SR 99/Hosking
Commercial Center Project
(GPA/ZC 13-0417)

Draft
Environmental Impact Report

SCH #2007101067

Prepared for:

City of Bakersfield
Community Development Department
Planning Division
1715 Chester Avenue
Bakersfield, CA 93301
Contact: Cecelia Griego, Associate Planner II
(661) 326-3733

Prepared by:

ICF International
9775 Businesspark Avenue, Suite 200
San Diego, CA 92131
Contact: Charlie Richmond, Project Manager
(858) 444-3911

June 2015

BAKERSFIELD

Community Development Department
Douglas N. McIsaac, Community Development Director

Phil Burns, Building Director
Building Division
Phone: (661) 326-3720

Jacquelyn R. Kitchen, Planning Director
Planning Division
Phone: (661) 326-3733

June 17, 2015

TO: Responsible or Other Interested Agency (See Distribution List)

SUBJECT: Notice of Public Hearing and Notice of Availability of Draft Environmental Impact Report (DEIR) for **General Plan Amendment/Zone Change No. 13-0417**. The project proposes a commercial development on approximately 85 acres and the site is located in southeast Bakersfield and is bordered by State Route 99 to the west, Berkshire Road to the north, South H Street to the east, and Hosking Avenue to the south.

Pursuant to the California Environmental Quality Act (CEQA), the City of Bakersfield will be the Lead Agency and has prepared a Draft Environmental Impact Report (DEIR) for the project identified above and in the attached Notice of Availability. The DEIR is attached for your review and comment. We would appreciate the views of your Agency as to the scope, content and adequacy of the environmental information which is applicable to your agency's statutory responsibilities in connection with the proposed project.

If you wish to respond, please include the name of the contact person in your agency. In order to review and consider your comments on this project, please send your response on or before **August 6, 2015**. If we have not received a reply from you by this date, we will assume that your Agency has no comments regarding this DEIR. Please note that your agency may need to use this EIR when considering any permits or other approvals needed for this project.

Additionally, notice is hereby given that a public hearing accepting testimony on the adequacy of the DEIR prepared for the proposed project will be held before the City of Bakersfield Planning Commission. Said hearing will begin at 5:30 p.m., or as soon thereafter as the matter may be heard on **THURSDAY, JULY 16, 2015**, in the Council Chambers of City Hall, 1501 Truxtun Avenue, Bakersfield, California, 93301.

For more information, please call the department at (661) 326-3733.

Sincerely,

Cecelia Griego
Associate Planner II

S:\GPAs\13-0417\Notices\Agency Ltr.docx

DOUG GREENER
FIRE DEPARTMENT

GREG WILLIAMSON
POLICE DEPARTMENT

MARIAN SHAW
PUBLIC WORKS

RYAN STARBUCK
TRAFFIC ENGINEERING

STEVE CHOATE
WATER RESOURCES

KEVIN BARNES
SOLID WASTE

COUNCILMEMBER PARLIER

FROM PLANNING

JAKE SWEENEY
CITY OF SHAFTER
336 PACIFIC AVENUE
SHAFTER CA 93263

RESOURCE MANAGE AGENCY
PLANNING DEPARTMENT
2700 M STREET STE 100
BAKERSFIELD CA 93301

KERN COUNTY ROADS DEPT
2700 M STREET
BAKERSFIELD CA 93301

KERN COUNTY WASTE MGMT
2700 M STREET SUITE 500
BAKERSFIELD CA 93301

KERN CO FIRE DEPARTMENT
5642 VICTOR STREET
BAKERSFIELD CA 93308

LAW LIBRARY
1415 TRUXTUN AVENUE
BAKERSFIELD CA 93301

BEALE LIBRARY
701 TRUXTUN AVENUE
BAKERSFIELD CA 93301

SOUTHWEST LIBRARY
8301 MING AVE
BAKERSFIELD CA 93311

KERN COG
1401 19TH STREET STE 300
BAKERSFIELD CA 93301

LAFCO
5300 LENNOX AVE STE 303
BAKERSFIELD CA 93309

ATTN: CEQA DEPARTMENT
SAN JOAQUIN VALLEY APCD
1990 GETTYSBURG AVE
FRESNO CA 93726

CAL STATE BAKERSFIELD
ARCH INFO CENTER
9001 STOCKDALE HIGHWAY
BAKERSFIELD CA 93311

GOLDEN EMPIRE TRANSIT
1830 GOLDEN STATE AVENUE
BAKERSFIELD CA 93301

COUNTY ADMINISTRATION OFFICE
1115 TRUXTUN AVE
BAKERSFIELD CA 93301

KERN COUNTY LIBRARY
701 TRUXTUN AVE
BAKERSFIELD CA 93301

SUPERINTENDENT OF SCHOOLS
ATTN MARY BAKER
1300 17TH STREET
BAKERSFIELD CA 93301

KERN HIGH SCHOOL DISTRICT
5801 SUNDALE AVE
BAKERSFIELD CA 93309

SOUTHERN CA GAS CO
ATTN HOMER GARZA
1510 NORTH CHESTER AVE
BAKERSFIELD CA 93308

LISA SALINAS
SO CAL EDISON
14799 CHESTNUT STREET
WESTMINSTER CA 92683

ATTENTION: STEVE LOWRY
SO CAL EDISON – ELECTRICAL
TOWERLINE
2131 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

DOUG SNYDER LAND SERV
PG &E
1918 H STREET
BAKERSFIELD CA 93301

CALIFORNIA WATER SERVICE
3725 SOUTH H STREET
BAKERSFIELD CA 93304

AT&T
4540 CALIFORNIA AVE #400
BAKERSFIELD CA 93309

BRIGHT HOUSE NETWORKS
4450 CALIFORNIA AVENUE
BAKERSFIELD CA 93308

DAVE DMOHOWSKI
QUAD KNOPF, INC
5080 CALIFORNIA AVE STE 220
BAKERSFIELD CA 93309

CALTRANS
ATTN: ALEC KIMMEL
1352 W OLIVE AVE
FRESNO CA 93728

WILSON BRANCH LIBRARY
1901 WILSON RD
BAKERSFIELD, CA 93304

FISH & GAME
1234 E SHAW AVENUE
FRESNO CA 93726

DEPT OF CONSERVATION
801 K STREET
SACRAMENTO CA 95814

DAYNE FRARY
DIVISION OF OIL & GAS
4800 STOCKDALE HWY STE 417
BAKERSFIELD CA 93309

LUCY CLARK, KERN CNPS
HC 3 BOX 88
GRANITE STATION
BAKERSFIELD, CA 93308-9124

KAWAIISU TRIBE OF TEJON RESERVATION
PO BOX 1547
KERNVILLE CA 93238

SMART GROWTH COALITION OF KERN COUNTY
302 S MOJAVE ST
TEHACHAPI CA 93561

CA NATIVE AMERICAN HERITAGE COMMISSION
1556 HARBOR BLVD.
WEST SACRAMENTO, CA 95691

SANTA ROSA RANCHERIA
ATTN: CULTURAL DEPARTMENT
P O BOX 8
LEMOORE CA 93245

TULE RIVER INDIAN TRIBE
RYAN GARFIELD, CHAIR
P O BOX 589
PORTERVILLE CA 93258

SIERRA CLUB
PO BOX 3357
BAKERSFIELD CA 93385

KERN VALLEY INDIAN COUNCIL
ROBERT ROBERTSON, HPO
PO BOX 401
WELDON CA 93283

KITANEMUK & YOWLUMNE TEJON INDIANS
DELIA DOMINGUEZ
981 N VIRGINIA
COVINA CA 91722

TEJON INDIAN TRIBE
KATHY MORGAN, CHAIR
1731 HASTI ACRES STE 108
BAKERSFIELD CA 93309

CHUMASH COUNCIL OF BAKERSFIELD
PO BOX 902
BAKERSFIELD CA 93302

GREENFIELD COUNTY WATER DISTRICT
551 TAFT HWY
BAKERSFIELD, CA 93307

TABATULABALS OF KERN VALLEY
DONNA BEGAY, TRIBAL CHAIRWOMEN
PO BOX 226
LAKE ISABELLA CA 93240

GREENFIELD UNION SCHOOL DISTRICT
1624 FAIRVIEW RD
BAKERSFIELD, CA 93307

KERN DELTA WATER DISTRICT
501 TAFT HWY
BAKERSFIELD, CA 93307

RICHARD DRURY
LOZEAU DRURY LLP
410 12TH STREET, SUITE 250
OAKLAND, CA 94607

STACEY OBORNE
LOZEAU DRURY LLP
410 12TH STREET, SUITE 250
OAKLAND, CA 94607

BIKE BAKERSFIELD
1708 CHESTER AVENUE
BAKERSFIELD, CALIFORNIA 93301

SCOTT A. UNDERHILL SCLS, CRX
NEWMARK GRUBB ASU & ASSOCIATES
2000 OAK STREET
SUITE 100
BAKERSFIELD, CA 93301

BAKERSFIELD

NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) AND NOTICE OF PUBLIC HEARING BEFORE THE PLANNING COMMISSION OF THE CITY OF BAKERSFIELD

NOTICE IS HEREBY GIVEN that on November 5, 2014, the City of Bakersfield, as Lead Agency, issued a Notice of Preparation of an Environmental Impact Report (EIR) for the project described below. The purpose of this notice is to advise that, pursuant to the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the City of Bakersfield's CEQA Implementation Procedures, the City of Bakersfield has prepared a Draft Environmental Impact Report (DEIR) for the project described below. As mandated by State law, the DEIR is now available for Public Review for a minimum of 45 days and the public comment period is as noted below.

Copies of the DEIR and all related documents are on file and available to the public through the City of Bakersfield Community Development Department - Planning Division, located at 1715 Chester Avenue, Bakersfield CA 93301. The public may also contact the planner assigned to this project, **Cecelia Griego, Associate Planner II**, at (661) 326-3733, or by e-mailing the department at cgriego@bakersfieldcity.us. The City website address is www.bakersfieldcity.us.

1. **Applicant:** Quad Knopf, Inc. 5080 California Ave, Suite 220, Bakersfield, CA 93309
2. **Case Reference:** GPA/ZC No. 13-0417 (SR 99/Hosking Commercial Center Project)
3. **Project Location:** The Project site is located on approximately 80 acres in southeast Bakersfield and is bordered by State Route 99 to the west, Berkshire Road to the north, South H Street to the east, and Hosking Avenue to the south. **Project Description:** The proposed project request includes: 1) amendment of the Land Use Element of the *Metropolitan Bakersfield General Plan* that would designate the project area from LR (Low Density Residential), LMR (Low Medium Density Residential) and HMR (High Medium Density Residential) to GC (General Commercial) or more restrictive uses; 2) a change in zone classification from R-1 (One Family Dwelling) to C-2/PCD (Regional Commercial/Planned Commercial Development) or more restrictive districts; 3) amendment of the Circulation Element of the *Metropolitan Bakersfield General Plan* to delete the southerly extension of Colony Street from Berkshire Road to South H Street; 4) other approvals for the project will include a subdivision map, preliminary site plan review/planned commercial development and Greenfield County Water District annexation.
4. **Anticipated Significiant Impacts on the Environment:** The DEIR has identified significant unavoidable traffic impacts associated with the proposed project. The project is not located on a hazardous waste site enumerated under Section 65962.5 of the Government code.
5. **Public Hearings:** NOTICE IS ALSO HEREBY GIVEN that a public hearing accepting testimony regarding the adequacy of the DEIR will be held before the Planning Commission of the City of Bakersfield on **THURSDAY, JULY 16, 2015** at 5:30 p.m., or as soon thereafter as the matter may be heard, in the Council Chambers of City Hall, 1501 Truxtun Avenue, Bakersfield, California, 93301. Additional hearings will be also scheduled for final consideration of the EIR.
6. **Public Comments** regarding the proposed project and/or adequacy of the DEIR, including requests for additional environmental review, will be accepted in writing on or before **August 3, 2015** and may be sent to the Planning Division at the address noted above. **The period for public review during which the City will receive comments on the DEIR will begin on June 22, 2015 and end on August 6, 2015.** Testimony at future public hearings maybe limited to those issues raised during the public review period either orally or submitted in writing by 5:00 p.m. the day the comment period closes.

DATED: June 17, 2015

Jacquelyn Kitchen

JACQUELYN R. KITCHEN, Planning Director
Planning Division, Community Development Department

IF YOUR PROPERTY IS RENTED OR LEASED, WE REQUEST THAT YOU PROVIDE YOUR TENANT(S) NOTICE OF THIS PUBLIC HEARING.

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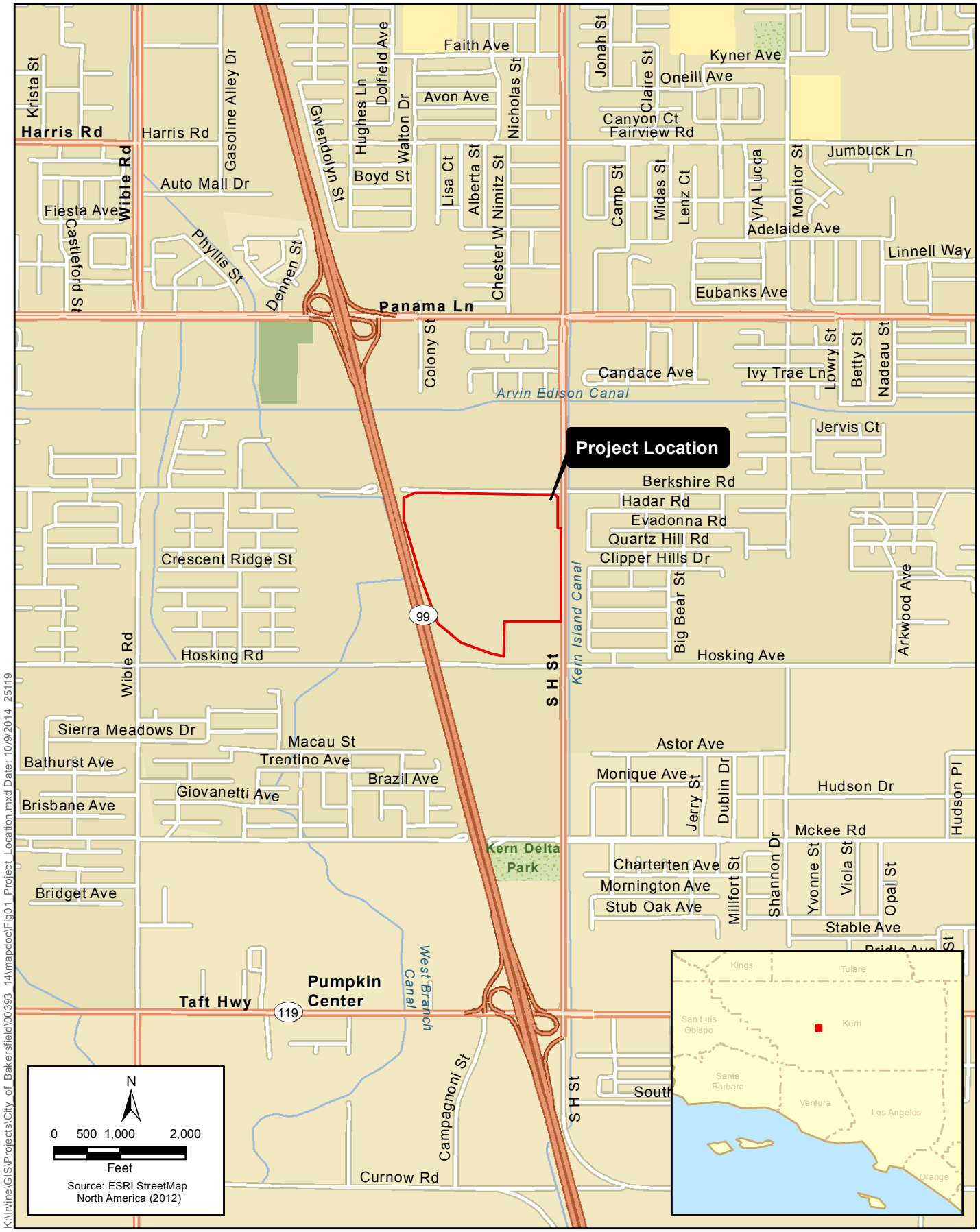

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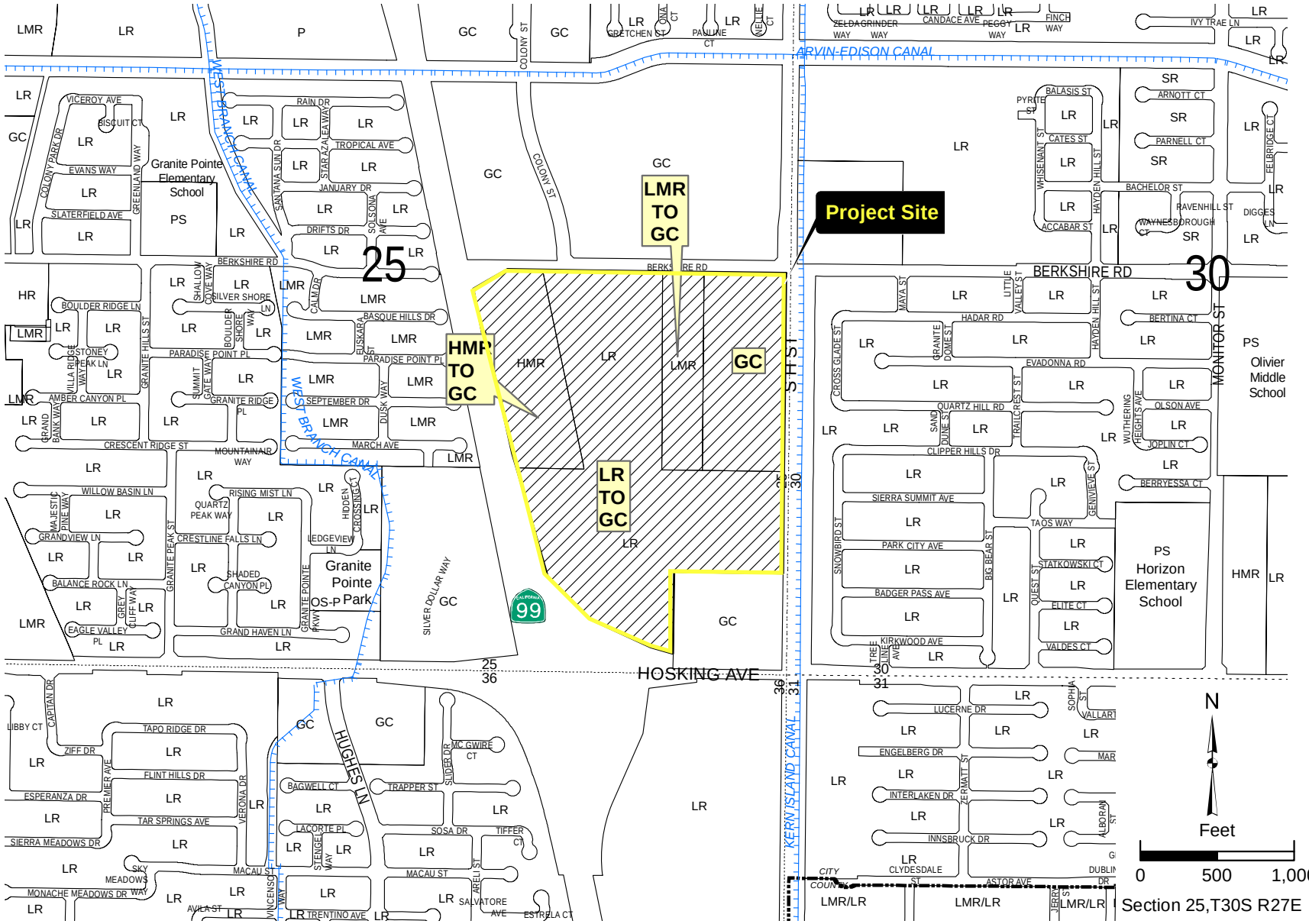
Figure 1
Project Location
SR 99/Hosking Commerical Center Project

GENERAL PLAN AMENDMENT 13-0417 - LAND USE



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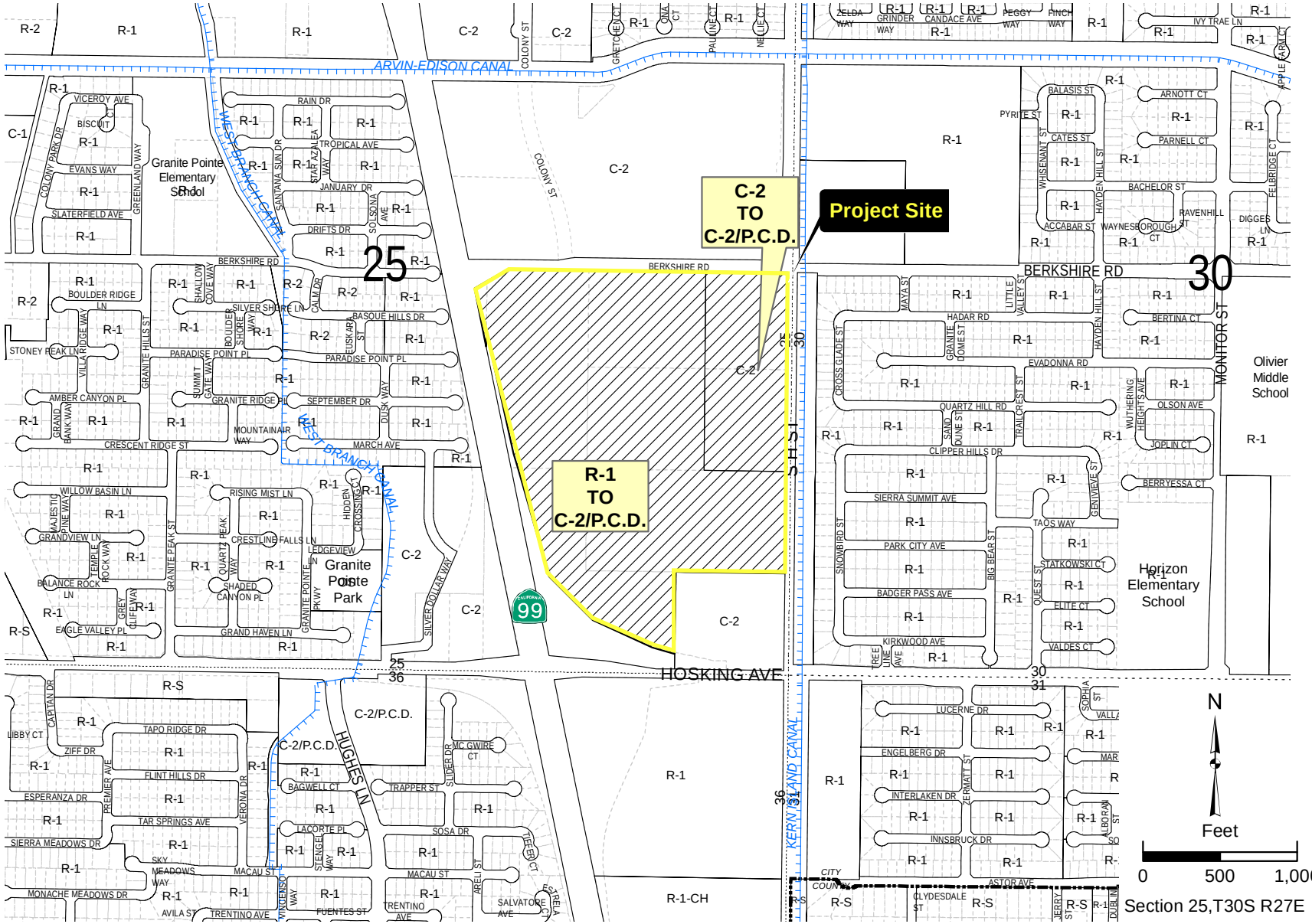
Source: City of Bakersfield

Figure 2
General Plan Amendment
SR 99/Hosking Commercial Center Project

ZONE CHANGE 13-0417



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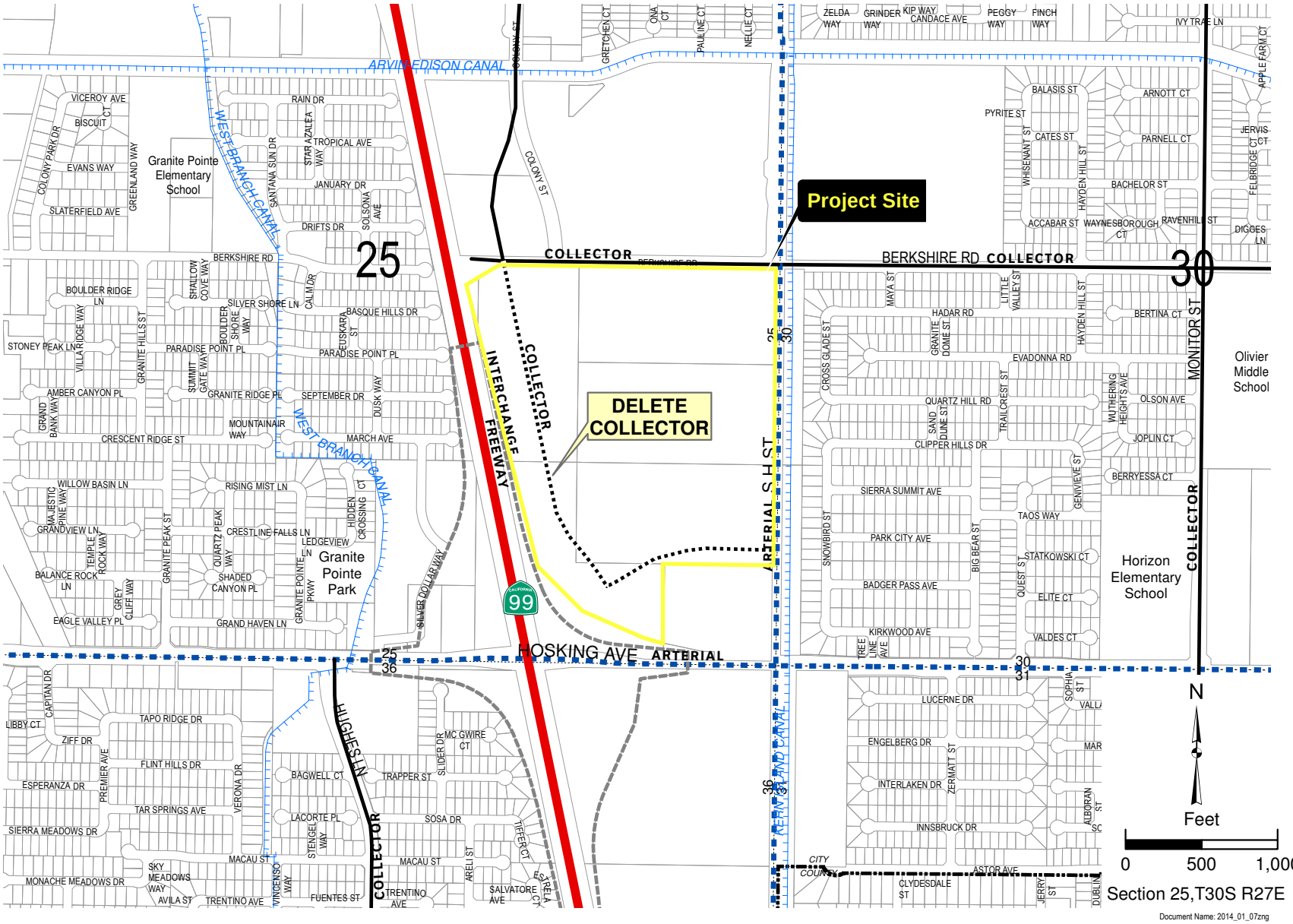
Source: City of Bakersfield

Figure 3
Zone Change
SR 99/Hosking Commercial Center Project

GENERAL PLAN AMENDMENT 13-0417 - CIRCULATION



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Source: City of Bakersfield

Figure 4
Circulation Element Update
SR 99/Hosking Commercial Center Project

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #2007101067

Project Title: SR 99/Hosking Commercial Center Project (GPA/ZC 13-0417)

Lead Agency: City of Bakersfield | Contact Person: Cecelia Griego
Mailing Address: 1715 Chester Avenue | Phone: 661-326-3733
City: Bakersfield, CA | Zip: 93301 | County: Kern

Project Location: County: Kern | City/Nearest Community: Bakersfield
Cross Streets: East of SR-99, West of South H Street, South of Berkshire, North of Hosking | Zip Code: 93313
Longitude/Latitude (degrees, minutes and seconds): 35 ° 17 ′ 4.08 ″ N / 119 ° 1 ′ 27.54 ″ W | Total Acres: 85
Assessor's Parcel No.: 51502030, 51502007, 51502008, 51 | Section: 25 | Twp.: 30 | Range: 27E | Base: Mt. Diablo
Within 2 Miles: State Hwy #: SR 99 | Waterways: Kern Island Canal
Airports: Cortiseran Farms | Railways: N/A | Schools: Granite Pointe ES, Hori

Document Type:

CEQA: ☐ NOP ☒ Draft EIR | NEPA: ☐ NOI | Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR | ☐ EA | ☐ Final Document
☐ Neg Dec (Prior SCH No.) _____ | ☐ Draft EIS | ☐ Other: _____
☐ Mit Neg Dec Other: _____ | ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☒ Rezone ☐ Annexation
☒ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☐ Other: _____

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☒ Commercial: Sq.ft. 800,000 Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: 240 Room Hotel

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☒ Schools/Universities ☒ Water Quality
☒ Air Quality ☒ Forest Land/Fire Hazard ☐ Septic Systems ☒ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☒ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☐ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

LR (Low-Density Residential), LMR (Low Medium-Density Residential), and HMR (High Medium-Density Residential)/ R-1 (One F

Project Description: *(please use a separate page if necessary)*

The proposed commercial development would consist of approximately 800,000 square feet of leasable retail space, 240 hotel rooms, 4,472 surface parking spaces along with internal drives, and landscaping. The commercial center would contain approximately 18 buildings in one- and two-story structures—including two anchor buildings, a cinema (60,000 square feet), and 11 restaurants (45,000 square feet total). In addition, a hotel spread over two separate facilities with approximately 240 rooms may also be a part of the proposed project. The floor area ratio would be approximately 0.25 and pervious/landscaped areas would make up about 5 % of the site.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
X	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #6		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #5F
X	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of		SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region #4		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of		Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date June 22, 2015 Ending Date August 6, 2015

Lead Agency (Complete if applicable):

Consulting Firm: ICF International
Address: 9775 Businesspark Ave
City/State/Zip: San Diego, CA 92131
Contact: Charlie Richmond
Phone: 858-444-3911

Applicant: City of Bakersfield
Address: 1715 Chester Avenue
City/State/Zip: Bakersfield, CA 93301
Phone: 661-326-3733

Signature of Lead Agency Representative: Cecilia Griego **Date:** 6/19/2015

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

SR 99/Hosking
Commercial Center Project
(GPA/ZC 13-0417)

Draft
Environmental Impact Report

SCH #2007101067

Prepared for:

City of Bakersfield
Community Development Department
Planning Division
1715 Chester Avenue
Bakersfield, CA 93301
Contact: Cecelia Griego, Associate Planner II
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Prepared by:

ICF International
9775 Businesspark Avenue, Suite 200
San Diego, CA 92131
Contact: Charlie Richmond, Project Manager
(858) 444-3911

June 2015

ICF International. 2015. SR 99/Hosking Commercial Center Project Draft Environmental Impact Report. June. (ICF 393.14.) San Diego, CA. Prepared for the City of Bakersfield, Bakersfield, CA.

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Chapter 1
Executive Summary

1.1 Introduction

The State Route (SR) 99/Hosking Commercial Center Project (GPA/ZC 13-0417) (proposed project) involves a request for approval of a General Plan Amendment (GPA) and concurrent Zone Change (ZC) for a regional retail commercial center as well as Environmental Impact Report (EIR) certification. Other entitlements also requested include a change to the Metropolitan Bakersfield General Plan Circulation Element to delete the southerly extension of Colony Street from Berkshire Road to South H Street, tentative/final subdivision map approval, preliminary site plan review/planned commercial development plan approval, and Greenfield County Water District annexation. The proposed GPA would designate the project area from Low-Density Residential (LR), Low Medium-Density Residential (LMR), and High Medium-Density Residential (HMR) to General Commercial (GC). The proposed ZC would convert the One-Family Dwelling (R-1) zone classification and Regional Commercial (C-2) to Regional Commercial/Planned Commercial Development (C-2/PCD).

The proposed project consists of approximately 800,000 square feet of leasable retail space, 240 hotel rooms, 4,472 surface parking spaces along with internal drives, and landscaping. The commercial center would contain approximately 18 buildings in one- and two-story structures including two anchor buildings, a cinema (60,000 square feet), and 11 restaurants (45,000 square feet total). A hotel in two separate facilities with approximately 240 rooms may also be part of the proposed project. The floor area ratio (FAR) for the project site would be approximately 0.25 and pervious/landscaped areas would compose about 5% of the site.

1.2 Purpose of the Draft Environmental Impact Report

Prior to making a decision on or issuing permits for a project proposed by an applicant, the City of Bakersfield (City) is required to conduct an environmental review to consider the environmental effects or consequences of its decision. The purpose of this Draft EIR (DEIR) is to evaluate the potential environmental

impacts associated with the proposed project, and to identify mitigation measures and alternatives to the proposed project that may reduce or eliminate impacts.

1.3 Project Description

1.3.1 Project Location

The proposed project site is in southern Bakersfield. Figures 1-1 and 1-2 show the regional and local vicinity of the project site. The project site is located on approximately 85 acres and is bounded by Berkshire Road to the north, South H Street to the east, Hosking Avenue to the south, and SR 99 to the west. The project site is in the southeastern quarter of Section 25, Township 30 South, Range 27 East, Mount Diablo Base and Meridian. The project site includes Assessor's Parcel Numbers 515-020-07, 515-020-08, 515-020-09, 515-020-30, and 515-020-32.

1.3.2 Physical Setting and Surrounding Land Uses

Historically, the project site has been cultivated for a variety of crops. Historic aerial photographs indicate that since 1946 most of the project site was used for agricultural production (BSK Associates 2014), continuing until the late 1990s, with the southerly portion of the property farmed until the mid-2000s. A site visit performed by ICF International (ICF) staff in October 2007 and again in November 2014 confirmed that the project site is vacant land that is not under agricultural production.

The project site is relatively flat and gently slopes south-southwest. The site elevation is approximately 358 feet above mean sea level (BSK Associates 2014). The surface and near-surface soils consist of sandy silt, silty sand, sandy silt or silty sand with trace clay, and sand. The soils are classified as Kimberlina fine sandy loam, 0 to 2% slope (Krazan & Associates 2008). The project site does not contain any native habitat, and vegetative cover has been nearly eliminated by periodic disking (Quad Knopf 2014). No natural streams or rivers, either perennial or intermittent, cross the project site (Quad Knopf 2014). The project site is not in either a 100-year or 500-year floodplain (FEMA 2014). The nearest water feature is the main branch of the Kern Island Canal (approximately 80 feet to the east), which runs north-south and is adjacent to and to the east of South H Street. The Arvin-Edison Canal trends east-west approximately 0.25 mile to the north of the project site. Groundwater depth at the project site is 43 feet below ground surface, which is closer to the surface than the typical depth to groundwater (85 to 175 feet below ground surface) found in the proposed project's vicinity; this groundwater depth is likely due to seepage from the nearby Kern Island Canal (Krazan & Associates 2008).

Illegal dumping has occurred on the project site; burned debris, a burned and discarded mattress, 5-gallon containers with unknown contents, and discolored

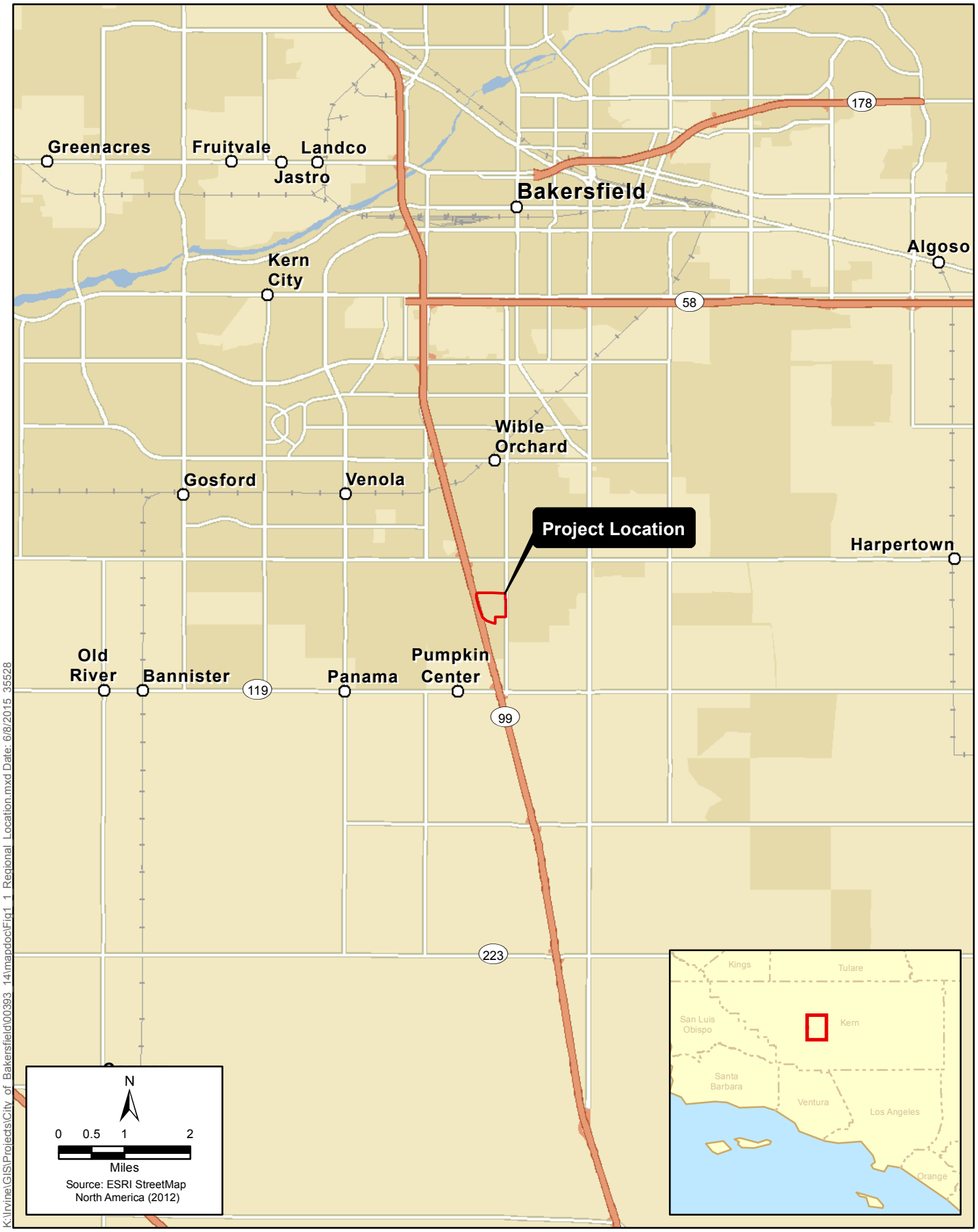

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Figure 1-1
Regional Location
SR 99/Hosking Commerical Center Project

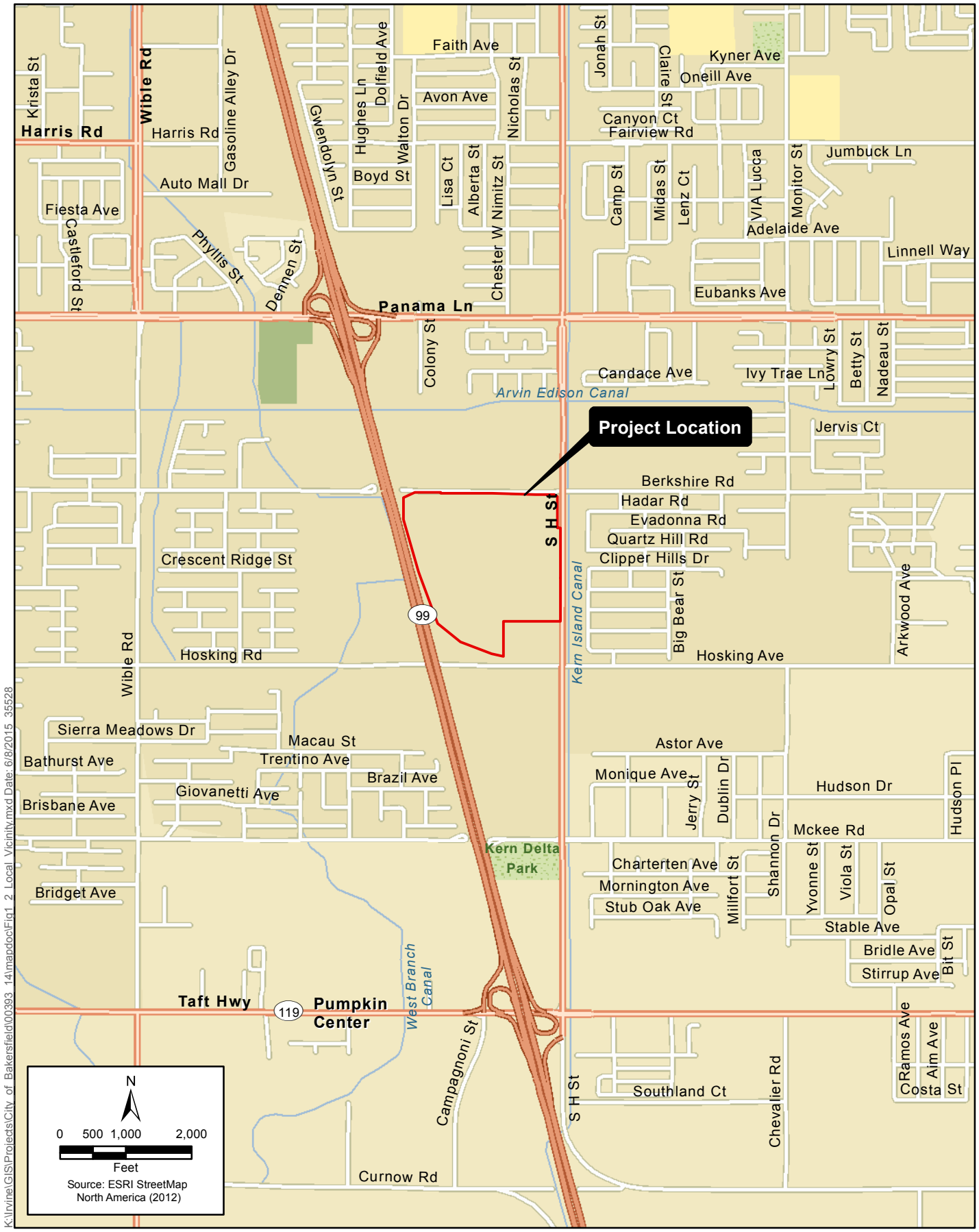

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Figure 1-2
Local Vicinity
SR 99/Hosking Commerical Center Project

soil have been observed on site. However, the project site does not contain any structures or evidence of past uses that indicate that historical activities have resulted in hazardous conditions on site. The project site is not listed as a hazardous materials site or waste disposal site in any regulatory databases (BSK Associates 2014).

There is an abandoned irrigation well near the northern boundary of the project site, and the well head is currently welded shut. Another well with above-grade piping is near the southeastern corner of the site. These abandoned wells would not be used as part of the proposed project and would be properly retired in accordance with and as required by state and local guidelines prior to the proposed development. No other improvements are located on the project site (BSK Associates 2014).

There are a number of unpaved roads and trails that bisect the project site. These trails were created by dirt bikes and off-road vehicles that have illegally used the site in the past. There is a 180-foot by 100-foot drainage basin, approximately 10 to 15 feet deep, in the southwestern portion of the project site. There is also an approximately 1- to 2-foot deep trench that extends generally north-south near the eastern border and east-west near the northern and southern borders of the project site (BSK Associates 2014, Figure 2).

Development extending south from the City has reached the project vicinity. The land north of the project site has been purchased by Kaiser Permanente for a possible medical facility development. Table 1-1 summarizes characteristics of the currently developed and vacant land adjacent to the project site at the time that the project's Notice of Preparation (NOP) was circulated to the agencies and the general public.

Table 1-1. Developed and Vacant Land Adjacent to the Project Site

Direction	Developed?	Existing Development
North	No	Vacant, Commercial
East	Yes	Single-Family Residential
South	No	Vacant
West	Yes	SR 99 & Single-Family Residential on the west of SR 99

Existing land uses beyond the vacant Kaiser Permanente property include a CarMax facility, Lowe's Home Improvement, and a Walmart Super Center. A Vallarta Supermarket and Greenlawn Mortuary and Cemetery are located to the northeast and northwest of the project site, respectively. Properties to the east of the project site and South H Street (and adjacent to the Kern Island Canal) contain existing residential developments. Land to the south is currently vacant land. SR 99 borders the entire project site's western perimeter, with single-family residential and general commercial to its west. Local features are shown in Figure 1-3.

1.3.3 Existing General Plan and Zoning

The project site is subject to the Metropolitan Bakersfield General Plan (MBGP) and the City's zoning ordinance. Each are described below as they relate to the proposed project site and surrounding areas, and Table 1-2 summarizes the existing MBGP and zoning designations for the project site and surrounding areas.

Table 1-2. Existing MBGP Designation and Zoning

Direction	Existing Land Use Designation	Existing Zoning
Project Site	LR, LMR, HMR, GC	R-1, C-2
North	GC	C-2
East	LR	R-1
South	LR, GC	R-1, C-2
West	LMR, GC	R-1, C-2

C-2 = Regional Commercial
GC = General Commercial
HMR = High-Medium Density Residential
LMR = Low-Medium Density Residential
LR = Low Density Residential
R-1 = One-Family Dwelling

The MBGP is the product of a joint planning effort between the City and Kern County, and it covers all territory within the Bakersfield Metropolitan Priority Area of the Kern County General Plan (City of Bakersfield and Kern County 2002). This area encompasses approximately 408 square miles and extends beyond the current City limits and beyond the existing City's sphere of influence to incorporate the probable ultimate physical boundary and service area of the City. The project site is entirely within the City's current boundaries. Figure 1-4 illustrates current general plan designations within and surrounding the project site.

