Administration Building. Less construction would mean that there would be fewer construction-related air quality impacts, and the lack of new buildings would mean that proposed programs would not be served, potentially capping student enrollment and potential new visitors to the campus, which would result in fewer operational air quality impacts. Therefore, the No Project/Existing Master Plan Alternative is environmentally superior to the proposed project in terms of air quality impacts.

Biological Resources

Under the No Project/Existing Master Plan Alternative, the campus would continue to function under the direction of the existing Master Plan. Because construction activity would be reduced under the No Project /Existing Master Plan Alternative, there would be fewer potential impacts to nesting birds. Therefore, the No Project/Existing Master Plan Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to biological resources.

Cultural Resources

Because the 2007 Master Plan envisioned that many of the buildings in the center of campus would be renovated or reconstructed, many of the historic buildings in the inner core of campus would be demolished to make room for new buildings in their place. As a result, there would be historic resources impacts similar to the proposed project. Archaeological and paleontological resources impacts would be mitigated under both the previous Master Plan and the proposed project. Therefore, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project, because both would have significant impacts to historic resources, and impacts to archaeological and paleontological resources would be mitigated.

Geology and Soils

Under the No Project/Existing Master Plan Alternative, the campus would continue to function under the direction of the existing master plan. Because construction activity would be reduced under the No Project/Existing Master Plan Alternative, and fewer students would be anticipated under the existing master plan, fewer people would be exposed to geology and soils impacts, including earthquakes, ground shaking, liquefaction, and impacts associated with expansive soils. However, under both the 2007 Master Plan and the Vision 2020 Facilities Master Plan, geology and soils are considered less than significant with adherence to existing regulations. Therefore, the No Project/Existing Master Plan Alternative would be considered environmentally neutral to the Vision 2020 Facilities Master Plan with regard to geology and soils.

Greenhouse Gas Emissions

Under the No Project/Existing Master Plan Alternative, the campus would continue to function under the direction of the existing master plan, which is almost built out. Buildout under the existing master plan would not include some large projects, like the new Criminal Justice Training Center Complex, new Math/Science Building, new Language Arts Complex, and Business/Social Science/Administration Building. Less construction would mean that there would be less construction-related greenhouse gas emissions, and the lack of new buildings would mean that proposed programs would not be served, potentially capping student enrollment and potential new visitors to the campus, which would result in fewer operational greenhouse gas emissions. While the Vision 2020 Facilities Master Plan does not have significant greenhouse gas emissions impacts, there would be greater construction and operational impacts under the proposed project than the No Project/Existing Master Plan Alternative. Therefore, the No Project/Existing Master Plan Alternative is environmentally superior to the proposed project in terms of greenhouse gas emissions.

Hazards and Hazardous Materials

Two leaking underground storage tank sites related to fuel releases to soils were identified on campus, and both cases are closed. However, under the Vision 2020 Facilities Master Plan, impacted soils could be encountered during demolition and construction. Furthermore, due to the age of buildings planned for demolition, contaminated materials and hazardous substances like lead-based paint or asbestos could be released. These impacts are very similar to the No Project/Existing Master Plan Alternative because that Facilities Master Plan also envisioned demolition of buildings. Therefore, the No Project/Existing Master Plan Alternative is neutral compared to the proposed project in terms of hazards and hazardous materials.

Hydrology and Water Quality

The 2007 Master Plan and the proposed project both have hydrology and water quality impacts that can be mitigated. These impacts were primarily related to the potential for erosion and water quality impacts during construction. The amount of pervious and impervious surfaces would be similar under the proposed project and the No Project/Existing Master Plan; thus, operational impacts related to hydrology and water quality are expected to be the same. Therefore, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project in terms of hydrology and water quality impacts.

Noise

The 2007 Master Plan and the proposed project have noise impacts due to construction activities that can be mitigated. Campus operations would not vary substantially under the proposed project and the No Project/Existing Master Plan Alternative; therefore, operational noise impacts are expected to be the same. Thus, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project in terms of noise impacts.

Population and Housing

Under the No Project/Existing Master Plan Alternative, the campus would continue to operate under the direction of the existing Master Plan. Buildout under the existing Master Plan would result in fewer instructional buildings that have been identified as needed for the campus' future projected growth. The proposed project plans for future growth and provides opportunities for student enrichment through educational programming and the new facilities to meet those needs. Neither the proposed project nor the No Project/Existing Master Plan Alternative has population and housing impacts (e.g., induces significant population growth not envisioned in regional plans or causes the displacement of housing or people). Therefore, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project in terms of population and housing impacts.