The MBGP describes the existing land use designations of the project site as follows (City of Bakersfield and Kern County 2002):

- **Low Density Residential (LR):** Areas with less than or equal to 7.26 dwelling units/net acre that contain single-family detached housing, typical of tract developments.

- **Low-Medium Density Residential (LMR):** In the City, areas with greater than 4.0 and less than or equal to 10.0 dwelling units/net acre that are composed largely of attached, single-family townhomes, duplexes, and zero lot line developments. May apply to small multiple-family structures, such as triplexes, and mobile home parks that require a full array of urban services.

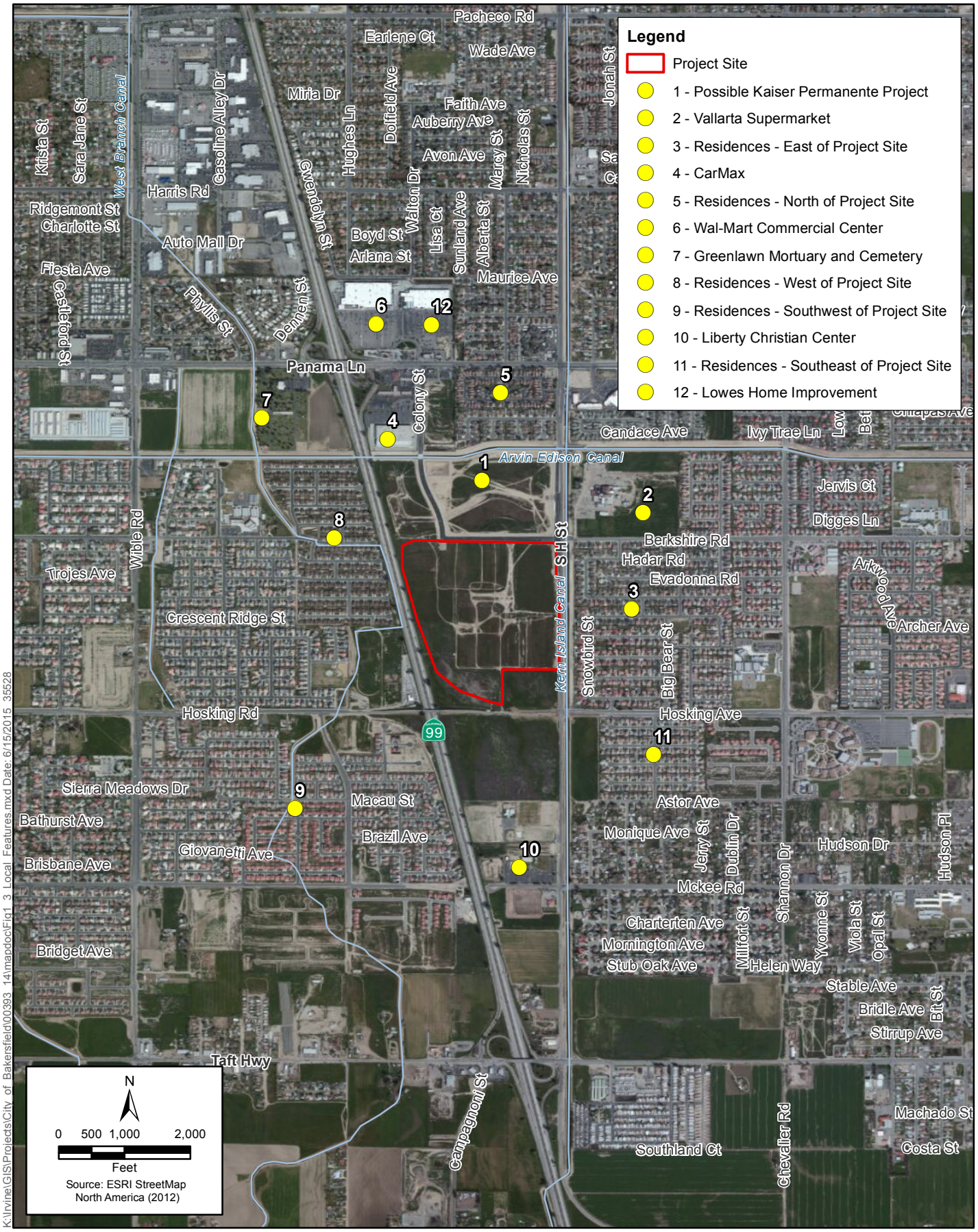

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Figure 1-3
Local Features
SR 99/Hosking Commerical Center Project

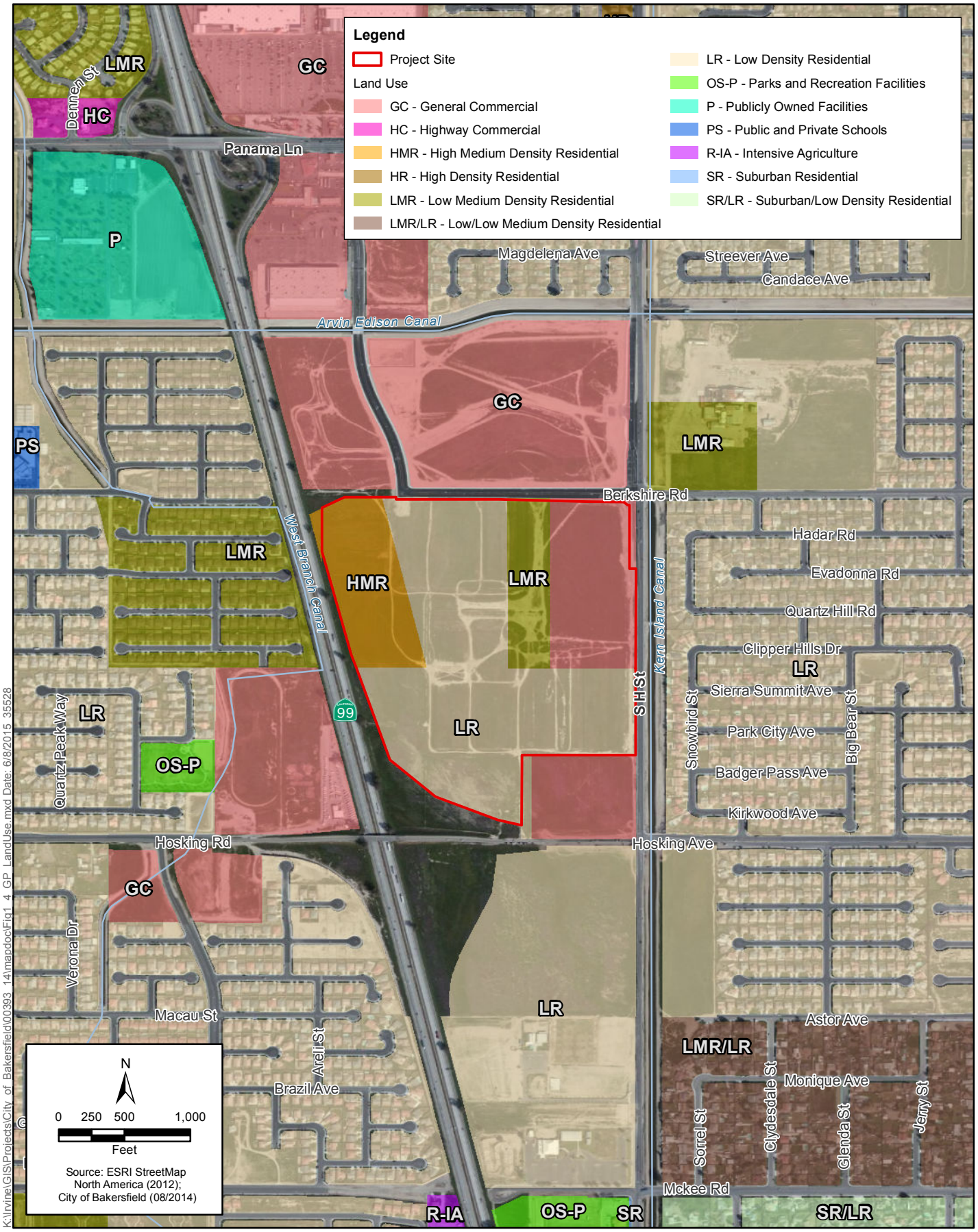

Figure 1-4
General Plan Land Use Designations
SR 99/Hosking Commerical Center Project

- **High-Medium Density Residential (HMR):** In the City, areas with greater than 7.26 and less than or equal to 17.42 dwelling units/net acre.

- **General Commercial (GC):** Maximum FAR of 1.0 and four stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents).

The project site is zoned R-1 and C-2 by the City. Figure 1-5 shows current zoning designations within and surrounding the project site. These zones are described as the following:

- **One-Family Dwelling (R-1):** Typically characterized by single-family subdivision. However, other allowable structures and uses such as accessory buildings (e.g., garages, greenhouses, and swimming pools), home-based daycares, and home occupations can be incorporated (City of Bakersfield Municipal Code 17.10, 2007).

- **Regional Commercial (C-2):** Development of concentrated large-scale retail operations providing a broad range of goods and services that serve the metropolitan market area (City of Bakersfield Municipal Code 17.2, 2007).

1.3.4 Project Objectives

The California Environmental Quality Act (CEQA) Guidelines (Section 15124(b)) require that the project description contain a statement of objectives that includes the underlying purpose of the project. The objectives of the proposed project are as follows:

- Provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City of Bakersfield and greater Kern County.
- Assemble a variety of retailers that would satisfy a majority of the shopping needs of the surrounding existing and planned neighborhoods, thus eliminating the need for residents to leave their neighborhoods for goods and services.
- Provide a multi-level hotel to accommodate regional travelers coming to the site and the greater Bakersfield area.
- Provide a highly visible shopping center for regional shopping needs and community development as well as a buffer between existing residential development east of the project site and SR 99.
- Provide a gathering place for City of Bakersfield residents and visitors that includes shopping, entertainment (including a movie theater), and restaurants in a safe and aesthetically appealing environment.
- Facilitate a planned development consisting of national retailers and related in-line tenants consistent with current and future market demands.

1.3.5 Proposed Project

The proposed project would develop a regional retail shopping center in southern Bakersfield with approximately 800,000 square feet of leasable space and a four-story, 240-room hotel. Surface parking lots associated with the shopping center would accommodate a total of 4,472 parking spaces. Table 1-3 provides a breakdown of the proposed square feet. Figure 1-6 provides a conceptual site plan.

Table 1-3. Approximate Leasable Commercial Space

Commercial Space	Total Area (square feet)	Notes
Anchor	100,000	--
Anchor	110,000	--
Entertainment Anchor	35,000	--
Retail	450,000	Approximately 16 leasable storefront spaces of 4,000 to 60,000 square feet
Restaurant	45,000	Approximately 10 leasable spaces of 3,000 to 8,000 square feet
Theater	60,000	Part of two-story structure that includes retail
Total	**800,000**	

The project site is approximately 85 gross acres, approximately 16 acres of which would be dedicated to public right-of-way street improvements along Berkshire Road, South H Street, and Hosking Avenue. The proposed remaining 69 net acres would be dedicated to various structures and associated surface parking lots, internal street and pedestrian walkway improvements, and landscaped areas.

The proposed project's design would be required to emphasize pedestrian movement and would be consistent with the City of Bakersfield's Municipal Code, Chapter 17.08.140, *Design standards for large retail developments*. Standards would include the creation of plazas and seating with meandering walkways and sidewalks connecting the shops. Security lighting and project identification signage, designed in conformance with standards suggested by the International Dark Sky Association, would be provided for the parking lots and proposed structures.

Bus turnouts would be provided to facilitate mass transit to the project site, as approved by the Golden Empire Transit (GET) District. The turnouts would include benches, trash cans, signage, and structures to provide shading and weather protection. The project proponent would also provide additional bus stops outfitted with benches, trash cans, signage, and protective structures. These design measures are intended to encourage the project site as a "destination" point, which would potentially reduce traffic congestion and associated air

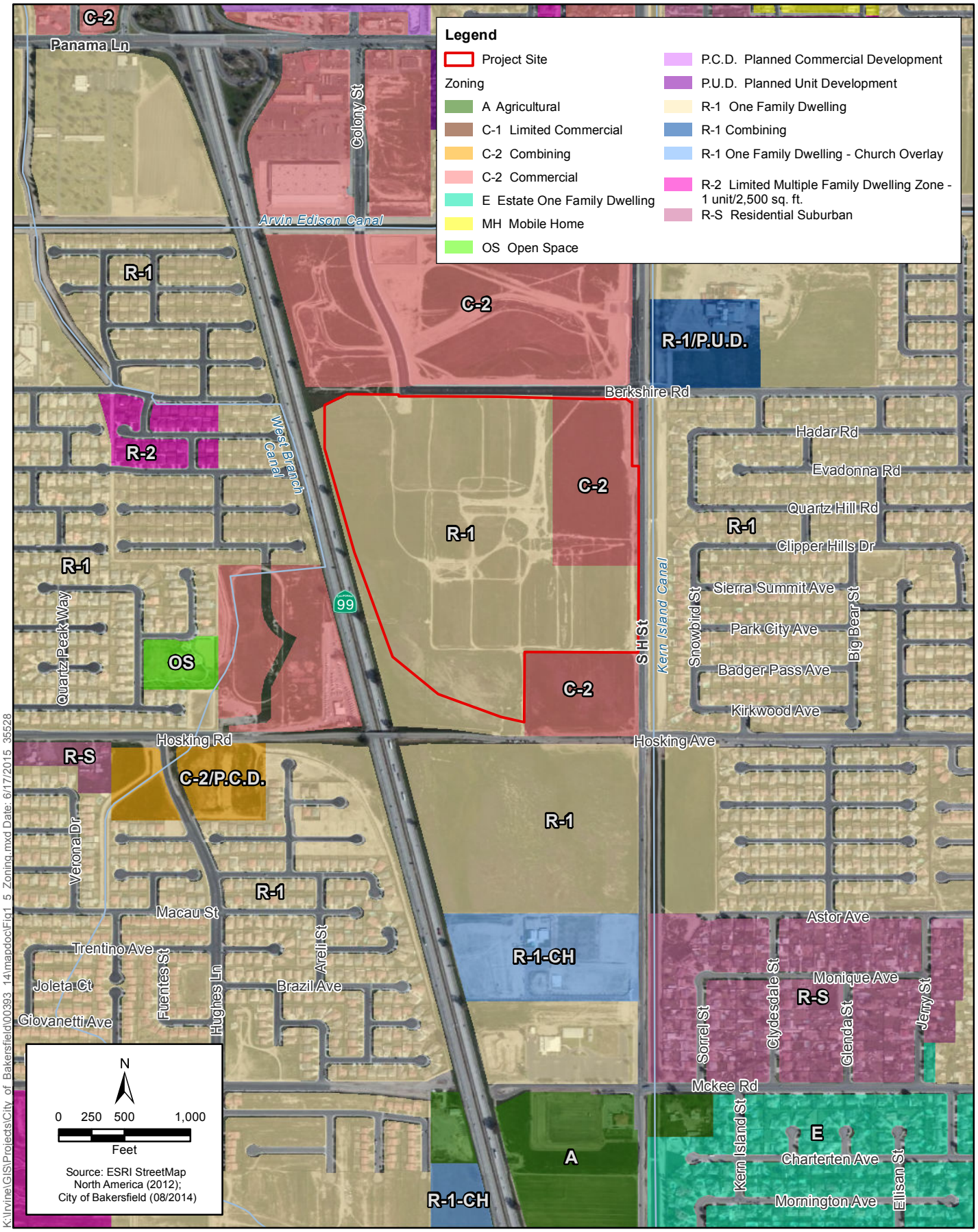

Figure 1-5
Current Zoning Designations
SR 99/Hosking Commerical Center Project

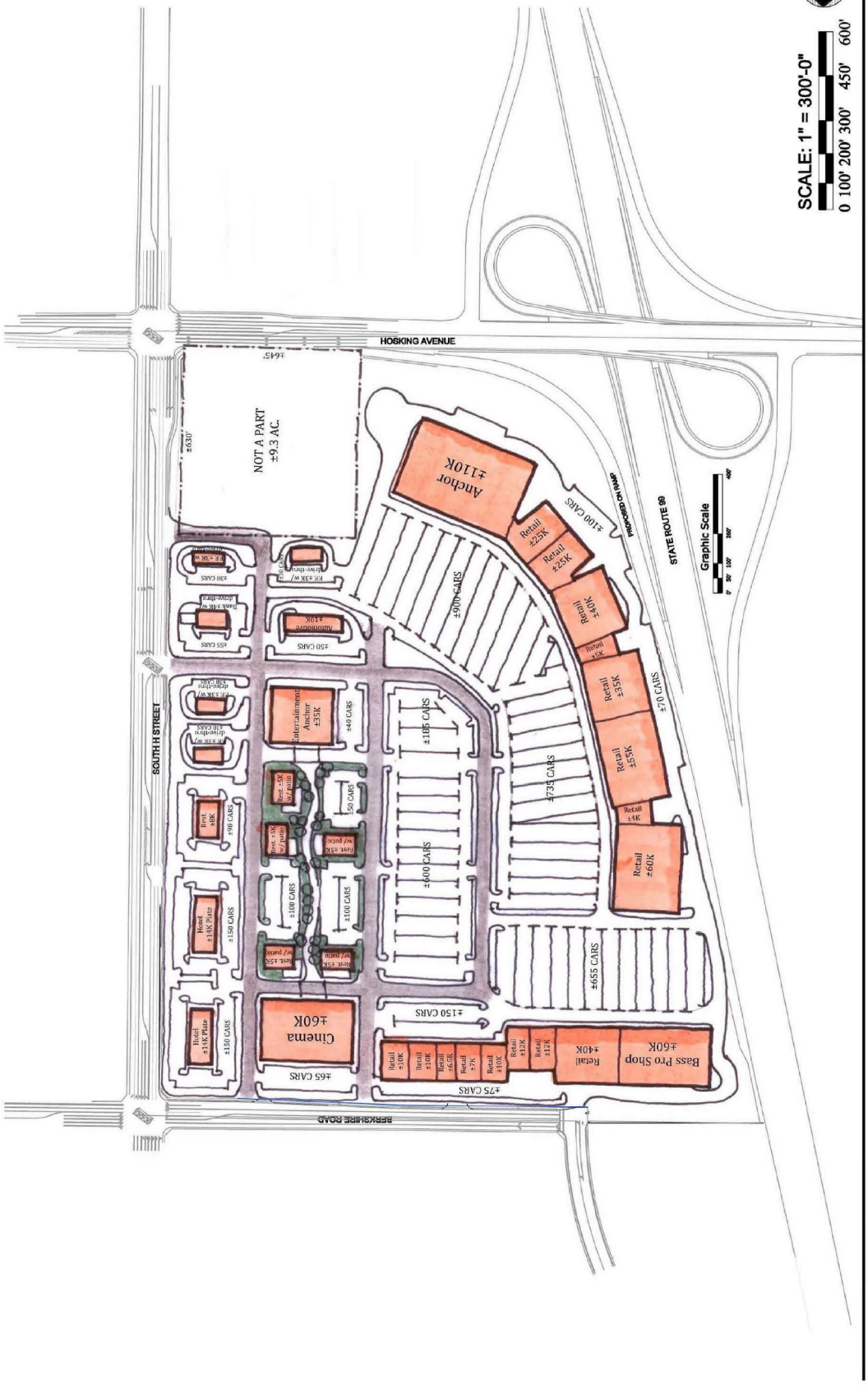

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Figure 1-6
Conceptual Site Plan
SR 99/Hosking Commerical Center Project

quality emissions by providing alternatives to automobile use to access the project site.

The project site is in an "intensified activity center" as designated in the MBGP (City of Bakersfield and Kern County 2002, Figure II-2, pages II-2 and II-3). The proposed project's design and scale are consistent with this centers concept, which is described in the MBGP as "the focusing of new development into distinctive centers which are separated by low land use densities" (City of Bakersfield and Kern County 2002). The centers concept provides for a land use pattern consisting of several concentrated mixed-use commercial and high-density residential centers surrounded by medium-density residential uses (City of Bakersfield and Kern County 2002). The proposed project, coupled with other existing commercial land uses (e.g., CarMax, Lowe's Home Improvement), would provide for the high density mixed-use commercial nucleus surrounded by medium-density residential land uses as envisioned in the centers concept. As the MBGP points out, this concept "encourages people to live and work in the same place and, thus, serves to minimize sprawl and reduce traffic, travel time, infrastructure costs, and air pollution" (City of Bakersfield and Kern County 2002).

1.3.6 Requested Entitlements and Approvals

The applicant's specific entitlement objective under this environmental document is to obtain City approval of a GPA, zone change, MBGP Circulation Element Amendment, tentative/final subdivision map approval, site plan and final development plan review, and planned commercial development approval. Other potential entitlement approvals may include, but may not be limited to, approval of a comprehensive sign plan to provide signage that is compatible with the architectural design of the center. Also requested is a possible water district annexation into the Greenfield County Water District (GCWD) to be approved by the Kern County Local Agency Formation Commission (LAFCO) as the responsible agency. The requested entitlements are discussed in detail below.

1.3.7 Proposed General Plan Amendment

The proposed project involves a request for approval of a GPA to designate the entire project site as a GC land use designation. The proposed GPA would change those portions of the site designated LR (~50 acres), LMR (~7 acres), and HMR (~13 acres) to:

- **General Commercial (GC)**, a maximum floor area ratio of 1.0 and 4 stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents) (City of Bakersfield and Kern County 2002).

The remaining ~15 acres of the site are already designated as GC (refer to Figure 1-4).

1.3.8 Proposed Zone Change

The proposed project involves a request for approval of a concurrent ZC to modify the zoning on a roughly 73-acre portion of the site from R-1 to C-2/PCD, as follows:

- **Regional Commercial/Planned Commercial Development Zone (C-2/PCD):** Typically associated with larger commercial centers that may contain a number of larger scale stores as well as a mixture of smaller retail outlets, which can include any use permitted for Professional and Administrative Office (C-0) and Neighborhood Commercial (C-1), apparel and accessory stores, automobile dealerships, computer software stores, department stores, farmers markets on weekends, hardware stores, hotels, restaurants and other eating-related places, sporting goods stores, theaters, and public or commercial parking (City of Bakersfield Municipal Code 17.24, 2007).

The remaining ~12 acres of the site are already zoned C-2 (Figure 1-5). The existing C-2 portions of the project site would be rezoned to add the Planned Commercial Development (PCD) overlay, combining the designations to be consistent with the remainder of the project site. In connection with the commercial zone, a PCD Development Plan Review and approval of a tentative parcel map are also proposed. The intent of the PCD designation is to provide flexibility for commercial developments so that a more cohesive design can be achieved. PCD zoning allows for innovative design and diversification in the relationship of various uses, buildings, structures, lot sizes, and open spaces while ensuring compliance with the general plan and the intent of the municipal code. The PCD Zone would be used in combination with the proposed commercial zone to define the allowable uses and to ensure future site development that is compatible with surrounding development and recognizes the unique site characteristics (City of Bakersfield Municipal Code 17.54, 2007).

1.3.9 Proposed Circulation Element Amendment

The proposed project also involves a request for approval of an MBGP Circulation Element amendment. This amendment would eliminate a collector road (Colony Street) segment currently shown on the MBGP Circulation Element map (City of Bakersfield and Kern County 2002) that travels through the project site. A collector road has 90 feet of right-of-way with four travel lanes, without a raised median. This segment of Colony Street is shown intersecting with Berkshire Road to the north of the site, traveling southbound along the western edge of the site, turning east in about the middle of the site, and then connecting with South H Street at an intersection. This collector road segment has not been

built, but its route through the site is shown on the current map. The proposed amendment would eliminate this segment of Colony Street from the MBGP Circulation Element map.

1.3.10 Proposed Water Supply

The majority of the project site lies within the district boundary of the Greenfield County Water District (GCWD), but an approximately 17-acre portion of the 85-acre project area located in the southern portion of the project site lies outside of the district boundary; the entire project site is in the GCWD sphere of influence. The project proponent is pursuing an annexation of this portion of the project site into the GCWD service boundary. The project proponent and GCWD have entered into agreements initiating the annexation process and appointing GCWD as agent to extract groundwater. As part of the agreements, the project proponent is responsible for preparing maps, exhibits, and legal descriptions that GCWD needs for annexation.

In accordance with California Senate Bill (SB) 610, the project proponent has prepared a Water Supply Assessment (WSA) (Appendix D). The assessment is necessary because the proposed project would develop greater than 500,000 square feet of commercial floor space and, therefore, is considered a "project" within the scope of SB 610. The WSA determined that GCWD would have sufficient water supplies to meet project demands at full build-out (including the annexed area), as well as overall GCWD demands (Table 6 of Appendix D). Project demands would be met through GCWD's existing groundwater rights from native aquifer supplies, as well Mr. John Giumarra's overlying groundwater rights for the same aquifer that will be pumped from GCWD wells (page 1 of Appendix D). An Agreement for Overlying Lands, in which GCWD acts as an agent, would be executed to allow GCWD to utilize Mr. Giumarra's Overlying Groundwater Rights as a landowner, which would then require new wells to be drilled. District demands would also continue be met with pumping native groundwater, which GCWD has been using to serve its existing customers based on existing groundwater rights. To ensure water supply reliability during single dry year or multiple dry years, GCWD will use its storage reserve of canal seepage water from Kern Delta Water District. As part of an Urban Customer Service Agreement, GCWD receives 100% of the surface water seepage losses from the Kern Island Canal system as groundwater recharge and to maintain groundwater aquifer levels. This water would be used only during times of water shortages (Appendix D). The agreement will not take effect until and unless the City certifies the Final EIR.

As required by California law, a proposed annexation must also be approved by the Kern County LAFCO. GCWD would submit the annexation application and this EIR to Kern County LAFCO. As a subsequent action, Kern County LAFCO would accept, accept with revisions, or reject the annexation application presented by GCWD. If the project proponent decided to proceed with the annexation process, during the plan check and prior to final map approvals, the project proponent must provide the City with written documentation that the

proposed project's annexation application has been approved by Kern County LAFCO. Therefore, Kern County LAFCO is a Responsible Agency under CEQA.

1.4 Environmental Impacts

1.4.1 Impacts not Considered in This DEIR

The contents of this DEIR were established based on an Initial Study (IS) and NOP prepared in accordance with the State CEQA Guidelines, as well as public and agency input received during the scoping process. The IS was comprehensive and addressed every environmental issue contained within the Environmental Checklist, Appendix G of the State CEQA Guidelines. Those specific issues that were found to have no impact or less-than-significant impacts during preparation of the IS/NOP are not addressed further in this DEIR unless they were specifically identified by agencies, organizations, or interested parties during the NOP public review period and were determined to be relevant to the decision. The resource areas removed from consideration in the IS/NOP are agricultural and forestry resources, mineral resources, population and housing, and recreation. Please see the IS/NOP in Appendix A for more information

1.4.2 Impacts of the Proposed Project

Sections 4.1 through 4.12 of this DEIR provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts to less-than-significant levels, when feasible. The impacts, mitigation measures, and residual impacts for the proposed project are summarized in Table 1-7 at the end of this Executive Summary, and are discussed further below.

Summary of Less-than-Significant Impacts

This DEIR addresses all potentially significant environmental impacts that were identified by the City during the NOP, scoping process, and public review period for this DEIR. After further study and environmental review, this DEIR determined that impacts on geology/soils would be less than significant without mitigation.

Summary of Significant Impacts that Can Be Mitigated, Avoided, or Substantially Lessened

After further study and environmental review in this DEIR, impacts on the following resource areas were determined to be significant prior to the incorporation of mitigation measures. The mitigation measures that were identified to reduce impacts of the proposed project to less-than-significant levels are discussed in Chapter 4 and are summarized in Table 1-7. Environmental impacts for the following issues would be reduced to less-than-significant levels with the incorporation of mitigation measures.

- Aesthetics and urban decay;
- Air quality;
- Biological resources;
- Cultural resources;
- Greenhouse Gas Emissions;
- Hazards and hazardous materials;
- Hydrology and water quality;
- Land use and planning;
- Noise; and
- Public services and utilities.

Summary of Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

Table 1-4 presents those impacts of the project that are significant and unavoidable even with the implementation of mitigation measures. Sections 4.1, 4.2, 4.3, 4.4, and 4.11 of this EIR present detailed analyses of these impacts and describe the means by which the mitigation measures listed in Table 1-4 would reduce the severity of impacts to the extent feasible.

Table 1-4. Summary of Proposed Project Impacts that are Significant and Unavoidable

Impact	Mitigation Measures
Traffic (Project and Cumulative)	MM TR-1 through MM TR-3

As shown above, the DEIR determined that direct traffic impacts would be significant and unavoidable. Mitigation is not available for significant impacts identified at one intersection (ID 24: South H Street/Panama Lane) and one roadway segment (Panama Lane, between Wible Road and SR 99). Operations at South H Street/Panama Lane would degrade from level of service (LOS) C under 2017 baseline conditions to LOS D with Phase I of the project. In 2020, once Phase II is implemented, the LOS would further degrade to LOS F. Roadway segment operations along Panama Lane between Wible Road and SR 99 would degrade from a volume to capacity (V/C) ratio of 0.79 under 2017 baseline conditions to 0.82 with Phase I of the project. In 2020, once Phase II is implemented, the V/C ratio would further degrade to 0.86. Because both of these roadway facilities are built out under existing conditions, no improvements or other mitigation measures are feasible at either location and impacts would remain significant and unavoidable at opening day of Phase I in 2017 and at opening day of Phase II in 2020. As such, two significant and unavoidable direct impacts would occur.

The project would also result in cumulatively considerable contributions to significant cumulative traffic impacts at one unsignalized intersection, eleven signalized intersections, and two roadway segments. Mitigation is proposed for one unsignalized intersection, seven signalized intersections, and one roadway segment. However, even after mitigation is incorporated, impacts would remain significant and unavoidable.

1. Operations at unsignalized South Union Avenue/Berkshire Road would remain at LOS F during the Saturday peak hour under 2035 conditions with the project's cumulative contribution and would remain at LOS F with mitigation, resulting in a significant and unavoidable cumulative impact.
2. Operations at signalized South H Street/White Lane would remain at LOS F during the AM and Saturday peak hours under 2035 conditions with the project's cumulative contribution, and would improve to LOS D with mitigation during the PM and Saturday peak hours, resulting in significant and unavoidable impacts.
3. Operations at signalized Stine Road/Panama Lane would remain at LOS F during the AM and Saturday peak hours under 2035 conditions with the project's cumulative contribution, would improve to LOS D with mitigation during the AM peak hour, and would remain at LOS F during the Saturday peak hour, resulting in significant and unavoidable impacts.
4. Mitigation at signalized Akers Road/Panama Lane would remain at LOS E during the AM peak hour under 2035 conditions with the project's cumulative contribution and would improve to LOS D with mitigation; however, impacts would remain significant and unavoidable.
5. Operations at signalized Wible Road/Panama Lane would degrade from LOS C to LOS D during the AM and PM peak hours under 2035 conditions with the project's cumulative contribution and would remain at LOS D with mitigation, resulting in significant and unavoidable impacts. During the Saturday peak hour for Wible Road/Panama Lane, operations would remain at LOS E under 2035 conditions with the project's cumulative contribution

and would improve to LOS F with mitigation; however, impacts would remain significant and unavoidable.

6. Operations at signalized South H Street/Hosking Avenue would remain at LOS F during the Saturday peak hour under 2035 conditions and the project's cumulative contribution and would improve to LOS E with mitigation, and would remain a significant and unavoidable impact.
7. Operations at signalized Southbound SR 99 off-ramp/Taft Highway (SR 119) would remain at LOS F during the Saturday peak hour under 2035 conditions and the project's cumulative contribution and would improve to LOS D with mitigation, and would remain a significant and unavoidable impact.
8. Operations at signalized South H Street/Panama Lane would degrade from LOS C under 2035 baseline conditions to LOS D with the project's cumulative contribution.
9. Roadway segment operations along Panama Lane between Wible Road and SR 99 would degrade from a V/C ratio of 0.79 under 2035 baseline conditions to 0.82 with the project's cumulative contribution. Because both of these roadway facilities are built out under existing conditions, no improvements or other mitigation measures are feasible at either location and impacts would remain significant and unavoidable in the long-term cumulative condition.

In addition, mitigation is not available for impacts identified at four signalized intersections (ID 4: Southbound SR 99 off-ramp/White Lane, ID 21: Southbound SR 99 off-ramp/Panama Lane, ID 22: Northbound SR 99 off-ramp/Panama Lane, and ID 24: South H Street/Panama Lane) and one roadway segment (Panama Lane, between Wible Road and SR 99) because their current condition is built out and additional capacity is not possible. Impacts at these four signalized intersections and one roadway segment would remain significant and unavoidable.

Growth-Inducing Impacts

Section 15126.2(c) of the CEQA Guidelines defines the nature of an irreversible impact as an impact that uses non-renewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

The proposed project would not have a growth-inducing impact on surrounding areas. The proposed project lies in the path of growth and does not represent "leapfrog" development. Planning for growth on the project site represents a reasonable extension of urban land uses in metropolitan Bakersfield.

The project site has already been planned for development, would not directly induce growth by supplying residences, and would not indirectly induce growth by providing jobs requiring specialized skills that cannot be filled by the current

labor pool. Instead, the proposed project is growth-accommodating in that it would provide needed services to already planned residential growth areas in the region.

Significant Irreversible Changes to the Environment

The proposed project would require the use of nonrenewable resources—such as metal alloys and aggregate resources—for the physical construction of the proposed project. However, the proposed project would not use an uncommon amount of raw materials compared to the amount used by other projects of a similar scope and magnitude.

The proposed project would not significantly increase consumption of nonrenewable resources, and would not significantly commit future generations to unnecessary exploitation of nonrenewable resources. While various natural resources—such as construction materials and energy resources—would be used for the proposed project, the use of these resources relative to similar urban development projects in the region would not result in substantial resource depletion.

1.5 Alternatives to the Proposed Project

CEQA states that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which are ostensibly feasible and could attain the basic objectives of the project, and evaluate the comparative merits of the alternatives." Based on the proposed project objectives, four alternatives were considered and evaluated in this DEIR.

- Alternative 1, No-Project A—No Build
- Alternative 2, No-Project B—Build Per Existing Land Use Designations
- Alternative 3, Reduced Development A—Phase I Buildout Only
- Alternative 4, Reduced Development B—Commercial Only, No Hotel

These alternatives are described below.

1.5.1 Alternative 1. No-Project A—No Build

Section 15126.6(e) of the State CEQA Guidelines requires the analysis of a no-project alternative. This no-project analysis must discuss the existing condition, as well as what would be reasonably expected to occur in the foreseeable future if the proposed project was not approved. Because the proposed project is a development project, Section 15126.6(e)(3)(B) of the State CEQA Guidelines is directly applicable to the project:

> If the project is…a development project on an identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the "no project" alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

If the proposed project were not approved, one possible effect would be continued use of the land as it is used under existing conditions. At the time of the IS/NOP scoping period, the project site was vacant land. Therefore, the assumption for this alternative if the proposed project were not approved is that the project site would remain vacant land into the foreseeable future under Alternative 1.

1.5.2 Alternative 2. No-Project B—Build Per Existing Land Use Designations

Another reasonably foreseeable future no-project scenario for the project site, if the proposed project were not approved, would be the eventual development of the site per existing land use designations. Currently the proposed project site is designated for LR, LMR, HMR, and GC. Figure 1-4 shows the current general plan designations for the project site. The current zoning for the project site is R-1 and C-2. Figure 1-5 shows the current zoning designations for the project site. Under this alternative, the site could be developed with residential and commercial uses without a discretionary approval in accordance with existing development standards pursuant to the respective land use and zoning designations. Ministerial approval by the City in the form of the site and design plan review would be required, as is required for all proposed projects in the City.

Using the most current MBGP Land Use Element map (City of Bakersfield and Kern County 2002), it is estimated that the project site is composed of roughly 50.2 acres of LR, 7.7 acres of LMR, 13.0 acres of HMR, and 15.0 acres of GC by the current land use designations. Using these acreages, Table 1-5 below shows the maximum number of dwelling units and commercial square footage that are assumed for Alternative 2.

Table 1-5. Approximate Number of Dwelling Units and Commercial Square Footage for Alternative 2

Land Use Designation	Acres	Dwelling units/ square footage per acre	Number of Dwelling Units/Commercial Square Footage
Low Density Residential (LR)	50.2	7.26 du/ac	364 dwelling units
Low-Medium Density Residential (LMR)	7.7	10.0 du/ac	77 dwelling units
High-Medium Density Residential (HMR)	13.0	17.42 du/ac	226 dwelling units
General Commercial (GC)	15.0	1.0 floor/area ratio (43,560 sf/ac)	653,400 square feet

du/ac = dwelling units per acre
sf/ac = square footage per acre

Source: City of Bakersfield and Kern County 2002.

Therefore, under Alternative 2, it is estimated that a maximum of 667 dwelling units and 653,400 square feet of GC could be developed per the existing land use designations. Alternative 2 is also estimated to generate approximately 6,063 average daily trips (ADT)[1] for residential uses and 82% of the proposed project's ADT for commercial uses, or approximately 21,546 ADT[2] for commercial. This would result in a total of 27,609 ADT for Alternative 2, which is slightly more than would be generated by the proposed project.

1.5.3 Alternative 3. Reduced Development A—Phase I Buildout Only

Alternative 3 would include the buildout of Phase I of the proposed project only. This would include construction of 400,000 square feet of leasable commercial space, development of 120 hotel rooms, 2,683 surface parking spaces[3], and related onsite improvements including the proposed street widening and right-of-way improvements. Based on data presented in the Traffic Study prepared for the proposed project for ADT for Phase I, it is assumed that Alternative 3 would generate approximately 60% of the ADT of the proposed project, or 40% less traffic than the proposed project. Alternative 3 is assumed to be developed on approximately half, or 42.5 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

1 CalEEMod Appendix D, Table 4.13
2 Phase II of the proposed project would generate 26,275 ADT for commercial uses.
3 Based on 60% of the total parking spaces provided under the proposed project, as only 60% of the proposed project's ADT would be generated under Alternative 3.

1.5.4 Alternative 4. Reduced Development B—Commercial Phase I Only, No Hotel

Alternative 4 would include the buildout of the 400,000 square feet of commercial space only as proposed in Phase I of the project, along with 2,550 surface parking spaces[4] and the related onsite improvements, including the proposed street widening and right-of-way improvements. No hotel uses would be developed under this alternative. It is assumed that Alternative 4 would generate 57% of the ADT of the proposed project, or 43% less traffic than the proposed project. Alternative 4 is assumed to be developed on approximately one quarter, or 21.25 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

1.6 Alternatives Analysis

Each of the alternatives considered above is analyzed in this DEIR. The City determined to provide the analysis of these alternatives as full alternatives in this DEIR. Their inclusion in this DEIR does not necessarily mean that they have been found to be feasible, or that they would reduce or eliminate impacts in comparison to the proposed project. Table 1-6 provides a summary of the alternatives' impact analyses.

An EIR must identify the environmentally superior alternative to the proposed project. Alternative 1 (No-Project A—No Build) would be environmentally superior to the proposed project because it would minimize or avoid physical environmental impacts. However, the State CEQA Guidelines require that, if a no-project alternative is found to be environmentally superior, "the EIR shall also identify an environmentally superior alternative among the other alternatives" (State CEQA Guidelines, Section 15126.6(c)).

In terms of the physical effects on the environment, the environmentally superior alternative (other than a no-project alternative) is Alternative 4 (Reduced Development B—Commercial Phase I Only, No Hotel). However, Alternative 4 fails to fully meet the project objectives as discussed above.

4 Based on 57% of the total parking spaces provided under the proposed project, as only 57% of the proposed project's ADT would be generated under Alternative 4.

Table 1-6. Comparison of Alternatives to the Proposed Project

Environmental Issue Area	Proposed Project Impact	Alternative 1 Impact	Alternative 2 Impact	Alternative 3 Impact	Alternative 4 Impact
Aesthetics	Less than Significant with Mitigation	Less Impact	Less Impact	Less Impact	Less Impact
Air Quality	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Biological Resources	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Cultural Resources	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Geology and Soils	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Greenhouse Gases	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Hydrology and Water Quality	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Land Use and Planning	Less than Significant	Less Impact	Less Impact	Greater Impact	Greater Impact
Noise	Less than Significant	Less Impact	Less Impact	Less Impact	Less Impact
Population and Housing*	Less than Significant	Less Impact	Greater Impact	Similar Impact	Similar Impact
Public Services and Utilities	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Recreation*	Less than Significant	Less Impact	Greater Impact	Similar Impact	Similar Impact
Transportation and Traffic	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact

Notes:

* Screened out as potentially significant environmental issue area for the proposed project in the IS/NOP (Appendix A). Impact statement summaries are based on the Initial Study. Other topics such as Agriculture and Forestry Resources and Mineral Resources were also screened out in the IS/NOP, but are not mentioned here because there would be no significant difference between the project and the alternatives.

1.7 Areas of Controversy

Written agency and public comments received during the public review period are provided in Appendix A. In summary, the following project-related issues were identified during scoping, and, where appropriate, are addressed in the appropriate sections of this DEIR.

- Develop adequate pedestrian and bicycle facilities on Hosking Road and South H Street
- Develop a Class I bike path and adequate bicycle facilities to serve the project
- Potential conflicts with California Department of Transportation projects under construction in the project vicinity including the SR 99/Hosking Road Interchange, the Panama Lane off-ramp widening projects, and the SR 99 auxiliary lane project
- Traffic impacts on area roadways, state highways, and associated rights-of-way
- Offsite drainage impacts
- Impacts on utilities and water supply
- Ensure proper consultation with Native Americans
- Air quality impacts, greenhouse gas emissions, and health risks
- Potential for urban decay
- Aesthetic impacts and light pollution
- Consideration for a "transit-oriented" alternative
- Impacts on biological resources
- Potential for growth-inducing impacts
- Access to public transportation
- Potential energy impacts
- Conversion of historic agricultural farmlands

1.8 Availability of This DEIR

This DEIR is being circulated to the public and agencies for review and comment. During the 45-day public review period, which began on June 22, 2015 and will end on August 6, 2015, this DEIR will be available for general public review at the following locations:

- City of Bakersfield
  Community Development Department—Planning Division
  1715 Chester Avenue
  Bakersfield, CA 93301
- Kern County Library–Beale Memorial Library
  701 Truxtun Avenue
  Bakersfield, CA 93301
- Kern County Library–Eleanor Wilson Branch
  1901 Wilson Avenue
  Bakersfield, CA 93307
- Kern County Law Library
  1415 Truxtun Avenue, Room 301
  Bakersfield, CA 93301

Supporting documents not included in this DEIR are available for general public review at the City Community Development Department, 1715 Chester Avenue, 2nd Floor, Bakersfield, CA. This DEIR will also be available for general public review on the City's website: http://www.bakersfieldcity.us/.

Interested parties may provide written comments on this DEIR that must be received by 5 p.m. on August 6, 2015. Please address comments to:

Cecelia Griego, Associate Planner II
Community Development Department
Planning Division
1715 Chester Avenue
Bakersfield, CA 93301
cgriego@bakersfieldcity.us
Fax: (661) 852-2136

Upon completion of the 45-day public review period, written responses to all comments on environmental issues discussed in this DEIR will be prepared and incorporated into the Final EIR (FEIR). Within the 45-day public review period, the City Planning Commission will hold an EIR Adequacy Hearing to receive public comments on this DEIR, which is tentatively scheduled for July 16, 2015 at 5:30 p.m.; written responses to comments received during the hearing will also be prepared and incorporated into the FEIR. A public meeting will also be held before the Planning Commission to consider a recommendation for the City Council to certify the FEIR along with consideration of approval of the proposed project. The City Council has final authority over certification of the FEIR and project decisions.

Written responses to comments received from any state agencies will be made available to these agencies at least 10 days before the City Council meeting at which the certification of the FEIR will be considered. These comments and their responses will be included in the FEIR for consideration by the City, as well as any other decision makers.

1.9 Issues to Be Resolved

Section 15123(b)(3) of the State CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved in the proposed project include decisions by the lead agency as to whether:

- the DEIR adequately describes the environmental impacts of the proposed project,
- the recommended mitigation measures should be adopted or modified,
- additional mitigation measures need to be applied to the proposed project, or
- the proposed entitlements should or should not be approved.

Table 1-7. Summary of Proposed Project Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Level of Significance	Mitigation Measure	Residual Impact
AESTHETICS AND URBAN DECAY			
Impact AUD-1. The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.	Less than significant	No mitigation required	Less than significant
Impact AUD-2. The proposed project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Potentially significant	**MM AUD-1.** Prior to the issuance of building permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following: (a) **Minimize Spill Light.** All onsite lighting standards and exterior luminaries shall be fitted with filtering louvers, hoods and/or similar technology to minimize spill light to adjacent properties and to reduce light from emitting above the horizontal plane of individual light fixtures. **MM AUD-2.** Prior to the issuance of the final Certificate of Occupancy for each phase of development, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following: (a) **Ensure Fixtures Properly Configured.** The project proponent shall ensure that a nighttime evaluation is conducted by a qualified professional to ensure that spillover light and glare are avoided, and shall make adjustments if needed to fixture configuration to ensure that spill over light is minimized. The project proponent shall provide a copy of the final testing results to the City of Bakersfield for review.	Less than significant
AIR QUALITY			
Impact AQ-1. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than significant	No mitigation required	Less than significant
Impact AQ-2. The proposed project would violate an air quality standard or contribute substantially to an existing or projected air	Potentially significant	**MM AQ-1.** Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
quality violation.		(a) **Obtain Required Permits.** The project shall be required to comply with all applicable rules and regulations as set forth by the San Joaquin Valley Air Pollution Control District (SJVAPCD). To ensure compliance, the project proponent shall obtain all construction permits deemed necessary by the SJVPACD and shall comply with all measures as specified by that agency including, but not limited to: (i) **Fugitive Dust Control Plan**. The project proponent shall develop a Fugitive Dust Control Plan in accordance with SJVAPCD Regulation VIII, Dust Control Requirements to Control Construction Emissions of PM10 (particulate matter 10 microns in diameter or less). The Plan shall include, but is not limited to, the following: A project description, a listing of all anticipated fugitive dust emissions included in the project, and methods for adherence to all regulations related to onsite watering, reduced vehicle speeds, track-out devices, surface stabilization, fugitive dust control practices, free-board limits, mud/dirt accumulation, cease grading during heightened wind speeds. (ii) **Indirect Source Review.** The project proponent shall provide the City with proof that an Indirect Source Review (ISR) application has been approved by SJVPACD, if deemed necessary by that agency. (iii) **Incorporate Measures to Reduce Construction Exhaust Emissions.** The project proponent shall require that all construction contractors to utilize Tier 3 engines for all off-road construction equipment over 50 horsepower, unless such an engine is not available for a particular item of equipment. In the event a Tier 3 engine is not available for any off-road engine larger than 100 horsepower, that engine shall be equipped with retrofit controls that would provide nitrogen oxides (NO_X) and particulate matter emissions that are equivalent to a Tier 3 engine. Additionally, all equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specifications and shall be turned off when not in use, and idling shall be minimized. All vehicles shall also comply with any measures specified by SJVAPCD related to NO_X emissions from on-road heavy-duty diesel haul vehicles. (b) **Valley Fever.** The project proponent shall ensure that construction workers are educated regarding the symptoms and potential health effects associated with exposure to Coccidioides immitis fungus spores; and that construction workers	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		are provided with personal protective equipment such as respiratory equipment (masks), if requested. This will reduce potential exposure to airborne dust and facilitate recognition of symptoms and earlier treatment of Valley Fever. (c) **Reduction of Reactive Organic Gas (ROG) and Nitrogen Oxide (NO_X) Emissions.** The project proponent shall submit evidence, verified by SJVAPCD, that demonstrates that the project's construction and operational-related PM10, ROG, and NO_X emissions will be reduced to below SJVAPCD's numeric threshold of 15, 10, and 10 tons per year, respectively. These reductions can be achieved by any combination of project design, compliance with the ISR, and/or via the project proponent entering into a development mitigation contract (i.e., Voluntary Emission Reduction Agreement, or VERA), with SJVAPCD. If a VERA is utilized, a copy of the executed agreement and implementing reports will be provided to the City to demonstrate compliance. Additionally, the project proponent shall supply updated documents if the requirements change as the VERA is reassessed by SJVAPCD at each phase of project development. This requirement will be enforced and verified by SJVAPCD. The current VERA payment fee for construction emissions is $9,350 per ton of NO_X; payment fees vary by year (i.e., future year payment fees for NO_X could be more than the current price of $9,350) and are sensitive to the number of projects requiring emission reductions within the same air basin. At the time of issuance for building permits for each phase of the project, associated fees will be calculated and collected by SJVAPCD and will depend on the emissions required to be mitigated after all selected emission reduction projects are completed. The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid to SJVAPCD by the project proponent to implement emission reduction projects required for the project. **MM AQ-2.** The project shall continuously comply with the items listed below during all operations of the project and, prior to the issuance of Final Occupancy approval, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate methods for compliance with the following: (a) **Implement Onsite Mitigation to Reduce Operational Emissions.** The project proponents will incorporate the following onsite mitigation into the project design: (i) Use low volatile organic compound (VOC) paint (non-residential *interior*).	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		(ii) Use low VOC paint (non-residential *exterior*). (iii) Require the electrification of landscaping equipment, with a minimum of 3% of lawnmowers, leaf blowers, and chainsaws to be electrified.	
Impact AQ-3. The proposed project would expose sensitive receptors to substantial pollutant concentrations.	Potentially significant	Mitigation Measure MM AQ-1	Less than significant
BIOLOGICAL RESOURCES			
Impact BIO-1. The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Potentially significant	**MM BIO-1.** Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following: (a) **Pay Development Impact Fees Pursuant to the Metropolitan Bakersfield Habitat Conservation Plan.** The project proponent shall pay fees pursuant to the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit, which includes coverage for the San Joaquin kit fox. The payment of development impact fees is considered adequate mitigation under the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit to minimize impacts on special-status species. The fees are placed in an account for habitat acquisition and management to be used by the Metropolitan Bakersfield Habitat Conservation Plan Trust Group. Upon the payment of this fee as specified by the City of Bakersfield, the project applicant will become a sub-permittee and will be allowed the incidental take of the species in accordance with state and federal endangered species laws and mitigation requirements of all parties, including state, federal, and local (City of Bakersfield and Kern County 1994, Incidental Take Permit No. 2081-2013-058-04) (b) **Conduct Preconstruction Clearance Survey.** A biological clearance survey is required for San Joaquin kit fox and burrowing owl. The survey shall be completed according to the requirements of the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit. All surveys must be delivered to the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the City of Bakersfield. If the survey results find a covered species on the project site, a written Notice of Grading is required at least 5 business days prior to any ground disturbance activities (excluding weekends and holidays). The Notice of Grading shall only	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		be submitted after all required minimization measures, according to the Incidental Take Permit, are implemented. (c) **San Joaquin Kit Fox Avoidance and Den Excavation.** If known, active, or natal San Joaquin kit fox dens are identified during the survey, minimization measures identified in the Incidental Take Permit for den avoidance must be demonstrated (Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition of Approval 7.5). If dens cannot be avoided, appropriate monitoring and den excavation as described in Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition 7.6 will be adhered to. (d) **Burrowing Owl Focused Survey and Avoidance and Passive Relocation.** A focused survey following the protocol described in the California Department of Fish and Wildlife *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) will be conducted prior to the start of construction. If burrowing owls are identified on the project site, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls and other raptors). The non-disturbance buffer shall include a minimum 250-foot buffer zone around any occupied burrow unless a qualified biologist approved by the California Department of Fish and Wildlife verifies through non-invasive methods that either (1) burrowing owls have not begun egg laying and incubation, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The sizes of individual buffers may be modified through coordination with the California Department of Fish and Wildlife based on site-specific conditions and existing disturbance levels. During the non-nesting season or if the qualified biologist determines either (1) or (2) above, the project applicant will coordinate with the California Department of Fish and Wildlife to construct artificial burrows and passively relocate the owl(s). Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 50 meters (approximately 160 feet) from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (California Burrowing Owl Consortium 1993). Regarding passive relocation, the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) state that: "Owls should be excluded from burrows in the immediate impact zone and within a 50 m (approx. 160 feet) buffer zone by installing one-way doors in	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or artificial burrow should be provided for each burrow that will be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe or burlap bags should be inserted into the tunnels."	
		(e) **Conduct "Tailgate" Environmental Education for All Construction Personnel.** Prior to initial groundbreaking, a tailgate session shall be conducted by a qualified biologist to educate construction personnel on relevant federal, state, and local laws related to potentially occurring special-status species at the site. The tailgate session shall include training on identification of species that may be found on the project site, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species will also be explained. Personnel will be advised to report any special-status species or burrows promptly. A fact sheet conveying this information will be prepared for display or for distribution to anyone who may enter the project site.	
		(f) **Cap and Inspections of Materials and Equipment.** Material and equipment inspections shall be conducted according to the Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit. All exposed pipes, culverts, and other similar structures with a diameter 4 inches or greater shall be properly capped in order to prevent entry by San Joaquin kit fox or other species. Any of these materials or structures that are left overnight and are not capped shall be inspected prior to being moved, buried, or closed in order to ensure that San Joaquin kit fox or other species are not present within the structure. If a covered species is found within one of these structures, the animal will be allowed to safely escape that section prior to moving or utilizing that segment.	
		(g) **Cover or Inspect All Trenches or Other Potential Entrapments.** All open holes, sumps, and trenches shall be inspected at the beginning, in the middle, and at the end of each day for trapped covered species as required by Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition of Approval 7.15. All trenches, sumps, and other excavations with side walls that have greater than 1:1 slope (45 degrees) and are between 2 and 8 feet deep will	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		be covered when workers or equipment are not actively working in the excavation, including overnight, or shall have an escape ramp constructed of earth or a non-slip material with less than 1:1 slope. All excavations with side walls greater than 1:10 slope and deeper than 8 feet shall be covered when workers or equipment are not actively working in the exaction and at the end of each day. All excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If a covered species is found to be trapped, work is to cease in the vicinity and notification will be made immediately to the California Department of Fish and Wildlife. The animal will be allowed to escape unimpeded, or a qualified biologist will capture and relocate the animal in accordance with California Department of Fish and Wildlife direction. (h) **Protect Nesting Birds.** If construction activities are scheduled to begin between February 15 and September 15, a nesting bird survey will be conducted no more than 5 days prior to the start of any initial activity. If construction is postponed, additional surveys may be required. For any nests that are identified, avoidance buffers will be established to avoid any disturbances that may affect the nesting birds or cause nest failure. The buffer will be determined based on a qualified biologist's determination. If the recommended buffer is less than 500 feet for raptors and less than 250 feet for passerine birds, then a biological monitor will be present whenever construction occurs within 500 feet of a raptor nest or 250 feet of a passerine nest, unless otherwise determined unnecessary by a qualified biologist. If the biologist detects distress or a risk of nest failure resulting from the construction activity, the biologist may halt construction and adjust the buffer as necessary. **MM BIO-2. Other Best Management Practices.** The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project: (a) All trash, including food items, will be disposed of in securely closed or covered containers daily. (b) A project speed limit will be maintained at 20 miles per hour during daylight hours and 10 miles per hour for any driving on site before sunrise or after sunset.	
Impact BIO-2. The proposed project would not interfere substantially with the movement of	Less than significant	No mitigation required	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
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.			
Impact BIO-3. The proposed project would conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Potentially significant	Mitigation Measures MM BIO-1 through MM BIO-2	Less than significant
Impact BIO-4. The proposed project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Potentially significant	Mitigation Measures MM BIO-1 through MM BIO-2	Less than significant
CULTURAL RESOURCES			
Impact CR-1. The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	No impact	No mitigation required	No impact
Impact CR-2. The proposed project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Potentially significant	**MM CR-1.** The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project: (a) **Stop Work if Cultural Resources Are Encountered.** If buried cultural resources, such as chipped or ground stone, historic bottles or ceramics, building foundations, or non-human bone are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material,	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		or mitigation of impacts through data recovery programs such as excavation or detailed documentation. Prior to recommencement of any construction activities, the qualified archaeologist shall provide a pre-grading conference that will provide procedures for archaeological resource surveillance and appropriate treatment of cultural resources. (b) **Provide Notice if Cultural Resources Are Encountered.** If buried cultural resources are discovered that may have relevance to Native Americans, the project proponent shall provide written notice to the City of Bakersfield and to the Native American Heritage Commission and any other appropriate individuals, agencies, and/or groups as determined by the qualified archaeologist in consultation with the City of Bakersfield.	
Impact CR-3. The proposed project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially significant	**MM CR-2.** The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project: (a) **Stop Work if Paleontological Resources Are Encountered During Construction Activities.** If paleontological resources are encountered, all work in the immediate vicinity of the find will halt until a qualified paleontologist can evaluate the find and make recommendations. Paleontological resource materials may include fossils, plant impressions, or animal tracks that have been preserved in rock. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. Construction shall not resume until the appropriate mitigation measures are implemented or the materials are determined to be less than significant.	Less than significant
Impact CR-4. The proposed project would disturb any human remains, including those interred outside of formal cemeteries.	Potentially significant	**MM CR-3.** The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project: (a) **Appropriate Treatment of Human Remains.** If human remains of Native American origin are discovered during project construction, State laws will be followed relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (California Public Resource Code § 5097). According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (§ 8100) and disturbance of Native American cemeteries is a felony (§ 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. (b) **Appropriate Contact Regarding Findings of Human Remains.** If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: (i) The coroner of Kern County has been informed and has determined that no investigation of the cause of death is required, and, (ii) The descendants of the deceased Native Americans, or the Native American Heritage Commission (if the Commission is unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission), have made a recommendation to the landowner or person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in California Public Resource Code § 5097.98.	
GEOLOGY AND SOILS			
Impact GEO-1. The project would not result in substantial soil erosion or the loss of topsoil.	Less than significant	No mitigation required	Less than significant
Impact GEO-2. The project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.	Less than significant	No mitigation required	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
Impact GEO-3. The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life and property.	Less than significant	No mitigation required	Less than significant
GREENHOUSE GAS EMISSIONS			
Impact GHG-1. The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Potentially significant	**MM GHG-1. Implement Onsite Mitigation to Reduce Operational Emissions.** Prior to the issuance of grading permits, the project proponent shall submit evidence to the City of Bakersfield Planning Division to demonstrate adherence to the following: The project shall incorporate the following onsite mitigation into the project design to reduce greenhouse gas emissions associated with project operations: (a) Install high-efficiency lighting to reduce consumption of electricity for lighting, which reduces emissions associated with the generation of electricity. A 75% lighting energy reduction was applied to the proposed project based on the performance of Energy STAR–certified light bulbs, which consume 70–90% less energy than traditional incandescent bulbs; (b) Install low-flow bathroom faucets to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water; (c) Install low-flow toilets to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water; (d) Use water-efficient irrigation systems to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water; and (e) Institute onsite recycling and composting services to reduce offsite, waste-related emissions associated with the proposed project. **MM GHG-2. Reduction of Operational GHG Emissions**. Prior to the issuance of final occupancy for each phase of development, the project proponent shall submit a focused Greenhouse Gas Report that identifies measures for the reduction by 29% of the project's "business as usual" operational carbon dioxide equivalent emissions as quantified in this Environmental Impact Report prepared for the project. The focused air analysis may reference combined state and project-level mitigation that would reduce greenhouse gas emissions and shall be submitted to the San Joaquin Valley	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		Air Pollution Control District for review and comment regarding the methodology used to quantify the reductions. The study can be for each individual phase of construction or for the entire project. Any mitigation program for the reduction of greenhouse gases adopted by the City of Bakersfield or the San Joaquin Valley Air Pollution Control District, which can be implemented for the specific project site and that provides equal or more effective mitigation than this mitigation measure, can be utilized as a replacement for the requirements of this mitigation measure.	
Impact GHG-2. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than significant	No mitigation required	Less than significant
Impact GHG-3. The proposed project would not subject property and persons to otherwise avoidable physical harm in light of inevitable climate change.	Less than significant	No mitigation required	Less than significant
HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-1. The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than significant	No mitigation required	Less than significant
Impact HAZ-2. The proposed project would 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.	Potentially significant	**MM HAZ-1.** Prior to the issuance of grading permits, the project proponent shall provide retain a qualified environmental consulting firm to prepare a Phase II Environmental Site Assessment to evaluate the topics listed below. Any remediation activities identified by the study shall be conducted under the oversight of the City of Bakersfield Fire Department Environmental Services Division, which serves as the local Certified Unified Program Agency. A copy of the final report, as well as evidence to demonstrate compliance with any remediation measures, shall be provided to the City of Bakersfield Planning Division prior to the issuance of the first grading and/or building permits. Project construction activities (unrelated to	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		remediation activities) and site occupancy will not be permitted if it is determined the site is contaminated until the Environmental Services Division determines the site has been safely remediated and is suitable for construction and operation activities to commence. (a) **Soil Sampling in Area with Discolored Soils.** The study shall collect soil samples in the vicinity of potentially affected soil (discolored soil near the drainage basin at the south-central portion of the site) and analyze the samples to evaluate if illegal dumping activities have affected soils in the area. If hazardous materials are discovered in the soils, the study shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division. (b) **Soil Sampling for Lead and Asbestos.** The study shall collect soil samples near the foundation (in the southern portion of the site) and analyze them for lead and asbestos to evaluate if demolition activities have potentially affected the soils in the area. Concurrent with sample collection mentioned above, soil samples shall also be collected in the vicinity of the former dwelling-sized structures near the northeastern corner and the east-central portion of the site and analyzed for lead and asbestos to evaluate if demolition activities have potentially affected the soils in the area. If hazardous materials are discovered in the sampled soils, the study shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division. (c) **Soil Sampling for Agricultural Pesticides.** The study shall collect soil samples across the site and analyze them for organochlorine pesticides, arsenic, and lead. If hazardous materials are discovered in the soils, the qualified hazardous materials professional shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division. **MM HAZ-2.** The project shall continuously comply with the following best management practices during all construction activities and operations of the project: (a) **Discovery of Asbestos.** In the event that suspect asbestos-containing materials are uncovered during project construction, work at the project sites shall immediately halt and a qualified hazardous materials professional shall be	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		contacted and brought to the project sites to make a proper assessment of the suspect materials. All potentially friable asbestos-containing materials shall be removed in accordance with federal, State, and local laws and the National Emissions Standards for Hazardous Air Pollutants guidelines prior to ground disturbance that may disturb such materials. (b) **Discovery of Oil Wells.** In the event that abandoned or unrecorded wells or above-ground fuel storage tanks are uncovered or damaged during excavation or grading activities, all work shall cease in the vicinity of the well or above-ground fuel storage tanks, and the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, shall be contacted for requirements and approval; copies of said approvals shall be submitted to the City of Bakersfield. The California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, may determine that remedial plugging operations may be required.	
Impact HAZ-3. The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.	No impact	No mitigation required	No impact
Impact HAZ-4. The proposed project would be located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area.	Less than significant	No mitigation required	Less than significant
Impact HAZ-5. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than significant	No mitigation required	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
HYDROLOGY AND WATER QUALITY			
Impact WQ-1. The proposed project would violate water quality standards or waste discharge requirements.	Potentially significant	**MM WQ-1.** Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following: (a) **Stormwater Management and Design.** The project proponent shall coordinate with the City of Bakersfield Public Works Department to design the project to ensure that all project runoff can be accommodated by the receiving stormwater system. Design elements shall include, if needed, onsite stormwater management measures, such as onsite detention or selected upgrades to the receiving system. Onsite stormwater management facilities shall be designed and constructed to capture runoff and provide treatment before discharge of pollutant-generating surfaces, including parking areas and buildings and in compliance with City of Bakersfield design standards.	Less than significant
Impact WQ-2. The proposed project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted).	Potentially significant	**MM WQ-2.** Prior to the issuance of building permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that the project has been designed in compliance with the following: (a) **Water-Efficient Fixtures (Outdoor).** The project shall use water-efficient fixtures and recirculated or recycled water (where available) and water-efficient irrigation systems with rain detection/soil moisture–sensing devices. Water features such as outdoor fountains, if used, shall be designed to minimize water loss from overspill, evaporation, and percolation and shall be recirculated. (b) **Water-Efficient Fixtures (Indoor).** The project shall use water-efficient fixtures including showerheads with 1.5 gallons per minute or better, toilets with 1.28 gallons per flush or better, urinals with 0.5 gallon per flush or better, and lavatory faucets with 0.8 gallon per minute or better. Toilets should also use dual-flush. No single-pass cooling systems shall be installed. Additionally, the project proponent shall incorporate the use of water recycling or reuse measures (gray water and process recycling systems) in suitable indoor applications wherever feasible. Feasibility that relies on cost shall be demonstrated with a complete budget to be considered a cause for infeasibility. (c) **Drought-Tolerant Landscaping.** All landscaping shall be drought-tolerant (i.e., low-water demand) and native/adapted/non-invasive plant species in accordance with the appropriate climate zone such as described in the New Sunset Western Garden Book, and shall be subject to approval by the City of Bakersfield.	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		WQ-3. Water Supply Alternatives. Prior to issuance of grading/building permits, the project proponent will (1) achieve annexation of the remaining portion of the site to the Greenfield County Water District; and (2) surrender Overlying Groundwater Rights as a part of the annexation process. If annexation cannot be achieved, the project proponent shall demonstrate an alternative supply of water sufficient to serve the life of project, with the alternative means to be approved by the City of Bakersfield and the water supplier.	
Impact WQ-3. The proposed project would not 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 that would result in substantial erosion or siltation onsite or offsite.	Less than significant	No mitigation required	Less than significant
Impact WQ-4. The proposed project would not 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 that would result in flooding onsite or offsite.	Less than significant	No mitigation required	Less than significant
Impact WQ-5. The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less than significant	No mitigation required	Less than significant
Impact WQ-6. The proposed project would not otherwise	Less than	No mitigation required	Less than

Impact	Level of Significance	Mitigation Measure	Residual Impact
substantially degrade water quality.	significant		significant
Impact WQ-7. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.	Less than significant	No mitigation required	Less than significant
LAND USE AND PLANNING			
Impact LUP-1. The proposed project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	Less than significant	No mitigation required	Less than significant
Impact LUP-2. The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	Potentially significant	Mitigation Measures MM BIO-1 through MM BIO-2	Less than significant
NOISE			
Impact NOI-1. The proposed project would expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.	Potentially significant	**MM NOI-1.** The project shall continuously comply with the following best management practices during all construction activities and operations of the project: (a) **Limit Construction Hours.** No construction activity (including the transportation or delivery of any materials, tools, equipment, or personnel to or from the project site, or the loading or unloading of such materials, tools, equipment, or personnel) within 1,000 feet of a residence shall take place outside of the City's permitted hours of 6 a.m. to 9 p.m. on weekdays and 8 a.m. to 9	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
		p.m. on weekends. In addition, all construction equipment shall be equipped with adequate mufflers and be properly maintained. (b) **Operational Noise.** The project shall be designed to limit the amount of offsite noise generated from future commercial uses to ensure that impacts on any neighboring single-family zoned properties are reduced to below the noise thresholds established by the Metropolitan Bakersfield General Plan.	
Impact NOI-2. The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Less than significant	No mitigation required	Less than significant
Impact NOI-3. The proposed project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Less than significant	No mitigation required	Less than significant
Impact NOI-4. The proposed project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Less than significant	No mitigation required	Less than significant
Impact NOI-5. The proposed project would not be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.	Less than significant	No mitigation required	Less than significant
PUBLIC SERVICES AND UTILITIES			
Impact PS-1. The proposed project would not result in substantial adverse physical impacts	Potentially significant	**MM PS-1: Adequate Fire Flows**. Before start of construction, a fire flow test shall be required to demonstrate availability of 2,000 gallons of water per minute at 20 pounds per square inch over a 4-hour period. No mitigation is required.	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
associated with the provision of new or physically altered fire protection facilities or a need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.			
Impact PS-2. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities or a need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for police protection services.	Less than significant	No mitigation required	Less than significant
Impact U-1. The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	Less than significant	No mitigation required	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
Impact U-2. The proposed project would not 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.	Potentially significant	**MM U-1. Sewer Capacity.** Prior to the issuance of building permits for the first phase of development, or along with submittal of a tentative subdivision map, whichever occurs first, the project proponent shall submit a comprehensive Sewer Study to the City Engineer to determine and verify sufficient sewer capacities downstream of the project. The developer shall construct additional sewer infrastructure to accommodate sewer capacities as identified in the Sewer Study to the satisfaction of the City Engineer.	Less than significant
Impact U-3. The proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than significant	No mitigation required	Less than significant
Impact U-4. The proposed project would have sufficient water supplies available to serve the project from new or expanded entitlements.	Potentially significant	Mitigation Measures MM WQ-2 and MM WQ-3	Less than significant
Impact U-5. The proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than significant	No mitigation required	Less than significant
Impact U-6. The project would not be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.	Potentially significant	**MM U-2. Waste Management Plan.** Prior to the issuance of building permits, the project proponent shall submit a waste management plan to the City of Bakersfield to demonstrate how the project will comply with Assembly Bill 939 and achieve 50% or greater diversion rate for both construction and operational solid waste. In addition, the project shall institute onsite recycling and composting services to reduce offsite, waste-related emissions associated with the proposed project as identified under MM GHG-1.	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
Impact U-7. The proposed project would not fail to comply with federal, state, and local statutes and regulations related to solid waste.	Potentially significant	Mitigation Measure MM U-2 and GHG-1	Less than significant
Impact U-8. The proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy.	Potentially significant	Mitigation Measure MM GHG-1	Less than significant
TRANSPORTATION AND TRAFFIC			
Impact TR-1. The proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	Potentially significant	**MM TR-1.** Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following: (a) **Develop and Implement a Traffic Control Plan.** The project proponent shall develop a Construction Traffic Control Plan in accordance with the policies of the City of Bakersfield Public Works Department. The purpose of the Plan is to mitigate construction-related traffic impacts throughout the course of project construction. The Plan may include, but is not limited to, the following elements: (i) Plan for communicating construction plans with transit providers, emergency service providers, residences, and businesses in the project vicinity that may be affected by project construction. (ii) Identification of roadway segments or intersections that exceed or are approaching the standard of Level of Service C, and provisions for construction-generated traffic to avoid these locations at the peak periods, either by traveling different routes or by traveling at non-peak times of day. (iii) Access and circulation plan for use by emergency vehicles when lane closures adjacent to the site are in effect, including provisions for advance notice to local fire and police departments to ensure that alternative evacuation and emergency routes are designed to maintain response times. (iv) Plan for maintaining access to existing residences on the east side of South H Street during construction activities. (v) Provision for adequate parking for construction worker vehicles, construction trucks, and equipment within the designated staging areas throughout the construction period.	Significant and unavoidable

Impact	Level of Significance	Mitigation Measure	Residual Impact
		(vi) Plan for maintaining pedestrian and bicycle access and circulation during project construction, where safe to do so. (vii) Provisions for traffic controls on roadways adjacent to the project, if needed during lane closures or major construction activities which affect road right-of-way. Provisions could include flag persons wearing bright orange or red vests and using a *Stop/Slow* paddle to control oncoming traffic; posting of construction warning signs in accordance with local standards or those set forth in the *Manual on Uniform Traffic Control Devices* (Federal Highway Administration 2001) in advance of the construction area and at any intersection that provides access to the construction area. (viii) Written notification provided to contractors regarding appropriate routes to and from the construction site, and the weight and speed limits on local roads used to access the construction site. (ix) Provisions for signs to be posted at all active construction areas giving the name and telephone number or e-mail address of the City staff person designated to receive complaints regarding construction traffic. **MM TR-2: Phase I Traffic Improvements.** Prior to the issuance of building permits for the first phase of project development (Phase I), the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that each of the improvements listed below has been designed in accordance with City Standards and will be constructed prior to Opening Day for Phase I or provide its percent share of the local mitigation transportation fee and/or the Regional Transportation Impact Fee (RTIF). All mitigation will be implemented prior to the impact occurring, pursuant to the mitigation fee programs, and the project proponent shall obtain all necessary encroachment permits prior to construction activities. (a) Construct improvements at the intersection of Colony Street/Berkshire Road (ID 33) by adding one northbound through lane and one southbound through lane. (b) Construct improvements at the intersection of South Union Avenue/ Berkshire Road (ID 36) by installing a traffic signal and adding one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, two northbound through lanes, one northbound right-turn lane, one southbound left-turn lane, two southbound through lanes, and one	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		southbound right-turn lane. (c) Construct improvements at the intersection of South H Street/Hosking Avenue (ID 46) by adding one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one northbound through lane, one northbound right-turn lane, one southbound through lane, and one southbound right-turn lane. (d) Construct improvements to widen Hosking Avenue, between State Route (SR) 99 and South H Street, by adding four lanes and a median. (e) Pay the RTIF to construct improvements and install a traffic signal at the intersection of Golden Gate Drive/Panama Lane (ID 17). (f) Pay a 13% share of local mitigation transportation fee to construct improvements at the intersection of Monitor Street/Panama Lane (ID 25), which will include the addition of two northbound through lanes and two southbound through lanes. (g) Pay the RTIF to construct improvements at Cottonwood Road/Panama Lane (ID 28), which will include installation of a traffic signal and the addition of two eastbound left-turn lanes, two eastbound through lanes, one eastbound right-turn lane, two westbound left-turn lanes, two west-bound through lanes, one westbound right-turn lane, two northbound left-turn lanes, one northbound through lane, one northbound right-turn lane, two southbound left-turn lanes, one southbound through lane, and one southbound right-turn lane. (h) Pay the RTIF to construct improvements at the intersection of Ashe Road/McCutchen Road (ID 38), which will include installation of a traffic signal and the addition of two eastbound left-turn lanes, one eastbound through lane, one eastbound right-turn lane, two westbound left-turn lanes, one westbound through lane, one westbound right-turn lane, two northbound left-turn lanes, two northbound through lanes, one northbound right-turn lane, two southbound left-turn lanes, two southbound through lanes, and one southbound right-turn lane. (i) Pay the RTIF to construct improvements at the intersection of Mountain Ridge Drive/McCutchen Road (ID 39), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, two eastbound through lanes, one westbound left-turn lane, two westbound through lanes, two northbound left-turn lanes, one northbound right-turn lane, two southbound left-turn lanes, and one southbound right-turn lane.	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		(j) Pay the RTIF and a 6.96% share of local mitigation transportation fee to construct improvements at the intersection of Cottonwood Road/Hosking Avenue (ID 49), which will include the addition of one eastbound right-turn lane.	
		(k) Pay the RTIF to construct improvements at the intersection of South H Street/McKee Road (ID 53), which will include the addition of one northbound through lane and one southbound through lane.	
		(l) Pay the RTIF to construct improvements at the intersection of South Union Avenue/McKee Road (ID 54), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound left-turn lane, one northbound through lane, one northbound right-turn lane, one southbound left-turn lane, one southbound through lane, and one southbound right-turn lane.	
		(m) Pay the RTIF to construct improvements at the intersection of Akers Road/Taft Highway (ID 56), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound right-turn lane, and one southbound right-turn lane.	
		(n) Pay the RTIF and a 7.2% share of local mitigation transportation fee to construct improvements at the intersection of Hughes Lane/Taft Highway (ID 58), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound right-turn lane, and one southbound right turn lane.	
		(o) Pay the RTIF and a 3.4% share of local mitigation transportation fee to construct improvements at the intersection of Shannon Drive/Taft Highway (ID 61), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound through lane, one northbound right-turn lane, and one southbound right-turn lane.	
		(p) Pay the RTIF to construct improvements at the intersection of Cottonwood Road/Taft Highway (SR 119) (ID 63), which will include the addition of one	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		eastbound left-turn lane and one eastbound right-turn lane. (q) Pay the RTIF to construct improvements at the intersection of Ashe Road/Taft Highway (SR 119) (ID 74), which will include the addition of one eastbound through lane, one eastbound right-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, one northbound right-turn lane, and one southbound left-turn lane. (r) Pay the RTIF and a 2.08% share of local mitigation transportation fee to construct improvements at the intersection of Gosford Road/Panama Lane (ID 87), which will include the addition of one eastbound through lane, one eastbound right-turn lane, one westbound through lane, two northbound left-turn lanes, one northbound through lane, one northbound right-turn lane, one southbound left-turn lane, and one southbound through lane. (s) Pay the RTIF to widen Taft Highway (SR 119) between Wible Road and South H Street by two additional lanes. (t) Pay the RTIF to widen Taft Highway (SR 119) between South H Street and Chevalier Road by two additional lanes. **MM TR-3: Phase II Traffic Improvements.** Prior to the issuance of building permits for the second phase of project development (Phase II), the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that each of the improvements listed below has been designed in accordance with City Standards and will be constructed prior to Opening Day for Phase II (anticipated to be Year 2020, but actual year subject to market conditions) or provide its percent share of the local mitigation transportation fee and/or the Regional Transportation Impact Fee (RTIF). All mitigation will be implemented prior to the impact occurring, pursuant to the mitigation fee programs and the project proponent shall obtain all necessary encroachment permits prior to construction activities. (a) Pay the RTIF and a 7.61% share of local mitigation transportation fee to construct improvements at the intersection of South Union Avenue/White Lane (ID 8), which would include the addition of one eastbound left-turn lane, one eastbound through lane, one westbound left-turn lane, one northbound right-turn lane, and one southbound right-turn lane. (b) Pay the RTIF to construct improvements at the intersection of Golden Gate Drive/Panama Lane (ID 17), which would include the addition of one eastbound	

Impact	Level of Significance	Mitigation Measure	Residual Impact
		left-turn lane, one eastbound through lane, one eastbound right-turn lane, two westbound left-turn lanes, one northbound through lane, and one southbound left-turn lane. (c) Pay the RTIF to construct improvements at the intersection of South Union Avenue/Panama Lane (ID 26), which would include the addition of one eastbound left-turn lane, two eastbound through lanes, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, one southbound left-turn lane, and one southbound right-turn lane. (d) Pay the RTIF to construct improvements at the intersection of Stine Road/Hosking Avenue (ID 40), which would include the addition of one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, and one westbound right-turn lane. (e) Pay the RTIF to construct improvements at the intersection of Hughes Lane/Hosking Avenue (ID 43), which would include the installation of a traffic signal and the addition of two eastbound through lanes, one westbound left-turn lane, two westbound through lanes and one northbound left-turn lane. (f) Pay the RTIF to construct improvements at the intersection of Akers Road/Taft Highway (ID 56), which would include the addition of one eastbound through lane and one westbound through lane. (g) Pay the RTIF to Widen Hosking Avenue between Wible Road and State Route 99, which will add two lanes. (h) Pay the RTIF to Widen Panama Road between Chevalier Road and Cottonwood Road, which will add two lanes.	
Impact TR-2: The project would not 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	Less than significant	No mitigation required	Less than significant

Impact	Level of Significance	Mitigation Measure	Residual Impact
designated roads or highways.			
Impact TR-3: The project would not substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Potentially significant	Mitigation Measure MM TR-1	Less than significant
Impact TR-4: The proposed project would not result in inadequate emergency access.	Potentially significant	Mitigation Measure MM TR-1, TR-2, and TR-3	Less than significant
Impact TR-5: The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less than significant	No mitigation required	Less than significant

Chapter 2
Introduction and Overview

2.1 Intent of the California Environmental Quality Act

The California Environmental Quality Act (CEQA), Public Resources Code § 21000 et seq., was enacted in 1970 by California State Legislature. The intent of CEQA includes the following:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

2.2 Purpose of this Draft Environmental Impact Report

An Environmental Impact Report (EIR) is the public document used by a governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage. An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment. This Draft Environmental Impact Report (DEIR) was prepared to evaluate the potential environmental impacts associated with the State Route (SR) 99/Hosking Commercial Center Project (GPA/ZC 13-0417) (proposed project). This report also identifies mitigation measures and alternatives to the proposed project that may reduce or eliminate significant impacts. This DEIR has been prepared pursuant to CEQA, Public Resources Code § 21000 et seq., Guidelines (California Code of Regulations, Title 14, Chapter 3, § 15000 et seq.) and the City of Bakersfield CEQA Implementation Procedures (1998).

All discretionary projects within the State of California are required to undergo environmental review in accordance with CEQA to determine whether the project would result in any environmental impacts. A project requires environmental review pursuant to CEQA if the whole of its action has the potential to result in either a direct physical change to the environment or a reasonably foreseeable indirect physical change in the environment. More specifically, a project requires environmental review if it incorporates a decision-making action undertaken by a public agency; is an activity that is supported in whole or in part through public agency contracts, grants, subsidies, etc.; or, as is the case for the proposed project, is an activity requiring a public agency to issue a lease, permit, license, certificate, or other entitlement.

Based on the above requirements of CEQA, the City of Bakersfield (City) is required to conduct an environmental review of the proposed project and to consider its potential environmental impacts before making a decision on the proposed project. In accordance with CEQA, the City is the lead agency for the preparation of this DEIR, and the City will be taking primary responsibility for conducting the environmental review and certifying this DEIR.

2.2.1 Issues to Be Resolved

Section 15123(b)(3) of the State CEQA Guidelines requires an EIR to discuss all project-related environmental issues as well as the choices among alternatives and mitigation measures. The major issues to be resolved by the lead agency include the following:

- Does the EIR adequately describe the environmental impacts of the project?
- Should the recommended mitigation measures be adopted or modified?
- Do additional mitigation measures need to be developed?

2.3 Scope of this DEIR

This DEIR addresses the potential environmental impacts of the proposed project, the scope of which is based on the results of an Initial Study (IS) that was prepared in accordance with the CEQA Checklist, as well as input from the public and affected agencies. The scope of the DEIR was established using all of the tools required and recommended by CEQA.

In accordance with Section 15063 of the State CEQA Guidelines, a Notice of Preparation (NOP) was prepared and distributed to responsible and affected agencies and other interested parties for a 30-day public review. The public review period for the NOP began on November 5, 2014, and ended on December 4, 2014. The NOP was also posted in the Kern County Clerk's office for 30 days, and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of this DEIR. A public scoping meeting was held on November 18, 2014, at the City of Bakersfield Community Development Department Conference Room, 2nd Floor,

located at 1715 Chester Avenue, Bakersfield, California, from 2 p.m. to 3 p.m. During the 30-day public review period, written comment letters were received regarding the proposed project. Copies of the NOP, IS, and comments received during the review period are included in Appendix A.

Based on the findings of the IS and NOP, a determination was made that an EIR would be required to address certain potentially significant environmental impacts of the proposed project. Environmental issues that were determined to have a less-than-significant impact or no impact do not require further evaluation and, therefore, are not discussed in this DEIR. The issues for which the project was found to have no impacts or less-than-significant impacts, and the reasons for the determination of significance, are provided in the IS and NOP in Appendix A.

The following potentially significant impacts were identified during the scoping process as potential areas of controversy and are addressed in this DEIR:

- Aesthetics and Urban Decay
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Utilities
- Transportation and Traffic

Chapter 3 of this DEIR is divided into sections for each of the issues listed above and includes a detailed discussion of the associated impacts. Mitigation measures to reduce impacts to a less-than-significant level are identified when significant impacts have the potential to occur.

2.4 Required DEIR Contents

In addition to the environmental issues identified above, this DEIR includes all of the sections required by CEQA. Table 2-1 contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this document.

Table 2-1. Required EIR Contents

Requirement/CEQA Section	Location in this DEIR
Table of contents (§ 15122)	Table of Contents
Summary (§ 15123)	Chapter 1
Project description (§ 15124)	Chapter 3
Significant environmental impacts (§ 15126.2)	Chapter 1 and Sections 4.1–4.12
Environmental setting (§ 15125)	Chapter 3 and Sections 4.1–4.12
Mitigation measures (§ 15126.4)	Chapter 1 and Sections 4.1–4.12
Cumulative impacts (§ 15130)	Chapter 1 and Sections 4.1–4.12
Alternatives to the proposed project (§ 15126.6)	Chapter 5
Growth-inducing impacts (§ 15126.2)	Chapter 6
Effects found not to be significant (§ 15128)	Chapter 1, Sections 4.1–4.12, Chapter 6, Appendix A
Unavoidable significant environmental impacts (§ 15126.2)	Chapter 1, Sections 4.1–4.12, Chapter 6
Organizations and persons consulted (§ 15129)	Chapter 8
List of preparers (§ 15129)	Chapter 9

2.5 Organization and Contents of this DEIR

The content and organization of this DEIR are designed to meet the current requirements of the CEQA Statutes and the CEQA Guidelines. The DEIR is organized as described below.

Chapter 1, ***Executive Summary***, presents a summary of the proposed project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding growth inducement and cumulative impacts.

Chapter 2, ***Introduction and Overview***, describes the purpose and overview of the EIR process and the scope of this DEIR. It also outlines required EIR contents and the organization of this DEIR.

Chapter 3, ***Project Description and Environmental Setting***, describes the project location, project details, and the City's objectives for the proposed project.

Chapter 4, ***Impact Analysis and Mitigation Measures***, describes existing conditions for each environmental issue before project implementation, as well as methods and assumptions used in the impact analysis, regulatory setting, criteria for determining significance, impacts that would result from the proposed project, and applicable mitigation measures that would eliminate or reduce significant impacts.

Chapter 5, ***Alternatives Analysis***, evaluates the environmental impacts of project alternatives, including two no-project alternatives. It also identifies the environmentally superior project alternative.

Chapter 6, ***Consequences of Project Implementation***, includes a brief description of effects found not to be significant or found to be less than significant in the IS/NOP, a discussion of the direct and indirect growth-inducing impacts that could be caused by the proposed project, and a discussion of significant adverse irreversible commitments of resources caused by the proposed project.

Chapter 7, ***Response to Comments***, will include the public and agency comments on the public DEIR and the responses to those comments from the Lead Agency. Note, this chapter is prepared after the public DEIR is circulated for public review and is part of the Final Environmental Impact Report (FEIR).

Chapter 8, ***Organizations and Persons Consulted***, lists the agencies, organizations, and individuals consulted during preparation of the DEIR.

Chapter 9, ***List of Preparers***, lists the individuals involved in preparing this DEIR.

Chapter 10, ***Bibliography***, identifies the documents (printed references) and individuals (personal communications) consulted during preparation of this DEIR. This chapter includes agencies and people consulted to ascertain information for the environmental conditions and impact analysis.

Chapter 11, ***Acronyms and Abbreviations***, lists all acronyms and abbreviations mentioned throughout the DEIR with corresponding definitions.

Appendices provide information and technical studies that support the environmental analysis contained within this document. The following technical appendices are included:

- Appendix A, *Notice of Preparation/Initial Study and Comments Received during Scoping*
- Appendix B, *Biological Resources Evaluation*
- Appendix C, *Voluntary Emissions Reduction Agreement*
- Appendix D, *Water Supply Assessment*
- Appendix E, *Bakersfield Gateway Urban Decay Analysis*

- Appendix F, *Air Quality Impact Analysis*
- Appendix G, *Cultural Resources Report and Addendum*
- Appendix H, *Geologic Hazards Investigation*
- Appendix I, *Phase I Environmental Site Assessment*
- Appendix J, *Environmental Noise Assessment*
- Appendix K, *Traffic Study*

2.6 Availability of this DEIR

The DEIR for the proposed project is being circulated to the public and agencies for review and comment. One of the primary objectives of CEQA is to enhance public participation in the planning process and to gather input as to the important environmental issues to be analyzed in the EIR. Therefore, public involvement is considered an essential feature of CEQA, and community members are encouraged to participate in the environmental review process.

A 45-day review period has been established in accordance with Section 15087 of the State CEQA Guidelines. During the 45-day public review period, which began on June 22, 2015, and will end on August 6, 2015, the DEIR will be available for general public review at:

City of Bakersfield
Community Development Department—Planning Division
1715 Chester Avenue
Bakersfield, CA 93301

Kern County Library–Beale Memorial Library
701 Truxtun Avenue
Bakersfield, CA 93301

Kern County Library–Eleanor Wilson Branch
1901 Wilson Avenue
Bakersfield, CA 93307

Kern County Law Library
1415 Truxtun Avenue, Room 301
Bakersfield, CA 93301

Supporting documents not included in the DEIR are available for general public review at the City's Community Development Department, 1715 Chester Avenue, Bakersfield, California, 2nd Floor. The DEIR will also be available for general public review on the City's website: http://www.bakersfieldcity.us. Interested parties may provide written comments on the DEIR that must be received by 5 p.m. on August 6, 2015. Please address comments to:

Cecelia Griego, Associate Planner II
Community Development Department
Planning Division
City of Bakersfield
1715 Chester Avenue
Bakersfield, CA 93301
Fax: (661) 852-2136

Upon completion of the 45-day public review period, written responses to all comments on environmental issues discussed in the DEIR will be prepared and incorporated into the FEIR. Within the 45-day public review period, the City Planning Commission will hold an EIR Adequacy Hearing to receive public comments on the DEIR, which is tentatively scheduled for July 16, 2015 at 5:30 p.m.; written responses to comments received during the hearing will also be prepared and incorporated into the FEIR. A public meeting will also be held before the Planning Commission to consider a recommendation for the City Council to certify the FEIR along with consideration of approval of the proposed project. The City Council has final authority over certification of the FEIR and project decisions.

Written responses to comments received from any state agencies will be made available to these agencies at least 10 days before the board meeting at which the certification of the FEIR will be considered. These comments, and their responses, will be included in the FEIR for consideration by the City as well as any other decision makers.

2.7 Incorporation by Reference

In accordance with Section 15150 of the State CEQA Guidelines, to reduce the size of the report, the following documents are hereby incorporated by reference into this EIR and available for public review at the City's Community Development Department. A brief synopsis of the scope and content of these documents is provided below.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) (City of Bakersfield 2002) is a policy document with land use maps and related information. It is designed to give long-range guidance to City staff and officials who make decisions that affect growth and resources in the metropolitan Bakersfield planning area. This document, adopted on December 11, 2002, and last amended on May 23, 2012,

helps to ensure that day-to-day decisions conform to the long-range program—which was designed to protect and further the public interest as it relates to the City's growth and development—and mitigate environmental impacts. The general plan also serves as a guide to the private sector regarding the economy so that development initiatives conform to the City's public plans, objectives, and policies.

City of Bakersfield Housing Element

Ensuring the provision of adequate and affordable housing is important to the City's continued economic prosperity and livability. The City's current Housing Element, *City of Bakersfield General Plan ~ Final Housing Element*, adopted in February 2009 and certified in April 2009, provides an understanding of the existing and projected housing needs within the community and sets forth policies and schedules that promote preservation, improvement, and development of diverse types and costs of housing throughout the City. The housing element must maintain consistency with the other elements of the Metropolitan Bakersfield General Plan (City of Bakersfield 2002). An update to the 2009 Housing Element is underway.

City of Bakersfield Municipal Code – Zoning Ordinance

According to Chapter 17.02.030, Purpose, of the City of Bakersfield Zoning Ordinance, Title 17 was adopted to implement the goals and policies of the general plan of the city which serve to promote and protect the public health, safety, peace, morals, comfort, convenience and general welfare. The specific purposes of this title are listed below.

- To assist in providing a definite plan of development for the city and to guide, control and regulate the future growth of the city in accordance with said plan [MBGP]; and
- To protect the established character and the social and economic stability of agricultural, residential, commercial, industrial and other areas within the city, and to assure the orderly and beneficial development of such areas..