Public Services

Under the No Project/Existing Master Plan Alternative, the campus would continue to operate under the direction of the existing Master Plan. No public services impacts were identified in the previous EIR. Under the proposed project, there are also no significant public services impacts. Therefore, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project in terms of public services impacts.

Traffic and Circulation

Under the No Project/Existing Master Plan Alternative, the campus would continue to operate under the direction of the existing Master Plan. No traffic impacts were identified in the previous EIR. Under the proposed project, there would be impacts at nine intersections prior to mitigation in the future condition, including the project-generated trips. Therefore, the No Project/Existing Master Plan Alternative is considered environmentally superior when compared to the proposed project in terms of traffic impacts.

Utilities and Service Systems

Under the No Project/Existing Master Plan Alternative, the campus would continue to operate under the direction of the existing Master Plan. No utility and service system impacts were identified in the previous EIR. Under the proposed project, there would be a need for additional water, wastewater, and landfill services related to campus growth. However, these impacts were considered less than significant. Therefore, the No Project/Existing Master Plan Alternative is considered neutral when compared to the proposed project in terms of utilities and service systems impacts.

Conclusion

The No Project/Existing Master Plan Alternative would be considered environmentally superior in Air Quality, Biological Resources, Greenhouse Gas Emissions, and Traffic and Circulation (four areas). It would be environmentally inferior in Aesthetics (one area) and would be environmentally neutral in Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Population and Housing, Public Services, and

Utilities and Service Systems (eight areas). The adoption of the No Project/Existing Master Plan Alternative would not meet the project objectives identified by the District for campus growth through 2024. The No Project/Existing Master Plan Alternative fails to accomplish the project objectives in the District's vision and has environmental impacts that are the same or greater (all the neutral or inferior areas mentioned previously). The No Project/Existing Master Plan Alternative does not meet the educational program objectives of the college to optimize the physical setting to maximize the institutional mission and effectiveness, provide optimal physical settings to support student learning programs and services, address the need for rezoning campus land uses, and introducing clearer pathways and better signage. The No Project/Existing Master Plan Alternative is, therefore, not considered environmentally superior to the proposed project.

6.3.2 No Project/No Development Alternative

Aesthetics

Under the No Project/No Development Alternative, there would be no change to the current visual appearance of the campus. There would be no changes related to new construction or new signage and no new lighting and glare impacts requiring mitigation. The Vision 2020 Facilities Master Plan does have a vision for the campus that addresses construction of new buildings to meet education program objectives of the college and to reduce maintenance costs of existing buildings, rezoning of the interior of campus, reshaping campus edges, and developing a new main entry with a student focus and better signage. Although the proposed project has lighting and glare impacts, the impacts are less than significant with application of mitigation. Because the No Project/No Development Alternative does nothing to address the shortcomings of the current campus design, it is environmentally inferior to the proposed project in terms of aesthetics.

Air Quality

Under the No Project/No Development Alternative, there would be no new construction, and therefore, no new emissions in the project area. Therefore, the No Project/No Development Alternative is environmentally superior to the proposed project in terms of air quality impacts.

Biological Resources

Under the No Project/No Development Alternative, the campus would continue to function in its current condition. Because there would be no construction activity under the No Project/No Development Alternative, there would be fewer potential impacts to nesting birds. Therefore, the No Project/No Development Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to biological resources.

Cultural Resources

Under the No Project/No Development Alternative, the campus would continue to function in its current condition. Because there would be no construction activity under the No Project/No Development Alternative, there would be no impacts to cultural resources. Therefore, the No Project/No Development Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to cultural resources.

Geology and Soils

Under the No Project/No Development Alternative, the campus would continue to function in its current condition. Because there would be no construction activity under the No Project/No Development Alternative, and fewer students would be anticipated because the campus would not be modified to accommodate future growth, fewer people would be exposed to geology and soils impacts, including earthquakes, ground shaking, and liquefaction. Therefore, the No Project/No Development Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to geology and soils.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no new construction and therefore, no new greenhouse gas emissions produced by the proposed project. Therefore, the No Project/No Development Alternative is environmentally superior to the proposed project in terms of greenhouse gas emissions.