2014 Regional Transportation Plan

The latest regional transportation plan (RTP) was adopted in 2014 and amended in 2008. Destination 2030 is a 26-year regional transportation plan that establishes a set of regional transportation goals, objectives, policies, and actions to guide development of planned multimodal transportation systems in Kern County (Kern Council of Governments 2014). It was developed through a continuing, comprehensive, and cooperative planning process and provides for effective coordination between local, regional, State, and Federal agencies. New to the 2014 RTP, California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern RTP to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas emissions from

passenger vehicles and light-duty trucks by 5 percent per capita by 2020 and 10 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA), ensuring consistency between low-income housing need and transportation planning. The 2014 RTP exceeds SB 375 reduction targets for the region and is consistent with the RHNA. In addition, it provides a discussion of all mechanisms used to finance transportation and air quality program implementation (Kern Council of Governments 2014).

Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan (ALUCP) was originally adopted in 1996 but has since been amended to comply with Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5), regarding public airports and surrounding land use planning (County of Kern 2011). As required by that law, proposals for public or private land use developments that occur within defined airport influence areas are subject to compatibility review. The principal airport land use compatibility concerns addressed by the plan are (1) exposure to aircraft noise, (2) land use safety with respect to both people and property on the ground and occupants of aircraft, (3) protection of airport air space, and (4) general concerns related to aircraft overflights.

The ALUCP identifies policies and compatibility criteria for influence zones or planning area boundaries. The ALUCP maps and labels these zones as A, B1, B2, C, and D, ranging from the most restrictive (A: airport property/runway protection zone) to the least restrictive (D: disclosure to property owners only). The City adopted the ALUCP for airports within its limits.

2.8 Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency—in this case, the City's Community Development Department—may require subsequent oversight, approvals, or permits from other public agencies to be implemented. Other such agencies are referred to as *responsible agencies* and *trustee agencies*. Pursuant to Sections 15381 and 15386 of the State CEQA Guidelines, as amended, responsible and trustee agencies are defined as follows:

- A *responsible agency* is a public agency that proposes to carry out or approve a project for which a lead agency is preparing or has prepared an EIR or negative declaration. For the purposes of CEQA, responsible agencies include all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).
- A *trustee agency* is a State agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (Section 15386).

The various public agencies and jurisdictions with a particular interest in the project are outlined below.

2.8.1 State Agencies

California Department of Fish and Wildlife

California Department of Conservation

Governor's Office of Planning and Research

California Air Resources Board

California Native American Heritage Commission

California Department of Transportation, District 6

California Public Utilities Commission

State Water Resources Control Board, Central District

Regional Water Quality Control Board, Central Valley Region

2.8.2 Local Agencies

Local Agency Formation Commission (LAFCO)

Greenfield Water District

Kern Delta Water District

2.9 Project Contacts and DEIR Preparation

The City is the lead agency in the preparation of this DEIR. 4 J's & R, LLC is the project applicant. This DEIR has been prepared by ICF International as an independent contractor to the City. Preparers of this DEIR are provided in Chapter 9, *List of Preparers*.

Key contacts are as follows:

Lead Agency:	City of Bakersfield Community Development Department—Planning Division 1715 Chester Avenue Bakersfield, CA 93301 Contact: Cecelia Griego, Associate Planner II
Project Applicant:	4 J's & R, LLC C/O Quad Knopf, Inc. 5080 California Avenue, Suite 220 Bakersfield, CA 93309 Contact: Dave Dmohowski
EIR Consultant:	ICF International 525 B Street, Suite 1700 San Diego, CA 92101 Contact: Charlie Richmond, Project Manager

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Chapter 3
Project Description and Environmental Setting

3.1 Introduction

The proposed SR 99/Hosking Commercial Center Project (project) involves the construction and operation of a retail commercial center on approximately 85 acres that would consist of up to 800,000 square feet of leasable commercial space and 240 hotel rooms. The applicant is requesting approval of a general plan amendment (GPA) and concurrent zone change (ZC), Circulation Element amendment, as well as future tentative/final subdivision map approval, site plan and final development plan review, water district annexation, comprehensive sign plan review, and planned commercial development approval. This chapter describes the project location, the existing conditions of the project site and surrounding areas, and the proposed project's characteristics, including the potential construction and operation activities.

3.2 Project Location and Existing Conditions

3.2.1 Regional and Local Setting

The project site is in the southern portion of the City of Bakersfield (City), in western Kern County, at the southern end of California's Central Valley. Figure 3-1 shows the regional location of the project site. The project site is bounded by, and adjacent to, State Route (SR) 99 to the west, Berkshire Road to the north, South H Street to the east, and Hosking Avenue to the south. The project site is in the southeastern quarter of Section 25, Township 30 South, Range 27 East, Mount Diablo Base and Meridian. The project site includes Assessor's Parcel Numbers (APNs) 515-020-07, 515-020-08, 515-020-09, 515-020-30, and 515-020-44. Figure 3-2 illustrates the local project vicinity, including the project site.

3.2.2 Physical Setting and Surrounding Land Uses

Historically, the project site has been cultivated for a variety of crops. Historic aerial photographs indicate that since 1946, most of the project site was used for

agricultural production (BSK Associates 2014), which continued until the late 1990s, with the southerly portion of the property farmed until the mid-2000s. A site visit performed by ICF International (ICF) staff in October 2007 and again in November 2014 confirmed that the project site is vacant land that is not under agricultural production.

The project site is relatively flat and gently slopes south-southwest. The site elevation is approximately 358 feet above mean sea level (BSK Associates 2014). The surface and near-surface soils consist of sandy silt, silty sand, sandy silt or silty sand with trace clay, and sand. The soils are classified as Kimberlina fine sandy loam, 0 to 2% slope (Krazan & Associates 2008). The project site does not contain any native habitat, and vegetative cover has been nearly eliminated from periodic disking (Appendix B). No natural streams or rivers, either perennial or intermittent, cross the project site (Appendix B). The project site is not in either a 100-year or 500-year floodplain (FEMA 2014). The nearest water feature is the main branch of the Kern Island Canal (approximately 80 feet to the east), which runs north-south and is adjacent to and to the east of South H Street. The Arvin-Edison Canal trends east-west approximately 0.25 mile to the north of the project site (BSK Associates 2014). Groundwater depth at the project site is 43 feet below ground surface, which is more shallow than the typical depth to groundwater (85 to 175 feet below ground surface) found in the proposed project's vicinity; this groundwater depth is likely from seepage from the nearby Kern Island Canal (Krazan & Associates 2008).

Illegal dumping has occurred on the project site; burned debris, a burned and discarded mattress, 5-gallon containers with unknown contents, and discolored soil have been observed on site. However, the project site does not contain any structures or evidence of past uses that indicate that historical activities have resulted in hazardous conditions on site. The project site is not listed as a hazardous materials site or waste disposal site in any regulatory databases (BSK Associates 2014).

There is an abandoned irrigation well near the northern boundary of the project site, and the well head is currently welded shut. Another well with above-grade piping is located near the southeastern corner of the site. These abandoned wells would not be used as part of the proposed project and would be properly retired in accordance with and as required by state and local guidelines prior to the proposed development. No other improvements are located on the project site (BSK Associates 2014).

There are a number of unpaved roads and trails that bisect the project site. These trails were created by dirt bikes and off-road vehicles that have illegally used the site in the past. There is a 180-foot by 100-foot drainage basin, approximately 10 to 15 feet deep, in the southwestern portion of the project site. There is also an approximately 1- to 2-foot deep trench that extends generally north-south near the eastern border and east-west near the northern and southern borders of the project site (BSK Associates 2014, Figure 2).

Development extending south from the City has reached the project vicinity. The land north of the project site has been purchased by Kaiser Permanente for a

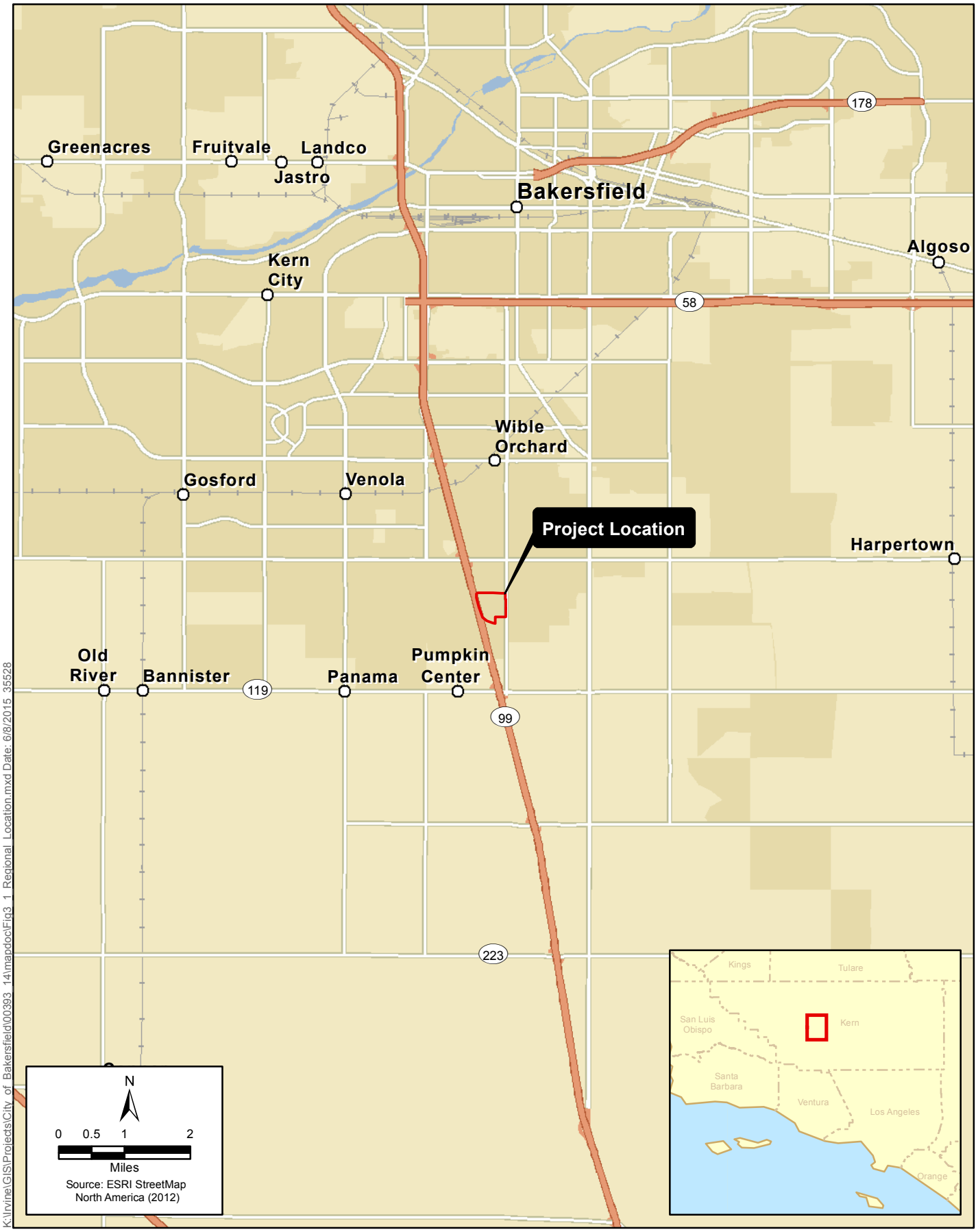

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Figure 3-1
Regional Location
SR 99/Hosking Commerical Center Project

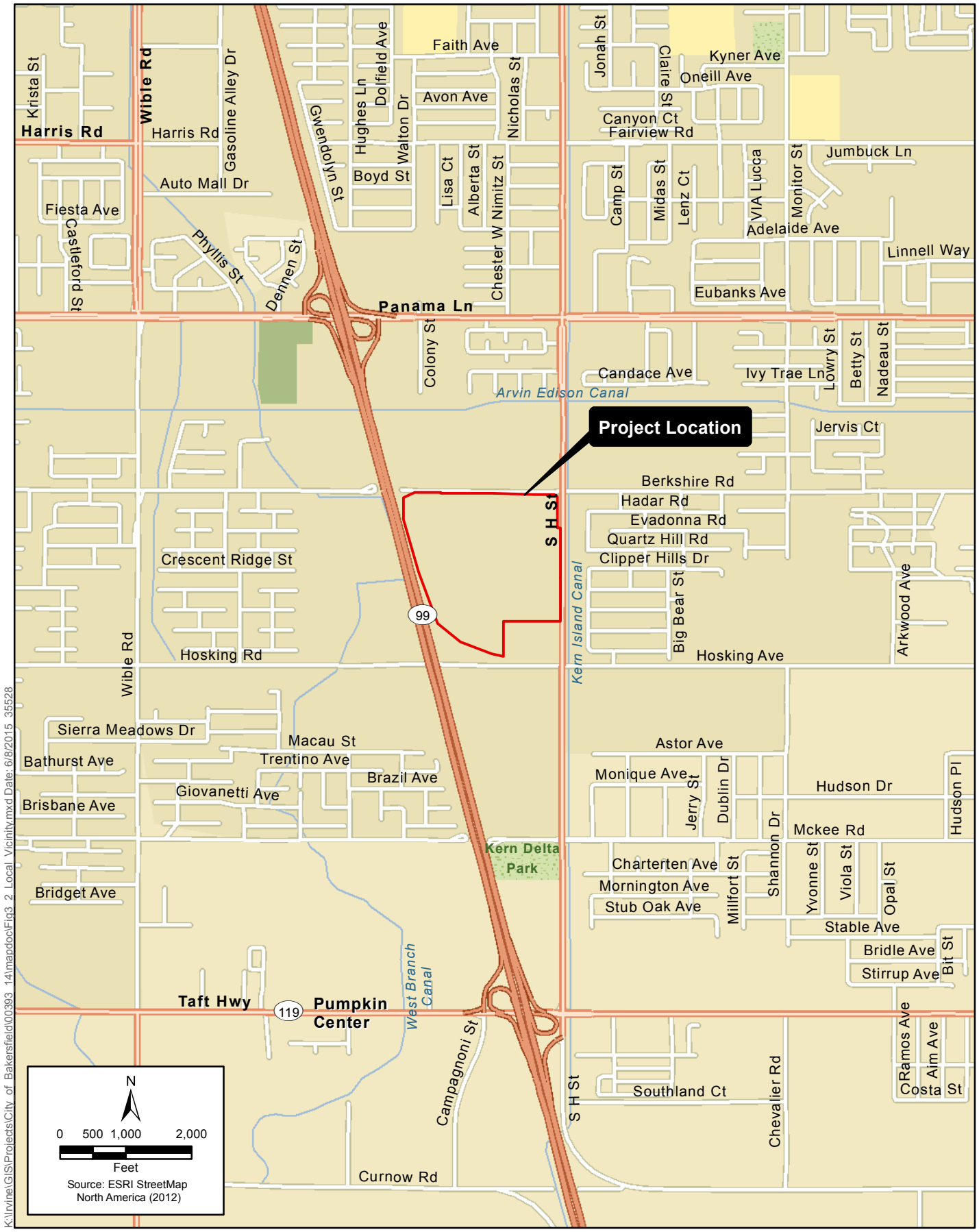

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Figure 3-2
Local Vicinity
SR 99/Hosking Commerical Center Project

possible medical facility development. Table 3-1 summarizes characteristics of the currently developed and vacant land adjacent to the project site at the time that the project's Notice of Preparation was circulated to the agencies and the general public.

Table 3-1. Developed and Vacant Land Adjacent to Project Site

Direction	Developed?	Existing Development
North	No	Vacant, Commercial
East	Yes	Single-Family Residential
South	No	Vacant
West	Yes	State Route (SR) 99 & Single-Family Residential on the west of SR 99

Existing land uses beyond the vacant Kaiser Permanente property include a CarMax facility, Lowe's Home Improvement, and a Walmart Super Center. A Vallarta Supermarket and Greenlawn Mortuary and Cemetery are located to the northeast and northwest of the project site, respectively. Properties to the east of the project site and South H Street (and adjacent to the Kern Island Canal) contain existing residential developments. Land to the south is currently vacant land. SR 99 borders the entire project site's western perimeter, with single-family residential and general commercial to its west. Local features are shown in Figure 3-3.

3.2.3 Existing General Plan and Zoning

The project site is subject to the Metropolitan Bakersfield General Plan (MBGP) and the City's zoning ordinance. Each are described below as they relate to the proposed project site and surrounding areas, and Table 3-2 summarizes the existing MBGP and zoning designations for the project site and surrounding areas.

Table 3-2. Existing MBGP Designation and Zoning

Direction	Existing Land Use Designation	Existing Zoning
Project Site	LR, LMR, HMR, GC	R-1, C-2
North	GC	C-2
East	LR	R-1
South	LR, GC	R-1, C-2
West	LMR, GC	R-1, C-2

C-2 = Regional Commercial
GC = General Commercial
HMR = High-Medium Density Residential
LMR = Low-Medium Density Residential
LR = Low Density Residential
R-1 = One-Family Dwelling

The MBGP is the product of a joint planning effort between the City and Kern County, and it covers all territory within the Bakersfield Metropolitan Priority Area of the Kern County General Plan (City of Bakersfield and Kern County 2002). This area encompasses approximately 408 square miles and extends beyond the current City limits and the City's existing sphere of influence to incorporate the probable ultimate physical boundary and service area of the City. The project site is entirely within the City's current boundaries. Figure 3-4 illustrates current general plan designations within and surrounding the project site.

The MBGP describes the existing land use designations of the project site as follows.

- **Low Density Residential (LR):** Areas with less than or equal to 7.26 dwelling units per net acre that contain single-family detached housing, typical of tract developments (City of Bakersfield and Kern County 2002).

- **Low-Medium Density Residential (LMR):** In the City, areas with greater than 4.0 and less than or equal to 10.0 dwelling units per net acre that are composed largely of attached, single-family townhomes, duplexes, and zero lot line developments. May apply to small multiple-family structures, such as triplexes, and mobile home parks that require a full array of urban services (City of Bakersfield and Kern County 2002).

- **High-Medium Density Residential (HMR):** In the City, areas with greater than 7.26 and less than or equal to 17.42 dwelling units per net acre (City of Bakersfield and Kern County 2002).

- **General Commercial (GC):** Maximum floor area ratio[1] (FAR) of 1.0 and four stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents) (City of Bakersfield and Kern County 2002).

The project site is zoned R-1 and C-2 by the City. Figure 3-5 shows current zoning designations within and surrounding the project site. These zones are described as follows.

- **One-Family Dwelling (R-1):** Typically characterized by single-family subdivision. However, other allowable structures and uses such as accessory buildings (e.g., garages, greenhouses, and swimming pools), home-based daycares, and home occupations can be incorporated (City of Bakersfield Municipal Code 17.10, 2007).

- **Regional Commercial (C-2):** Development of concentrated large-scale retail operations providing a broad range of goods and services that serve the metropolitan market area (City of Bakersfield Municipal Code 17.2, 2007).

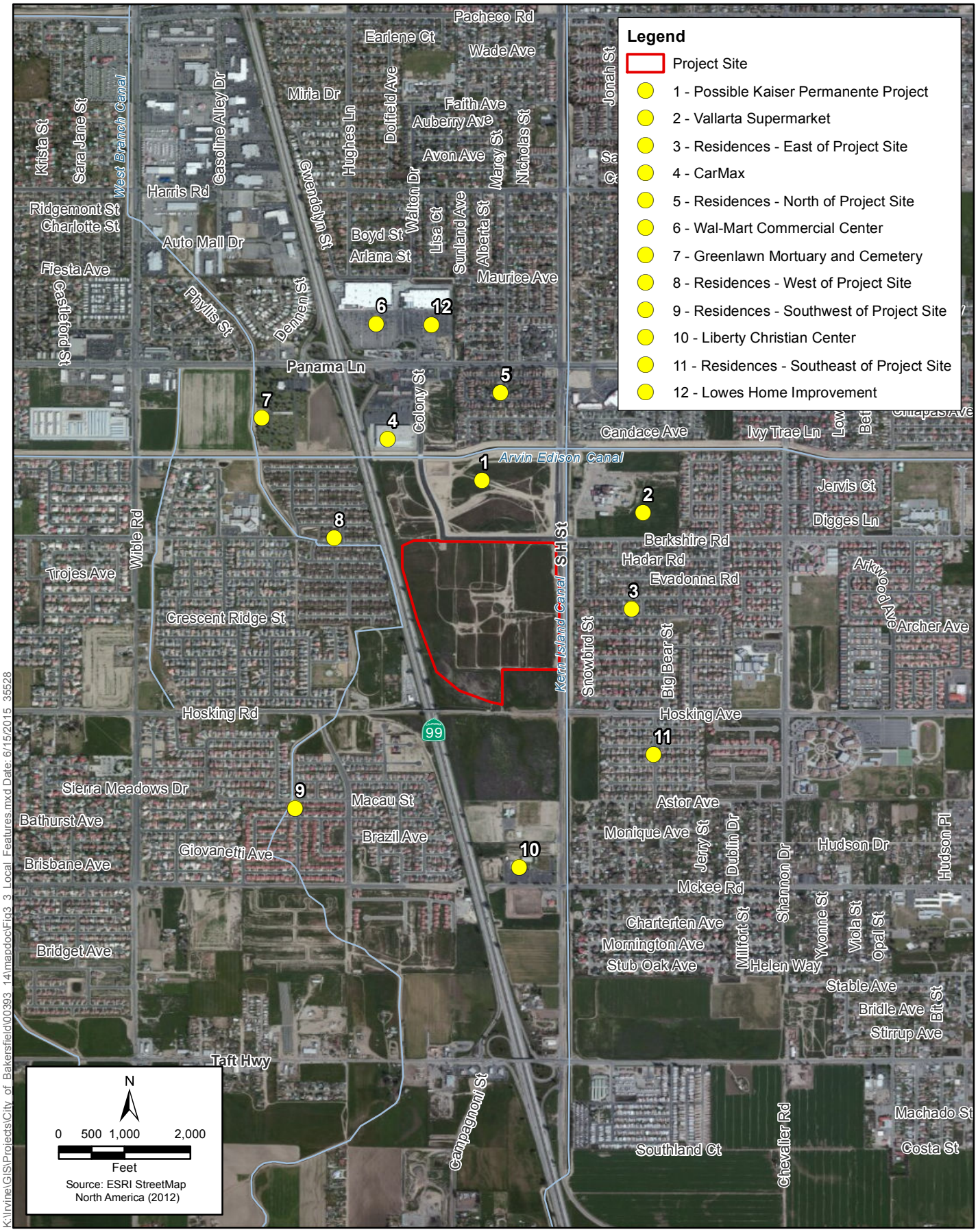

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Figure 3-3
Local Features
SR 99/Hosking Commerical Center Project

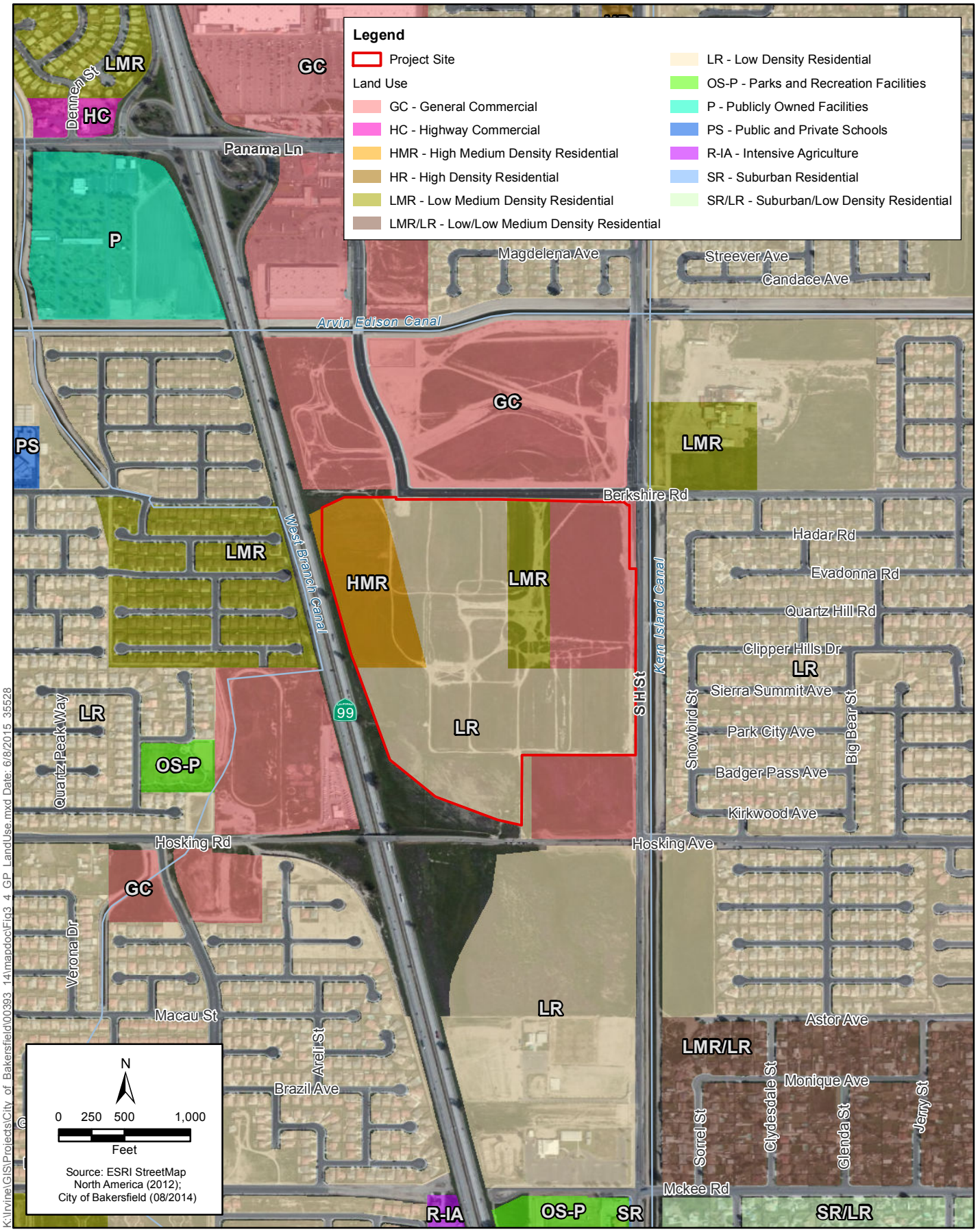

Figure 3-4
General Plan Land Use Designations
SR 99/Hosking Commerical Center Project

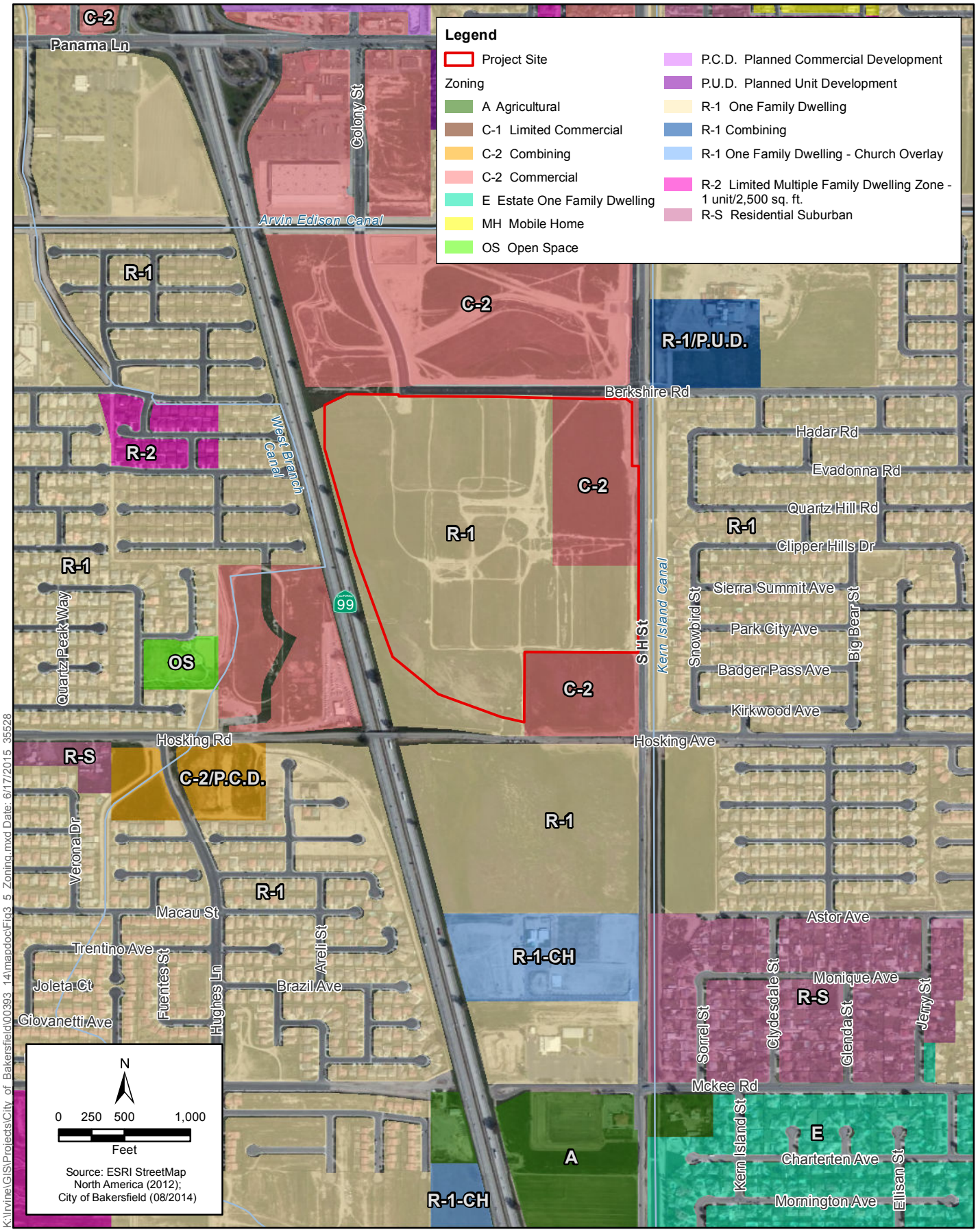

Figure 3-5
Current Zoning Designations
SR 99/Hosking Commerical Center Project

3.3 Project Objectives

The California Environmental Quality Act (CEQA) Guidelines (Section 15124(b)) require that the project description contain a statement of objectives that includes the underlying purpose of the project. The objectives of the proposed project are as follows.

- Provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City of Bakersfield and greater Kern County.
- Assemble a variety of retailers that would satisfy a majority of the shopping needs of the surrounding existing and planned neighborhoods, thus eliminating the need for residents to leave their neighborhoods for goods and services.
- Provide a multi-level hotel to accommodate regional travelers coming to the site and the greater Bakersfield area.
- Provide a highly visible shopping center for regional shopping needs and community development as well as a buffer between existing residential development east of the project site and SR 99.
- Provide a gathering place for City of Bakersfield residents and visitors that includes shopping, entertainment (including a movie theater), and restaurants in a safe and aesthetically appealing environment.
- Facilitate a planned development consisting of national retailers and related in-line tenants consistent with current and future market demands.

3.4 Proposed Project

The proposed project would develop a regional retail shopping center in southern Bakersfield with approximately 800,000 square feet of leasable space and a four-story, 240-room hotel. Surface parking lots associated with the shopping center would accommodate a total of 4,472 parking spaces. Table 3-3 provides a breakdown of the proposed square feet. Figure 3-6 provides a conceptual site plan.

Table 3-3. Approximate Leasable Commercial Space

Commercial Space	Total Area (square feet)	Notes
Anchor	100,000	--
Anchor	110,000	--
Entertainment Anchor	35,000	--
Retail	450,000	Approximately 16 leasable storefront spaces of 4,000 to 60,000 square feet
Restaurant	45,000	Approximately 10 leasable spaces of 3,000 to 8,000 square feet
Theater	60,000	Part of two-story structure that includes retail
Total	**800,000**	

The project site is approximately 85 gross acres, approximately 16 acres of which would be dedicated to public right-of-way street improvements along Berkshire Road, South H Street, and Hosking Avenue. The proposed remaining 69 net acres would be dedicated to various structures and associated surface parking lots, internal street and pedestrian walkway improvements, and landscaped areas.

The proposed project's design would be required to emphasize pedestrian movement and would be consistent with the City of Bakersfield's Municipal Code, Chapter 17.08.140, *Design standards for large retail developments*. Standards would include the creation of plazas and seating with meandering walkways and sidewalks connecting the shops. Security lighting and project identification signage, designed in conformance with standards suggested by the International Dark Sky Association, would be provided for the parking lots and proposed structures.

Bus turnouts would be provided to facilitate mass transit to the project site, as approved by the Golden Empire Transit (GET) District. The turnouts would include benches, trash cans, signage, and structures to provide shading and weather protection. The project proponent would also provide additional bus stops outfitted with benches, trash cans, signage, and protective structures. These design measures are intended to encourage the project site as a "destination" point, which would potentially reduce traffic congestion and associated air quality emissions by providing alternatives to automobile use to access the project site. The project site is in an "intensified activity center" as designated in the MBGP (City of Bakersfield and Kern County 2002, Figure II-2, pages II-2 and II-3). The proposed project's design and scale are consistent with this centers concept, which is described in the MBGP as "the focusing of new development into distinctive centers which are separated by low land use densities" (City of Bakersfield and Kern County 2002). The centers concept provides for a land use pattern consisting of several concentrated mixed-use commercial and high-density residential centers surrounded by medium-density residential uses (City of Bakersfield and Kern County 2002). The proposed project, coupled with other

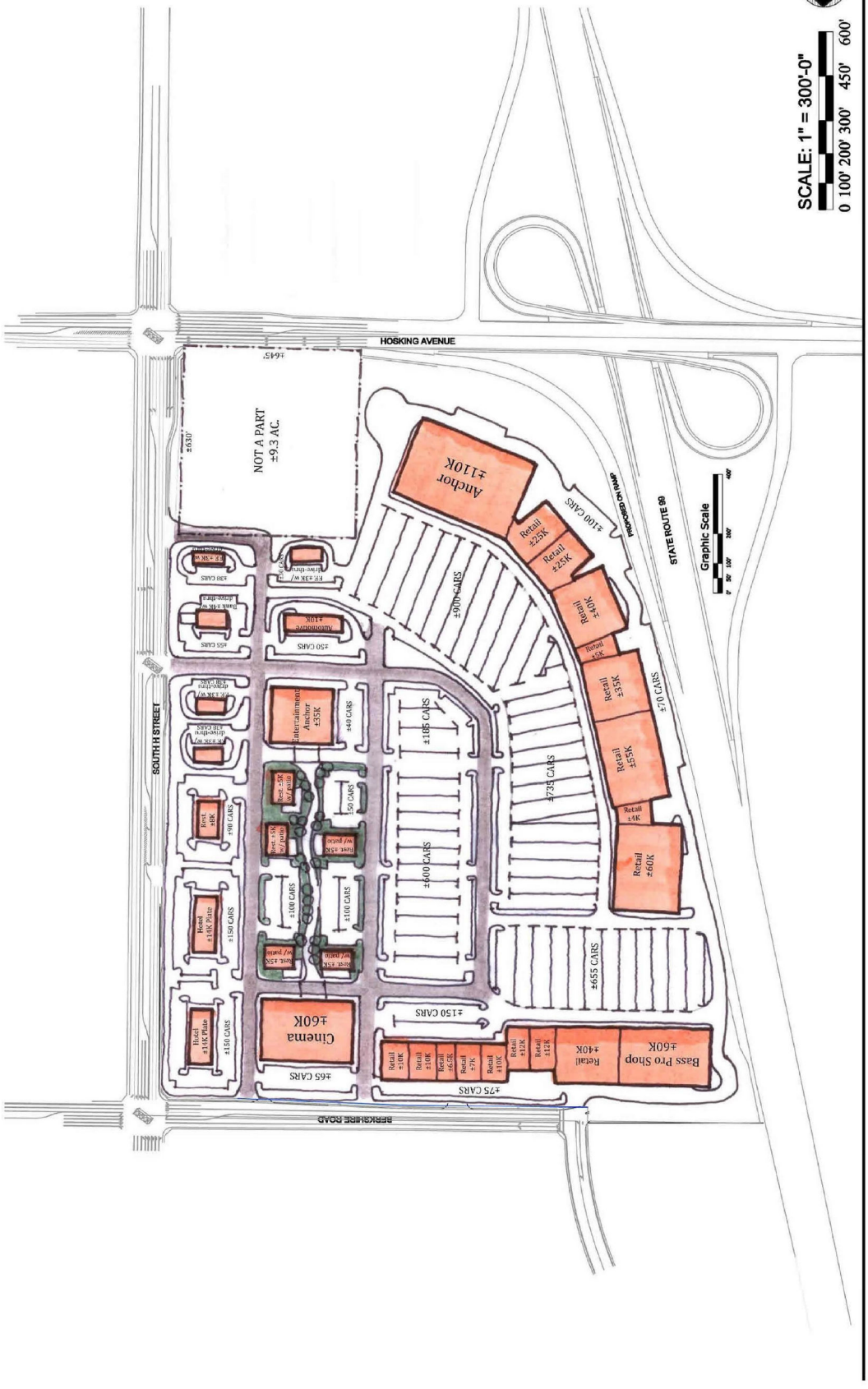

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Figure 3-6
Conceptual Site Plan
SR 99/Hosking Commerical Center Project

existing commercial land uses (e.g., CarMax, Lowe's Home Improvement, and existing commercial land uses along Panama Lane), would provide for the high density mixed-use commercial nucleus surrounded by medium-density residential land uses as envisioned in the centers concept. As the MBGP points out, this concept "encourages people to live and work in the same place and, thus, serves to minimize sprawl and reduce traffic, travel time, infrastructure costs, and air pollution" (City of Bakersfield and Kern County 2002).

3.4.1 Engineering Components

Because of the proposed project's scope and magnitude and attributes inherent to the project site, there are engineering design considerations that need to be addressed. The *Preliminary Site Study for Bakersfield Gateway Shopping Center* (M.S. Walker & Associates 2008) was prepared for the project site and identified, evaluated, and recommended solutions and strategies for addressing design considerations associated with site grading and drainage, sanitary sewer, potable water, and street design. Each of these considerations is described in greater detail below.

Site Grading

The project site's natural grade is generally lower or very near the same elevation as the surrounding area and adjacent streets. This condition allows for coordination of pad elevations, but creates problems with street and parking grades and drainage. Streets and parking to have an adequate slope for drainage purposes. The grading would require approximately 650,000 cubic yards (cy) of cut and approximately 550,000 cy of fill, and would result in an approximately 100,000 cy of soil surplus. This surplus would be balanced on site or hauled away to an approved location.

Site Drainage

A collection of curb and gutter inlets with redundant drainage functions and storm pipes located in the parking areas would be used in conjunction with stormwater flows to capture and control runoff (M.S. Walker & Associates 2008). Additionally, a small portion of runoff from the east along South H Street and from the south along Hosking Avenue would be collected by the proposed project's stormwater drainage system. The developer shall provide onsite sumps for storm water drainage.

Sanitary Sewer

Sanitary sewer trunks exist under South H Street and Hosking Avenue, and a sewer stub exists at the intersection of South H Street and Berkshire Road to

accommodate westerly expansion. The trunk line was sized for residential development and may need to be expanded for commercial development. A project sewer study will be prepared that will provide the necessary specifications. The existing stub would be employed and extended with a 12-inch diameter sewer pipe to accommodate the proposed project (M.S. Walker & Associates 2008). Because improvements to this intersection would occur as a result of necessary street upgrades for the proposed project, connection to this trunk line is considered on site and part of the impact analysis for the proposed project. In addition, most of the project site's sewer system would connect to the existing system in either South H Street or Hosking Avenue (or both), whichever best serves the proposed project's needs. Connection to the existing sanitary sewer system would be in compliance with site requirements for sanitary sewer service outlined in Section 1.2.1 of the City's Subdivision Manual.

All sanitary sewer lines, except for the sewer laterals, would be within the drive aisles on site. This design is used to keep the sewer within common areas where parking is not allowed to accommodate maintenance accessibility at all times. The onsite sewer system would consist of approximately 350 feet of 12-inch sewer pipe, 410 feet of 10-inch sewer pipe, 2,400 feet of 8-inch sewer pipe, and 1,975 feet of 6-inch sewer pipe, as well as 17 utility holes. These amounts do not include the length of sewer laterals to each structure (M.S. Walker & Associates 2008).

Potable Water System

A Water Supply Assessment (WSA) was prepared for the proposed project (Appendix D). The WSA determined that project demands will be met by current groundwater aquifer supplies as well as the landowner's overlying groundwater rights for the same aquifer that will be pumped from Greenfield County Water District (GCWD) wells. Further discussion about water demand and water supply can be found in Section 4.11, *Public Services and Utilities*, and in Section 3.5.4, *Proposed Water Supply*, below.

Potable water pipes would be laid out to parallel the proposed project's sewer lines with acceptable safe separation. Preliminary design indicates that a minimum 8-inch-diameter potable water pipe would be required for the mainline loop through the project site, but the required size may increase to 10- or 12-inch-diameter when the final site plan is developed (M.S. Walker & Associates 2008).

Potable Water System Connection Scenarios

Connection to GCWD's potable water system would occur at two points to create a loop system. The first point would be a pipe stub located east of the Berkshire Road/South H Street intersection and east of the Kern Island Canal. From this connection, piping would be run through a sleeve under the bridge over the Kern Island Canal, and then constructed to the west underneath the intersection and

Berkshire Road for approximately 1,500 feet and then onto the project site underneath the Berkshire Road/Colony Street intersection. Because improvements to this intersection would occur as a result of necessary street upgrades for the proposed project, connection to this stub is considered on site and part of the impact analysis for the proposed project. The second connection point would be in a pipe stub in Hosking Avenue just east of the Kern Island Canal. As with the other line, it would run in a sleeve under the Hosking Avenue Bridge over the Kern Island Canal, and then a pipe would be constructed to connect with a line running down H Street, thus completing the loop. The loop would be connected at the intersection of Berkshire Road and Colony Street.

Street Design

The project site is bound by, and adjacent to, SR 99 to the west, Berkshire Road to the north, South H Street to the east, and Hosking Avenue to the south. Of these roads, SR 99 and the SR 99/Hosking Interchange would not require improvements by the project proponent.

The SR 99/Hosking Interchange is being constructed by the City and the California Department of Transportation (Caltrans) to allow access onto and off of SR 99 from Hosking Avenue in all directions. Therefore, only a small portion of Hosking Avenue would be improved by the project proponent. Hosking Avenue is classified as an arterial road (City of Bakersfield and Kern County 2002). Hosking Avenue is currently paved, but otherwise unimproved. An additional four lanes plus a median would need to be constructed by the project proponent. In addition, the project proponent would be responsible for constructing a dual southbound right turn lane at South H Street and Hosking Avenue.

South H Street is currently improved to a width of 42 feet. An additional 52 feet in width would be dedicated from the project site and 3,500 linear feet of street improvements would be constructed by the project proponent. These improvements to South H Street would result in a minimum 117-foot-wide right-of-way with 99 feet of improved surfaces, including a raised median. South H Street is classified as an arterial road (City of Bakersfield and Kern County 2002), and ultimate improvements to the road would include six lanes and a bike lane in each direction (M.S. Walker & Associates, Inc. 2008).

Both South H Street and Hosking Avenue would be widened at their intersection to provide multiple turn lanes in both directions. This intersection would be signalized.

3.4.2 Construction Phasing

The proposed project would be constructed in two phases. Phase I would consist of grading the entire project site; installing street improvements, street lighting, and landscaping that fronts the major roads surrounding the project site; and

installing all sanitary sewer, potable water, and storm drainage structures throughout the project site. All necessary street widening and right-of-way improvements to South H Street and Hosking Avenue would occur during the first phase. Additionally, construction of the proposed 100,000-square-foot anchor store and 300,000 square feet of leasable commercial space for a total of 400,000 square feet as well as development of the first 120 hotel rooms would occur during Phase I. The anchor may be constructed and open prior to the rest of Phase I. It is currently unknown which 300,000-square-foot portion of commercial space would be constructed at the site during Phase I. Paving, landscaping, and electrical and communications service would also be provided for the anchor store and the 300,000 square feet of commercial space during Phase I. Phase II would consist of building the remaining 400,000 square feet of leasable commercial space in addition to the remaining 120 hotel rooms. Paving, landscaping, and electrical and communications services would also be provided for the 400,000 square feet of commercial space and additional hotel rooms during Phase II.

It is anticipated that construction of the proposed commercial center would commence within 1 month of the completion of necessary permitting from the City, which is expected in fall 2015. Accordingly, construction of Phase I is expected to commence in fall/winter 2015. Construction of 100,000 square feet of commercial space (part of Phase I) is expected to take approximately 12 months, with an anticipated opening date of fall 2016 for the first anchor store. Construction of the remaining 300,000 square feet of commercial space for Phase I is anticipated to begin a few months after the beginning of anchor store construction and is expected to be completed winter 2016–2017. Phase II construction would follow once market conditions indicate there will be sufficient demand.

All construction staging (for construction equipment and materials) and temporary construction parking areas would be contained within the footprint of the project site. No public streets would be used for construction staging or for parking by construction employees.

3.5 Requested Entitlements and Approvals

The applicant's specific entitlement objective under this environmental document is to obtain City approval of a GPA, ZC, MBGP Circulation Element Amendment, tentative/final subdivision map approval, site plan and final development plan review, and planned commercial development approval. Other potential entitlement approvals may include, but not be limited to, approval of a comprehensive sign plan to provide signage that is compatible with the architectural design of the center. Also requested is a water district annexation into the GCWD to be approved by the Kern County Local Agency Formation Commission (LAFCO), as the responsible agency. The requested entitlements are discussed in detail below.

3.5.1 Proposed General Plan Amendment

The proposed project involves a request for approval of a GPA to designate the entire project site as a GC land use designation. The proposed GPA would change those portions of the site designated LR (~50 acres), LMR (~7 acres), and HMR (~13 acres) to:

- **General Commercial (GC)**, a maximum FAR of 1.0 and 4 stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents) (City of Bakersfield and Kern County 2002).