Hazards and Hazardous Materials

Two leaking underground storage tank sites related to fuel releases to soils were identified on campus, and both cases are closed. However, under the Vision 2020 Facilities Master Plan, impacted soils could be encountered during demolition and construction. Furthermore, due to the age of buildings planned for demolition, contaminated materials and hazardous substances like lead-based paint or asbestos could be released. These impacts would be eliminated under the No Project/No Development Alternative because there would be no construction or demolition activity. Therefore, the No Project/No Development Alternative is environmentally superior compared to the proposed project in terms of hazards and hazardous materials.

Hydrology and Water Quality

Under the No Project/No Development Alternative, there would be no new construction, and therefore, no new hydrology and water quality impacts. Therefore, the No Project/No

Development Alternative is environmentally superior to the proposed project in terms of hydrology and water quality.

Noise

Under the No Project/No Development Alternative, there would be no new construction and therefore, no noise impacts. Operational impacts are expected to be very similar to the proposed project. Therefore, the No Project/No Development Alternative is environmentally superior to the proposed project in terms of noise.

Population and Housing

Under the No Project/No Development Alternative, the campus would continue to operate as it currently exists. There would be no new construction to accommodate the campus' future projected growth. The proposed project plans for future growth and provides opportunities for student enrichment through educational programming and the new facilities to meet those needs. Neither the proposed project nor the No Project/No Development Alternative has population and housing impacts (e.g., induces significant population growth not envisioned in regional plans or causes the displacement of housing or people). However, because there would be absolutely no chance of population and housing impacts under the No Project/No Development Alternative, this alterative would be considered environmentally superior when compared to the proposed project in terms of population and housing impacts.

Public Services

Under the No Project/No Development Alternative, the campus would continue to operate as it currently exists. No new public services impacts would result under the No Project/No Development Alternative because there would be no new construction and no increase in student growth. Therefore, the No Project/No Development Alternative is considered environmentally superior when compared to the proposed project in terms of public services impacts.

Traffic and Circulation

Under the No Project/No Development Alternative, the campus would continue to operate under current conditions. No new traffic impacts would occur as a result of new construction. Student growth would not be accommodated and enrollment could be capped by facility capacity. Therefore, the No Project/No Development Alternative is considered environmentally superior when compared to the proposed project in terms of traffic impacts.

Utilities and Service Systems

Under the No Project/No Development Alternative, the campus would continue to operate in its current condition. No utility and service system impacts would occur because there would be no construction and no increase in student growth. Therefore, the No Project/No Development Alternatives is considered environmentally superior when compared to the proposed project in terms of public services impacts.

Conclusion

The No Project/No Development Alternative would be considered environmentally superior in all resource areas except Aesthetics. The No Project/No Development Alternative would not meet the project objectives identified by the District for campus growth through 2024. While the No Project/No Development Alternative reduces environmental impacts in almost all resources areas, it fails to accomplish the project objectives in the District's vision. The No Project/No Development Alternative does not meet the educational program objectives of the college to optimize the physical setting to support the college's academic mission and to maximize student learning objectives, address issues of rising building maintenance costs, accommodate future campus growth, provide opportunities to improve campus zoning, and provide clear signage or better wayfinding opportunities through the campus. The No Project/No Development Alternative is, therefore, not considered environmentally superior to the proposed project.

6.3.3 Full Preservation Alternative

In response to the finding that there is evidence of a historic district on campus (Ostashay 2015), two alternatives were developed to represent a range of preservation options. The Full Preservation Alternative suggests the preservation and reuse of a number of structures that contribute to the historic district in the campus core. This plan is represented in Figure 6-1, Full Preservation. The plan shows that a number of contributors to the historic district (colored yellow), including the Math/Science Building, Forum I, Business Education, Administration Building, Communication Building, Music Building, Boyce Library, Fine Arts and Gallery, Men's and Women's Physical Education Buildings, Community Center, Health Science Building, Cosmetology Building, Forum II, Physical Education/Gymnasium, Technology Building, Theater, Bookstore, Student Center, and landscape and hardscape features, including the berms, would be saved, and many buildings would be repurposed with different uses. For example, the Math/Science Building could be repurposed for Cosmetology, the Business Building could become the Business Institute, Boyce Library could be repurposed as Student Services, the Health Science Building could become classrooms, and the Cosmetology Building could become a conference center.

In some cases, these historic buildings were added on to, and these additions are not necessarily historic contributors. For example, the northern addition to the Math/Science Building is not historic, the northern addition to Boyce Library is not historic, and the southern addition to the Administration Building is not historic. These determinations were made by Jan Ostashay and Associates and included a review of historic aerial photographs to determine where later additions were made.