The remaining ~15 acres of the site are already designated as GC (refer to Figure 3-4).

3.5.2 Proposed Zone Change

The proposed project involves a request for approval of a concurrent ZC to modify the zoning on a roughly 73-acre portion of the site from R-1 to C-2/PCD, as follows:

- **Regional Commercial/Planned Commercial Development Zone (C-2/PCD):** Typically associated with larger commercial centers that may contain a number of larger scale stores as well as a mixture of smaller retail outlets, which can include any use permitted for Professional and Administrative Office (C-0) and Neighborhood Commercial (C-1), apparel and accessory stores, automobile dealerships, computer software stores, department stores, farmers markets on weekends, hardware stores, hotels, restaurants and other eating-related places, sporting goods stores, theaters, and public or commercial parking (City of Bakersfield Municipal Code 17.24, 2007).

The remaining 12 acres (approximate) of the site are already zoned C-2 (Figure 3-5). The existing C-2 portions of the project site would be rezoned to add the Planned Commercial Development (PCD) overlay, combining the designations to be consistent with the remainder of the project site. In connection with the commercial zone, a PCD Development Plan Review and approval of a tentative parcel map are also proposed. The intent of the PCD designation is to provide flexibility for commercial developments so that a more cohesive design can be achieved. PCD zoning allows for innovative design and diversification in the relationship of various uses, buildings, structures, lot sizes, and open spaces while ensuring compliance with the general plan and the intent of the municipal code. The PCD zone would be used in combination with the proposed commercial zone to define the allowable uses and to ensure future site development that is compatible with surrounding development and recognizes the unique site characteristics (City of Bakersfield Municipal Code 17.54, 2007).

3.5.3 Proposed Circulation Element Amendment

The proposed project also involves a request for approval of an MBGP Circulation Element amendment. This amendment would eliminate a collector road (Colony Street) segment currently shown on the MBGP Circulation Element map (City of Bakersfield and Kern County 2002) that travels through the project site. A collector road has 90 feet of right-of-way with four travel lanes, without a raised median. This segment of Colony Street is shown intersecting with Berkshire Road to the north of the site, traveling southbound along the western edge of the site, turning east in about the middle of the site, and then connecting with South H Street at an intersection. This collector road segment has not been built, but its route through the site is shown on the current map. The proposed amendment would eliminate this segment of Colony Street from the MBGP Circulation Element map.

3.5.4 Proposed Water Supply

The majority of the project site lies within the district boundary of GCWD, but an approximately 17-acre area in the southern portion of the project site lies outside of the district boundary; the entire project site is in the GCWD sphere of influence. The project proponent is pursuing an annexation of this portion of the project site into the GCWD service boundary. The project proponent and GCWD have entered into agreements initiating the annexation process and appointing GCWD as agent to extract groundwater. As part of the agreements, the project proponent is responsible for preparing maps, exhibits, and legal descriptions that GCWD needs for annexation.

In accordance with California Senate Bill (SB) 610, the project proponent has prepared a WSA (Appendix D). The assessment is necessary because the proposed project would develop greater than 500,000 square feet of commercial floor space and, therefore, is considered a "project" within the scope of SB 610. The WSA determined that GCWD would have sufficient water supplies to meet project demands, as well as overall GCWD demands (Table 6 of Appendix D). Project demands would be met through GCWD's existing groundwater rights from native aquifer supplies, as well Mr. John Giumarra's overlying groundwater rights for the same aquifer that will be pumped from GCWD wells. An Agreement for Overlying Lands would be executed, in which GCWD acts as an agent, to allow GCWD to utilize Mr. Giumarra's Overlying Groundwater Rights as a landowner. District demands would also continue to be met with pumping native groundwater, which GCWD has been using to serve its existing customers based on existing groundwater rights. To ensure water supply reliability during single dry year or multiple dry years, GCWD will use its storage reserve of canal seepage water from Kern Delta Water District (KDWD). As part of an Urban Customer Service Agreement, GCWD receives 100% of the surface water seepage losses from the Kern Island Canal system as groundwater recharge and to maintain groundwater aquifer levels. This water would be used only during times of water shortages. (Appendix D). The agreement will not take effect until and unless the City certifies the Final Environmental Impact Report (EIR).

As required by California law, a proposed annexation must also be approved by the Kern County LAFCO GCWD would submit the annexation application and this EIR to Kern County LAFCO. As a subsequent action, Kern County LAFCO would accept, accept with revisions, or reject the annexation application presented by GCWD. If the project proponent decided to proceed with the annexation process, during the plan check and prior to final map approvals, the project proponent must provide the City with written documentation that the proposed project's annexation application has been approved by Kern County LAFCO. Therefore, Kern County LAFCO is a Responsible Agency under CEQA.

3.5.5 Responsible Agency Designation and Approval

As noted above, KDWD has entered into a Water Purchase Agreement with GCWD to sell water from canal seepage on an annual basis, subject to the terms of the agreement (Appendix D). The infrastructure for delivery of this water exists, and there is no need for additional infrastructure (S. Nicholas pers. comm.). This agreement is incorporated by reference and can be found in Appendix D. As such, if it is determined the water purchase agreement meets the definition of a project under CEQA, the agency must find that this EIR addresses the environmental impacts of this water supply sufficiently or if additional analysis is required. KDWD is therefore designated as a responsible agency.

As noted above, the applicant has also requested a water district annexation into the GCWD to be approved by the Kern County LAFCO as the responsible agency.

3.6 Project Consistency with General Plan Land Use Element

An analysis of project consistency with the MBGP Land Use Element can be found in Section 4.9, *Land Use and Planning*. The analysis determined that the proposed project would be consistent with the MBGP Land Use Element.

3.7 Cumulative Projects

3.7.1 Introduction and Overview

The State CEQA Guidelines (Section 15130) require that cumulative impacts be analyzed in an EIR when the resulting impacts are cumulatively considerable and, therefore, potentially significant. Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably

foreseeable future projects. The discussion of cumulative impacts must reflect the severity of the impacts as well as the likelihood of their occurrence. However, the discussion does not need to be as detailed as the discussion of environmental impacts attributable to the proposed project alone. Furthermore, the discussion should remain practical and reasonable in considering other projects and related cumulatively considerable impacts. According to § 15355 of the State CEQA Guidelines:

> "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Furthermore, according to State CEQA Guidelines § 15130 (a)(1):

> As defined in Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

In addition, as stated in the State CEQA Guidelines, § 15064(i)(5), it should be noted that:

> [t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

Therefore, the cumulative impacts discussion in an EIR focuses on whether the impacts of the proposed project are cumulatively considerable within the context of combined impacts caused by other past, present, or future projects. The cumulative impact scenario considers other projects proposed within the area that have the potential to contribute to cumulatively considerable impacts.

3.7.2 Cumulative Impact Assessment Methodology

Determination of the significance of a cumulative impact, and whether the proposed project's incremental contribution to a cumulative impact is considerable, can be analyzed using either the project list or projection approach. This Draft EIR (DEIR) primarily uses the projection approach, which bases the cumulative impact analysis on general growth projections contained in the

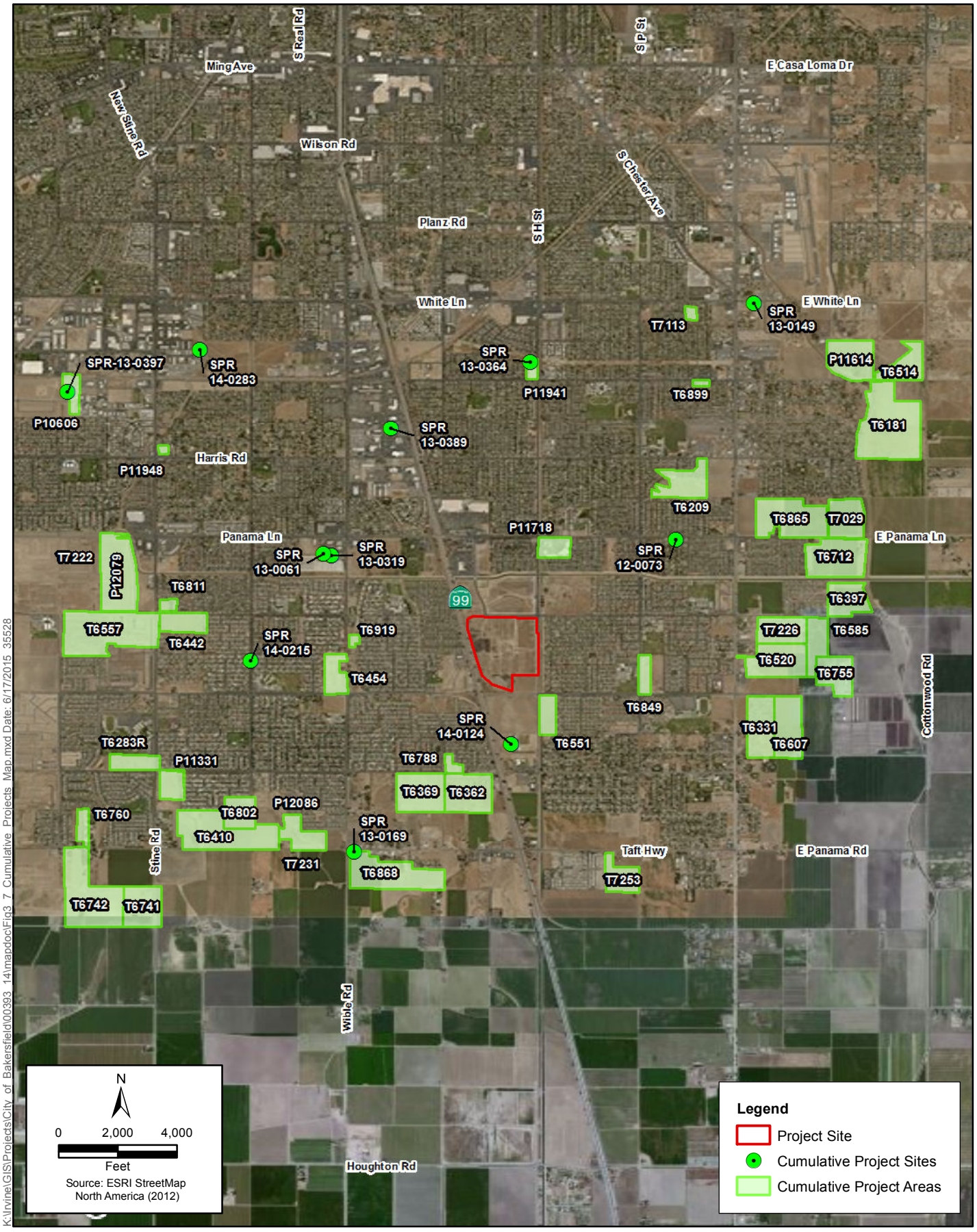

Figure 3-7
Cumulative Projects
SR 99/Hosking Commerical Center Project

MBGP. In using this approach, the City relies on the MBGP to evaluate regional conditions that contribute to cumulative impacts. This DEIR supplements the projections approach with a list of related projects in the project vicinity. The study area for the list includes projects that are within an approximately 2-mile radius because projects beyond this radius will have little to no contribution to the cumulative project impacts within the project's vicinity. This list is summarized in Table 3-4 and project locations are shown on Figure 3-7.

Although the projection approach is used as the primary method for assessing cumulative impacts, this chapter also addresses the specific potential cumulative impacts from the Interchange Project because of its proximity to the proposed project. The interchange site is immediately adjacent to the southeastern corner and western boundary of the project site. It is bound by, and adjacent to, SR 99 to the west and by Hosking Avenue to the south. The Interchange Project is currently under construction and estimated to be complete by fall 2015.

Table 3-4. List of Cumulative Projects

Project Name	APN/Location	Development Description	Status	Parcel Acres	No. of Residences	Building Size (sq ft)
Tract Map Projects						
Tract 6454	515-040-22	68 lots on 17.9 acres	Tentatively approved; approved grading plan	17.9	68	-
Tract 6551	517-010-01	39 lots on 13.8 acres	Approved	13.8	39	-
Tract 6849	516-020-25	38 lots on 10.01 acres	Tentatively approved	10.01	38	-
Tract 6369	514-040-05	187 lots on 40.03 acres	Tentatively approved; approved grading plan	40.03	187	-
Tract 6362	514-740-01	167 lots on 40.09 acres	78 lots recorded	40.09	167	-
Tract 6868	184-170-10/15/27/32	156 lots on 56.33 acres	Tentatively approved; approved grading plan	56.33	156	-
Tract 7253	185-070-27	79 lots on 20.14 acres	Tentatively approved	20.14	79	-
Tract 7231	514-020-58	59 lots on 23.67 acres	Tentatively approved	23.67	59	-
Tract 6410	514-190-01, 514-020-10/25	140 lots on 65.54 acres	Tentatively approved	65.54	140	-
Tract 6802	514-020-08	79 lots on 21.7 acres	Tentatively approved	21.7	79	-
Tract 6788	514-030-07	19 lots on 4.22 acres	Tentatively approved	4.22	19	-
Tract 6919	515-110-10	10 lots on 2.52 acres	Tentatively approved	2.52	10	-
Tract 6181	-	364 lots on 78.88 acres	Tentatively approved	78.88	364	-
Tract 6209	-	120 lots on 28.79 acres	42 lots recorded	28.79	120	-
Tract 6283	-	2 lots on 16.14 acres	Tentatively approved; approved grading plan	16.14	2	-
Tract 6331	-	155 lots on 36.03 acres	87 lots recorded	36.03	155	-
Tract 6397	-	122 lots on 27.1 acres	Tentatively approved; approved grading plan	27.1	122	-

Project Name	APN/Location	Development Description	Status	Parcel Acres	No. of Residences	Building Size (sq ft)
Tract 6442	-	79 lots on 19.79 acres	Tentatively approved	19.79	79	-
Tract 6514	-	111 lots on 13.18 acres	Tentatively approved	13.18	111	-
Tract 6520	-	287 lots on 67.6 acres	132 lots recorded	67.6	287	-
Tract 6557	-	311 lots on 78.34 acres	135 lots recorded	78.34	311	-
Tract 6585	-	79 lots on 22.32 acres	Tentatively approved; approved grading plan	22.32	79	-
Tract 6607	-	151 lots on 36.05 acres	Tentatively approved	36.05	151	-
Tract 6712	-	182 lots on 48.01 acres	Tentatively approved	48.01	182	-
Tract 6741	-	142 lots on 31.7 acres	Tentatively approved	31.7	142	-
Tract 6742	-	183 lots on 58.61 acres	Tentatively approved	58.61	183	-
Tract 6755	-	91 lots on 33.01 acres	Tentatively approved; approved grading plan	33.01	91	-
Tract 6760	-	31 lots on 8.92 acres	Tentatively approved	8.92	31	-
Tract 6811	-	84 lots on 3.77 acres	Tentatively approved	3.77	84	-
Tract 6865	-	243 lots on 55.28 acres	Tentatively approved	55.28	243	-
Tract 6899	-	61 lots on 17.72 acres	Tentatively approved	17.72	61	-
Tract 7029	-	129 lots on 30.17 acres	Tentatively approved	30.17	129	-
Tract 7113	-	17 lots on 3.93 acres	Tentatively approved	3.93	17	-
Tract 7222-1	-	230 lots on 61.23 acres	117 lots recorded	61.23	230	-
Tract 7222-2	-	See Tract 7222-1	See Tract 7222-1	-	-	-
Tract 7226	-	132 lots on 28.39 acres	Tentatively approved; approved grading plan (part of tract 6520)	28.39	132	-

Project Name	APN/Location	Development Description	Status	Parcel Acres	No. of Residences	Building Size (sq ft)
Site Plan Projects						
Site Plan 13-0061	3515 Panama Lane	18,370 sf health club in C-2 (Regional Commercial) zone	Final building permit issued	-	-	18,370
Site Plan 13-0319	3451 Panama Lane	70-foot tall monopine in C-2 (Regional Commercial) zone	Final building permit issued	-	-	-
Site Plan 12-0073	575 Panama Lane	1,084 sf addition to convenience market in C-1 (Neighborhood Commercial) zone	Building permit pending	-	-	1,084
Site Plan 14-0215	4103 Rock Lake Drive	492 sf second unit in R-1 (One Family Dwelling) zone	Final building permit issued	-	-	492
Site Plan 12-0311	7800 Silver Dollar Way	7,000 sf trailer sales/shop building in C-2 (Regional Commercial) zone	Final building permit issued	-	-	7,000
Site Plan 14-0124	8601 S. H Street	21,881 sf religious facility in R-1/CH (One Family Dwelling-Church Overlay) zone	Final building permit issued	-	-	21,881
Site Plan 12-0319	9100 Ellashosh Street	1,500 sf church in R-1/CH (One Family Dwelling-Church Overlay) zone	Building permit pending	-	-	1,500
Site Plan 13-0266	9855 Compagnoni Street	41,736 sf CHP facility in M-1 (Light Manufacturing) zone	Applied for grading, no permit yet	-	-	41,736
Site Plan 13-0169	3221 Taft Highway	600 sf convenience store addition	Building permit pending	-	-	600
Site Plan 13-0389	5300 Gasoline Alley Drive	5,400 sf automobile service addition in M-1 (Light Manufacturing) zone	Final building permit issued	-	-	5,400
Site Plan 14-0283	4516 District Boulevard	6,000 sf warehouse building in M-1-MH (Light Manufacturing-Mobile Home Overlay) zone	Grading permit issued	-	-	6,000
Site Plan 13-0364	4801 S. H Street	72-foot tall monopine in C-1 (Neighborhood Commercial) zone	-	-	-	-

Project Name	APN/Location	Development Description	Status	Parcel Acres	No. of Residences	Building Size (sq ft)
Site Plan 13-0397	5614 Woodmere Drive	12,000 sf church in M-2 (General Manufacturing) zone	Grading permit issued	-	-	12,000
Parcel Map Projects						
Parcel Map 12086	514-020-58	4 large parcels, within tract 7231	-	-	-	-
Parcel Map 11718	1601 Panama Lane	120,870 sf neighborhood shopping center, mostly built out a few pads still vacant	-	-	-	120,780
Parcel Map 11941	405-020-23	Subdivide approximately 5.12 acres into 4 parcels, zoned C-1 (Neighborhood Commercial)	-	5.12	-	-
Parcel Map 11614	172-070-35	Two parcels on 36.59 acres zoned M-3 (Heavy Industrial) for industrial purpose	-	36.59	-	-
Parcel Map 11948	371-091-07	Subdivide approximately 1.238 acres into 2 parcels in a C-1 (Neighborhood Commercial)		1.238	-	-
Parcel Map 12079	538-010-05	Subdivide 58.7 acres into two parcels for financing purposes in an R-2 (Limited Multiple-Family Dwelling)	-	58.7	-	-
Other Projects						
Unscheduled lodging facility	19480 Quin Road, Oildale (482-106-02)	104-room upper-midscale facility		0.49	-	-

3.7.3 Cumulative Baseline and Projected Growth

The southern and southwestern Metropolitan Bakersfield area was undergoing rapid growth and development prior to 2008 before the economic downturn, and has started picking back up with the recent growth in the economy. In general, Stockdale Highway and Taft Highway currently define the northerly and southerly limits of active construction in the southwest area. Future developments are planned to occur between these limits in the near future. The past, present, and probable future projects that could contribute to a significant cumulative environmental impact are listed on Table 3-4 and shown on Figure 3-7. Table 3-4 reflects requests for approval of tract maps, site plans, and parcel maps where construction of planned developments may combine with the proposed project to greatly alter transportation and development patterns in the southwestern Bakersfield region. Table 3-4 is intended to help the reader understand the scope and nature of the projects that were considered in identifying cumulative impacts.

Agricultural resources, mineral resources, population and housing, and recreation were screened out as potentially significant environmental issues for the proposed project in the Initial Study/Notice of Preparation (Appendix A). The City did not receive public or agency comment regarding these issue areas during the Notice of Preparation 30-day public comment period. Therefore, a cumulative impact analysis of these three environmental impact areas is not included in this chapter.

3.7.4 Cumulative Impact Analysis

Cumulative impact scenarios may differ among environmental topics, depending on the potential area that would be affected. For example, the cumulative conditions for air quality should account for impacts in the San Joaquin Valley Air Basin, while the cumulative impacts for traffic should be more local in scale, evaluating intersections in the vicinity that could be affected by cumulative projects. The cumulative setting and limitations for each discipline are discussed as appropriate within each resource section in Chapter 4.

Section 4.1
Aesthetics and Urban Decay

4.1.1 Introduction

This section discusses the potential for the proposed project to result in the degradation of the existing visual character or quality of the site and its surroundings, including visual blight related to urban decay, as well as an analysis of potential light and glare impacts. Potential impacts related to scenic vistas and scenic resources are not discussed, and a separate discussion can be reviewed as part of the initial study checklist, provided as Appendix A.

Degradation of the project site's visual character is generally addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment and the project-related modification that would alter the existing visual setting. Issues of visual blight[1] are addressed by considering the potential for urban decay that may be precipitated or exacerbated in Metropolitan Bakersfield and its environs and by considering the indirect changes in visual quality that could occur as a result of the proposed project. The analysis of urban decay impacts presented in this section is based on a study prepared by Alfred Gobar Associates, titled *Bakersfield Gateway Urban Decay Analysis*, October 2014 (see Appendix E).

4.1.2 Environmental Setting

4.1.2.1 Regional Character

The project site is located in Bakersfield near the southern end of the San Joaquin Valley (Valley) and is characterized by flat terrain that ranges in elevation from about 250 to 450 feet above sea level. Existing development patterns in the region are generally characteristic of suburban Central Valley and include regional shopping centers, major arterial freeways and roadways, tract home developments, and outlying areas of agricultural and rural residential

[1] Visual blight related to urban decay is defined as a general deterioration of the urban landscape that is characterized by long-term building vacancies; poor building maintenance; and increased vandalism, loitering, and homeless populations. The term visual blight as used in this document is a condition where real property, by reason of its appearance, is detrimental to the property of others or to the aesthetic value of adjacent properties, or reduces the aesthetic appearance of the neighborhood or community.

development. In general, existing development in the Bakersfield region is low-lying and does not include many high rise or multi-story developments, with the exception of some areas towards the central business district in downtown Bakersfield where mid-rise development occurs.

From a geographic standpoint, the surrounding region is framed by tall mountain ranges to the south, west, and east. The mountains to the south, known as the Tehachapi Mountains, run east to west between the Coast Ranges to the west and the Sierra Nevada Mountains to the east. The Tehachapi Mountain elevations vary from approximately 4,000 to 8,000 feet above sea level and form a barrier separating the Valley to the northwest from the Mojave Desert to the southeast. Due to the largely flat, unrelieved terrain that characterizes the Valley, the mountains are often the most dramatic visual element. Trees are not prominent visual elements in most views, and most groundcover consists either of agricultural crops—such as cotton, onions, grapes, or alfalfa—or, more often, of scrub growth, with prominent areas of bare and disturbed ground. In some portions of the southern Valley, almond and citrus groves occur. Water features are not common in the area and constitute relatively modest visual resources. The Kern River, for example, is the principal water body in proximity to the project site (approximately 5 miles to the north) but is a relatively inconspicuous visual element that is identified, when looking across the landscape, by the trees that grow along its banks.

4.1.2.2 Local Character

The city is located at the southern end of the Valley and serves as the gateway community to southern California, the Valley, and California's high desert. Typical of the southern Valley, the terrain is essentially flat, offering distant views of the ridgelines of the Tehachapi Mountains to the south, the Coast Range to the west, and the Sierra Nevada Mountains to the northeast. The nearest scenic views and vistas to the project site include areas between the Kern River and Lake Ming, located approximately 15 miles from the project site, and are not visible. Stretching along Round Mountain Road and Alfred Harrell Highway between Hart Park (west) and the Kern River Golf Course in northeast Bakersfield, such vantage points offer impressive panoramic views south and southwest across the city. Due to the distance and intervening development, however, only far-off and indistinct views of the project site can be acquired from such scenic view locations.

The project site is in the southern portion of the city in a setting wherein large parcels of vacant and agricultural lands are being rapidly converted to typical urban tract housing and commercial shopping centers. The SR 99 corridor bisects the city, and this corridor is influenced by commercial and industrial development, with a modest amount of residential developments bordered by sound walls adjacent to the highway. Commercial development is expanding along this corridor to both the north and the south of the city and extends south of Panama Lane (just north of the project site). The several miles of SR 99 that run north of the project site are typified by commercial developments, automotive dealerships, and several hotels, up to five stories in height, immediately adjacent

to SR 99. The hotels tend to be located near restaurants and retail developments. The intersection of SR 99 and Panama Lane includes a Walmart Supercenter and a Lowe's Home Improvement Center. These existing structures are typically up to two stories in height.

The terrain near the project site is essentially flat (with a less than 2% grade), and does not contain significant visual resources such as rock outcroppings, native or designed landscape elements, or historic buildings. Because of the flat terrain, dramatic views are not present, and only distant views of mountain ridgelines offer contrasting visual pattern (line, texture, color, and form) of moderate visual interest. The Kern Island Canal, which appears to be a drainage ditch, runs just east of and parallel to the project site along H Street. Areas directly north and south of the site are vacant graded lots that include ruderal vegetation flat dirt areas.

4.1.2.3 Onsite Visual Elements

The project site occurs on flat terrain, featuring grades ranging from 0 to 2% or less and has been used for agricultural cultivation. As previously noted, no visual resources such as rock outcroppings, groupings of native trees, designed landscapes, or historic buildings are present on or near the project site. The site is vacant, with low-growing green scrub and ruderal grasses that are pale green following rainfall, turning yellow during the dry season.

Project Site Views

Daylight, dusk, or nighttime views of the project site and its visual setting are not distinctive, and visual quality is low because the viewshed lacks vivid or highly noticeable features and is characterized by uninteresting and unvaried natural and human-built landscapes. Distant views of mountain ridgelines are the principal visual resource in this setting. Such views are easily acquired at present due to the open setting, although the poor air quality of the region often obscures or completely blocks these distant views.

Viewer Groups and Viewer Responses

The project site is accessible to the following viewer groups in the vicinity. Their sensitivity to visual changes in the area is characterized below.

Recreational Users

Few recreational users are present in the vicinity of the project site. The site does not offer any formal recreational opportunities, although the site is used by off-road motorcyclists who trespass onto the property. Such visitors to the viewshed are likely to be accustomed to development and change in the vicinity of the project site, given that the area is undergoing rapid transition from agricultural uses to urban uses. Viewer sensitivity is considered low among these

recreationists because other than distant views of mountain ridgelines, there are few features present in the viewshed that they are likely to value, and as a result, they are less likely to be sensitive to visual changes in the foreground landscape.

Residents

Single-family homes occur on the east side of H Street (bordering the project site to the east). Residents' views of the project site are precluded by a 6-foot-high perimeter block wall, which also isolates the homes from the Kern Island Canal between the residences and H Street. Views of the project site from these one-story residences are ordinary because of the block wall, and the foreground features (roadway, the vacant project site, and SR 99) are not vivid. Viewer sensitivity is considered low among these residents because most do not have a readily available view of the project site due to the perimeter wall, and almost all of the houses are single-story. There are approximately seven two-story houses in which residents on the second story have this typical view of the vacant project site and SR 99 in the background. There are mountains in the far distance to the west of the project site (western edge of the southern Valley); however, views are typically very faint due to the great distance, the generally poor visibility, and the lower elevations as compared to mountains to the east of the project site.

Approximately 0.25 mile to the north of the project site are eight single-family residences, the backyards of which face the project site. This view is very similar to the views of the residents along South H Street, with a canal separating them from the project site. Viewer sensitivity is considered low among these residents because they are farther from the project site.

Motorists

The area is bounded by roadways to the east (H Street), south (Hosking Avenue), and west (SR 99). Currently, much of the land visible from these roads is dedicated to residential and agricultural uses, or vacant fields. Motorists traveling along Hosking Avenue and H Street are chiefly commuters and area residents driving at moderate to fast speeds. Such motorists are likely to have sporadic glimpses of agricultural lands and of the distant mountain ridgelines but would not be considered sensitive viewers. The existing visual setting along SR 99 north of the project site is already dominated by large commercial buildings and multistory hotels, which are similar to the size and scope of the buildings in the proposed project.

Single views typically are of short duration, except on straighter stretches where views last slightly longer. Viewer sensitivity is considered low-to-moderate among these motorists because the passing landscape becomes familiar to them, and their attention typically focuses on the roadway, roadway signs, and surrounding traffic. Motorists traveling north on SR 99 would expect a transition from an open rural setting to an urbanized setting reflective of a large metropolitan city. Motorists traveling south on SR 99 would expect an opposite transition from urban development to a rural setting.

4.1.2.4 Lighting Environment

There are no lights on the vacant project site. Adjacent lighting occurs only along H Street, Hosking Avenue, and SR 99, primarily in the form of headlights and sporadic street lights and commercial billboards. Residents to the east of H Street are currently exposed to low offsite nighttime lighting. There is street lighting in this residential subdivision. As a large urban setting, the city currently generates substantial nighttime lighting glare from the existing commercial, residential, industrial, and vehicle uses. These lighting sources, in conjunction with the poor air quality, currently minimize the quality of nighttime sky viewing.

4.1.2.5 Economic Environment

This section discusses the local market area and economic character of existing commercial development within the surrounding project area. It serves as a basis for evaluating whether the proposed development would create or contribute to the conditions for urban decay. The summary information presented in this section is based on the *Bakersfield Gateway Urban Decay Analysis* (see Appendix E for full study methodology and results).

Local Economic Character

The local economic character in the vicinity and regional area surrounding the project site focuses on retail, entertainment and leisure, and lodging services. The existing baseline conditions for each sector of the economy are described separately, below. Existing retail in the project vicinity is characterized by two general types of business: (1) merchandising and (2) entertainment-leisure.

Retail

Retail types include services such as building materials; drugstores; food service; auto parts and supply; and general merchandise, apparel, furnishing, and other specialty products (GAFO). Both 2016 and 2019 baseline conditions are provided for all retail types analyzed, which were selected because Phase I of the project would be operational in 2016 and Phase II would be operational in 2019. As shown in Table 4.1-1, there is residual potential (or additional opportunity for sales in a specific retail type) for all retail types, with the exception of "Drug & Sundries," "Food & Beverage," and "Auto Tires, Batteries, Accessories-Maintenance" uses, none of which have any residual potential. Information for "Consumer-Entertainment Services" is not available.

Table 4.1-1. Baseline Residual Potential for Retail Types

Retail Types	Residual Potential $ (millions) 2016 (Phase I)	2019 (Phases I & II)
GAFO Total	545,226	609,464
General Merchandising	17,064	18,365
Apparel & Accessories	109,327	121,635
Furniture & Household Appliances	138,847	154,184
Other Specialty – Miscellaneous Retail	279,988	315,280
Building Materials	38,540	43,402
Drug & Sundries	0	0
Food & Beverage	0	0
Eating & Drinking	213,922	240,912
Auto Tires, Batteries, Accessories-Maintenance	0	0
Consumer-Entertainment Services	N/A	N/A
Total	**797,688**	**893,778**

Source: Appendix E.

Entertainment and Leisure

Entertainment and leisure types include finance/banking, cinemas, and fitness uses. A 2016 baseline was used to identify the anticipated amount of residual potential for both multi-screen cinemas and a health club/fitness center during Phase I. There is residual potential for 24 additional movie screens and up to about 6,700 additional health club/fitness center members, or two clubs.

Lodging

Lodging types include midscale and upscale hotels, which are defined based on the per room per night average. Upscale hotel rooms are estimated at about $102 per night in the area, while midscale hotel rooms are estimated at about $57 per night. The analysis of lodging potential reviewed 62 existing hotels in the Metropolitan Bakersfield area. There is residual potential for an additional 196 midscale and 306 upscale hotel rooms in 2016, and 487 midscale and 534 upscale hotel rooms in 2019.

4.1.3 Applicable Regulations

4.1.3.1 Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) sets forth policies and goals for aesthetic resources and commercial development. Those related to the proposed project are listed below (City of Bakersfield and Kern County 2002).

Chapter II, Land Use Element

- Establish a built environment that achieves a compatible functional and visual relationship among individual building and sites.
- Encourage a separation of at least 0.5 mile between new commercial designations.
- Require that commercial development provide design features such as screen walls, landscaping and height, setback, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.
- Landscape street frontages along all new commercial development.
- Require new large retail commercial development projects to evaluate urban decay impacts on existing commercial uses as set forth in the implementation measures.

Chapter III, Circulation Element

- Provide and maintain landscaping on both sides and in the median of arterial streets within incorporated areas.
- Provide and maintain landscaping on both sides of collector streets.

Chapter X, Public Services and Facilities Element

- Require developers to install street lighting in all new developments in accord with adopted city standards and county policies.

The MBGP also provides specific policies for commercial development related to design features such as light restrictions in order to reduce impacts on adjacent residences. In general, when designing projects that are subject to development review, applicants must include methods of minimizing direct light and glare impacts on neighboring properties. Lighting hoods and other methods should be employed for directing light downward. These restrictions apply to—but are not limited to—lighting for parking areas and other types of large-scale onsite lighting. Compliance would be ensured by conditions of approval attached to discretionary development permits.

4.1.3.2 City of Bakersfield Municipal Code

The City's municipal code addresses specific issues regarding lighting and urban decay. Codes relevant to the proposed project are discussed below.

Lighting

Specific zoning ordinances in the City of Bakersfield Municipal Code address lighting standards for parking lots and sign illumination. Lighting should be designed so that light is reflected away from adjacent residential properties and streets by using glare shields or baffles to reduce glare and control backlight. In addition, in regard to sign illumination, floodlighting is permitted when such lighting is installed on private property or property maintained by a maintenance district, and is hooded or shielded so that the light source is not a nuisance or detrimental to persons viewing the area, or would not affect or interfere with vehicular traffic, pedestrians, or adjacent properties in any manner (City of Bakersfield Municipal Code 17.60.060, 2007).

Visual Blight

The City's municipal code extensively regulates actions that have the potential to contribute to visual blight, including deferred maintenance, graffiti, vandalism, boarded windows and doors, broken sidewalks, dead landscaping, refuse dumping, illegal vehicle parking, and similar signs of deterioration. Enforcement is provided by the Code Enforcement Department, and violations by a landowner may be prosecuted as a criminal misdemeanor. Violations are subject to "strict liability," meaning that the City need only prove the known existence of facts that constitute the violation of the code sections in order to obtain a conviction. The City can also enforce these code provisions through nuisance abatement and other civil enforcement mechanisms (Municipal Code Section 1.40.010). Code sections related to urban decay are described below.

Section 8.27.010

It is unlawful and a public nuisance for any person having charge or possession of property in the city to maintain property in a manner that any of the following conditions exist, except as it is allowed by Title 17 of this code:

A. Any building or structure that has been partially destroyed for at least 6 months to the extent of more than 25% of the value of the building or left in an unreasonable state of partial construction.

B. Any doorway, window or other opening not closed and maintained.

C. Any broken window constituting a hazardous condition and facilitating trespass or malicious mischief.

D. Overgrown, dead, decayed, diseased or hazardous trees, weeds and other vegetation.

E. Any building exterior, wall, fence, driveway, sidewalk, or walkway which is maintained in such condition of deterioration or disrepair as to be unsafe or which is so defaced as to substantially detract from the appearance of the immediate neighborhood.

H. Lumber, junk, trash, debris or salvage materials visible from a public right-of-way.

Section 8.28.010

Property owners are responsible to ensure that their properties do not become overgrown with weed growth.

Section 8.80.010A

Property owners are responsible to abate any public nuisance defined under the Bakersfield Municipal Code existing upon that property and the abutting half of the street and/or alley.

Section 8.80.010C

Any property owner who fails to abate a public nuisance within the time prescribed in any notice or order provided will be charged with the cost of inspection.

Section 12.40.050

It is made the duty of property owners to properly take care of all trees, shrubs and plants within any parkway or public place immediately adjacent to their respective real properties.

Section 17.08.140C2

All building facades must include no less than three of the following design elements, one of which shall occur horizontally: (1) color change; (2) texture change; (3) materials change; or (4) an expression of architectural or structural bays through ha change in plan no less than 12 inches in width, such as an offset, reveal or projecting rib, or other architecturally appropriate feature. All elements shall occur at intervals of no more than 30 feet.

Section 17.08.140C3

Where large retail developments contain smaller additional, separately owned stores that occupy less than twenty-five thousand square feet of gross floor area with separate, exterior customer entrances, the street level façade of such stores shall be transparent between the height of three feet and eight feet above the walkway grade for no less than sixty percent of the horizontal length of the building of such additional stores. Windows shall be recessed and include visually prominent sills, shutters, or other such forms of framing.

Section 17.08.140C4

In multiple building developments, each individual building shall include prominent architectural characteristics shared by all buildings in the center so that the development forms a cohesive sense of place.

Section 17.08.140C5

Rooflines shall be varied with a change in height every one hundred linear feet of the building length. Parapets, mansard roofs, gable roofs, hip roofs, or dormers shall be used to conceal flat roofs and roof top equipment from public view. Alternating lengths and designs of the roofline are acceptable. If parapets are used, they shall not at any point exceed one-third of the height of the supporting wall. All parapets shall feature three-dimensional cornice treatment.

Section 17.08.140C6

Exterior building materials shall be high quality materials, including, but not limited to, brick, sandstone, and other native stone, manufactured stone (realistic), wood, glass, decorative metal elements, and tinted/textured concrete masonry units, including stucco and synthetic stucco-type materials.

Section 17.08.140C7

Primary façade colors shall be low reflectance, subtle colors over primary, bold or dramatic colors. The use of reflective metallic or fluorescent colors is discouraged. However, building trim and accent areas may feature brighter colors, including primary colors. Paint applied over brick, stone and concrete is prohibited.

Section 17.08.140C8

Finished exterior building materials shall not include smooth-faced concrete block, tilt-up concrete panels or prefabricated steel panels.

Section 17.08.140C9 (Entryways)

a. At least two sides of a large retail development shall feature customer entrances. The two required sides shall be those planned to have the highest level of public pedestrian activity. One of the sides shall be that which most directly faces a primary public or private street with pedestrian access. The other may face a second street with pedestrian access or the main parking lot area if there is no second street. All entrances shall be architecturally prominent and clearly visible from the abutting public street.

b. Public entrances must include architectural elements that emphasize the entry. Each large retail development on a site shall have clearly defined, highly visible customer entrances featuring no less than three of the following:

    i. Canopies or porticos;

    ii. Overhangs;

    iii. Recesses/projections;

    iv. Arcades;

    v. Raised corniced parapets over the door;

    vi. Peaked roof forms or towers;

    vii. Arches;

    viii. Plazas or outdoor patios;

    ix. Display windows;

    x. Fountains or other water features;

    xi. Architectural details such as tile work and moldings that are integrated into the building structure and design;

    xii. Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.

c. Where additional stores will be located in the large retail development, each such store shall have at least one exterior customer entrance, which shall conform to the above requirements.

d. Weather protection elements shall be provided at all public entrances.

Section 17.08.140D (Parking Lot Design)

1. No more than sixty percent of the off-street parking area for the entire area of land devoted to the large retail development shall be located between the front façade of the large retail development and the abutting streets unless the parking lots are screened from view by other freestanding pad buildings, or enhanced landscaping features with trees that incorporates berms at least three feet high, plazas, water elements, or other such features that diminish the visual impression of a mass parking lot from the public right-of-ways.

2. Parking lots shall be divided into sections of two hundred spaces or less with internal pedestrian walkways, buildings or landscaped open areas. Pedestrian ways shall be subject to the provisions of subsection E of this section.

3. Areas for bicycle parking shall be provided throughout the center and shall not interfere with pedestrian walkways.

4. If shopping carts are to be provided, cart corrals shall be installed and generally distributed across parking area.

Section 17.08.140E (Pedestrian Circulation)

1. Meandering sidewalks at least six feet in width shall be provided along all sides of the large retail development that abuts a public street.

2. Continuous internal pedestrian walkways, no less than six feet in width, shall be provided from a public sidewalk or right-of-way to the principal customer entrances of all large retail developments on the site, including all freestanding pad buildings. Pedestrian walkways shall link all buildings in the development. At a minimum, walkways shall connect focal points of pedestrian activity such as, but not limited to, transit stops, street crossings, building and store entry points, and shall feature adjoining landscaped areas that include trees, shrubs, benches, flower beds, ground covers or other such materials for no less than fifty percent of the length of the walkway. Use of decorative arbors, freestanding arcades or other weather protection structures is permitted.

3. Sidewalks, no less than six feet in width, shall be provided along the full length of the building along any façade featuring a customer entrance, and along any façade abutting public parking areas. Such sidewalks shall be located at least six feet from the façade of the building to provide planting beds for foundation landscaping, except where features such as arcades or entryways are part of the façade.

4. All internal pedestrian walkways shall be clearly distinguished from driving surfaces using durable, low maintenance surface materials such as pavers, bricks or scored concrete to enhance pedestrian safety and comfort, as well as the attractiveness of the walkways.

5. Parked vehicles shall not overhang into any pedestrian walkways.

6. Pedestrian access to adjacent residential neighborhoods shall be provided where local streets abut the project. This access shall connect directly to focal points in the project such as, but not limited to, community/public spaces, main building or store entries, or transit stops without traversing through loading areas, buildings rears, etc. These pedestrian walkways shall be clearly distinguished from driving surfaces using durable, low maintenance surface materials such as pavers, bricks or scored concrete to enhance pedestrian safety and comfort, as well as the attractiveness of the walkways.

Section 17.08.140F (Central Features and Community Space)

Each retail establishment subject to the standards in this section shall contribute to the establishment or enhancement of community and public spaces by providing at least two of the following:

1. Pedestrian plaza or patio with seating;

2. Transportation/transit center;

3. Covered window shopping walkway along at least seventy-five percent of primary building;

4. Outdoor playground area;

5. Water feature;

6. Clock tower;

7. Any other such deliberately shaped area and/or focal feature or amenity that enhances the community and public spaces of the center.

Any such areas shall have direct access to the public sidewalk network and such features shall not be constructed of materials that are inferior to the principal materials of the building and landscape.

Section 17.08.140G (Delivery/Loading and Solid Waste Operations)

1. No delivery, loading, trash removal or compaction, or other such operations shall be within thirty feet of any properties zoned or developed with residential uses.

2. In addition to compliance with the noise level performance standards table in the noise element of the metropolitan general plan for exterior daytime/nighttime exterior noise levels, other than trash removal by the city or its contractors, all

loading, unloading, delivery, private refuse collection and related operations shall not be permitted between the hours of 10:00 pm and 7:00 am adjacent to any land zoned or developed with residential uses. These activities may occur if the developer submits evidence to the city that sound mitigation will reduce the noise generated by such operations to less than three dBA above the measured background noise level at the same period for any three continuous minutes in any hour during the operation as measured at the property line adjacent to said residential lands. Evidence of compliance must include background data (without the subject equipment operating) at said property line for the subject period, modeling results or test data from the proposed equipment, or noise data gathered from a similar location if approved by the city.

3. Loading docks shall include separate walls for noise attenuation adjacent to residential areas and be screened with landscaping so they are not visible from said residential areas or public streets.

4. Trash pickup areas shall not be visible from public streets unless the enclosure areas are architecturally designed matching the design of the center.

Section 17.08.140H (Storage, Seasonal Sales, Miscellaneous)

1. Storage of materials and merchandise is prohibited unless screened with in accordance with this title, including use of landscaping. Vending equipment and shopping cart storage areas must be screened from public view and not impede pedestrian ways.

2. Seasonal sales of merchandise shall not be permitted in any required parking area but shall be within a screened area dedicated for such use.

3. Truck trailers shall not remain on the site for more than forty-eight hours (loading and unloading only). Truck or trailer storage, or use of trailers for product storage is prohibited.

4. Metal storage containers as defined in Section 17.04.464 and any other portable storage containers for permanent or temporary use, except for construction and/or remodeling purposes, are prohibited.

Section 17.61.040A

All plants on a property must be kept in a healthy condition.

Section 17.61.040B

Landscape structural features shall be maintained in sound structural and attractive condition.

4.1.4 Impacts and Mitigation

Visual impacts associated with the proposed project are presented by comparing the existing economic and visual character conditions on site and in the surrounding area to those anticipated from the proposed project. Visual blight impacts associated with urban decay are evaluated based on the anticipated impacts of the proposed project on the local market area economy (such as market saturation and the resulting store closures) and how these impacts may lead to visible signs of urban decay.

4.1.4.1 Methodology

Visual Resource Impacts

The methodology used to assess visual resource impacts from the proposed project includes the following steps:

- Objectively identify the visual features (visual resources) in the project site viewshed.
- Assess the character and quality of those resources relative to overall regional visual character.
  - **Visual Character**. The natural and artificial elements within a viewpoint that compose the character of an area or specific view. Character is influenced by geologic, topographic, hydrologic, botanical, wildlife, recreation, and urban features. Urban features include those conditions associated with landscape settlements and development, including roads, utilities, structures, earthworks, recreation, and urban features. The basic components used to describe visual character of most visual assessments are the elements of form, line, color, and texture of the landscape patterns. The appearance of the landscape is described in terms of the dominance of each of these components.
  - **Visual Quality.** The sum of the concepts of vividness, intactness, and unity culminate to create the overall visual quality from a specific viewpoint.
  - **Vividness.** The visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
  - **Intactness**. The visual integrity of the natural and human-built landscape and its freedom from encroaching elements.
  - **Unity**. The visual coherence and compositional harmony of the landscape considered as a whole.
- Identify the importance to people, or sensitivity, of views of visual resources in the viewshed.

By establishing the baseline (existing) conditions, a proposed project or other change to the viewshed can be objectively evaluated for its degree of impact. The degree of impact depends both on the magnitude of change in the visual resource (i.e., visual character and quality) and on viewers' responses to and concern for those changes. The potential impacts associated with the proposed project are evaluated on a qualitative basis by comparing the anticipated project impacts with the existing light and commercial retail environment. The change in the visual environment is significant if any effect described under the criteria below occurs. The evaluation of project impacts is based on professional judgment, analysis of the City's visual resource policies, and the significance criteria established by Appendix G of the State CEQA Guidelines, which the City has determined to be appropriate criteria for this DEIR.