Aesthetics

The Vision 2020 Facilities Master Plan focuses on the construction of new buildings on campus that meet instructional needs and are also aesthetically pleasing, opportunities to improve signage and wayfinding, and the opportunity to further develop campus zoning where buildings with similar subject matters are grouped in the same campus areas and areas of the campus visited by the public are easily accessible along the perimeter of campus with parking close by. The Full Preservation Alternative proposes the preservation and reuse of a number of structures on campus. There would likely need to be a greater effort made to integrate new building design with the existing buildings' design, as well as an effort to restore the existing buildings in a way that preserves their historic integrity and removes any visually offending elements. Preservation of the buildings could be done in such a way to be aesthetically pleasing, but it would hinder the ability to group the buildings by subject matter since there are some buildings that cannot be repurposed in ways that lead to consistent campus zones. As an example, repurposing the Math/Science Building for Cosmetology would not allow for a science, technology, engineering and math (STEM)-focused zone. Therefore, the Full Preservation Alternative is environmentally inferior to the proposed project in terms of aesthetics because it would not meet the project objectives of the Vision 2020 Facilities Master Plan.

Air Quality

Because there would be less new construction under the Full Preservation Alternative, there would be fewer construction-related air quality impacts. Operational impacts are expected to be very similar to the proposed project. Therefore, the Full Preservation Alternative is environmentally superior to the proposed project in terms of air quality impacts.

Biological Resources

Under the Full Preservation Alternative, construction activity would be reduced, and there would likely be fewer potential impacts to nesting birds. Therefore, the Full Preservation Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to biological resources.

Cultural Resources

The Full Preservation Alternative would focus on the preservation and reuse of structures on campus that comprise the historic district. Because these buildings would be retained in place, the historic integrity of the district would remain, and historic resources impacts under this alternative would be considered less than significant. Because there would be less new construction, the potential for impacts to archaeological and paleontological resources would be less, although these impacts can be mitigated to a less-than-significant level under both the proposed project and the Full Preservation Alternative. Therefore, the Full Preservation Alternative would be considered environmentally superior with regard to cultural resources impacts because of the focus on retaining historic district contributors within the campus core.

Geology and Soils

Although construction activity would be reduced under the Full Preservation Alternative, the same number of students would likely be exposed to geology and soils impacts, including earthquakes, ground shaking, and liquefaction, regardless of whether they would be housed in a new or an old building. The old buildings were designed after 1933 when it was required that school buildings meet the requirements of the Field Act. Furthermore, any efforts to restore and reuse the older buildings would involve a structural integrity analysis related to any proposed reuse of the structures. Therefore, the Full Preservation Alternative would be considered environmentally neutral to the Vision 2020 Facilities Master Plan with regard to geology and soils impacts.

Greenhouse Gas Emissions

Less new construction would mean that there would be less construction-related greenhouse gas emissions. While the Vision 2020 Facilities Master Plan does not have significant greenhouse gas emissions impacts, there would be greater construction and operational impacts under the proposed project than the Full Preservation Alternative. Therefore, the Full Preservation Alternative is environmentally superior to the proposed project in terms of greenhouse gas emissions.

Hazards and Hazardous Materials

Two leaking underground storage tank sites were identified on campus related to fuel releases to soils and both cases are closed. Under the Vision 2020 Facilities Master Plan, impacted soils could be encountered during demolition and construction. Furthermore, due to the age of buildings planned for demolition, contaminated materials and hazardous substances, like lead-based paint or asbestos, could be released. These impacts would be less for the Full Preservation Alternative because there would be no demolition of historic buildings. Therefore, the Full Preservation Alternative is environmentally superior compared to the proposed project in terms of hazards and hazardous materials.

Hydrology and Water Quality

The proposed project and the Full Preservation Alternative have hydrology and water quality impacts that can be mitigated although there would be fewer impacts under the Full Preservation Alternative because there is less new construction. These impacts were primarily related to the potential for erosion and water quality impacts during construction. The amount of pervious and impervious surfaces would be similar under the proposed project and the Full Preservation Alternative, thus operational impacts related to hydrology and water quality are expected to be the same. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of hydrology and water quality impacts.

Noise

The proposed project and the Full Preservation Alternative have noise impacts that can be mitigated. These impacts were primarily related to the potential for noise impacts during construction. Because the Full Preservation Alternative would have less new construction, it is likely there would be fewer noise impacts. However, noise impacts would likely be mitigated to less than significant. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of noise impacts.

Population and Housing

Under the Full Preservation Alternative, fewer new instructional buildings would be constructed that have been identified as needed for the campus' future projected growth. The proposed project plans for future growth and provides opportunities for student enrichment through educational programming and the new facilities to meet those needs. While the proposed project does not have population and housing impacts (e.g., induce significant population growth not envisioned in regional plans or cause the displacement of housing or people), it can be argued that the Full Preservation Alternative does not meet the project objectives to plan for future growth with the construction of modern buildings that meet today's instructional needs, and resources would need to be expended to upgrade the older buildings in such a way that it will meet those instructional needs. Despite this, the Full Preservation Alternative would not have population and housing impacts that would be significant under CEQA. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of population and housing impacts.

Public Services

Under the proposed project, there would be a need for additional fire and police services related to campus growth, and it is anticipated that these impacts would be very similar under the Full Preservation Alternative. These impacts were considered less than significant, and it can be assumed that this would be true for the Full Preservation Alternative as well because the need for these services is tied to projected growth more than the types of buildings that are being used. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of public services impacts.

Traffic and Circulation

Under the proposed project, there would be a significant impact prior to mitigation at nine intersections in the future condition, including the project-generated trips. Because projected growth under the Full Preservation Alternative is assumed to be very similar (the growth-inducing elements would still exist under this plan), traffic and circulation impacts are assumed to be similar. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of traffic and circulation impacts.

Utilities and Service Systems

Under the proposed project, there would be a need for additional water, wastewater, and landfill services related to campus growth on the proposed project site. However, these impacts were considered less than significant. Because projected growth under the Full Preservation Alternative is assumed to be very similar (the growth inducing elements would still exist under this plan,), utility and service systems impacts are assumed to be similar. Therefore, the Full Preservation Alternative is considered neutral when compared to the proposed project in terms of utilities and service systems impacts.

Conclusion

The Full Preservation Alternative would be considered environmentally superior in Air Quality, Biological Resources, Cultural Resources, Greenhouse Gas Emissions, Hazards and Hazardous Materials, (five areas). It would be environmentally inferior in Aesthetics (one area) and environmentally neutral with regard to Geology and Soils, Hydrology and Water Quality, Noise, Population and Housing, Public Services, Traffic and Circulation, and Utilities and Service Systems (seven areas). The adoption of the Full Preservation Alternative would not meet the project objectives identified by the District for campus growth through 2024 because of the need for new instruction buildings to meet the educational goals for the campus. As shown in Table 3-4 in the Project Description, Golden West College Project Objectives and Ranking of the Proposed Project and Alternatives, the Full Preservation Alternative only minimally meets the project objectives and was given a low score by faculty and staff. The preservation of the historic structures also hinders the ability to identify distinct zones on campus with the placement of new buildings. The Full Preservation Alternative fails to fully accomplish the project objectives in the District's vision but has fewer environmental impacts than the proposed project. Because the Full

Preservation Alternative has fewer environmental impacts and it avoids a significant impact to the historic district, it is environmentally superior to the proposed project.

6.3.4 Majority Reuse Alternative

The Majority Reuse Alternative, as represented in Figure 6-2, highlights the preservation and reuse of the following buildings: Forum I, Business, Administration, Communication, Music, Fine Arts and Gallery, Men and Women's Physical Education, Cosmetology, Forum II, Physical Education/Recreation, Technology, Theater, Bookstore, and Student Center. The difference between this alternative and the Full Preservation Alternative is that it would remove the following historic contributors: Math/Science Building, Boyce Library, Community Center, Health Science Building, and the berms. As compared to the proposed project, this alternative would preserve the Business, Administration, and Cosmetology Buildings.

Aesthetics

The Vision 2020 Facilities Master Plan focuses on the construction of new buildings on campus that meet instructional needs but that are also aesthetically pleasing, opportunities to improve signage and wayfinding, the opportunity to further develop campus zoning where similar subject matter is grouped in the same areas of campus and areas of the campus visited by the public are easily accessible along the perimeter of campus with parking close by. The Majority Reuse Alternative proposes the preservation and reuse of a number of structures on campus. There would likely need to be a greater effort made to integrate new building design with the existing buildings' design, as well as an effort to restore the existing buildings in a way that preserves their historic integrity and removes any visually offending elements. The retention of buildings does not allow the college to fully meet the objectives to provide modern teaching and learning facilities, to reduce the costs of building maintenance, or to reorganize the campus zoning. As a result, the Majority Reuse Alternative is considered environmentally inferior to the proposed project in terms of aesthetics, because it would not meet the project objectives of the Vision 2020 Facilities Master Plan.