Visual Blight Related to Urban Decay Impacts

Visual blight related to urban decay could occur as an end product of a chain reaction of store closures and long-term vacancies that result in the physical decay of existing retail developments in surrounding areas of the Metropolitan Bakersfield area. "Urban decay" is defined as physical conditions brought on by prolonged vacancy that include, but are not limited to, the deterioration of buildings and parking lots that create a haven for litter, graffiti, vandalism, loitering, and homeless populations. Some clearly visible manifestations of urban decay include plywood-boarded doors and windows; long-term unauthorized parking and abandoned vehicles; broken glass and debris littering the site; severely eroded parking surfaces and broken parking-circulation barriers; dead trees and shrubs accompanied by weeds; substantial lack of building maintenance; graffiti and evidence of gang and other illicit activity; homeless encampments; and unsightly fencing used to cordon off buildings and storefront entrances.

To determine the potential for the proposed project to disturb other similar businesses in the area and contribute to urban decay and resulting visual blight, several factors were utilized in the economic-urban decay study (Appendix E). To determine if impacts would be potentially significant, two analyses were completed, including residual potential and operating resiliency tests. If a project exceeds and does not meet the requirements of both tests, a third test was completed to determine the duration a failed business would remain as a vacant building and the likelihood that the vacancies would bring about significant urban decay of existing retail and lodging facilities. If the anticipated vacancy would continue for a prolonged period of time, then a potentially significant environment effect related to visual blight could occur as a result of urban decay. These analyses tests are defined as follows and discussed thoroughly in Appendix E.

1. **Residual potential**. This test analyzes market potential not captured by existing retailers and lodging facilities. If a project would absorb more than 100% of the residual potential for a given market, other similar businesses would experience a reduction in sales.

2. **Operating resiliency**. This test considers the sales impact of a project on existing retailers and lodging facilities. Specifically, this test considers past annual average sales decrease percentages and the duration that similar businesses remained open with decreased sales.
3. **Retail vacancy**. This test considers the duration for a failed business to remain as a vacant building and the likelihood that the vacancies would bring about significant urban decay of existing retail and lodging facilities.

4.1.4.2 Criteria for Determining Significance

Criteria for determining the significance of impacts related to aesthetics are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Have a substantial adverse effect on a scenic vista.

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

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

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

Thresholds a and b were evaluated during the initial study process and were determined to result in less-than-significant impacts on scenic vistas and scenic resources, respectively. As such, these impacts are not further evaluated below. For a detailed discussion of these impacts, refer to Appendix A.

4.1.4.3 Project Impacts

Impact AUD-1. The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.

The impacts related to aesthetics are discussed separately for construction and operational effects below, including the potential for urban decay and blight to occur as a result of new commercial uses associated with the project. Appendix E provides a more detailed discussion of the potential impacts of the proposed project related to urban decay and blight.

Construction

The current visual setting is composed of vacant land covered with ruderal plants, adjoined by an approximately 60-acre vacant lot to the north (identical visual setting), single-family residential development to the east that is partially screened from the project site by an estimated 6-foot-tall concrete masonry screening wall, a freeway (SR 99) to the west, and Hosking Avenue to the south. Additional vacant land lies slightly farther south of Hosking Avenue. Because the visual setting does not contain significant visual resources, the construction process—which would entail excavation and earth-moving activities and the temporary introduction of construction vehicles and equipment to the area—would not significantly alter or degrade the existing visual character or quality of the visual setting for residents, motorists, or recreational users passing through on their way to other destinations. Construction activities have been a frequent occurrence in this area of the city as residential and urban development projects have continued to occur and passersby and motorists are accustomed to these activities.

Operation

No significant visual resources occur on site or in the vicinity of the project site as part of the visual setting. The proposed project involves operation of a retail shopping center and a hotel in a setting that is rapidly transitioning from large parcels of vacant land and agricultural acreage to residential and commercial development. The project applicant intends to provide numerous design measures to enhance visual appeal, including extensive landscaping and architectural features. For example, the design emphasizes pedestrian movement and appealing congregating areas, and includes a pedestrian shopping promenade and an entertainment plaza (lifestyle center) located roughly in the center of the project site. Generous sidewalks and landscaping, pedestrian arcades, and trellises would connect the larger tenants. The pedestrian shopping promenade and entertainment plaza would be enhanced by water features, dining patios, covered arcades, and landscaping. The proposed project would include detailed paving design with extensive use of shade trees. Water features and shading devices, with both Mexican-tiled roofs and flying metal sheds, would be used in opposition to each other to create a dynamic cityscape. Covered arcades would lead to open plazas and trellises. Construction material would be smooth stucco on the larger buildings and the small retail shops. Column covers and extensive use of green screen would also be employed. Lights would be strung above the shoppers' heads in the pedestrian shopping promenade's Main Street. Outdoor gas fireplaces would mark seating locations for enjoyment at night.

A substantive difference between the aesthetic character of existing developments and the proposed project would be provided by the extensive landscaping and blended architecture in the proposed project, both of which are commonly absent in the existing commercial and industrial developments along SR 99.

The project proposes one- and two-story commercial buildings that would be in scale with the existing buildings in commercial developments along SR 99 to the north. The proposed multistory hotel would be consistent with the existing size and design of hotels along SR 99 to the north of the project site, so the proposed project would be a continuation of the existing visual setting. The proposed project would include architectural treatments (forms, colors, and materials) compatible with other commercial and residential development in the setting. The proposed project would not substantially alter or degrade visual character or quality for area residents, nor would it substantially impact the character for motorists or recreational users passing through town to distant locations.

Urban Decay and Blight

The potential for the proposed project to contribute to urban decay and blight and result in a substantial degradation of the existing character of the Metropolitan Bakersfield area is analyzed below by type and includes retail, entertainment and leisure, and lodging uses.

Retail

Implementation of the proposed project would introduce some retail types that would divert sales from existing businesses in the area to the proposed project; however, this shift is not anticipated to result in significant aesthetics impacts as a result of urban decay and blight, and no mitigation measures would be required. The proposed project would result in the addition of new regional-oriented retail uses over two phases and would constitute the third largest retail center in the Metropolitan Bakersfield area. Phase I would occur in 2016 and would involve the development of 462,000 square feet of retail space with a mix of retail types. Phase II would occur in 2019 and would involve an additional 338,000 square feet of retail space. With the combined introduction of 800,000 square feet of new retail uses, it is anticipated that other regional retailers would experience some shift in sales from their businesses to the proposed new businesses associated with the project.

The proposed project includes a variety of retail types, as shown in Table 4.1-2. Two retail types; "General Merchandising" and "Auto Tires, Batteries, Accessories-Maintenance," would exceed the existing residual sales potential in the Metropolitan Bakersfield area. None of the other retail types would capture 100% or more of the existing residual retail potential in the area. As a result, the resiliency of these two retail types is considered relative to existing store sales and the amount of time needed to recover lost sales. Based on the study prepared by Alfred Gobar Associates (Appendix E), "General Merchandising" sales in the project area declined between 3 and 7% per year for 2–3 consecutive years without widespread business failure between 1990 and the present. Similarly, "Auto Tires, Batteries, Accessories-Maintenance" sales in the area declined between 3 and 5% per year for 2–3 consecutive years without widespread business failure. As shown in Table 4.1-3, the anticipated shift in sales and expected period of recovery back to existing sales for both "General Merchandising" and "Auto Tires, Batteries, Accessories-Maintenance" would not exceed a 1.8% drop in sales, and the recovery time would be 7 months or less.

Because businesses in the area within these two retail types have experienced greater losses in sales for longer periods of time and not failed, it is reasonable to expect that the proposed project would not cause widespread business failure or result in protracted vacancy risk. As such, impacts related to the introduction of additional "General Merchandising" and "Auto Tires, Batteries, Accessories-Maintenance" retail types would not be significant, and the potential for urban decay and blight impacts would be less than significant.

Table 4.1-2. Residual Potential for Retail with the Project – Phase I

Retail Type	($ millions) Residual Potential	($ millions) Residual Potential	Project % of Residual Potential	Greater than 100%?
GAFO Total	545,226	62,028	11	N
General Merchandising	17,064	6,420	38	N
Apparel & Accessories	109,327	14,812	14	N
Furniture & Household Appliances	138,847	3,744	3	N
Other Specialty- Miscellaneous Retail	279,988	37,052	13	N
Building Materials	38,540	36,480	95	N
Drug & Sundries	0	0	--	N
Food & Beverage	0	0	--	N
Eating & Drinking	213,922	10,800	5	N
Auto Tires, Batteries, Accessories-Maintenance	0	2,540	--	N
Consumer-Entertainment Services	--	6,542	--	N
Total	**797,688**	**118,390**	**15**	**N**

Source: Appendix E.

Table 4.1-3. Residual Potential for Retail with the Project – Phases I and II

Retail Type	($ millions) Residual Potential	($ millions) Project Contribution	Project % of Residual Potential	Greater than 100%?
GAFO Total	609,464	153,496	25	N
General Merchandising	18,365	32,400	>100	Y
Apparel & Accessories	121,635	30,544	25	N
Furniture & Household Appliances	154,184	19,320	13	N
Other Specialty- Miscellaneous Retail	315,280	71,232	23	N
Building Materials	43,402	36,960	85	N
Drug & Sundries	0	0	--	N

Retail Type	($ millions) Residual Potential	($ millions) Project Contribution	Project % of Residual Potential	Greater than 100%?
Food & Beverage	0	0	--	N
Eating & Drinking	240,912	18,270	8	N
Auto Tires, Batteries, Accessories-Maintenance	0	2,580	>100	Y
Consumer-Entertainment Services	-	6,740	-	N
Total	**893,778**	**218,046**	**24**	**N**

Source: Appendix E.

Entertainment and Leisure

Implementation of the proposed project would introduce two entertainment and leisure types that would divert sales from existing businesses in the area to the proposed project; however, this shift is not anticipated to result in significant aesthetics impacts as a result of urban decay and blight, and no mitigation measures would be required.

The proposed project would result in the addition of new cinema and health uses during the first phase. With the introduction of 16 movie screens and 48,600 square feet of health and fitness centers, it is anticipated that other regional entertainment and leisure types would experience some shift in sales from their businesses to the proposed new businesses associated with the project.

As shown below in Table 4.1-4, the existing residual potential for both proposed entertainment and leisure type uses exceeds the amount of uses included with the proposed project and would not exceed the full residual potential. While existing business would likely be affected by the proposed project related to entertainment and leisure type uses, impacts would not cause sales to shift from other similar businesses, and widespread business failure and resulting vacancies would not occur as a result of the proposed project. Impacts would be less than significant, and mitigation is not required.

Table 4.1-4. Residual Potential for Entertainment and Leisure with the Project

Entertainment and Leisure Type	Residual Potential	Project Contribution	Project % of Residual Potential	Greater than 100%?
Multi-Screen Cinema	24 screens	14–16 screens	67	N
Health Club/Fitness Center	6,700 members	2,000 members	30	N

Source: Appendix E.

Lodging

Implementation of the proposed project would introduce two types of lodging uses—midscale and upscale lodging—and would result in some increased competition with existing businesses; however, this shift is not anticipated to

result in significant aesthetics impacts as a result of urban decay and blight, and no mitigation measures would be required. The proposed project would result in the addition of 240 hotel rooms (120 upscale and 120 midscale) during the first phase. With the introduction of 240 hotel rooms, it is anticipated that other regional entertainment and leisure types would experience some shift in sales from their businesses to the proposed new businesses associated with the project.

As shown below in Table 4.1-5, the existing residual potential for hotel rooms exceeds the amount of rooms included with the proposed project and would not exceed the full residual potential. Although existing businesses would likely be affected by the proposed project related to lodging uses, impacts would not cause sales to shift from other similar lodging businesses, and widespread business failure and resulting vacancies would not occur as a result of the proposed project. Impacts would be less than significant, and mitigation is not required.

Table 4.1-5. Residual Potential for Lodging with the Project

	Rooms		Project % of	
Lodging Type	**Residual Potential**	**Project Contribution**	**Residual Potential**	**Greater than 100%?**
Midscale	534	120	22	N
Upscale	487	120	25	N

Source: Appendix E.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AUD-2. The proposed project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The impacts related to aesthetics are discussed separately for construction and operational effects below.

Construction

No significant visual resources on the project site would be adversely affected by the daytime construction activities. Nighttime construction at the site is not

proposed; therefore, nighttime views of the areas would not be significantly affected. There would be no light and glare related to construction activities.

Operation

Implementation of the proposed project would result in impacts from an increase in nighttime lighting; however, because significant visual resources are not present and current residents have a very poor view or no view at all, the proposed project would not significantly affect nighttime views in the area. Two major causes of ambient light pollution that could be generated by the proposed project are glare and spill light. Glare occurs when a person's eyes register a bright object against a dark background, such as experienced from oncoming headlights while driving. Spill light is caused by misdirected light.

As part of the proposed project, a number of new lighting sources would be introduced on the project site. These would include various internally illuminated or indirectly illuminated business wall signs, internally illuminated shopping center entrance pylon signs, and shielded, downward-directed parking lot pole lighting. During nighttime operations, headlights from the parking lots and from the increased traffic along South H Street and Hosking Avenue would be a common light source. Some light also would emanate from the business interiors through windows and entrances. In addition, for nighttime safety purposes, limited downward-directed exterior wall lighting is likely to be proposed at building corners and in the rear loading areas. The only residents who would directly view the new sources of lighting are inhabitants of the second story of seven two-story homes on the east side of South H Street. Other residents would not view the direct new lighting sources due to the existing 6-foot perimeter wall that separates the lots from the Kern Island Canal.

In accordance with the goals and policies previously outlined, lights would be focused downward and would not be directed offsite. As part of the proposed project, light fixtures would be aimed and adjusted as necessary, and reflector shields, louvers, and hoods would be installed to reduce glare. These measures, in addition to using directional lighting, would minimize light pollution, and would direct light away from adjacent properties and road rights-of-way. A lighting plan would be required for the proposed project, as detailed in the City's zoning ordinance. In its review of the lighting plan, the City would stipulate what lighting standards would be applied to the entire proposed project. Compliance with the City's light standards would avoid significantly adverse lighting impacts. Implementation of the following mitigation measure, however, would ensure that impacts remain less than significant.

Mitigation Measures

MM AUD-1. Prior to the issuance of building permits, the project proponent shall provide evidence the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Minimize Spill Light.** All onsite lighting standards and exterior luminaries shall be fitted with filtering louvers, hoods and/or similar technology to minimize spill light to adjacent properties and to reduce light from emitting above the horizontal plane of individual light fixtures.

MM AUD-2. Prior to the issuance of the final Certificate of Occupancy for each Phase of development, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Ensure Fixtures Properly Configured.** The project proponent shall ensure that a nighttime evaluation is conducted by a qualified professional to ensure that spillover light and glare are avoided, and shall make adjustments if needed to fixture configuration to ensure that spill over light is minimized. The project proponent shall provide a copy of the final testing results to the City of Bakersfield for review.

Level of Significance after Mitigation

Impacts would be less than significant.

4.1.4.4 Cumulative Impacts

Impacts on visual and aesthetic resources are typically limited to a given site or viewshed because a project's changes to the landscape are fairly localized. Exceptions may occur if there are impacts on scenic vistas or areas that are visible from far distances, or if the proposed project has the potential to affect aesthetics over a wider geographic area.

A number of development projects are proposed in both the City and Kern County land adjacent to and within the vicinity of the proposed project area. The cumulative aesthetic impact from development of these projects would substantially change the visual landscape from primarily rural to more suburban in character, such as the approved health club and convenience market on Panama Lane, a trailer sales/shop building on Silver Dollar Way, several religious facilities in the surrounding area, and a 6,000-square-foot warehouse building. The area surrounding the project is transitioning from extensive agricultural use to primarily residential and commercial uses that are typical of an urban setting. However, the conversion of land from one type of use to another does not necessarily constitute a significant impact.

As discussed in Section 4.9, *Land Use and Planning*, of this DEIR, the proposed project is consistent with land use plans and policies. Additionally, the proposed project site and its surrounding area do not contain scenic resources, such as hills, canyons, or other unique topographic features, and are not located in the vicinity of designated or eligible scenic highways; therefore, the project would not contribute to cumulative impacts on these kinds of resources. New development in the area will undergo thorough development review by the City and Kern

County, which requires visual amenities to be integrated into architectural elements and landscaping.

Cumulative projects would also contribute to an increase in the general lighting environment through the introduction of new streetlights, commercial signs, parking lot lighting, and general security lighting. Additionally, other projects in the region could include sports parks with nighttime field lighting. Each cumulative project would be required to comply with the City's and Kern County's lighting standards to minimize light pollution, spill light, and glare, which would reduce impacts from these areas to less-than-significant levels. Therefore, the cumulative contribution from the proposed project would not be considerable.

The cumulative impact analysis related to potential urban blight from urban decay was conducted by Alfred Gobar Associates by collecting future retail and lodging developments contemplated in the Bakersfield area. Present and future cumulative retail development in the area is estimated at about 2.08 million square feet; however, the cumulative market demand for retail is anticipated to exceed the supply by about 1.94 million square feet. As such, cumulative impacts related to retail would remain less than significant.

With respect to the cumulative effect on lodging facilities, only one known future unscheduled lodging facility is contemplated within the Metropolitan Bakersfield area. The unscheduled future project is contemplated as a 104-room upper-midscale facility in the Oildale area. If developed, it is likely this future hotel would compete for a share of upscale lodging potential. The market outlook for upscale lodging in the Metropolitan Bakersfield area indicates another 475 upscale rooms could be added to the supply of upscale hotels by 2019 without adversely affecting precedent sales performance of existing facilities (2,323 existing upscale rooms in 18 hotel facilities). It is anticipated that lodging activity within the Bakersfield Gateway Center will include a 120-room facility targeting an upscale lodging experience and a 120-room facility targeting a midscale-economy lodging experience. Assuming all 240 rooms hosted within the project compete for upscale lodging support, enough residual potential is indicated by 2019 to add 240 upscale rooms within the project and another 104 upscale rooms at the Oildale location (344 rooms total) without adversely affecting occupancy performance within existing hotels. Therefore, the project's contribution to cumulative aesthetic impacts would be less than cumulatively considerable.

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Section 4.2
Air Quality

4.2.1 Introduction

This section describes the environmental and regulatory setting for air quality. It also describes impacts on air quality that would result from implementation of the proposed project and identifies mitigation for significant impacts. Impacts related to greenhouse gases and climate change are described in Section 4.6, *Greenhouse Gas Emissions.*

4.2.2 Environmental Setting

4.2.2.1 Regional Climate and Meteorology

The project area is in the San Joaquin Valley Air Basin (SJVAB) portion of Kern County. The most significant single control on the weather pattern of the San Joaquin Valley is the semi-permanent subtropical high-pressure cell, referred to as the "Pacific High." During the summer, the Pacific High is positioned off the coast of northern California, diverting ocean-derived storms to the north; hence, the summer months are virtually rainless. During the winter the Pacific High moves southward, allowing storms to pass through the San Joaquin Valley. Almost all of the precipitation expected during a given year occurs from December through April. During the summer, the predominant surface winds are out of the northwest. Air enters the valley through the Carquinez strait and flows toward the Tehachapi Mountains. This up-valley (northwesterly) wind flow is interrupted in early fall by the emergence of nocturnal, down-valley (southeasterly) winds, which become progressively more predominant as winter approaches. Wind speeds are generally highest during the spring and lightest in fall and winter. The relatively cool air flowing through the Carquinez strait is warmed on its journey south through the valley, resulting in an average high temperature during the summer of nearly 100 degrees Fahrenheit (°F) in the southern end of the valley. Relative humidity during the summer is quite low, causing large diurnal temperature variations. Temperatures during the summer often drop into the upper 60s. In winter, the average high temperatures reach into the mid-50s and the average low drops to the mid-30s. In addition, another high-pressure cell, known as the "Great Basin High," develops east of the Sierra Nevada Mountain Range during winter. When this cell is weak, a layer of cool, damp air becomes trapped in the basin and extensive fog results. During inversions, vertical dispersion is restricted, and pollutant emissions are trapped

beneath the inversion and pushed against the mountains, adversely affecting regional air quality. Surface-based inversions, while shallow and typically short-lived, are present most mornings. Elevated inversions, while less frequent than ground-based inversions, are typically longer lasting and create the more severe air stagnation problems. The winter season characteristically has the poorest conditions for vertical mixing.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the project site is expected to be similar to the data recorded at the Bakersfield monitoring station. These data are provided in Table 4.2-1, which contains average precipitation data recorded at the Bakersfield monitoring station. Over the 76-year period from October of 1937 through March of 2013 (the most recent data available), the average annual precipitation was 6.17 inches.

Table 4.2-1. Period of Record Monthly Climate Summary for the Period 10/01/1937 to 3/31/2013

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Maximum Temp (°F)	57.4	63.6	69.0	75.7	84.2	92.1	98.6	96.7	91.0	80.5	67.3	57.8	77.8
Average Minimum Temp (°F)	38.5	42.1	45.4	49.7	56.6	63.3	69.2	67.7	63.1	54.0	44.1	38.5	52.7
Average Total Precipitation (in.)	1.04	1.16	1.12	0.67	0.21	0.07	0.01	0.04	0.10	0.30	0.59	0.85	6.17
Average Snowfall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percentage of possible observations for period of record:
Maximum temperature: 99.6%; minimum temperature: 99.6%; precipitation: 99.7%; snowfall: 92.4%; snow depth: 92.2%
°F = degrees Fahrenheit
in. = inches
Source: Appendix F

4.2.2.2 Criteria Pollutants and Local Air Quality

The federal and state governments have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for six criteria pollutants: ozone (O_3), carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM), which consists of PM 10 microns in diameter or less (PM10) and PM 2.5 microns in diameter or less (PM2.5). O_3 and NO_2 are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally. PM is both a local and a regional pollutant.

Principal characteristics surrounding the six criteria pollutants are described below. Toxic air contaminants (TAC) and valley fever are also discussed, although no federal or state standards have been adopted for these pollutants.

Ozone

The most severe air quality problem in the San Joaquin Valley is high concentrations of O_3. High levels of O_3 cause eye irritation and can impair respiratory functions and can also affect plants and materials. Particularly vulnerable to O_3 damage are grapes, lettuce, spinach, and many types of garden flowers and shrubs. O_3 is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X). Significant O_3 generation requires about 1 to 3 hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October make up the "ozone season." O_3 is a regional pollutant because O_3 precursors are transported and diffused by wind concurrently with the reaction process.

Reactive Organic Gases and Volatile Organic Compounds

ROG (also known as volatile organic compounds (VOC]) are compounds made up primarily of hydrogen and carbon atoms. Motor vehicles are the major source of reactive hydrocarbons in the basin. Other sources include evaporation of organic solvents and petroleum production and refining operations. Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions, which produce photochemical oxidants.

Nitrogen Oxides

NO_X are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 is the "whiskey brown"–colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of Kern County's NO_X emissions, most of which are emitted as NO_2. Combustion in motor vehicle engines, power plants, refineries, and other industrial operations are the primary sources in the region. Railroads and aircraft are other potentially significant sources of combustion air contaminants.

NO_X are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form NO_2 and O_3. NO_2, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 parts per million (ppm) on days of 10-mile visibility. NO_X is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Carbon Monoxide

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions prevalent in the San Joaquin Valley, CO concentrations may be more uniformly distributed over a broad area.

Internal combustion engines, principally in vehicles, produce CO through incomplete fuel combustion. Various industrial processes also produce CO emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant. CO does not irritate the respiratory tract, but passes through the lungs directly into the bloodstream, and, by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen, thereby aggravating cardiovascular disease and causing fatigue, headaches, and dizziness. CO is not known to have adverse effects on vegetation, visibility, or materials.

Inhalable Particulate Matter

PM consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Natural activities also increase the level of particulates in the atmosphere; wind-raised dust and ocean spray are two sources of naturally occurring particulates. The largest sources of PM10 and PM2.5 in Kern County are vehicle movement over paved and unpaved roads, demolition and construction activities, farming operations, and unplanned fires. PM10 and PM2.5 are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed. In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Sulfur Oxides

SO_2 is the primary combustion product of sulfur, or sulfur-containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (e.g., natural gas, propane) typically have lower percentages of sulfur-containing compounds than liquid fuels, such as diesel or crude oil. SO_2 levels are generally higher in the winter months. Decreasing levels of SO_2 in the atmosphere reflect the use of natural gas in power plants and boilers.

At high concentrations, SO_2 irritates the upper respiratory tract. At lower concentrations, when respirated in combination with particulates, SO_2 can result

in greater harm by injuring lung tissues. Sulfur oxides (SO_X) combining with moisture and oxygen results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. SO_X can also react to produce sulfates that reduce visibility and sunlight.

Lead

Pb is a metal that is a natural constituent of air, water, and the biosphere. Pb is neither created nor destroyed in the environment, so it essentially persists forever. Pb was used several decades ago to increase the octane rating in automotive fuel. Because gasoline-powered automobile engines were a major source of airborne Pb through the use of leaded fuels and the use of leaded fuel has been mostly phased out, the ambient concentrations of Pb have dropped dramatically.

Short-term exposure to high levels of Pb can cause vomiting, diarrhea, convulsions, coma, or even death. However, even small amounts of Pb can be harmful, especially to infants, young children, and pregnant women. Symptoms of long-term exposure to lower Pb levels may be less noticeable but are still serious. Anemia is common, and damage to the nervous system may cause impaired mental function. Other symptoms are appetite loss, abdominal pain, constipation, fatigue, sleeplessness, irritability, and headache. Continued excessive exposure, as in an industrial setting, can affect the kidneys.

Toxic Air Contaminants

Although NAAQS and CAAQS have been established for criteria pollutants, no ambient standards exist for TACs. Air toxics are generated by a number of sources, including point sources, such as refineries and industrial plants; mobile sources, such as diesel trucks, ships, and trains; and area sources, such as dry cleaners, gas stations, and auto body shops. Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute) noncarcinogenic, and long-term (chronic) noncarcinogenic. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. Toxicity of individual TACs is studied by the California Office of Environmental Health Hazard Assessment (OEHHA), which also issues guidance and methodologies for characterizing health risks from exposure to TACs.

In 1998, following a 10-year scientific assessment process, the California Air Resources Board (ARB) identified PM exhaust from diesel-fueled engines—commonly called diesel particulate matter (DPM)—as a TAC. Compared with other air toxics ARB has identified, DPM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk (California Air Resources Board 2000:1). DPM emissions from diesel equipment and trucks are the primary TAC of concern associated with the proposed project.

Valley Fever

Valley Fever is not an air pollutant, but is a disease caused by inhaling *Coccidioides immitis* (*C. immitis*) fungus spores. The spores are found in certain types of soil and become airborne when the soil is disturbed. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Valley Fever symptoms generally occur within 2 to 3 weeks of exposure. Approximately 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. *C. immitis* is fungus is endemic to the Central Valley. (U.S. Geological Survey 2000.)

4.2.2.3 Sensitive Receptors

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. The nearest residential sensitive receptor is approximately 0.03 mile east (across South H Street) of the proposed project site. There are 18 known non-residential sensitive receptors with 2 miles of the project site (16 schools and 2 senior living centers), which are listed below in Table 4.2-2.

Table 4.2-2. Sensitive Receptors Located Less than 2 Miles from Project

Receptor	Type of Facility	Distance from Project in Miles	Direction from Project
Stonecreek Junior High School	6–8 public	0.93	W
Berkshire Elementary School	K–6 public	0.85	NW
Valle Verde Elementary School	K–5 public	0.79	NE
McKee Middle School	6–8 public	0.93	SE
Fairview Elementary School	K–5 public	1.66	NE
Ridgeview High School	9–12 public	1.71	SW
Positive Directions	assisted living	1.80	NE
Shauna's Family Child Care	preschool	0.14	NW
Granite Pointe Elementary School	K–5 public	0.33	NW
Horizon Elementary School	K–5 public	0.41	E
Heritage Assisted Living	assisted living	0.49	NE
Leon H. Ollivier Middle School	5–9 public	0.54	E
Golden Valley High School	9–12 public	0.55	SE
Greenfield Country Preschool	preschool	1.03	E
Raffaello Palla Elementary School	K–5 public	1.15	NE

Receptor	Type of Facility	Distance from Project in Miles	Direction from Project
W. A. Kendrick Elementary School	K–5 public	1.26	N
Greenfield Middle School	6–8 public	1.28	NE
Roy W. Loudon Elementary School	K–6 public	1.29	NW
Ridgeview Christian Preschool	preschool	1.59	SW

E = east
N = north
NE = northeast
NW = northwest
S = south
SE = southeast
SW = southwest
W = west
Source: Appendix F

4.2.2.4 Existing Conditions at Project Site

The San Joaquin Valley Air Pollution Control District (SJVAPCD), along with the ARB, operates an air quality monitoring network that provides information on average concentrations of those pollutants for which state or federal agencies have established NAAQS and CAAQS. Information from the various monitoring stations is available from SJVAPCD (2014) and ARB (2014).

This analysis relies on data collected during the last 3 years for the ARB monitoring stations that are closest to the project site. Table 4.2-3 provides the background concentrations for O_3, PM10, PM2.5, CO, NO_2, SO_2, and Pb as of September 2014. Information is provided for the Bakersfield – 5558 California Avenue, Shafter – Walker St., Oildale – 3311 Manor St., Edison, Bakersfield – 410 E. Planz Rd., and Fresno – 1st Street monitoring stations for 2011 through 2013. No data are available for TACs or other pollutants in Kern County.

Table 4.2-3 indicates that the monitoring stations exceeded the following ambient air quality standards during the 3-year reporting period (2011–2013):

- State 1-hour average ambient O_3 standard
- Federal and State 8-hour average ambient O_3 standards
- PM2.5 and PM10 24-hours standards

No violations of the CO, NO_2, or Pb standards were reported.

Table 4.2-3. Existing Air Quality Monitoring Data in Project Area

	Maximum Concentration			Days Exceeding Standard		
Pollutant and Monitoring Station Location	2011	2012	2013	2011	2012	2013
O_3 – 1-hour CAAQS (0.09 ppm)						
Shafter – Walker Street	0.097	0.103	0.112	1	5	1
Oildale – 3311 Manor Street	0.102	0.099	0.099	4	3	1
Bakersfield – 5558 California Avenue	0.107	0.102	0.107	5	9	3
O_3 – 8-hour CAAQS (0.07 ppm)						
Shafter – Walker Street	0.087	0.090	0.097	43	64	21
Oildale – 3311 Manor Street	0.095	0.092	0.090	54	78	15
Bakersfield – 5558 California Avenue	0.094	0.096	0.099	51	83	47
O_3 – 8-hour NAAQS (0.075 ppm)						
Shafter – Walker Street	0.086	0.090	0.096	18	30	6
Oildale – 3311 Manor Street	0.095	0.092	0.090	29	46	5
Bakersfield – 5558 California Avenue	0.094	0.095	0.098	25	56	22
PM10 – 24-hour CAAQS (50 µg/m^3)						
Oildale – 3311 Manor Street	105.5	94.7	138.0	16	12	27
Bakersfield – 5558 California Avenue	154.0	125.8	116.9	113	55	16
PM10 – 24-hour NAAQS (150 µg/m^3)						
Oildale – 3311 Manor Street	100.2	91.1	134.3	0	0	0
Bakersfield – 5558 California Avenue	97.4	99.6	120.7	0	0	0
PM2.5 – 24-hour NAAQS (35 µg/m^3)						
Bakersfield – 558 California Avenue	80.3	86.5	111.7	30	22	44
Bakersfield – 410 E Planz Road	45.9	52.5	167.3	7	7	15

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2011	2012	2013	2011	2012	2013
CO – 8-Hour CAAQS & NAAQS (9.0 ppm)						
Fresno – 1st Street	2.29	2.22	*	0	0	0
NO2 – 1-Hour CAAQS (0.18 ppm)						
Shafter – Walker Street	0.054	0.052	0.058	0	0	0
Bakersfield – 5558 California Ave	0.064	0.064	0.055	0	0	0
NO2 – 1-Hour NAAQS (0.10 ppm)						
Shafter – Walker Street	0.054	0.052	0.0585	0	0	0
Bakersfield – 5558 California Avenue	0.064	0.064	0.0554	0	0	0
SO_2 – 24-hour Concentration – CAAQS (0.04 ppm)						
Fresno – 1st Street	0.004	*	*	*	*	*
Pb – Maximum 30-Day Concentration CAAQS (0.15 µg/m3)						
Bakersfield – 5558 California Avenue	0.011	0.014	*	*	*	*

* There were insufficient (or no) data available to determine the value.
$\mu g/m^3$ = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standards
NAAQS = National Ambient Air Quality Standards
O_3 = ozone
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ppm= parts per million
Source: Appendix F

Attainment Status

Local monitoring data (Table 4.2-3) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are further defined as:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- Unclassified—assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Table 4.2-4 provides SJVAB's designation and classifications based on the various criteria pollutants under both the NAAQS and CAAQS.

Table 4.2-4. SJVAB Attainment Status

Pollutant	NAAQS[a]	CAAQS[b]
O_3, 8-hour	nonattainment/extreme[e]	nonattainment
PM10	attainment[c]	nonattainment
PM2.5	nonattainment[d]	nonattainment
CO	attainment/unclassified	attainment/unclassified
NO_2	attainment/unclassified	attainment
SO_2	attainment/unclassified	attainment
Pb (Particulate)	no designation/classification	attainment
H_2S	no federal standard	unclassified
Sulfates	no federal standard	attainment
Visibility-reducing particles	no federal standard	unclassified
Vinyl chloride	no federal standard	attainment

[a] See 40 Code of Federal Regulations Part 81
[b] See California Code of Regulations Title 17 §§ 60200–60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour O_3 standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, EPA revoked the federal 1-hour O_3 standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour O_3 nonattainment areas continue to apply to the SJVAB.
CO = carbon monoxide
EPA = U.S. Environmental Protection Agency
H_2S = hydrogen sulfide
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
O_3 = ozone
Pb = lead
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
SJVAB = San Joaquin Valley Air Basin
SO_2 = sulfur dioxide
Source: Appendix F

4.2.3 Applicable Regulations

Air quality at the federal level is regulated by the U.S. Environmental Protection Agency (EPA), whereas air quality regulations at the state level are administered by ARB and local air quality management agencies. SJVAPCD has jurisdiction over local air quality issues throughout the western half of Kern County as well as all of Tulare, Kings, Fresno, Madera, Merced, Stanislaus, and San Joaquin counties. The eastern half of Kern County is in the Mojave Desert Air Basin and under the jurisdiction of the Kern County Air Pollution Control District. SJVAPCD acts as the regulatory agency for air pollution control in the SJVAB and is the local agency empowered to regulate air pollutant emissions for the plan area.

Federal, state, and local air quality regulations applicable to the proposed project are described below.

4.2.3.1 Federal Requirements

Protection of the public health is maintained through the attainment and maintenance of standards for ambient concentrations of various compounds in the atmosphere and the enforcement of emissions limits for individual stationary sources. The federal Clean Air Act requires that EPA establish NAAQS to protect the health, safety, and welfare of the public. The Clean Air Act Amendments of 1977 required states to identify areas that were in non-attainment of the NAAQS and to develop State Implementation Plans (SIPs) containing strategies to bring these non-attainment areas into compliance.

Table 4.2-5 shows the NAAQS currently in effect for each criteria pollutant. The CAAQS (described below) are also provided for reference.

Table 4.2-5. National and State Ambient Air Quality Standards

		NAAQS	CAAQS
Pollutant	Averaging Time	Concentration	
O_3	8-hour	0.075 ppm (147 µg/m^3) [c]	0.070 ppm (137 µg/m^3)
	1-hour	N/A [a]	0.09 ppm (180 µg/m^3)
CO	8-hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1-hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
NO_2	annual average	53 ppb (100 µg/m^3)	0.030 ppm (56 µg/m^3)
	1-hour	100 ppb (188.68 µg/m^3)	0.18 ppm (338 µg/m^3)
	3-hour	0.5 ppm (1,300 µg/m^3)	N/A
	24-hour	N/A [f]	0.04 ppm (105 µg/m^3)
	1-hour	75 ppb (196 µg/m^3)	0.25 ppm (655 µg/m^3)

Pollutant	Averaging Time	NAAQS	CAAQS
		Concentration	
PM10	annual arithmetic mean	N/A [b]	20 µg/m^3
	24-hour	150 µg/m^3	50 µg/m^3
PM2.5	annual arithmetic mean	12 µg/m^3	12 µg/m^3
	24-hour	35 µg/m^3	N/A
Sulfates	24-hour	N/A	25 µg/m^3
Pb [d]	calendar quarter	0.15 µg/m^3	N/A
	30-day average	N/A	1.5 µg/m^3
H_2S	1-hour	N/A	0.03 ppm (42 µg/m^3)
Vinyl chloride (chloroethene)	24-hour	N/A	0.010 ppm (26 µg/m^3)
Visibility-reducing particles	8-hour (10:00 a.m. to 6:00 p.m. PST)	N/A	N/A [e]

[a] 1-Hour O_3 standard revoked effective June 15, 2005.
[b] Annual PM10 standard revoked effective December 18, 2006.
[c] EPA finalized the revised (2008) 8-hour O_3 standard of 0.075 ppm on March 27, 2008. The 1997 8-hour O_3 standard of 0.08 ppm has not been revoked. In the January 19, 2010 Federal Register, EPA proposed to revise the 2008 O_3 NAAQS of 0.075 ppm to a NAAQS in the range of 0.060 to 0.070 ppm. EPA expects to finalize the revised NAAQS, which will replace the 0.075 ppm NAAQS, by July 29, 2011.
[d] On October 15, 2008, EPA strengthened the Pb standard.
[e] Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70%. This standard is intended to limit the frequency and severity of visibility impairment from regional haze and is equivalent to a 10-mile nominal visual range.
[f] 24-hour SO_2 standard revoked effective June 22, 2010.
CO = carbon monoxide
EPA = U.S. Environmental Protection Agency
H_2S = hydrogen sulfide
mg/m^3 = milligrams per cubic meter
N/A = not applicable
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
O_3 = ozone
Pb = lead
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ppb = parts per billion
ppm = parts per million
PST = Pacific Standard Time
SO_2 = sulfur dioxide
µg/m^3 = micrograms per cubic meter
Source: Appendix F

4.2.3.2 State Requirements

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal Clean Air Act, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates (SO_4), hydrogen sulfide (H_2S), vinyl chloride (C_2H_3Cl), and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 4.2-5.

ARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated to ARB authority to prepare SIPs; in turn, ARB has delegated that authority to individual air districts. ARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

4.2.3.3 Local and Regional Requirements

San Joaquin Valley Air Pollution Control District

At the local level, responsibilities of SJVAPCD include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by the California Environmental Quality Act (CEQA). SJVAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

SJVAPCD has adopted attainment plans to address O_3, PM, and CO emissions in the SJVAB. The 2007 Ozone Plan contains a comprehensive list of regulatory and incentive-based measures to reduce VOC and NO_X emissions within the SJVAB. In particular, the plan proposes a 75% reduction in NO_X and a 25%

reduction in VOC by 2023. SJVAPCD's 2007 PM10 Maintenance Plan and 2008 PM2.5 Plan likewise include strategies to reduce PM emissions throughout the air basin. Finally, the 2004 California State Implementation Plan for Carbon Monoxide addresses CO emissions throughout the state. SJVAPCD's air quality plans are evolving documents that are updated to reflect changing population and economic, land use, and transportation conditions. Local transportation planning agencies (in this area, Kern Council of Governments) and ARB provide the information needed to predict future on-road mobile source emissions that are used in the air quality planning process.

The proposed project may be subject to the following district rules. This list of rules may not be all encompassing, as additional SJVAPCD rules may apply to the alternatives as specific components are identified. These are rules that have been adopted by SJVAPCD to reduce emissions throughout the San Joaquin Valley.

- Rule 2010 (Permit Required Rule). This rule requires any person constructing, altering, replacing, or operating any source which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate.
- Rule 2020 (Exemptions). This rule specifies units that are not required to obtain an Authority to Construct or Permit to Operate as well as record-keeping requirements to verify exemptions.
- Rule 2070 (Standards for Granting Applications). The purpose of this rule is to explain the standards by which the California Air Pollution Control Officers Association may deny an application for an Authority to Construct of Permit to Operate. Any source operation must be constructed and operated in accordance with Rule 2201 (New and Modified Stationary Source Review Rule), Rule 4001 (New Source Performance Standards), and Rule 4002 (National Emissions Standards for Hazardous Air Pollutants), the Authority to Construct, and the Permit to Operate.
- Rule 2201 (New and Modified Stationary-Source Review Rule). This rule applies to all new stationary sources and all modifications to existing stationary sources subject to SJVAPCD permit requirements that, after construction, emit or may emit one or more pollutants regulated by the rule.
- Rule 2520 (Federally Mandated Operating Permits). This rule is intended to provide an administrative mechanism for issuing operating permits for new and modified sources of air contaminants, issuing renewed operating permits, and revising, reopening, revoking, and terminating operating permits for sources of air contaminants in accordance with requirements of 40 Code of Federal Regulations Part 70.
- Rule 3135 (Dust Control Plan Fees). This rule requires the applicant to submit a fee in addition to a dust control plan. The purpose of this rule is to recover SJVAPCD's cost for reviewing these plans and conducting compliance inspections.
- Rule 4001 (New Source Performance Standards). This rule applies to all new sources of air pollution and modification of existing sources of air pollution.

Rule 4001 incorporates specified provisions of 40 Code of Federal Regulations Part 60 and would apply to the proposed project.

- Rule 4101 (Visible Emissions). This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- Rule 4102 (Nuisance). This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and subject to SJVAPCD enforcement action.
- Rule 4201 (Particulate Matter Concentration). This rule is intended to protect the ambient air quality by establishing a particulate matter emissions standard. This rule applies to any source operation that emits, or has the potential to emit, dust, fumes, or total suspended particulate matter.
- Rule 4601 (Architectural Coatings). This rule limits VOCs from architectural coatings.
- Rule 4641 (Cutback, Slow-Cure, and Emulsified Asphalt, Paving, and Maintenance Operations). This rule applies to the manufacture and use of cutback asphalt, slow-cure asphalt, and emulsified asphalt for paving and maintenance operations.
- Rule 4692 (Commercial Charbroiling). The purpose of this rule is to limit VOC and PM10 emission from commercial charbroiling. Should any of the tenant restaurants in the proposed project use charbroilers, this rule would be applicable.
- Rule 4701 (Internal Combustion Engines—Phase 1). This rule limits the emissions of NO_X, CO, and VOC from internal combustion engines. These limits are not applicable to standby engines as long as they are used fewer than 200 hours per year (e.g., for testing during non-emergencies).
- Rule 4702 (Internal Combustion Engines—Phase 2). This rule limits the emissions of NO_X, CO, and VOC from spark-ignited internal combustion engines.
- Rule 9510 (Indirect Source Review). This rule requires the reduction of NO_X generated by operations by 33.3% and PM10 generated by operations by 50%. Rule 9510 was designed to fulfill SJVAPCD's emission reduction commitments in the PM10 and Ozone Attainment Plans requiring applicable projects to reduce operational NO_X emissions by 33.3% from operational baseline over a 10-year period and reduce PM10 emissions by 50% from operational baseline over a period of 10 years. Reductions not actualized are paid for by the ton, allowing SJVAPCD to fund actual reductions elsewhere. Rule 9510 also requires the reduction of NO_X emissions from construction by 20% and PM10 exhaust emission from construction by 45%.
- Regulation VIII (Fugitive PM10 Prohibitions). This is a series of rules (Rules 8011–8081) designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, and other activities.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) Conservation Element/Air Quality contains goals, policies, objectives, and implementation measures that comprehensively address general conditions and site specific circumstances that may affect air quality. The policies are listed below.

- Require dust abatement measures during significant grading and construction operations.
- Improve the capacity of the existing road system through improved signalization, more right turn lanes, and traffic control systems.
- Encourage the use of mass transit, carpooling, and other transportation options to reduce vehicle miles traveled.
- Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality.
- Promote the use of bicycles by providing attractive bicycle paths and requiring provision of storage facilities in commercial and industrial projects.
- Cooperate with Golden Empire Transit and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts.
- Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings.
- Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel.
- Require the provision of secure, convenient bike storage racks at shopping centers, office buildings, and other places of employment in the Bakersfield Metropolitan area.
- Encourage the provision of shower and locker facilities by employers, for employees who bicycle or jog to work.
- Encourage land uses and land use practices which do not contribute significantly to air quality degradation.
- Require dust abatement measures during significant grading and construction operations.
- Consider air pollution impacts when evaluating discretionary permits for land use proposals.

4.2.4 Impacts and Mitigation

4.2.4.1 Methodology

Construction

Construction of the project would generate emissions of ROG, NO_X, CO, PM10, and PM2.5 that would result in short-term impacts on ambient air quality. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from land clearing, and application of architectural coatings. It is expected that construction would require two phases between 2015 and 2018. Phase I would construct 400,000 square feet of regional shopping space and 120 hotel rooms. Phase II would construct an additional 400,000 square feet of shopping space and 120 hotel rooms.

Criteria pollutant emissions from heavy-duty equipment, on-road vehicle trips, and land disturbance were estimated using the California Emissions Estimator Model (CalEEMod), version 2013.2.2. Model default construction phasing and equipment assumptions were utilized to evaluate air quality impacts based on the anticipated project square footage and land use types. Please refer to the Air Quality Impact Analysis (Appendix F) for additional assumptions and model outputs.

Operation

Operation of the project would generate emissions of ROG, NO_X, CO, PM10, and PM2.5 that could result in long-term impacts on ambient air quality. Two types of air pollutant sources are expected during operation of the project: mobile and area. Mobile sources are sources of emissions associated with vehicle trips. Area sources include emissions from natural gas combustion for heating requirements, landscaping activities, and periodic paint emissions from facility upkeep.