Air Quality

Because there would be less new construction under the Majority Reuse Alternative, there would be fewer construction-related air quality impacts. Operational impacts are expected to be very similar to the proposed project. Therefore, the Majority Reuse Alternative is environmentally superior to the proposed project in terms of air quality impacts.

Biological Resources

Under the Majority Reuse Alternative, construction activity would be reduced, and there would likely be fewer potential impacts to nesting birds. Therefore, the Majority Reuse Alternative would be considered environmentally superior to the Vision 2020 Facilities Master Plan with regard to biological resources.

Cultural Resources

The Majority Reuse Alternative would focus on the preservation and reuse of many of the structures on campus that comprise the historic district. Although the historic integrity of the district would not remain because key contributors to the district such as the Math/Science Building, Boyce Library, the Community Center, the Health Science Building, and the berms would be removed, historic resources impacts under this alternative would be still be less than the proposed project, which also removes the Business Building, the Administration Building, and the Cosmetology Building. Because there would be less new construction, the potential for impacts to archaeological and paleontological resources would be less, although these impacts can be mitigated to a less-than-significant level under both the proposed project and the Majority Reuse Alternative. However, the Majority Reuse Alternative would be considered environmentally neutral with regard to cultural resources impacts because, even though it retains additional historic buildings, it does not avoid a significant impact to historic resources, similar to the proposed project.

Geology and Soils

Although construction activity would be reduced under the Majority Reuse Alternative, the same number of students would likely be exposed to geology and soils impacts, including earthquakes, ground shaking, and liquefaction, regardless of whether they would be housed in a new or old building. The old buildings were designed after 1933 when it was required that school buildings meet the requirements of the Field Act. Furthermore, any efforts to restore and reuse the older buildings would involve a structural integrity analysis related to any proposed reuse of the structures. Therefore, the Majority Reuse Alternative would be considered environmentally neutral to the Vision 2020 Facilities Master Plan with regard to geology and soils impacts.

Greenhouse Gas Emissions

Less new construction would mean that there would be less construction-related greenhouse gas emissions. While the Vision 2020 Facilities Master Plan does not have significant greenhouse gas emissions impacts, there would be greater construction and operational impacts under the proposed project than the Majority Reuse Alternative. Therefore, the Majority Reuse Alternative is environmentally superior to the proposed project in terms of greenhouse gas emissions.

Hazards and Hazardous Materials

Two leaking underground storage tank sites were identified on campus related to fuel releases to soils and both cases are closed. Under the Vision 2020 Facilities Master Plan, impacted soils could be encountered during demolition and construction. Furthermore, due to the age of buildings planned for demolition, contaminated materials and hazardous substances, like lead-based paint or asbestos, could be released. These impacts would be less for the Majority Reuse Alternative because there would be less demolition of historic buildings. Therefore, the Majority Reuse Alternative is environmentally superior compared to the proposed project in terms of hazards and hazardous materials.

Hydrology and Water Quality

The proposed project and Majority Reuse Alternative both have hydrology and water quality impacts that can be mitigated. These impacts were primarily related to the potential for erosion and water quality impacts during construction. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of hydrology and water quality impacts.

Noise

The proposed project and Majority Reuse Alternative both have noise impacts that can be mitigated. These impacts were primarily related to the potential for noise impacts during construction. Because the Majority Reuse Alternative would have less new construction, it is likely there would be fewer noise impacts. However, noise impacts would likely be mitigated to less than significant. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of noise impacts.

Population and Housing

Under the Majority Reuse Alternative, fewer new instructional buildings would be constructed that have been identified as needed for the campus' future projected growth and that meet educational program objectives. The proposed project plans for future growth and provides opportunities for student enrichment through educational programming and the new facilities to meet those needs. While the proposed project does not have population and housing impacts (e.g., induce significant population growth not envisioned in regional plans or cause the displacement of housing or people), it can be argued that the Majority Reuse Alternative does not meet the project objectives to plan for future growth with the construction of modern buildings that meet today's instructional needs, and resources would need to be expended to upgrade the older buildings in such a way that it will meet those instructional needs. Despite this, the Majority Reuse Alternative would not have population and housing impacts that would be significant under CEQA. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of population and housing impacts.