Criteria pollutant emissions generated by project operations were estimated using CalEEMod. It was assumed that operation of Phase I would begin in 2017, whereas full operation of the project (Phases I and II) would begin in 2018. The standard defaults provided in CalEEMod were used for all aspects in the estimation of long-term emissions except for the following:

- Trip lengths were adjusted to be more representative;
- Trip purpose percentages were adjusted in accordance with the proposed project's associated traffic study conducted by Ruettgers and Schuler Civil Engineers; and
- Fleet mix percentages were adjusted to account for 60 heavy-heavy duty trucks per week.

The analysis of health risks during project operations considered receptor exposure to both CO hotspots and DPM. Traffic data at full project buildout were used to evaluate the project's potential to worsen the existing level of service (LOS) at intersections in the project area. The most recent version of the American Meteorological Society/EPA Regulatory Model (AERMOD) was used to predict health risks to the population attributable to emissions of DPM from operation of the proposed project. All of the regulatory default AERMOD model keyword parameters were employed. A total of 3,695 receptors were modeled. SJVAPCD's meteorological data for Bakersfield, California were used in the emissions modeling. Post-processing of the AERMOD output was performed to assess the potential for excess cancer risk and chronic non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA). Please refer to the Air Quality Impact Analysis (Appendix F) for additional assumptions and model outputs.

4.2.4.2 Criteria for Determining Significance

CEQA Thresholds

Criteria for determining the significance of impacts related to air quality are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

d) Expose sensitive receptors to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people.

Threshold e was evaluated during the initial study process and was determined to result in no impacts related to odors. As such, this impact is not further evaluated below. For a detailed discussion of this impact, refer to Appendix A.

Threshold c is discussed in Chapter 4.

Local Air District Thresholds

According to the State CEQA Guidelines (Section 15064.7), the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. As described above, SJVAPCD is

responsible for ensuring that state and federal ambient air quality standards are not violated within western Kern County. SJVAPCD (2002) has developed its own thresholds of significance to evaluate both construction and operational impacts.[1] The following section summarizes the local air district thresholds and presents sustainable evidence regarding the basis upon which the thresholds were developed, and describes how they are used to determine whether project construction and operational emissions would:

- interfere with or impede attainment of CAAQS and NAAQS,
- cause increased risk to human health, or
- result in objectionable odors.

Regional Thresholds for Air Basin Attainment of State and Federal Ambient Air Quality Standards

As discussed in Section 4.2.2.2, ROG and NO_X are regional pollutants, whereas PM is both a regional and local pollutant. SJVAPCD has adopted regional thresholds for ROG, NO_X, and PM to assist lead agencies in determining the significance of environmental effects with regards to local attainment of state and federal ambient air quality standards (see Table 4.2-5). The thresholds are based on emissions levels identified under the New Source Review (NSR) program. The NSR program is a permitting program that was established by Congress as part of the Clean Air Act to ensure that air quality is not significantly degraded by new sources of emissions. The NSR program requires stationary sources receive permits before start of construction and/or use of the equipment. By permitting large stationary sources, the NSR program ensures that new emissions would not slow regional progress toward attaining the NAAQS. SJVAPCD has concluded that the stationary pollutants described under the NSR program are equally significant to those pollutants generated with land use projects. As such, the thresholds summarized in Table 4.2-6 were set as the total emission thresholds associated within the NSR program to help attain the NAAQS (San Joaquin Valley Air Pollution Control District 2002).

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The May 27, 2014 Fifth Appellate District Court decision *Sierra Club et al. v. County of Fresno County et al*. concludes that an Environmental Impact Report should disclose and evaluate the public health consequences associated with increasing air pollutants.[2] As discussed in Section 4.2.2.2, all criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Adverse health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative

[1] SJVAPCD adopted its 2015 GAMAQI on March 19, 2015. Conversation with SJVAPCD staff indicates that SJVAPCD is not requiring the use of its updated 2015 GAMAQI for projects initiated prior to the adoption of the 2015 GAMAQI (Siong pers. comm.).

[2] On October 1, 2014, the California Supreme Court granted the Real Party in interest and respondent Friant Ranch, L.P.'s petition for review.

concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Moreover, O_3 precursors (ROG and NO_X) affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects would produce meaningless results. In other words, minor increases in regional air pollution from project-generated ROG and NO_X would have nominal or negligible impacts on human health.[3]

As a result, an analysis of impacts on human health associated with project-generated regional emissions is not included in this analysis. Increased emissions of O_3 precursors (ROG and NO_X) generated by the project could increase photochemical reactions and the formation of tropospheric O_3, which at certain concentrations could lead to respiratory symptoms (e.g., coughing), decreased lung function, and inflammation of airways. While these health effects are associated with O_3, the impacts would be a result of cumulative and regional ROG and NO_X emissions, and the incremental contribution of the project to specific health outcomes from criteria pollutant emissions would be limited and could not be solely traced to the project. Please refer to Chapter 4 for a discussion of cumulative impacts.

Because localized pollutants generated by a project can directly affect adjacent sensitive receptors, the analysis of project-related impacts on human health focuses only on those localized pollutants with the greatest potential to result in a significant, material impact on human health. This is consistent with the current state-of-practice and published guidance by SJVAPCD (2002), California Air Pollution Control Officers Association (2009), OEHHA (2003), and ARB (2000). The pollutants of concern in the project area include (1) locally concentrated PM and CO; (2) DPM[4]; and (3) *C. immitis* (Valley Fever). Locally adopted thresholds of significance for each pollutant are identified below.

Localized Particulate Matter Concentrations

Particulate matter is a complex mixture of substances including carbon, metals, organic material, wood smoke, and diesel exhaust. When inhaled, PM can be absorbed into the body's respiratory system, increasing the severity of asthma attacks and other lung diseases. SJVAPCD has adopted incremental PM2.5 concentration-based significance thresholds. The substantial PM2.5 thresholds are defined by SJVAPCD as annual total (i.e., exhaust and dust) PM2.5 concentrations exceeding 0.6 micrograms per cubic meter ($\mu g/m^3$) and 24-hour

[3] As an example, the Bay Area Air Quality Management District's Multi-Pollutant Evaluation Method requires a 3 to 5% increase in ROG to produce a material change in modeled human health impacts. Based on 2008 ROG and NO_X emissions in the Bay Area, a 3 to 5% increases equates to over 20,000 pounds per day of ROG and NO_X. While this example is specific to the Bay Area, similar model limitations would be observed in the SJVAB.

[4] DPM is the primary TAC of concern for mobile sources—of all controlled TACs, emissions of DPM are estimated to be responsible for about 70% of the total ambient TAC risk (California Air Resources Board 2000). Given the risks associated with DPM, tools and factors for evaluating human health impacts from project-generated DPM have been developed and are readily available. Conversely, tools and techniques for assessing project-specific health outcomes as a result of exposure to other TACs (e.g., benzene) remain limited. These limitations impede the ability to evaluate and precisely quantify potential public health risks posed by TAC exposure.

total PM2.5 concentrations exceeding 2.5 μg/m^3 (see Table 4.2-6). SJVAPCD also considers fugitive PM from earthmoving activities to be significant without application of dust controls.

Localized Carbon Monoxide Concentrations

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO "hot-spots" may have a greater likelihood of developing adverse health effects. CO concentrations in excess of the CAAQS could result in a CO hot-spot and would constitute a significant impact (San Joaquin Valley Air Pollution Control District 2002). SJVAPCD has adopted screening criteria that provide a conservative indication of whether project-generated traffic will exceed the CAAQS. The two criteria outlined in SJVAPCD (2002) Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) are summarized below:

> I. A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity would be reduced to LOS E or F; or
>
> II. A traffic study indicates that the project would substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

Localized Diesel Particulate Matter Concentrations

DPM is a form of localized PM (see above) that is generated by diesel equipment and vehicle exhaust. DPM has been identified as TAC and is particularly concerning, as long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous system. Accordingly, SJVAPCD has adopted separate thresholds to evaluate receptor exposure to DPM emissions. The "substantial" DPM threshold defined by SJVAPCD is the probability of contracting cancer for the maximum exposed individual exceeding 10 in 1 million, or the ground-level concentrations of non-carcinogenic TACs resulting in a hazard index greater than 1 for the maximum exposed individual (see Table 4.2-6).

Valley Fever

Valley Fever can develop after receptor exposure to *C. immitis.* While flu-like symptoms develop in less than 40% of individuals exposed to the fungal spores, those presenting symptoms may experience fatigue, cough, chest pain, fever, rash, headache, and joint aches. Neither SJVAPCD nor the City of Bakersfield (City) have adopted thresholds to evaluate receptor exposure to increased Valley Fever risk. The potential for the project to expose receptors to Valley Fever is highest in areas known to contain *C. immitis* and during earthmoving activities that generate fugitive dust. Accordingly, uncontrolled construction dust emissions in endemic regions of *C. immitis* could result in increased health impacts from exposure of receptors to *C. immitis* spores.

Table 4.2-6. SJVAPCD Thresholds of Significance

Analysis	Thresholds
Regional Criteria Pollutants (Construction)	ROG: 10 tons/year NO_X: 10 tons/year PM10: 15 tons/year PM2.5: 15 tons/year
Regional Criteria Pollutants (Operations)	Same as construction
Localized PM and CO	Total PM2.5: Increase greater than 0.6 µg/m^3 annual average or greater than 2.5 µg/m^3 24-hour average. Fugitive PM: Failure to implement BMPs CO: Violation of CAAQS
Localized DPM	Increased cancer risk of 10 in 1 million or increased non-cancer hazard of greater than 1.0
Valley Fever	None

BMPs = best management practices
CAAQS = California Ambient Air Quality Standards
CO = carbon monoxide
DPM = diesel particulate matter
NO_X = nitrogen oxides
PM = particulate matter
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
µg/m^3 = micrograms per cubic meter
Source: San Joaquin Valley Air Pollution Control District 2002.

Odor

SJVAPCD has not adopted quantitative thresholds for odor analyses, but has identified common types of facilities that have been known to produce odors in the San Joaquin Valley. The GAMAQI identifies screening distances from the source where the degree of odors could possibly be significant (San Joaquin Valley Air Pollution Control District 2002).

4.2.4.3 Project Impacts

Impact AQ-1. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

A project would be deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds estimates used to develop applicable air quality plans. Projects that propose development that is consistent with the growth anticipated by the relevant land use plans would be consistent with the current SJVAPCD air quality plans. Likewise, projects that propose

development that is less dense than anticipated within a general plan (or other governing land use document) would be consistent with the air quality plans because emissions would be lower than estimated for the region. If a project proposes development that is greater than anticipated growth projections, the project would be in conflict with the SJVAPCD air quality plans, and might have a potentially significant impact on air quality because emissions would exceed those estimated for the region. This situation would warrant further analysis to determine if a proposed project and surrounding projects would exceed the growth projections used in the SJVAPCD air quality plans for a specific subregional area.

As discussed in Section 4.9, *Land Use and Planning*, the General Plan land use designations for the project site are Low Density Residential, Low-Medium Density Residential, High-Medium Density Residential, and General Commercial. The project site also currently zoned for One-Family Dwelling and Regional Commercial. The proposed project involves a request for the approval of a General Plan Amendment from the current designations to General Commercial, as well as a Zone Change from One-Family Dwelling to Regional Commercial/Planned Commercial Development. Because the project is requesting rezoning, it would not conflict with applicable land use plans or policies, and would be considered consistent with the long-term General Plan vision for the project area.

The proposed project would construct and operate a commercial development consisting of a retail commercial center on 800,000 square feet of leasable commercial space and a 240-room hotel. As discussed in Chapter 6, *Growth-Inducing Impacts*, the proposed project would serve the existing and planned local neighborhoods and would not require a large or diverse labor force. Moreover, the project would not result in substantial indirect growth because the project site and surrounding sites are already developed with commercial or residential uses. Accordingly, the project would be consistent with recent growth and labor projections for the region. While emissions would be generated during construction and operation (discussed below), they would not be expected to exceed SJVAPCD significance thresholds nor impede attainment or maintenance of the NAAQS or CAAQS.

Because the project would not conflict with any applicable land use plan or policy, would be consistent with recent growth projections for the region, and would not exceed SJVAPCD's significance thresholds, it would not conflict with or obstruct implementation of the current SJVAPCD air quality plans. Therefore, the impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AQ-2. The proposed project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Construction

Short-term emissions would be generated during the construction phase of the project and would be short in duration (temporary), without lasting impacts on air quality. Sources of short-term construction emissions would be related to earth-moving activities, travel by construction equipment, exhaust from construction equipment, architectural coatings, asphalt paving, and mobile emissions associated with the transport of construction workers. Criteria pollutant emissions generated by these sources were quantified using CalEEMod. Refer to the Air Quality Impact Analysis (Appendix F) for model outputs and detailed assumptions.

Table 4.2-7 presents the project's short-term emissions based on the anticipated construction period.

Table 4.2-7. Unmitigated Short-Term (Construction) Project Emissions

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total
2015	0.49	4.39	3.66	0.005	0.47	0.23	0.70	0.21	0.22	0.42
2016	3.90	5.23	5.25	0.008	0.23	0.30	0.53	0.06	0.28	0.34
2017	0.63	5.40	4.96	0.008	0.55	0.29	0.84	0.23	0.27	0.50
2018	3.71	3.96	4.36	0.008	0.21	0.21	0.43	0.06	0.20	0.26
SJVAPCD Threshold	10	10	-	-	BMPs	-	15	BMPs	-	15
Threshold Exceeded?	**NO**	**NO**	-	-	-	-	**NO**			**NO**

BMPs = best management practices
CO = carbon monoxide
NO_X = nitrogen oxides
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide
Source: Appendix F

The construction emissions above represent a worst-case scenario for construction equipment, as CalEEMod defaults for type of equipment, quantity of equipment in the fleet, and power rating were utilized because no specific equipment listing was available at the time of this report. As calculated with CalEEMod using the default equipment listing, the short-term emissions are not

predicted to exceed SJVAPCD annual significance thresholds levels for ROG, NO_X, or total PM.

While SJVAPCD's annual significance criteria would not be exceeded, Table 4.2-7 indicates that construction activities would trigger the need for emission reductions consistent with the requirements of SJVAPCD's Rule 9510, *Indirect Source Review*, as construction emissions would be in excess of 2.0 tons per year. Under SJVAPCD's Rule 9510, construction exhaust emissions equal to or exceeding 2.0 tons of NO_X or PM_{10} exhaust emissions are required to reduce NO_X emissions by 20% and PM_{10} exhaust emissions by 45%, compared with the statewide fleet average (Mitigation Measure MM AQ-1 (part (a)(ii))). In addition, Mitigation Measure MM AQ-1 (part (a)(iii)) is required to further reduce construction-related exhaust emissions.

Table 4.2-8 summarizes mitigated construction emissions consistent with Mitigation Measure MM AQ-1 (part (a)). The emission estimates also assume implementation of fugitive dust best management practices (BMPs), which are required pursuant to SJVAPCD Regulation VIII and outlined in Mitigation Measure MM AQ-1 (part (a)(i)). Compliance with SJVAPCD Regulation VIII is required to mitigate fugitive dust emissions to less-than-significant levels. Construction emissions would be less than significant with implementation of Mitigation Measure MM AQ-1(part (a)).

Table 4.2-8. Mitigated Short-Term (Construction) Project Emissions

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total
2015	0.18	2.09	3.13	0.005	0.24	0.09	0.33	0.10	0.09	0.19
2016	3.51	3.15	5.20	0.008	0.23	0.15	0.38	0.06	0.15	0.21
2017	0.25	2.98	4.57	0.008	0.32	0.14	0.46	0.12	0.14	0.26
2018	3.44	2.74	4.43	0.008	0.21	0.14	0.35	0.06	0.13	0.19
SJVAPCD Threshold	10	10	-	-	BMPs	-	15	BMPs	-	15
Threshold Exceeded?	**NO**	**NO**	**-**	**-**	**-**	**-**	**NO**			**NO**

BMPs = best management practices
CO = carbon monoxide
NO_X = nitrogen oxides
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide
Source: Appendix F

Operations

Long-term emissions would be caused by operational mobile transportation emissions from shoppers, employees, maintenance equipment, and area source emissions from incidental activities related to permanent utilities and services for the shopping center, such as paint reapplications and cleaning. Each of these sources was taken into account in calculating the project's long-term operational emissions, which were quantified using CalEEMod. Refer to the Air Quality Impact Analysis (Appendix F) for model outputs and detailed assumptions.

Estimated operational emissions are summarized in Table 4.2-9. It is important to note that operational emissions in 2017 represent Phase I only, while operational emissions in 2019 represent both Phases I and II (full operation).

Table 4.2-9. Unmitigated Long-Term (Operational) Project Emissions

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total
Phase I (Starting in Calendar Year 2017)										
Area	2.10	<0.01	0.03	0.00	0.00	<0.01	<0.01	0.00	<0.01	<0.01
Energy	0.03	0.29	0.24	0.002	0.00	0.02	0.02	0.00	0.02	0.02
Mobile	7.67	10.22	53.50	0.10	6.21	0.13	6.34	1.66	0.12	1.78
Phase I Total	9.80	10.51	53.77	0.10	6.21	0.15	6.36	1.66	0.14	1.80
Phase II (Starting in Calendar Year 2019)										
Area	2.10	<0.01	0.02	0.00	0.00	<0.01	<0.01	0.00	<0.01	<0.01
Energy	0.03	0.29	0.25	0.002	0.00	0.02	0.02	0.00	0.02	0.02
Mobile	6.41	8.44	43.66	0.08	6.21	0.09	6.30	1.67	0.10	1.77
Phase II Total	8.55	8.73	43.92	0.09	6.21	0.13	6.34	1.67	0.12	1.79
Phases I & II Emissions										
Area	4.20	<0.01	0.05	0.00	0.00	<0.01	<0.01	0.00	<0.01	<0.01
Energy	0.06	0.58	0.49	0.004	0.00	0.04	0.04	0.00	0.04	0.04
Mobile	14.08	18.66	97.16	0.18	12.42	0.24	12.66	3.33	0.22	3.55
Phases I & II Total	18.35	19.24	97.69	0.19	12.42	0.28	12.70	3.33	0.26	3.59
SJVAPCD Threshold	10	10	-	-	-	-	15	-	-	15
Threshold Exceeded?	**YES**	**YES**	**-**	**-**	**-**	**-**	**YES**	**-**	**-**	**NO**

CO = carbon monoxide
NO_X = nitrogen oxides
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide
Source: Appendix F

As shown in Table 4.2-9, operational NO_X emissions would exceed the SJVAPCD's significance thresholds during Phase I, while both ROG and NO_X emissions would exceed the SJVAPCD's significance thresholds during Phase II. The project would be subject to SJVAPCD's Rule 9510, which requires operational NO_X and PM10 emissions be reduced by 33.3% and 50%, respectively (see Mitigation Measure MM AQ-1 (part (a)(ii))). Mitigation Measure MM AQ-2 also outlines several area source strategies that would be implemented by the project applicant to reduce operational emissions. As shown in Table 4.2-10, ROG and NO_X emissions would still exceed SJVAPCD's significance thresholds even with Rule 9510 compliance and implementation of onsite mitigation. Accordingly, the project proponent would enter into a Voluntary Emissions Reduction Agreement (VERA), as outlined in Mitigation Measure MM AQ-1 (part (c)), with SJVAPCD to reduce operational ROG and NO_X emissions below air district thresholds. Operational emissions would be less than significant with implementation of Mitigation Measures MM AQ-1 (parts (a) and (c)) and MM AQ-2.

Table 4.2-10 summarizes operational emissions with implementation of Mitigation Measures MM AQ-1(parts (a) and (c)) and MM AQ-2.

Table 4.2-10. Mitigated Long-Term (Operational) Project Emissions

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total
Phase I (Starting in Calendar Year 2017)										
Area	1.91	<0.01	0.03	0.00	0.00	<0.01	<0.01	0.00	<0.01	<0.01
Energy	0.03	0.29	0.24	0.002	0.00	0.02	0.02	0.00	0.02	0.02
Mobile[a]	7.22	7.83	43.34	0.07	4.18	0.10	4.27	1.12	0.09	1.21
ISR Reduction[b]	-	-1.11	-	-	-	-	-1.11	-	-	-
VERA Reduction[c]	-7.17	-2.84	-	-	-	-	-	-	-	-
Phase I Total	2.00	4.17	43.61	0.07	4.18	0.12	3.18	1.12	0.11	1.23
Phases I & II Emissions										
Area	3.82	<0.01	0.05	0.00	0.00	<0.01	<0.01	0.00	<0.01	<0.01
Energy	0.06	0.58	0.49	0.004	0.00	0.04	0.04	0.00	0.04	0.04
Mobile[a]	13.28	14.33	78.73	0.13	8.36	0.18	8.53	2.24	0.16	2.40
ISR Reduction[b]	-	-2.08	-	-	-	-	-2.22	-	-	-
VERA Reduction[c]	-7.17	-2.84	-	-	-	-	-	-	-	-
Phases I & II Total	9.99	9.99	79.26	0.13	8.36	0.22	6.35	2.24	0.21	2.44
SJVAPCD Threshold	10	10	-	-	-	-	15	-	-	15
Threshold Exceeded?	**NO**	**NO**	**-**	**-**	**-**	**-**	**NO**	-	**-**	**NO**

[a] "Mitigated" mobile source emissions reflect adjustments made to the CalEEMod emissions model to account for atypical mitigations to reflect mitigations that generate emissions reductions from BAU conditions that are characteristic of the project traffic and development environment and are not measures incorporated into project

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total

design. Please refer to the Air Quality Impact Analysis (Appendix F) for additional assumptions and model outputs.

[b] Reduction applied to the project from compliance with SJVAPCD Rule 9510 – Indirect Source Review, which is 33% of NO_X emissions and 50% of PM10 emissions. SJVAPCD Rule 9510 requires the reduction of operational NO_X by 33.3% from unmitigated emissions and operational PM10 by 50% from unmitigated emissions. The rule allows all reductions to be applied as mitigation to a project. The ISR reductions displayed in Table 4.2-10 were calculated using the following example's methodology: 33.3% of unmitigated NO_X for Phases I and II is 6.41 tons. The difference between mitigated and unmitigated NO_X (the tons of NO_X reduced by the project through mitigation) is 4.33 tons. By subtracting 4.33 tons from 6.41 tons, the remaining tonnage of NO_X (2.08) that the project must reduce to conform with Rule 9510 is derived and noted in the row labeled "ISR Reduction."

[c] Reduction applied to the project from anticipated VERA. VERAs are contracts in which project developers agree to pay a fee per ton of operational emissions in order to reduce project-related emissions to a level below significance. SJVAPCD utilizes the funds paid to realize actual emissions reductions elsewhere (off site).

CO = carbon monoxide
ISR = Indirect Source Review
NO_X = nitrogen oxides
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide
VERA = Voluntary Emissions Reduction Agreement
Source: Appendix F

Combined Construction and Operational Emissions

Once Phase I of the project has been completed there will be 2 years (2017–2018) where Phase I operational and Phase II construction emissions would overlap. Because construction and operation of the proposed project would overlap, combined construction and operational emissions are presented in Table 4.2-11 and compared with SJVAPCD's thresholds. Note that emissions estimates assume implementation of Mitigation Measures MM AQ-1 (parts (a) and (c)) and MM AQ-2.

Table 4.2-11. Combined Construction and Operational Project Emissions

					PM10			PM2.5		
Year	ROG	NO_X	CO	SO_2	Dust	Exhaust	Total	Dust	Exhaust	Total
2017										
Phase I Operational[a]	2.00	4.17	43.61	0.07	4.18	0.12	3.18	1.12	0.11	1.23
Phase II Construction	0.25	2.98	4.57	0.01	0.32	0.14	0.46	0.12	0.14	0.26
TOTAL: 2017	2.25	7.15	48.18	0.08	4.50	0.26	3.64	1.24	0.25	1.49
SJVAPCD Threshold	10	10	-	-	-	-	15	-	-	15
Threshold Exceeded?	**NO**	**NO**	-	-	-	-	**NO**	-	-	**NO**
2018										
Phase I Operational[a]	2.02	4.16	44.26	0.07	4.31	0.12	3.18	1.15	0.11	1.26
Phase II Construction	3.44	2.74	4.43	0.01	0.21	0.14	0.35	0.06	0.13	0.19
TOTAL: 2017	5.46	6.90	48.69	0.08	4.52	0.26	3.53	1.21	0.24	1.45
SJVAPCD Threshold	10	10	-	-	-	-	15	-	-	15
Threshold Exceeded?	**NO**	**NO**	-	-	-	-	**NO**	-	-	**NO**

[a] These operational numbers have been reduced per compliance with Rule 9510 ISR and anticipated VERA.
CO = carbon monoxide
ISR = Indirect Source Review
NO_X = nitrogen oxides
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gases
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_2 = sulfur dioxide
VERA = Voluntary Emissions Reduction Agreement
Source: Appendix F

As shown in Table 4.2-11, combined construction and operational emissions would not exceed SJVAPCD's ROG and NO_X thresholds, and combined construction and operational emissions would be less than significant with implementation of Mitigation Measures MM AQ-1 (parts (a) and (c)) and MM AQ-2.

Mitigation Measures

MM AQ-1. Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Obtain Required Permits.** The project shall be required to comply with all applicable rules and regulations as set forth by the San Joaquin Valley Air Pollution Control District (SJVAPCD). To ensure compliance, the project proponent shall obtain all construction permits deemed necessary by the SJVPACD and shall comply with all measures as specified by that agency including, but not limited to:

(i) **Fugitive Dust Control Plan**. The project proponent shall develop a Fugitive Dust Control Plan in accordance with SJVAPCD Regulation VIII, Dust Control Requirements to Control Construction Emissions of PM10 (particulate matter 10 microns in diameter or less). The Plan shall include, but is not limited to, the following: A project description, a listing of all anticipated fugitive dust emissions included in the project, and methods for adherence to all regulations related to onsite watering, reduced vehicle speeds, track-out devices, surface stabilization, fugitive dust control practices, free-board limits, mud/dirt accumulation, cease grading during heightened wind speeds.

(ii) **Indirect Source Review.** The project proponent shall provide the City with proof that an Indirect Source Review (ISR) application has been approved by SJVAPCD, if deemed necessary by that agency.

(iii) **Incorporate Measures to Reduce Construction Exhaust Emissions.** The project proponent shall require that all construction contractors to utilize Tier 3 engines for all off-road construction equipment over 50 horsepower, unless such an engine is not available for a particular item of equipment. In the event a Tier 3 engine is not available for any off-road engine larger than 100 horsepower, that engine shall be equipped with retrofit controls that would provide nitrogen oxides (NO_X) and particulate matter emissions that are equivalent to a Tier 3 engine. Additionally, all equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specifications and shall be turned off when not in use, and idling shall be minimized. All vehicles shall also comply with any measures specified by SJVAPCD related to NO_X emissions from on-road heavy-duty diesel haul vehicles.

(b) **Valley Fever.** The project proponent shall ensure that construction workers are educated regarding the symptoms and potential health effects associated with exposure to Coccidioides immitis fungus spores; and that construction workers are provided with personal protective equipment such as respiratory equipment (masks), if requested. This will reduce potential exposure to airborne dust and facilitate recognition of symptoms and earlier treatment of Valley Fever.

(c) **Reduction of Reactive Organic Gas (ROG) and NO_X Emissions.** The project proponent shall submit evidence, verified by SJVAPCD, that demonstrates that the project's construction and operational-related PM10, ROG, and NO_X emissions will be reduced to below SJVAPCD's numeric threshold of 15, 10, and 10 tons per year, respectively. These reductions can be achieved by any combination of project design, compliance with the ISR, and/or via the project proponent entering into a development mitigation contract (i.e., Voluntary Emission Reduction Agreement, or VERA), with SJVAPCD.

If a VERA is utilized, a copy of the executed agreement and implementing reports will be provided to the City to demonstrate compliance. Additionally, the project proponent shall supply updated documents if the requirements change as the VERA is reassessed by SJVAPCD at each phase of project development. This requirement will be enforced and verified by SJVAPCD. The current VERA payment fee for construction emissions is $9,350 per ton of NO_X; payment fees vary by year (i.e., future year payment fees for NO_X could be more than the current price of $9,350) and are sensitive to the number of projects requiring emission reductions within the same air basin. At the time of issuance for building permits for each phase of the project, associated fees will be calculated and collected by SJVAPCD and will depend on the emissions required to be mitigated after all selected emission reduction projects are completed. The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid to SJVAPCD by the project proponent to implement emission reduction projects required for the project.

MM AQ-2. The project shall continuously comply with the items listed below during all operations of the project and, prior to the issuance of Final Occupancy approval, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate methods for compliance with the following:

(a) **Implement Onsite Mitigation to Reduce Operational Emissions.** The project proponents will incorporate the following onsite mitigation into the project design:

(i) Use low volatile organic compound (VOC) paint (non-residential *interior*).

(ii) Use low VOC paint (non-residential *exterior*).

(iii) Require the electrification of landscaping equipment, with a minimum of 3% of lawnmowers, leaf blowers, and chainsaws to be electrified.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AQ-3. The proposed project would expose sensitive receptors to substantial pollutant concentrations.

Localized Particulate Matter

Particulate matter generated by the project may be inhaled and absorbed into the body's respiratory system, which could increase the severity of asthma attacks and other lung diseases. The maximum offsite, ground-level concentration of PM2.5 for the 24-hour and annual periods was predicted using the AERMOD dispersion software and the CalEEMod operational outputs. The results of the modeling are presented in Table 4.2-12 and compared with SJVAPCD's incremental PM2.5 concentration-based significance thresholds.

Table 4.2-12. Predicted PM2.5 Concentrations from Project Operations

Parameter	24-Hour	Annual
Predicted concentration	1.18	0.31
SJVAPCD Thresholds	2.5	0.60
Exceeds Threshold in 2017?	NO	NO

SJVAPCD = San Joaquin Valley Air Pollutant Control District
Source: Appendix F

As shown in Table 4.2-12, operation of the project would not result in localized PM concentrations that exceed SJVAPCD's significance threshold. While construction activities would generate PM from land disturbance activities and equipment usage, emissions would be short term and cease once construction is complete. Moreover, fugitive dust emissions would be controlled through compliance with SJVAPCD Regulation VIII (see Mitigation Measure MM AQ-a (part (a)(i))). Consequently, exposure of sensitive receptors to localized particulate matter would be a less-than-significant impact.

In addition, Table 4.2-13 summarizes predicted concentrations of NO_2, SO_2, CO, PM10, and PM2.5, relative to the NAAQS and CAAQS. As indicated in Table 4.2-13, predicted concentrations are not anticipated to result in exceedances of the NAAQS nor CAAQS. Consequently, this impact is considered less than significant.

Table 4.2-13. Predicted Ambient Air Quality Impacts

Pollutant	Averaging Period	Background ($\mu g/m^3$)	Project ($\mu g/m^3$)	Project + Background ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	CAAQS ($\mu g/m^3$)
NO_2	1-hour	115.10	27.94	143.04	188.68	338
	Annual	8.15	2.31	10.46	100	56
SO_2	1-hour	19.20	0.22	19.42	196	655
	3-hour	18.100	0.19	18.29	1,300	---
	24-hour	10.487	0.07	10.56	365	105
	Annual	0.953	0.02	0.97	---	---
CO	1-hour	3,091.50	104.60	3,196.10	40,000	23,000
	8-hour	1,148.82	72.55	1,221.37	10,000	10,000
PM10	24-hour	109.00	3.53	112.53	150	50
	Annual	59.13	0.92	60.05	---	20
PM2.5	24-hour	83.00	1.18	84.18	35	---
	Annual	22.40	0.31	22.71	12.0	12

$\mu g/m^3$ = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standards
CO = carbon monoxide
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
PM10 = particulate matter 10 microns or less in diameter
PM2.5 = particulate matter 2.5 microns or less in diameter
SO_2 = sulfur dioxide

Localized Carbon Monoxide

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. CO concentrations are also influenced by wind speed and atmospheric mixing; however, under inversion conditions prevalent in the valley, CO concentrations may be more uniformly distributed over a broad area. Under certain meteorological conditions, CO concentrations along a congested roadway or intersection may reach unhealthful levels for sensitive receptors. This localized impact can result in elevated levels of CO, or hot-spots, even though concentrations at the closest air quality monitoring station may be below NAAQS and CAAQS.

As discussed in Section 4.2.4.2, SJVAPCD has adopted screening criteria that provide a conservative indication of whether project-generated traffic will exceed the CAAQS. Although the project would be a substantial source of traffic (800,000 square feet of retail commercial), given the location of the site and the

future planned improvements, a traffic impact study (Appendix C) was prepared for this project by Ruettgers & Schuler evaluating a total of 15 intersections (seven signalized and eight unsignalized). Based on future programmed roadway improvements (restriping, signalization, and roadway improvements for which the project would be required to contribute its fair share towards the costs), all potentially affected intersections and roadway segments would operate at a level of service of C or better. Accordingly, implementation of the project would not violate SJVAPCD's conservative screening criteria for CO hot-spots. Consequently, exposure of sensitive receptors to CO hot spots would be a less-than-significant impact.

Localized Diesel Particulate Matter

Project Construction

Project construction would generate DPM, resulting in the exposure of nearby existing sensitive receptors (e.g., residences) to increased DPM concentrations. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. In addition, DPM concentrations, and, therefore, cancer health risks, dissipate as a function of distance from the emissions source.

As described above, there are sensitive receptors within 1,000 feet of the project site (see Table 4.2-2). DPM generated during construction may expose these receptors to increased health risks. The greatest potential for DPM emissions would occur in 2016 (see Tables 4.2-7 and 4.2-8).

Overall, construction of the entire project would occur over a 4-year period. This is well below the 70-year exposure period typically associated with increased cancer health risks. Moreover, Mitigation Measure MM AQ-1 (part (a)(iii)) would reduce DPM emissions by requiring use of EPA Tier 3 or cleaner engines, while SJVAPCD Rule 9510 would require a 45% reduction in construction-related PM10 exhaust emissions (Mitigation Measure MM AQ-2 (part (a)(ii))).

As indicated in Tables 4.2-7 and 4.2-8, construction activities would generate only minor amounts of DPM; mitigated PM10 exhaust emissions are estimated to range from 0.09 and 0.15 pound per day, with maximum emissions generated in 2016. Because exposure to diesel exhaust would be well below the 70-year exposure period and advanced DPM controls (e.g., Tier 3 engines) would be implemented, construction activities are not anticipated to result in an elevated cancer risk for exposed persons or exceed SJVAPCD significance thresholds. Consequently, construction-related DPM emissions impacts would be less than significant.

Project Operations

The proposed project would result in emissions of TACs and would be located near existing residences; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed project is required.

Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Please refer to the Air Quality Impact Analysis (Appendix F) for additional assumptions and model outputs. Similarly, predicted concentrations were used to calculate non-cancer chronic and acute hazard indices, which are the ratio of expected exposure to acceptable exposure.

Table 4.2-14 summarizes the predicted cancer and non-cancer risks and demonstrates that risks at the point of maximum impact would not exceed SJVAPCD's significance levels of ten in one million and 1.0, respectively, for the proposed project. Accordingly, operation of the project would not expose sensitive receptors to increased health risks from DPM. This impact would be less than significant.

Table 4.2-14. Maximum Health Risks during Project Operations

Health Risk	Value	SJVAPCD Thresholds
Excess Cancer Risk[a]	0.00000238	10 per million
Chronic Hazard Index[a]	0.00115	1.0

[a] Based on continuous, 70-year residential exposure for the most sensitive receptor.
SJVAPCD = San Joaquin Valley Air Pollution Control District
Source: Appendix F

Valley Fever

Disturbance of soil containing *C. immitis* could expose the receptors adjacent to the construction site to spores known to cause Valley Fever. Areas endemic to *C. immitis* are generally arid to semiarid with low annual rainfall; as such, soil containing the fungus is commonly found in Southern California and throughout the Central Valley. Table 4.2-15 summarizes Valley Fever hospitalization rates between 2002 and 2010 in affected California counties and indicates that over 60% of Valley Fever cases have been in people who live in the San Joaquin Valley, with Kern County being the most affected county in the state.

Table 4.2-15. Valley Fever Hospitalizations (2002-2010)

Region	County	Number of Cases	Percentage of State Cases	Relative State Rank[a]
Northern California	Alameda	107	2%	11
	Contra Costa	106	2%	12
	Monterey	102	2%	13
	Sacramento	65	1%	16
	San Francisco	35	1%	19
	Solano	36	1%	18
Total Northern California		**451**	**7%**	-
Southern California	Imperial	20	0%	20
	Los Angeles	852	14%	2
	Orange	140	2%	10
	Riverside	310	5%	7
	San Bernardino	181	3%	9
	San Diego	313	5%	6
Total Southern California		**2,267**	**38%**	-
San Joaquin Valley	Fresno	681	11%	3
	Kern	1,810	30%	1
	Kings	345	6%	5
	Madera	55	1%	17
	Merced	81	1%	15
	San Joaquin	238	4%	8
	Stanislaus	93	2%	14
	Tulare	447	7%	4
Total San Joaquin Valley		**3,750**	**62%**	-
Total California		6,017	100%	-

Source: Lighthouse pers. comm.

[a] State ranking presented in descending order, where counties with the highest number of cases have the lowest rank (e.g., Kern County with 1,810 cases is ranked #1 in the state for Valley Fever hospitalizations).

The presence of *C. immitis* in Kern County does not guarantee that construction activities would result in increased incidence of Valley Fever. Propagation of *C. immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *C. immitis* spores can be released when filaments are disturbed by earthmoving

activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing Valley Fever. Moreover, exposure to *C. immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (U.S. Geological Survey 2000).

While there are a number of factors that influence receptor exposure and development of Valley Fever, earthmoving activities during construction could release *C. immitis* spores if filaments are present and other soil chemistry and climatic conditions are conducive to spore development. Receptors adjacent to the construction area may therefore be exposed to increase risk of inhaling *C. immitis* spores and subsequent development of Valley Fever. Dust-control measures are the primary defense against infection (U.S. Geological Survey 2000). Compliance with SJVAPCD Regulation VIII (Mitigation Measure MM AQ-1 (part (a)(i))) would avoid dusty conditions and reduce the risk of contracting Valley Fever through routine watering and other controls. Mitigation Measure MM AQ-1 (part (b)) also requires construction workers to be educated regarding the symptoms and potential health effects associated with exposure to *C. immitis*. Personal protective equipment will also be provided, if requested. Therefore, the impact of exposure of sensitive receptors to increased Valley Fever risk during construction would be less than significant with implementation of Mitigation Measure MM AQ-1 (parts (a)(i) and (b)).

Mitigation Measures

Implementation of Mitigation Measure MM AQ-1 (parts (a) and (b)) would reduce impacts to less-than-significant levels.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.3
Biological Resources

4.3.1 Introduction

This section addresses the existing biological resources located on the proposed project site and in the vicinity, and identifies potential impacts on biological resources that may be affected by the proposed project. This section also presents information regarding applicable regulations and existing onsite floral and faunal resources, including special-status species located through a biological resources study. Mitigation measures are recommended to reduce potential impacts caused by the proposed project where applicable.

The analysis presented in this section is primarily based on a biological report prepared by Quad Knopf titled *Biological Resources Evaluation, Hosking/99 Commercial Center*, which is attached in its entirety as Appendix B (Quad Knopf 2014). In addition to field work, the survey included pre-field research to identify special-status[1] plants and wildlife potentially occurring in the project vicinity. This research included a review of the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Plants, and the United States Fish and Wildlife Service (USFWS) website.

A biological survey was also conducted for this site in 2008 by Paul Pruett & Associates (*A Biological Assessment of Vegetation and Wildlife, 93± Acres, Section 25, T30S, R27E, MDB&M, Bakersfield, Kern County, California* [Paul Pruett & Associates 2008]).

4.3.2 Environmental Setting

The environmental setting for biological resources provides a description of the conditions that exist on the project site, including a list of plant species, plant communities, animals, and valuable habitat found on the site and the overall potential for floral and faunal species to use and/or be located on the project site.

[1] *Special-status* refers to any species considered by state or federal agencies as endangered, threatened, or depleted and of special concern.

The entire project site is within the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) area (City of Bakersfield and Kern County 1994). The project site is also in an area that has historically been used for farming, grazing, and oil production. A survey of the project site was conducted in October 2007 by Paul Pruett & Associates and again in February 2014 by Quad Knopf. In compliance with the MBHCP, a reconnaissance-level biological survey was conducted by qualified biologists who walked meandering transects throughout the entire project site and a 250-foot buffer, where feasible, to determine the extent of plant communities and sensitive habitats. The surveyed area was also evaluated to determine the potential for occurrences of special-status plant and animal species. The current land uses in the survey area were recorded, as were plants, wildlife, and wildlife sign (e.g., scat, burrows, feathers, tracks). Habitat features and qualities were noted, including the potential for those habitats to support wildlife. A discussion of the existing vegetation and wildlife that occur or have the potential to occur on the project site is provided below.

4.3.2.1 Vegetation

The project site is highly disturbed and does not contain any undisturbed native habitat. The site appears to have been used historically for agricultural use and includes foundations, trash, and predominantly nonnative vegetation. Much of the site appears to be regularly disked. Table 4.3-1 lists the plant species that were observed during the 2014 survey and their originations.

While four sensitive natural communities (Valley Saltbush Scrub, Valley Sacaton Grassland, Great Valley Cottonwood Riparian Forest, and Great Valley Mesquite Scrub) have been recorded within 10 miles of the project site, the project site lacks any sensitive plant communities, including riparian[2] communities.

Table 4.3-1. Plants Observed During the Biological Survey

Common Name (*Scientific Name*)	**Source**
Fiddleneck (*Amsinckia menziesii*)	Native
Mulefat (*Baccharis salicifolia*)	Native
Brome grass (*Bromus* spp.)	European
Jimson weed (*Datura stramonium*)	South America
Foxtail barley (*Hordeum jubatum*)	Native
Red-stem filaree (*Erodium cicutarium*)	European
Telegraph weed (*Heterotheca grandiflora*)	Native
Common mallow (*Malva neglecta*)	Eurasian
Russian thistle (*Salsola tragus*)	European

[2] Of, on, or relating to the banks of a course of water

Common Name (*Scientific Name*)	Source
Mustard (*Sisymbrium* spp.)	European
Source: Appendix B	

As shown in Table 4.3-1, four of the ten plant species observed at the project site are native to the area. The remaining species are either invasive or exotic herbaceous plant species. No trees or woody, non-herbaceous bushes were observed at the project site during the survey.

Special-Status Plant Species

Special-status plant species are species legally protected under the state and federal endangered species acts or other regulations, or species considered sufficiently rare by the scientific community to qualify for such a listing. Special-status plants are species in the following categories:

- species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.12 [listed plants] and various notices in the Federal Register [FR] [proposed species]);
- species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);
- species that meet the definitions of rare, threatened, or endangered under CEQA (State CEQA Guidelines § 15380);
- plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code § 1900 et seq.);
- plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California (Lists 1B and 2 in Skinner and Pavlik 1994); or
- plants listed by CNPS as plants for which more information is needed to determine their status, and as plants of limited distribution that may be included as special-status species on the basis of local significance or recent biological information (Lists 3 and 4).

A query of the 2014 CNDDB and CNPS records for the Gosford 7.5-minute U.S. Geological Survey (USGS) quadrangle and eight surrounding quadrangles (Rosedale, Oildale, Oil Center, Stevens, Millux, Conner, Lamont, and Weed Patch) and the USFWS list of potentially occurring species identified 20 special-status plant species as having the potential to occur in the vicinity of the project site (Appendix B). Table 4.3-2 lists these 20 special-status plant species and their regulatory statuses.

Table 4.3-2. Special-Status Plant Species Potentially Occurring in the USGS Gosford, Rosedale, Oildale, Oil Center, Stevens, Millux, Conner, Lamont, and Weed Patch Quadrangles

Common Name (*Scientific Name*)	Legal Status (USFWS/CDFW/CNPS) Status Code
Horn's milk-vetch (*Astragalus hornii* var. *hornii*)	--/--/1B.2
Lost Hills crownscale (*Atriplex coronate* var. *vallicola*)	--/--/1B.2
Bakersfield smallscale (*Atriplex tularensis*)	--/SE/1B.1
Alkali mariposa lily (*Calochortus striatus*)	--/--/1B.2
California jewelflower (*Caulanthus californicus*)	FE/CE/1B.1
Hispid salty bird's beak (*Chloropyron molle* ssp. *Hispidum*)	--/--/1B.2
Recurved larkspur (*Delphinium recurvatum*)	--/--/1B.2
Kern mallow (*Eremalche kernensis*)	FE/--/1B.1
Hoover's eriastrum (*Eriastrum hooveri*)	--/--/4.2
California satintail (*Imperata brevifolia*)	--/--/2B.1
Coulter's goldfield (*Lasthenia glabrata* ssp. *Coulteri*)	--/--/1B.2
Comanche Point layia (*Layia leucopappa*)	--/--/1B.1
Calico monkeyflower (*Mimulus pictus*)	--/--/1B.2
San Joaquin woollythreads (*Monolopia congdonii*)	FE/--/1B.2
Piute Mountains navarretia (*Navarretia setiloba*)	--/--/1B.1
Bakersfield cactus (*Opuntia basilaris* var. *treleasei*)	FE/SE/1B.1
California chalk-moss (*Pterygoneurum californicum*)	--/--/1B.1
Oil neststraw (*Stylocline citroleum*)	--/--/1B.1
Mason's neststraw (*Stylocline masonii*)	--/--/1B.1
California screw moss (*Tortula californica*)	--/--/1B.2

Status Codes: FE = Federally listed as endangered (USFWS); SE = State-listed as endangered (California Department of Fish and Wildlife [CDFW])
1B = Plants rare, threatened, or endangered in the state and elsewhere (CNPS)
4 = Plants having a limited distribution (watch list)
1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat) (CNPS)
.2 = Fairly endangered in California (20–80% occurrences threatened) (CNPS)

Source: Appendix B

No evidence of these 20 special-status plant species, or any other special-status plant species, was observed during the project site survey, and the project site lacks suitable habitat to support any of these species. Special-status plant species are not anticipated to occur on the project site.