Public Services

Under the proposed project, there would be a need for additional fire and police services related to campus growth, and it is anticipated that these impacts would be very similar under the Majority Reuse Alternative. These impacts were considered less than significant, and it can be assumed that this would be true for the Majority Reuse Alternative as well because the need for these services is tied to projected growth more than the types of buildings that are being used. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of public services impacts.

Traffic and Circulation

Under the proposed project, there would be a significant impact prior to mitigation at nine intersections in the future condition, including the project-generated trips. Because projected growth under the Majority Reuse Alternative is assumed to be very similar (the growth-inducing elements would still exist under this plan), traffic and circulation impacts are assumed to be similar. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of traffic and circulation impacts.

Utilities and Service Systems

Under the proposed project, there would be a need for additional water, wastewater, and landfill services related to campus growth. However, these impacts were considered less than significant. Because projected growth under the Majority Reuse Alternative is assumed to be very similar (the growth inducing elements would still exist under this plan,), utility and service systems impacts are assumed to be similar. Therefore, the Majority Reuse Alternative is considered neutral when compared to the proposed project in terms of utilities and service systems impacts.

Conclusion

The Majority Reuse Alternative would be considered environmentally superior in Air Quality, Biological Resources, Greenhouse Gas Emissions, and Hazards and Hazardous Materials, (four areas). It would be environmentally inferior in Aesthetics (one area) and environmentally neutral with regard to Cultural Resources, Geology and Soils, Hydrology and Water Quality, Noise, Population and Housing, Public Services, Traffic and Circulation, and Utilities and Service Systems (eight areas). The adoption of the Majority Reuse Alternative would not meet the project objectives identified by the District for campus growth through 2024 because of the need for new instructional buildings to meet the educational goals for the campus. This alternative also does not allow the

District to improve the total cost of ownership of the buildings on campus by lowering the maintenance costs over time. The preservation of the historic structures also hinders the ability to identify distinct zones on campus with the placement of new buildings. As shown in Table 3-4 in the Project Description, Golden West College Project Objectives and Ranking of the Proposed Project and Alternatives, the Majority Reuse Alternative meets some of the project objectives, but not all of them, and was given a middle score by faculty and staff. The Majority Reuse Alternative fails to fully accomplish the project objectives in the District's vision but has fewer environmental impacts than the proposed project. Because the Majority Reuse Alternative has fewer environmental impacts, it is environmentally superior to the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 6-1 shows that the environmentally superior alternative under CEQA is the No Project/No Development Alternative. However, when the No Project Alternative is environmentally superior, CEQA mandates another alternative be identified (14 CCR 15126.6(e)(2)). The environmentally superior alternative is the Full Preservation Alternative because it reduces the significant and unavoidable impact (to historic resources) and reduces the greatest number of impacts (five as compared to four). Thus, the Full Preservation Alternative is the environmentally superior alternative under CEQA.

Table 6-1
Comparison of Alternatives

Impact	No Project/Existing Master Plan	No Project/No Development	Full Preservation	Majority Reuse
Aesthetics	−1	−1	−1	−1
Air Quality	+1	+1	+1	+1
Biological Resources	+1	+1	+1	+1
Cultural Resources	0	+1	+1	0
Geology and Soils	0	+1	0	0
Greenhouse Gas Emissions	+1	+1	+1	+1
Hazards and Hazardous Materials	0	+1	+1	+1
Hydrology and Water Quality	0	+1	0	0
Noise	0	+1	0	0
Population and Housing	0	+1	0	0
Public Services	0	+1	0	0
Traffic and Circulation	+1	+1	0	0
Utilities and Service Systems	0	+1	0	0
Total (environmentally superior only)	4	12	5	4
Eliminates a Significant Impact of the Proposed Project	No	Yes	Yes	No

0 = environmentally neutral; −1 = environmentally inferior; +1 = environmentally superior

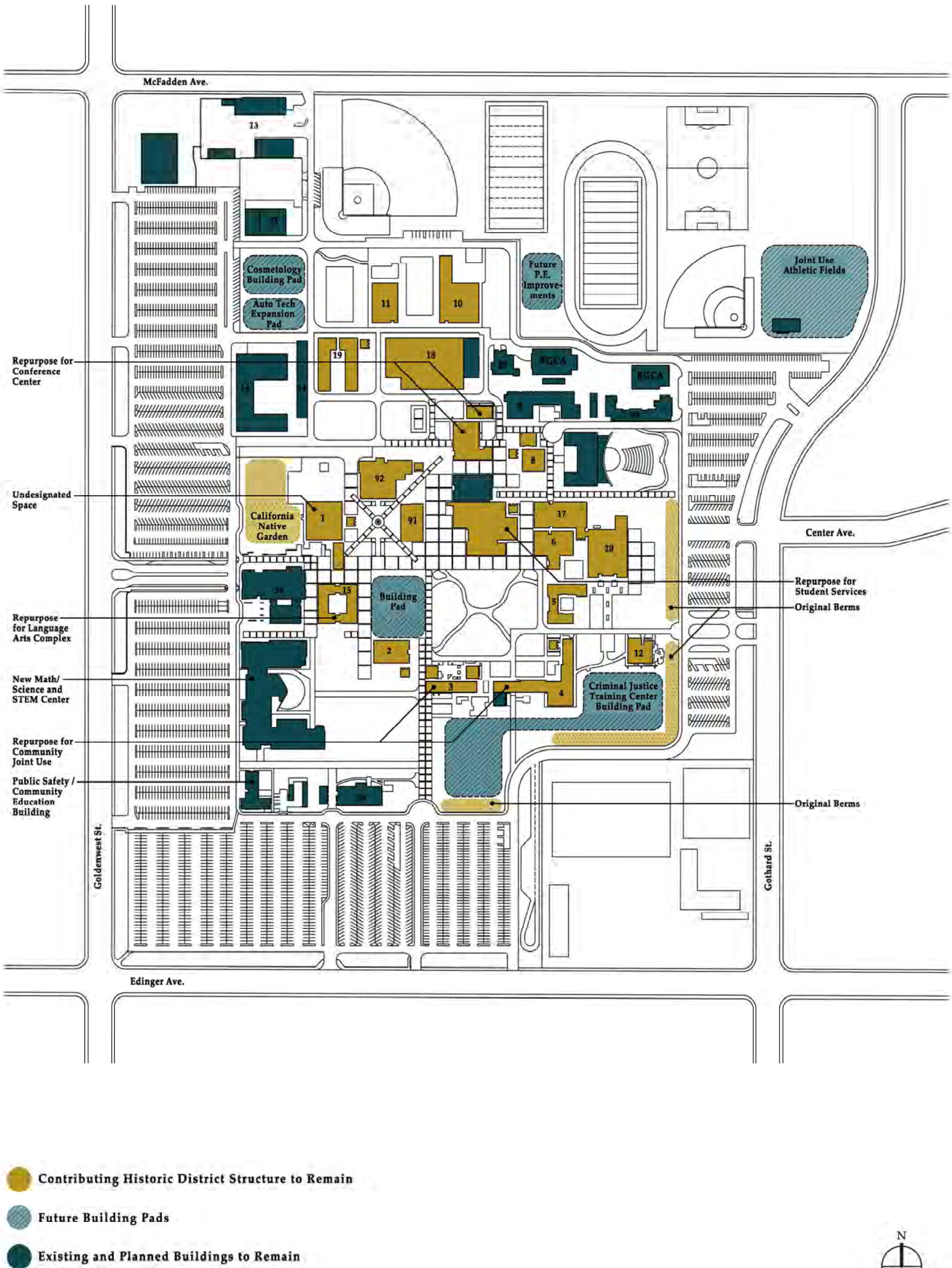
6.5 REFERENCES

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

District (Coast Community College District). 2011. *Vision 2020 Facilities Master Plan*. Prepared by Cambridge West Partnership LLC and Hill Partnership Inc. May 2011.

GWC (Golden West College). 2015. Proposed project objectives and alternatives. Meetings with Janet Houlihan (GWC), Jerry Marchbank (GWC), Randy Flint (GWC), Joe Dowling (GWC), John Eriksen (GWC), and Rachel Struglia (Dudek). June 3, 10, 17, and 24 and July 8, 2015.

Ostashay and Associates. 2015. Historic Resources Technical Report. Prepared for Golden West College. January 2015.



SOURCE: HPI Architecture, 07/2015.

FIGURE 6-1
Full Preservation

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Contributing Historic District Structure to Remain

Future Building Pads

Existing and Planned Buildings to Remain

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CHAPTER 7
LIST OF PREPARERS

This section identifies individuals who prepared the Golden West College (GWC) Vision 2020 Facilities Master Plan Program Environmental Impact Report. Individuals are identified by name, education, and primary contribution to the document.

7.1 GOLDEN WEST COLLEGE

Name	Education/Experience	Responsibility
Golden West College		
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7.2 DUDEK

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7.3 SUBCONSULTANTS

Name	Education/Experience	Responsibility
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