4.3.2.2 Wildlife

Wildlife species using the project site were identified by sight, sound, and sign during the 2014 site survey. The project site supports wildlife species typically found in rural agricultural settings. Table 4.3-3 lists the four wildlife species detected at the project site during the survey.

Table 4.3-3. Wildlife Observed During the Biological Survey

Common Name (*Scientific Name*)	Evidence
American kestrel (*Falco sparverius*)	Sighted
Desert cottontail (*Sylvilagus audubonii*)	Sign
Western side-blotched lizard (*Uta stansburiana*)	Sighted
San Joaquin kit fox (*Vulpes macrotis mutica*)	Burrows and Scat

Source: Appendix B.

Special-Status Wildlife Species

Special-status wildlife species are wildlife legally protected under the CESA and federal ESA or other regulations, and species considered sufficiently rare by the scientific community to qualify for such listing. Special-status wildlife includes species in the following categories:

- species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.11 [listed animals] and various notices in the FR [proposed species]);
- species listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5);
- species that meet the definitions of rare, threatened, or endangered under CEQA (State CEQA Guidelines § 15380);
- animal species of special concern to CDFW; and
- animals fully protected in California (California Fish and Game Code §§ 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

A query of the CNDDB for the Gosford and eight surrounding 7.5-minute USGS quadrangles and the USFWS list identified 29 special-status wildlife species as having the potential to occur in the vicinity of the project site. Table 4.3-4 lists these federal and/or state special-status wildlife species.

Table 4.3-4. Special-Status Wildlife Species Potentially Occurring in the USGS Gosford, Rosedale, Oildale, Oil Center, Stevens, Millux, Conner, Lamont, and Weed Patch Quadrangles

Common Name (*Scientific Name*)	Legal Status (USFWS/CDFW)
Tri-colored blackbird (*Agelaius tricolor*)	--/SE*
Nelson's antelope squirrel (*Ammospermophilus nelson*)	--/ST
Bakersfield legless lizard (*Anniella grinnellii*)	--/SSC
Burrowing owl (*Athene cunicularia*)	--/SSC
Vernal pool fairy shrimp (*Branchinecta lynchii*)	FT/--
Swainson's hawk (*Buteo swainsoni*)	--/ST
Western snowy plover (*Charadrius alexandrines nivosus*)	--/SSC
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FPT/SE
Fulvous whistling duck (*Dendrocygna bicolor*)	SSC
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT
Giant kangaroo rat (*Dipodomys ingens*)	FE/SE
Short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*)	--/SSC
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	FE/SE
White-tailed kite (*Elanus leucurus*)	--/FP
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/--
Western mastiff bat (*Eumops perotis californicus*)	--/SSC
Blunt-nosed leopard lizard (*Gambelia sila*)	FE/SE
Delta smelt (*Hypomesus transpacificus*)	FT
Hoary bat (*Lasiurus cinereus*)	--/SSC
Northern leopard frog (*Lithobates pipens*)	--/SSC
San Joaquin whipsnake (*Masticophis flagellum ruddocki*)	--/SSC
Tulare grasshopper mouse (*Onychomys torridus tularensis*)	--/SSC
California red-legged frog (*Rana draytonii*)	FT/--
Buena vista lake ornate shrew (*Sorex ornatus ornatus*)	FE/SSC
Western Spadefoot (*Spea hammondii*)	--/SSC
American badger (*Taxidea taxus*)	--/SSC
Giant garter snake (*Thamnophis gigas*)	FT/--
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE/ST
Yellow-headed blackbird (*Xanthocephalus xanthoephalus*)	--/SSC

Common Name (*Scientific Name*)	Legal Status (USFWS/CDFW)
Status Codes: FE = Federally listed as endangered (USFWS); FPT= Federally proposed for listing as threatened (USFWS); SE = State-listed as endangered (CDFW); ST = State-listed as threatened (CDFW); SSC = State species of special concern (CDFW); FP= State fully protected (CDFW) *Tri-colored blackbird was listed as endangered under an emergency listing in December 2014 by the California Fish and Game Commission.	
Source: Appendix B.	

Of the 29 species recorded in the nine-quadrangle literature review, all but six lack suitable habitat on the project site. Based on habitat availability, there is a potential for the following six species to occur on the project site: Bakersfield legless lizard (*Anniella grinnellii*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). While none of these species were observed on site, one species, San Joaquin kit fox, was detected based on burrows and scat on the project site. A potential San Joaquin kit fox den was also identified during the 2008 site survey (Paul Pruett & Associates 2008a). Each of the six special-status species with a potential to occur on the project site is discussed below.

San Joaquin Kit Fox

The San Joaquin kit fox is federally listed as an endangered species and state-listed as a threatened species. The species uses a variety of native and nonnative plant communities, including disturbed areas. The species is often associated with annual grasslands, valley saltbush scrub, and valley sink scrub habitats. It is also found in agricultural and developed areas. There are several occurrences within 10 miles of the project area, and sign of the species was found during the site survey. Numerous dens were found on site, though it was not clear if there was recent activity at any of the dens.

Burrowing Owl

Burrowing owl is a California Species of Special Concern and is also protected by the Migratory Bird Treaty Act (MBTA). The species is known to occur in a wide range of habitats with relatively flat terrain and sparse or low vegetative cover. Burrowing owls use existing burrows created by other burrowing wildlife species, especially California ground squirrels. No burrowing owls were observed or otherwise detected on the project site, but the site does contain suitable foraging habitat and burrows suitable for use by burrowing owls.

American Badger

American badger is a California Species of Special Concern that is typically found in dry shrublands, forests, and herbaceous habitats with friable soils. Occupied habitat is usually fairly open. This species was not detected on the project site during the site survey; however, the site does provide suitable habitat for the species.

White-tailed Kite

White-tailed kite is a California fully protected species and is also protected by the MBTA. The species is typically found in open grasslands and agricultural fields, but also may be found in open forests and shrublands. White-tailed kites require an abundance of prey, which may be limited at the heavily disturbed project site. Regardless, there is a potential for the species to use the site for foraging.

Swainson's Hawk

Swainson's hawk is state-listed as a threatened species and is protected by the MBTA. The species breeds and winters in open and semi-open desert, grassland, and prairie habitats. The species is often associated with prairies, hayfields, and other low-growing agricultural fields. There are multiple records of the species within 10 miles of the project site. While the species was not detected during the site visit and nesting habitat is not present on the site, there is a low potential for the species to use the site for foraging.

Bakersfield Legless Lizard

The Bakersfield legless lizard is a California Species of Special Concern. The species is found in sandy soils where moisture is provided by cover (boards, leaves, or other material). The project site contains low-quality habitat, and the species has a low potential to occur on the project site.

Wildlife Corridors and Wildlife Nurseries

There are no wildlife migration corridors on the project site or in the project vicinity. The project site is adjacent to SR 99 to the west, which is a major regional freeway. SR 99 severely restricts east-west wildlife movement in the project vicinity. The project site may facilitate limited north-south wildlife movement, but existing development cuts off the project site from other open areas to the north and east, where wildlife movement is highly restricted. There are currently open areas adjacent to the south of the project site, and wildlife likely use the project site for movement to and from these areas. However, Hosking Avenue to the south of the project site also restricts movement to and

from the project site from the south. A more accommodating route for wildlife to move from north to south would be the Kern Island Canal, which parallels the site along the east side of So. H Street and is less inhibited by development. Wildlife using this route would be required to navigate through and around gates and over and under fences. Nonetheless, the project site facilitates limited wildlife movement to the south on a very local level.

As discussed above, the project site does not contain any native habitat or large trees suitable for special-status species. Therefore, the project site does not appear to possess the native habitat or resources necessary to be a wildlife nursery for special-status species. Additionally, no trees or woody, non-herbaceous shrubs were observed at the project site during the survey. Therefore, no suitable raptor nesting areas occur at the project site. However, raptors may use the project site for foraging.

Nesting Birds

State and federal regulations protect most nesting birds in the project area. The project site provides suitable ground nesting and limited general nesting habitat for these protected bird species.

4.3.2.3 Wetlands

No wetlands, waters of the United States, waters of the State, or riparian (i.e., riverside) habitats were observed on the project site during the survey (Appendix B).

Based on a June 25, 2008 site visit by ICF Jones & Stokes, it appears that the proposed onsite stormwater drainage system's outfall into the Kern Island Canal would occur along a stretch of bank that is regularly mowed and maintained by the Kern Delta Water District (the canal's owner) and does not contain any habitat. Vegetation along this bank comprises mainly scattered weedy brome grasses (*Bromus* spp.).

4.3.3 Applicable Regulations

Applicable regulations related to biological resources are enforced by responsible and trustee agencies such as CDFW and local jurisdictions such as the City of Bakersfield (City). A discussion of applicable rules and regulations pertaining to the proposed project and associated agencies is provided below.

4.3.3.1 Federal and State Regulations

Federal and California Endangered Species Acts

USFWS and CDFW have direct regulatory authority over specially designated organisms and their habitats under the federal ESA and CESA, respectively. CDFW is a trustee agency under CEQA for biological resources throughout the state.

In response to legislative mandates, USFWS and CDFW have defined *sensitive biological resources* as organisms with regionally declining populations that may become extinct if population trends continue. Habitats are considered sensitive biological resources if they have limited distribution, have high wildlife value, support sensitive species, or are particularly susceptible to disturbance.

Special-status species are plants and animals legally protected under the ESA, the CESA, or other regulations, as well as species that are considered by the scientific community to be sufficiently rare to qualify for such listing.

Migratory Bird Treaty Act

The MBTA decrees that all migratory birds and their parts—including eggs, nests, and feathers—are fully protected. There are over 800 bird species covered under this act, including all migratory birds and raptors, and some songbirds. The MBTA protects migratory birds by prohibiting private parties from intentionally taking, selling, or conducting other activities that would harm migratory birds, their eggs, or nests, unless authorized by a special permit. *Taking* is defined as "pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting."

4.3.3.2 Local Regulations

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) sets forth policies and goals for biological resources. The policies that are relevant to the proposed project include the following:

- Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards (Chapter II, Land Use Element).
- Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources (Chapter V, Conservation Element) (City of Bakersfield and Kern County 2002).

Metropolitan Bakersfield Habitat Conservation Plan

The MBHCP sets forth in a planning document the components of a conservation plan (City of Bakersfield and Kern County 1994). The goal of the MBHCP is to acquire, preserve, and enhance native habitats that support endangered and special-status species while allowing urban development to proceed as set forth in the MBGP. The study area covered by the MBHCP contains both City and Kern County jurisdiction. The MBHCP meets the requirements of both state and federal endangered species acts. In addition, the MBHCP complies with state and federal environmental regulations set forth in the National Environmental Policy Act (NEPA) and CEQA. Upon payment of required mitigation fees and receipt of City project approval, a development applicant would become a sub-permittee and would be allowed the "incidental take" of species in accordance with state and federal endangered species laws.

San Joaquin kit fox, Tipton kangaroo rat, and Bakersfield cactus are covered under the MBHCP, but American badger, burrowing owl, white-tailed kite, Swainson's hawk, and Bakersfield legless lizard, along with other species recorded in the project area, are not covered under the MBHCP's incidental take permit; therefore, the take permit does not cover the loss of habitat or incidental take of these special-status species.

Incidental Take Permit No. 2081-2013-058-04 (Metropolitan Bakersfield Urban Development)

CDFW issued an incidental take permit (ITP) pursuant to Fish and Game Code Section 2081, subdivisions (b) and (c), and the California Code of Regulations, Title 14, section 783.0 et seq., for the Metropolitan Bakersfield 2010 General Plan Area, which covers approximately 261,120 acres in central Kern County. Lands within this area are predominantly privately owned, with approximately 96,000 acres under the City's jurisdiction. The ITP covers urban development with the project area and defines which activities constitute urban development. Species covered by the ITP include the Tipton kangaroo rat, San Joaquin kit fox, and the Bakersfield cactus. The ITP will expire in 2019 unless renewed by CDFW.

4.3.4 Impacts and Mitigation

4.3.4.1 Methodology

The proposed project is evaluated according to its potential adverse effects on biological resources. The impact analysis compares the existing conditions of the project site with modifications proposed by the project. Any loss of habitat or individual species that are protected would constitute a significant impact.

4.3.4.2 Criteria for Determining Significance

The criteria used to determine the significance of an impact on biological resources are based on Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

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

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

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

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

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

Thresholds b and c were evaluated during the initial study process and were determined to result in less-than-significant impacts on riparian habitat and no impacts on federally protected wetlands, respectively. As such, these impacts are not further evaluated below. For a detailed discussion of these impacts, refer to Appendix A.

4.3.4.3 Project Impacts

Impact BIO-1. The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the

California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The project site is highly disturbed and does not contain any undisturbed native habitat. No evidence of the 20 CNDDB-listed special-status plant species were observed during the biological survey in February 2014 and the project site lacks suitable habitat to support any of these species. Given the substantial ground disturbance from historic farming, grading activities, and illegal use of the project site, it is unlikely that special-status annual plant species would be present. The proposed project would result in a less-than-significant impact on special-status plant species.

There is a potential for the following six special-status wildlife species to occur on the project site: Bakersfield legless lizard, burrowing owl, Swainson's hawk, white-tailed kite, American badger, and San Joaquin kit fox. Two of these species are federally or state-listed species (San Joaquin kit fox [federally listed as endangered and state-listed as threatened] and Swainson's hawk [state listed as threatened]), one is a California fully protected species (white-tailed kite), and three are California Species of Special Concern: burrowing owl, American badger, and Bakersfield legless lizard.

Potential San Joaquin kit fox dens were observed during the survey in 2008 and the updated survey in 2014. Existing small mammal burrows found on site could be used by burrowing owls. The project site also provides low-quality habitat for Bakersfield legless lizard and American badger. The site does not contain suitable nesting habitat for white-tailed kite or Swainson's hawk; however, the site does contain low-quality foraging habitat for both raptor species. Therefore, indirect impacts in the form of the loss of potential habitat (foraging only for white-tailed kite and Swainson's hawk) for these species would occur at the project site. Additionally, the proposed project has the potential for direct impacts (e.g., mortality by heavy construction equipment) or incidental take of San Joaquin kit fox, burrowing owl, American badger, and Bakersfield legless lizard. The potential for San Joaquin kit fox and burrowing owl is considered moderate to high. Direct impacts on either San Joaquin kit fox or burrowing owl would be potentially significant. The potential for American badger and Bakersfield legless lizard to occur is low because the habitat is of low quality. Because American badger and Bakersfield legless lizard have a low potential to occur on the site, the potential for direct impacts is also low. If any individual American badgers or Bakersfield legless lizards are affected, the number of affected individuals would be relatively low and would not result in significant impacts on these two species.

The project site likely provides foraging habitat for raptors, including white-tailed kite and Swainson's hawk, but not nesting opportunities. The harassment of nesting raptors (e.g., construction-related noise and dust that causes nest abandonment) is considered indirect take[3] under the MBTA. However, the lack

[3] Indirect take is when an action does not cause mortality (direct take), but does cause a secondary deleterious impact on a species (e.g., harassment by construction noise and dust sufficient to cause nest abandonment).

of suitable nesting trees at the project site precludes nesting raptors at the site; therefore, indirect take of nesting raptors would not occur. Also, because raptors are highly mobile and can readily leave undesirable situations, the proposed project would not result in the direct take (e.g., mortality by construction equipment) of raptor species. Overall, the site is generally poor foraging habitat for raptors because of its proximity to adjacent urban development and SR 99. The associated noise, dust, and general disturbance can adversely affect raptor species. Additionally, there are no large trees on the site. The proposed project would result in a less-than-significant impact on raptors, including white-tailed kite and Swainson's hawk.

Though the site does not include nesting habitat for raptors, the site does contain suitable nesting habitat for ground-nesting birds and for other birds that may nest in the herbaceous cover provided on the project site. Any construction activity that occurs during nesting bird season (typically February 15 through September 15) has a potential to result in take (directly or indirectly) of a protected nest. Impacts involving injury to or killing of any bird, damaging a nest, or otherwise causing nest failure be a violation of California Fish and Game Code and the MBTA and would be a significant impact.

If unmitigated, these potential indirect and direct impacts on special-status wildlife species are considered significant. However, with implementation of Mitigation Measures MM BIO-1 and MM BIO-2, significant impacts on special-status species would be mitigated to less-than-significant levels.

Mitigation Measures

MM BIO-1. Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Pay Development Impact Fees Pursuant to the Metropolitan Bakersfield Habitat Conservation Plan.** The project proponent shall pay fees pursuant to the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit, which includes coverage for the San Joaquin kit fox. The payment of development impact fees is considered adequate mitigation under the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit to minimize impacts on special-status species. The fees are placed in an account for habitat acquisition and management to be used by the Metropolitan Bakersfield Habitat Conservation Plan Trust Group. Upon the payment of this fee as specified by the City of Bakersfield, the project applicant will become a sub-permittee and will be allowed the incidental take of the species in accordance with state and federal endangered species laws and mitigation requirements of all parties, including state, federal, and local (City of Bakersfield and Kern County 1994, Incidental Take Permit No. 2081-2013-058-04)

(b) **Conduct Preconstruction Clearance Survey.** A biological clearance survey is required for San Joaquin kit fox and burrowing owl. The survey shall be

completed according to the requirements of the Metropolitan Bakersfield Habitat Conservation Plan and Incidental Take Permit. All surveys must be delivered to the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the City of Bakersfield.

If the survey results find a covered species on the project site, a written Notice of Grading is required at least 5 business days prior to any ground disturbance activities (excluding weekends and holidays). The Notice of Grading shall only be submitted after all required minimization measures, according to the Incidental Take Permit, are implemented.

(c) **San Joaquin Kit Fox Avoidance and Den Excavation.** If known, active, or natal San Joaquin kit fox dens are identified during the survey, minimization measures identified in the Incidental Take Permit for den avoidance must be demonstrated (Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition of Approval 7.5). If dens cannot be avoided, appropriate monitoring and den excavation as described in Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition 7.6 will be adhered to.

(d) **Burrowing Owl Focused Survey and Avoidance and Passive Relocation.** A focused survey following the protocol described in the California Department of Fish and Wildlife *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) will be conducted prior to the start of construction. If burrowing owls are identified on the project site, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31 for owls and other raptors). The non-disturbance buffer shall include a minimum 250-foot buffer zone around any occupied burrow unless a qualified biologist approved by the California Department of Fish and Wildlife verifies through non-invasive methods that either (1) burrowing owls have not begun egg laying and incubation, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The sizes of individual buffers may be modified through coordination with the California Department of Fish and Wildlife based on site-specific conditions and existing disturbance levels. During the non-nesting season or if the qualified biologist determines either (1) or (2) above, the project applicant will coordinate with the California Department of Fish and Wildlife to construct artificial burrows and passively relocate the owl(s). Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 50 meters (approximately 160 feet) from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls (California Burrowing Owl Consortium 1993). Regarding passive relocation, the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) state that:

"Owls should be excluded from burrows in the immediate impact zone and within a 50 m (approx. 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors should be left in place 48 hours to insure owls have left the burrow before excavation. One alternate natural or

artificial burrow should be provided for each burrow that will be excavated in the project impact zone. The project area should be monitored daily for one week to confirm owl use of alternate burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe or burlap bags should be inserted into the tunnels."

(e) **Conduct "Tailgate" Environmental Education for All Construction Personnel.** Prior to initial groundbreaking, a tailgate session shall be conducted by a qualified biologist to educate construction personnel on relevant federal, state, and local laws related to potentially occurring special-status species at the site. The tailgate session shall include training on identification of species that may be found on the project site, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species will also be explained. Personnel will be advised to report any special-status species or burrows promptly. A fact sheet conveying this information will be prepared for display or for distribution to anyone who may enter the project site.

(f) **Cap and Inspections of Materials and Equipment.** Material and equipment inspections shall be conducted according to the Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit. All exposed pipes, culverts, and other similar structures with a diameter 4 inches or greater shall be properly capped in order to prevent entry by San Joaquin kit fox or other species. Any of these materials or structures that are left overnight and are not capped shall be inspected prior to being moved, buried, or closed in order to ensure that San Joaquin kit fox or other species are not present within the structure. If a covered species is found within one of these structures, the animal will be allowed to safely escape that section prior to moving or utilizing that segment.

(g) **Cover or Inspect All Trenches or Other Potential Entrapments.** All open holes, sumps, and trenches shall be inspected at the beginning, in the middle, and at the end of each day for trapped covered species as required by Metropolitan Bakersfield Habitat Conservation Plan Incidental Take Permit Condition of Approval 7.15. All trenches, sumps, and other excavations with side walls that have greater than 1:1 slope (45 degrees) and are between 2 and 8 feet deep will be covered when workers or equipment are not actively working in the excavation, including overnight, or shall have an escape ramp constructed of earth or a non-slip material with less than 1:1 slope. All excavations with side walls greater than 1:10 slope and deeper than 8 feet shall be covered when workers or equipment are not actively working in the exaction and at the end of each day. All excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If a covered species is found to be trapped, work is to cease in the vicinity and notification will be made immediately to the California Department of Fish and Wildlife. The animal will be allowed to escape unimpeded, or a qualified biologist will capture and relocate the animal in accordance with California Department of Fish and Wildlife direction.

(h) **Protect Nesting Birds.** If construction activities are scheduled to begin between February 15 and September 15, a nesting bird survey will be conducted no more than 5 days prior to the start of any initial activity. If construction is postponed, additional surveys may be required. For any nests that are identified, avoidance buffers will be established to avoid any disturbances that may affect the nesting birds or cause nest failure. The buffer will be determined based on a qualified biologist's determination. If the recommended buffer is less than 500 feet for raptors and less than 250 feet for passerine birds, then a biological monitor will be present whenever construction occurs within 500 feet of a raptor nest or 250 feet of a passerine nest, unless otherwise determined unnecessary by a qualified biologist. If the biologist detects distress or a risk of nest failure resulting from the construction activity, the biologist may halt construction and adjust the buffer as necessary.

MM BIO-2. Other Best Management Practices. The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project:

(a) All trash, including food items, will be disposed of in securely closed or covered containers daily.

(b) A project speed limit will be maintained at 20 miles per hour during daylight hours and 10 miles per hour for any driving on site before sunrise or after sunset.

Level of Significance after Mitigation

Implementation of the mitigation measures above would reduce impacts to less-than-significant levels.

Impact BIO-2. The proposed project would not 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.

There are no wildlife migration corridors on the project site or in the project vicinity. The project site is cut off from other open areas to the north and east by residential development and to the west by SR 99, but wildlife may use the project site for movement to and from open areas to the south. The proposed project would likely reduce by 85 acres the area where wildlife could freely move, but would not sever wildlife movement to the south of the project site. The proposed project would not create a linear feature and wildlife would still be afforded the opportunity to move to the south of the project site by using adjacent

open areas in that direction. The proposed project would not substantially interfere with wildlife movement.

As discussed above, the project site does not contain any native habitat or large trees suitable for special-status species. Therefore, the site does not possess the native habitat or resources necessary to be a wildlife nursery for special-status species and raptors. There would be no impact.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact BIO-3. The proposed project would conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

With implementation of Mitigation Measures MM BIO-1 through MM BIO–9, the proposed project would not conflict with any City ordinance or policies, and would comply with the MBGP and the MBHCP.

Mitigation Measures

Impacts would be less than significant with implementation of MM BIO-1 and MM BIO-2.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact BIO-4. The proposed project would 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 project site is entirely within the planning area for the MBHCP and is required to comply with provisions set forth in the plan. The proposed project would indirectly affect San Joaquin kit fox because it would eliminate suitable habitat and has the potential to cause direct impacts (e.g., mortality from heavy construction equipment) on the species. However, with implementation of Mitigation Measures MM BIO-1 and MM BIO-2, the proposed development would not conflict with the MBHCP because mitigation would require preconstruction surveys and, if necessary, avoidance relocation protocols required by the MBHCP for the San Joaquin kit fox. Additionally, the payment of impact fees would allow for incidental take as a result of indirect and direct project-related impacts on the species. Therefore, by implementing mitigation described above, the proposed project would not conflict with the MBHCP and there would be no impact.

Mitigation Measures

Impacts would be less than significant with implementation of MM BIO-1 and MM BIO-2.

Level of Significance after Mitigation

Impacts would be less than significant.

4.3.4.4 Cumulative Impacts

The proposed project in conjunction with other ongoing development in southwestern Bakersfield would permanently remove land from the overall land balance available for listed, protected, and special-status wildlife and vegetative communities. Proposed local projects that may have a cumulative impact include Tract 6454 (a 17.9-acre health club and 68-lot residential development), Tract 6868 (a 56.33-acre religious facility and 156-lot residential development), Tract 7253 (a 20.14-acre church and 79-lot residential development), Tract 7231 (a 23.67-acre California Highway Patrol facility and 59-lot residential development), and Tract 6802 (a 21.7-acre automotive service station and 79-lot residential development). The Bakersfield area is subject to the provisions of the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP); therefore, cumulative impacts have been addressed and considered mitigated to less-than-significant levels.

The development of the approximately 85-acre site would have negligible, if any, adverse effects on the diversity and abundance of native flora and fauna in the region. The site does contain suitable habitat for San Joaquin kit fox and burrowing owl; however, the habitat quality for other wildlife species is low. The project site has no potential to support a high diversity of native plants, and most of the wildlife species that could be expected to regularly use the study area are species that are adapted to disturbance of the type that is caused by residential and commercial development, agricultural practices, and disking found at and near the project site. Because of the present condition of the proposed site and the surrounding vicinity, it is not likely that development of the site would contribute significantly to cumulative adverse impacts on regional flora and fauna.

Section 4.4
Cultural Resources

4.4.1 Introduction

This section provides a description of the cultural resources setting of the project site, the regulatory context of the proposed project, and the potential impacts on cultural resources that may be caused by the proposed project. The setting and analysis provided in this section are based on the *Cultural Resources Report for the Woodmont-SR-99/Hosking Commercial Center Project,* prepared by ICF Jones & Stokes in October 2007 (Appendix G) and a record search at the Southern San Joaquin Archeological Information Center in December 2014.

4.4.2 Environmental Setting

The environmental setting for cultural resources includes the prehistoric archaeological context, the ethnographic and Native American history, and the modern historical context, as well as results from cultural resources inventories.

4.4.2.1 Prehistoric Archaeological Context

This section provides a general overview of prehistoric periods in the San Joaquin Valley, inclusive of the project site. The discussion of the prehistoric cultural setting is based primarily on a cultural sequence defined by Warren (1984).

"Early Man" Period

Several sites in California, the most well-known of which is Calico Hills, have been tentatively assigned to the "Early Man Period" with relative dates ranging from 12,000 years ago to as far back as 50,000 years ago (Moratto 1984). These dates have been tentatively established through various geologic and experimental dating methods. Thus far, however, none of these "Early Man" sites have withstood scientific scrutiny. Despite claims for evidence of "Early Man" in

California, it appears likely that humans first arrived in California between 11,000 and 13,000 years ago.

Paleo-Indian Period

The earliest humans to occupy North America are believed to have been highly mobile hunters and gatherers called Paleo-Indians. Two traditions characterize the Paleo-Indian Period in the southern half of the San Joaquin Valley: the Western Fluted Point Tradition and the Western Pluvial Lakes Tradition (Moratto 1984). The Western Fluted Point Tradition in California is similar to the contemporary Llano Complex of the Southwest and Great Plains. A total of 13 complete and 17 fragmentary fluted and stemmed Clovis-like points,[1] characteristic of this tradition, were collected from the southern shore of Lake Tulare, in the central San Joaquin Valley (Riddell and Olsen 1969). Similar points have been found near Bakersfield and on the Tejon Ranch (Zimmerman et al. 1989). Although none of the California points have been radiocarbon dated, obsidian hydration measurements of specimens found at Borax Lake in northern California have dated to 11,000–12,000 before present (BP) (Moratto 1984). Stone artifacts found on the southwestern shore of Buena Vista Lake, 13 miles southwest of the project site, have been associated with the Western Pluvial Lakes Tradition. Radiocarbon dates, stratigraphy, artifact types, and depth of overburden place these artifacts at approximately 8000 BP (Fredrickson and Grossman 1977).

Early Horizon

Early Horizon sites are associated with the margins of pluvial lakes and with now-extinct springs. Pinto series projectile points, crudely made stemmed or basally notched dart points, are the most distinctive artifact type of the Early Horizon. Other artifacts found at Early Horizon sites include large, leaf-shaped knives; thick, split cobble choppers and scrapers; scraper planes; and small milling slabs and manos.[2] This was a cold, dry period with low inland population densities. Most known Early Horizon sites are small surface deposits of stone tools and artifacts,[3] suggestive of temporary and perhaps seasonal occupation by small groups of people.

Middle Horizon

Penutian-speaking peoples, including the Yokuts, may have entered the southern San Joaquin Valley during the Middle Horizon, between 4000 and 1200 BP. This was a time of cultural intensification. Large occupation sites are most commonly

[1] A usually bifacial, fluted stone projectile point used in big-game hunting by Paleo-Indians of North America, and especially in the American Southwest.
[2] A hand-held stone or roller used for grinding corn or other grains on a milling slab.

found adjacent to permanent water sources, such as lakes, streams, or perennial springs (Moratto 1984). Technologically, the artifact assemblage of this period is similar to that of the preceding Early Horizon; new tools were added either as innovations or as borrowed cultural items. Artifact types include rectangular-based knives, flake scrapers, T-shaped drills, milling slabs, and manos, as well as core and cobble tool assemblages such as scraper planes, large choppers, and hammerstones. The bow and arrow and mortar and pestle were introduced during the Middle Horizon. Diagnostic projectile points include Humbolt, Gypsum, and Elko-series dart points (Warren 1984). Shaft smoothers, incised slate and sandstone tablets and pendants, bone awls, Olivella shell beads, and Haliotis beads and ornaments are also found (Warren 1984).

Middle-Late Horizon Transition

The Middle-Late transition period in the southern San Joaquin Valley coincides with the Medieval Climatic Anomaly, a period of increased temperatures and accompanying droughts. This climatic instability resulted in decreased water availability, a reduction in harvestable natural resources, and demographic stress. Evidence of transition period sites is minimal. Many of California's interior sites may have been abandoned at this time (Warren 1984).

Late Horizon

The Late Horizon was a time of recovery from the instability of the Medieval Climatic Anomaly. The relationship between the southern San Joaquin Valley and surrounding areas in the Late Horizon is relatively unknown; however, it is believed that the precursors for the historic Yokut way of life (lifeways) developed during the Late Horizon, between 1200 and 800 BP (Warren 1984).

4.4.2.2 Ethnographic Background

This section provides a general overview of ethnographic background in the southern San Joaquin Valley, inclusive of the project site.

Yokuts, along with other Penutian-speaking peoples, entered the southern San Joaquin Valley between 4000 and 1200 BP, and the precursors of historic Yokut lifeways developed between 1200 and 800 BP (Wallace 1978). At least 15 Yokut tribelets are known to have existed after A.D. 800. Each spoke a separate Penutian dialect (Wallace 1978). Estimations of population size are difficult to determine because of the extent of destruction caused by the introduction of European diseases and subsequent Euro-American colonization. Kroeber (1925:38) estimated a population of 350 individuals per Yokut tribelet, bringing the total population of the 15 southern San Joaquin Valley tribelets to 5,250 people. Spanish explorers in the nineteenth century estimated as many as 15,700 inhabitants of the southern San Joaquin Valley (Cook 1995).

Yokut subsistence consisted of fishing, hunting waterfowl, and collecting shellfish, roots, and seeds. Fish were caught using nets and stick pens. Species include lake trout, chubs, perch, suckers, steelhead, salmon, and sturgeon. Mussels and turtles were also collected and eaten. Waterfowl were caught using nets and snares (Wallace 1978:450). Tule was collected, dried, pounded, and made into starch flour. Other grasses, flowering herbs, grassnuts, fiddle-neck, alfilaria, and clover were eaten. Acorns were not easily accessible in the southern San Joaquin Valley, but may have been traded in from Kingston (Wallace 1978:450). Terrestrial mammals and birds made up a minimal portion of the diet. They were caught using snares, unbacked bows, and wooden-tip arrows (Wallace 1978:450).

The Southern Yokuts built domestic structures, granaries, and sweathouses (Wallace 1978). There were at least two types of domestic structures. The first type, a single-family structure, was oval, wood framed, and covered in tule matting. The second, larger type was similar in construction: wood framed and covered in tule mats. It differed from the first type of domestic structure in that it was steep-roofed, housed more than 10 families, and had multiple entryways and hearths (Wallace 1978).

4.4.2.3 Historical Overview

This section provides a general overview of the historic background in the San Joaquin Valley, and particularly the Bakersfield area.

Early Exploration

European settlement of California began with the founding of Mission San Diego de Alcala in 1769. Spanish explorers and missionaries began entering the San Joaquin Valley soon after. In the fall of 1772, Pedro Fages led a group of soldiers through the Tejon pass and visited a village on the shore of Buena Vista Lake, 13 miles west of the project site, on his way to San Luis Obispo. Francisco Garcés, a Spanish explorer, followed Fages in 1776 (Wallace 1978). Between 1806 and 1814, the Franciscans led several incursions into the southern San Joaquin Valley, but were unsuccessful in gaining a foothold there (Wallace 1978). Although no missions were established in the southern San Joaquin Valley, Native Americans in this area were indirectly affected by the missions through trade, and by the arrival of Native Americans individuals who fled the mission system (“runaways”) and took refuge in the San Joaquin Valley (Wallace 1978).

Mexican California

Mexico, including California, won independence from Spain in 1821. No ranchos were established in the San Joaquin Valley between 1822 and 1846, and direct

Mexican influence over the area was minimal (Wallace 1978:460). In 1833, a severe malaria outbreak, with an estimated mortality rate of 75%, decimated the Southern Yokut population (Cook 1995:303).

American Period

The acquisition of California by the United States at the end of the Mexican-American War in 1848, and the discovery of gold in 1849, brought the first major wave of Euro-Americans into the San Joaquin Valley. In 1851, the U.S. government removed Southern Yokuts to the Tejon reservation at the base of the Tehachapis and to the Fresno Reservation outside Madera, California (Wallace 1978:460).

City of Bakersfield

The first homestead claim in Bakersfield was filed in 1866 for a parcel of land named "Baker's Field." Named after Colonel Thomas Baker, the City of Bakersfield was formally laid out in 1869. Between 1869 and 1873, the city established a telegraph office, two stores, a newspaper, two boarding houses, a doctor's office, a school, and a saloon. The city was incorporated in 1873. In 1876, it unincorporated and did not reincorporate until 1898. That same year, the San Francisco and San Joaquin Valley Railroad (later known as the Santa Fe Railroad) began providing service to and from Bakersfield.

Agriculture and oil played vital roles in early Bakersfield and remain central to the city's economy. Oil was discovered in 1877. In 1899, the Kern River Oil Field was tapped. The discovery of oil brought an influx of people and technology. In 1927, one of the nation's largest and oldest farming co-ops, the California Cotton Cooperative Association, was founded in Bakersfield. Crops harvested in the area include carrots, alfalfa, cotton, grapes, almonds, pistachios, citrus fruits, wheat, garlic, and potatoes.

Paleontological Setting

The project site is located in the southern portion of the Great Valley geomorphic province of California. The Great Valley, also known as the Central Valley, is a northwest-trending flat lowland between the Sierra Nevada on the east and the Coast Ranges on the west. The Sacramento River drains the northern portion of the Great Valley, and the San Joaquin River drains the southern portion. The southern part of the Great Valley is also known as the San Joaquin Valley; the project site is situated on alluvial deposits on the southern San Joaquin Valley floor.

Surficial deposits in the project area consist of younger Quaternary Alluvium that are derived from drainages leading to the Kern Lakebed to the south. There are no vertebrate fossil localities reported from younger Quaternary Alluvium in the

project vicinity. Because of their recent age, these types of deposits typically do not contain significant vertebrate fossils (Mason 2011, 2013; Mcleod 2010).

Deeper layers of the alluvial fan deposits consist of older Quaternary deposits that could contain significant vertebrate fossils. The depth below surface at which the older Quaternary deposits begin is unknown.

4.4.2.4 Cultural Resources Inventory

ICF Jones & Stokes conducted a cultural resources inventory of the project site in September 2007. The inventory consisted of a record search at the Southern San Joaquin Archeological Information Center (SSJVIC) of the California Historic Resources Inventory System (located at California State University, Bakersfield), archival and background research, and a field survey of the project site. The record search was updated at the SSJVIC in December 2014.

The results of the record searches indicated that one cultural resources survey had been previously conducted that included a portion of the current project site. Additionally, within a 0.5-mile radius of the proposed project, 2 archeological studies and 31 cultural resources surveys have been conducted and cataloged in the inventory system. Of these 31 cultural resources surveys, 2 were conducted directly adjacent to the project site. The survey that included part of the project site identified three isolated historic glass items. Records for these artifacts are filed at the SSJVIC under the trinomial numbers KER-9205, KER-9206, and KER-9207 (Garcia 1992). KER-9205 is recorded as a "small fragment of blue glass," KER-9206 is a "small aqua glass bead," and KER-9207 is a "large fragment of purple glass" (Garcia 1992).

A pedestrian field survey of the project site was conducted on in September 24, 2007. An ICF Jones & Stokes archeologist walked approximately 80% of the project site in 15-meter transects. The remaining 20%, on the southwestern portion of the site, was covered with thick brush and was impassible.

Archaeological Sites

No archaeological resources were identified during the pedestrian surveys conducted for the project site. As noted above, three isolated artifacts were found in the project area in 1992; however, these items were not observed during survey for this project.

Native American Sites

As required by California Senate Bill (SB) 18, on December 22, 2014, ICF contacted the Native American Heritage Commission (NAHC) on behalf of the City, and requested that they consult their sacred lands file and provide a list of

Native American representatives for the project site. NAHC responded on December 30, 2014, stating that a search of their sacred lands file did not yield any sacred lands or traditional cultural properties associated with the project site. NAHC provided ICF with a list of eight Native American contacts in Kern County. Letters describing the project site and indicating the project location were sent to these contacts on January 5, 2015 (Appendix G). To date, one reply has been received. Ms. Shanna Brum of the Santa Rosa Rancheria Tachi Yokut Tribe replied via e-mail on January 12, 2015. She stated that the area was considered highly sensitive for village and burial sites. She recommended further contact with Mr. Colin Rambo from the Tejon Tribe regarding this area.

4.4.3 Applicable Regulations

4.4.3.1 California Environmental Quality Act

The proposed project is governed by the California Environmental Quality Act (CEQA). In accordance with Section 21084.1 of CEQA, the proposed project would have a significant adverse environmental impact if it causes a substantial or potentially substantial adverse change in the significance of a historical resource.

According to CEQA (Public Resources Code [PRC] Section 21084.1), historical resources include any resource listed, or determined eligible for listing, in the California Register of Historical Resources (CRHR). Properties listed, or determined eligible for listing, in the NRHP, such as those identified in the Section 106 process, are automatically listed in the CRHR. Therefore, all "historic properties" under federal preservation law are automatically "historical resources" under state preservation law. Historical resources are also presumed to be significant if they are included in a local register of historical resources or identified as significant in a qualified historical resource survey.

As defined under state law in California Code of Regulations (CCR), Title 14, Section 4850, the term "historical resource" means:

> Any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or which is significant to the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural history of California.

For the purposes of CEQA, historical resource is further defined under PRC Section 15064.5 as a "resource listed in, or determined eligible for listing in the California Register [of Historical Resources]."

Section 15064.5 of the State CEQA Guidelines sets forth the criteria and procedures for determining significant historical resources and the potential effects of a project on such resources. Generally, a cultural resource is considered

by the lead state agency to be historically significant if the resource meets any of the following criteria for listing in the CRHR:

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

The cited statutes and guidelines specify how cultural resources are to be managed in the context of projects such as the proposed project. Briefly, archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways. Prehistoric and historical resources deemed historically significant must be considered in project planning and development.

Senate Bill 18

SB 18 places the responsibility of initiating consultation with applicable Native American groups on local governments. SB 18 introduces a separate process that expands the focus to include, for both federally and non-federally recognized tribes, traditional tribal cultural places located on both public and private lands. A *cultural place* is a landscape feature, site, or cultural resource that has some relationship to particular tribal religious heritage or is a historic or archaeological site of significance or potential significance. The cultural place may be outside the reservation boundary.

The purpose of SB 18 is to provide time for tribal input early in the planning process. Besides City staff and tribal representatives, the process may also include applicants and consultants. SB 18 consultation applies to the adoption and amendment of both general plans and specific plans proposed on or after March 1, 2005. SB 18 consultation is a government-to government interaction between tribal representatives and representatives of the local jurisdiction.

California Health and Safety Code

Human remains are sometimes associated with archaeological sites. According to CEQA, "archaeological sites known to contain human remains shall be treated in accordance with the provisions of State Health and Safety Code Section 7050.5." The protection of human remains is also ensured by PRC Sections 5097.94, 5097.98, and 5097.99. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance may

occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. Construction must halt in the area of the discovery of human remains, the project proponent must assure that the area is protected, and consultation and treatment must occur as prescribed by law.

4.4.4 Impacts and Mitigation

4.4.4.1 Methodology

According to the State CEQA Guidelines (14 CCR 15064.5), a project with an effect that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment (14 CCR 15064.5[b]). CEQA further states that a substantial change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historic resource are any actions that would demolish or adversely alter those physical characteristics that convey its historic significance and qualify it for inclusion in the CRHR, local register, or survey that meets the requirements of PRC Sections 5020.1(k) and 5024.1(g).

4.4.4.2 Criteria for Determining Significance

Criteria for determining the significance of impacts related to cultural resources are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

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

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

4.4.4.3 Project Impacts

Impact CR-1. The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Based on the cultural resources record search, map review, and a pedestrian survey of the project site, the project site is currently vacant; it does not currently contain any buildings or structures. Therefore, there would be no impact on historical resources as a result of the proposed project.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

There would be no impact.

Impact CR-2. The proposed project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Based on a cultural resources record search and a pedestrian survey of the project site, there is no evidence that significant archaeological resources exist on the project site. Three isolated historic glass items, found in 1992 on the project parcel, were not found during the more recent survey for the current project. Isolated items, in this case described as a "small fragment of blue glass, "small aqua glass bead," and a "large fragment of purple glass" (Garcia 1992), are not considered significant archaeological resources under CEQA.

Therefore, the proposed project would not affect any known archaeological resources. However, during ground-disturbing construction activities (i.e., grading, trenching, site preparation), there is the potential to disturb previously unknown subsurface archaeological resources. Disturbance of previously unknown archaeological resources could cause a substantial adverse change in the significance of an archaeological resource. This could result in a significant impact. Implementation of the following mitigation measure would reduce impacts to less-than-significant levels.

Mitigation Measures

MM CR-1. The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project:

(a) **Stop Work if Cultural Resources Are Encountered.** If buried cultural resources, such as chipped or ground stone, historic bottles or ceramics, building foundations, or non-human bone are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. Prior to recommencement of any construction activities, the qualified archaeologist shall provide a pre-grading conference will provide procedures for archaeological resource surveillance and appropriate treatment of cultural resources.

(b) **Provide Notice if Cultural Resources Are Encountered.** If buried cultural resources are discovered that may have relevance to Native Americans, the project proponent shall provide written notice to the City of Bakersfield and to the Native American Heritage Commission and any other appropriate individuals, agencies, and/or groups as determined by the qualified archaeologist in consultation with the City of Bakersfield.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact CR-3. The proposed project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

There are no known paleontological resources or unique geologic features within the project site. The project area is situated on the San Joaquin Valley floor, an area where deep deposits of alluvium are present. Quaternary Holocene to late Pleistocene alluvium is found at or near the modern ground surface, and has a limited potential for containing vertebrate fossils. However, in older Quaternary alluvium at depths greater than approximately 5 feet it is possible that fossils could be present. Surface grading, or very shallow excavations in the younger Quaternary alluvium occurring at the surface of the project site, is unlikely to encounter significant vertebrate fossils. However, deeper trenching or excavations that extend into older Quaternary deposits may encounter significant vertebrate fossil remains. Implementation of the following mitigation measure would reduce any potential impact to a less-than-significant level.

Mitigation Measure

MM CR-2. The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project:

(a) **Stop Work if Paleontological Resources Are Encountered During Construction Activities.** If paleontological resources are encountered, all work in the immediate vicinity of the find will halt until a qualified paleontologist can evaluate the find and make recommendations. Paleontological resource materials may include fossils, plant impressions, or animal tracks that have been preserved in rock. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. Construction shall not resume until the appropriate mitigation measures are implemented or the materials are determined to be less than significant.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact CR-4. The proposed project would disturb any human remains, including those interred outside of formal cemeteries.

No Native American burial grounds or sacred sites have been identified in the project site. However, unknown buried human remains could be inadvertently unearthed during excavation activities, which could result in damage to these human remains. To avoid or reduce this potential impact on human remains to a less-than-significant level, the following mitigation measure would be implemented.

Mitigation Measure

MM CR-3. The project shall continuously comply with the best management practices items listed below during all construction activities and operations of the project:

(a) **Appropriate Treatment of Human Remains.** If human remains of Native American origin are discovered during project construction, State laws will be followed relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (California Public Resource Code § 5097). According to the California Health and Safety Code, six or more human burials at one location constitute

a cemetery (§ 8100) and disturbance of Native American cemeteries is a felony (§ 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission.

(b) **Appropriate Contact Regarding Findings of Human Remains.** If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(i) The coroner of Kern County has been informed and has determined that no investigation of the cause of death is required, and,

(ii) The descendants of the deceased Native Americans, or the Native American Heritage Commission (if the Commission is unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission), have made a recommendation to the landowner or person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in California Public Resource Code § 5097.98.

Level of Significance after Mitigation

Impacts would be less than significant.

4.4.4.4 Cumulative Impacts

Impacts on cultural resources are generally limited to a specific site and not deemed cumulative impacts unless such resources are determined to be part of a rural historic landscape, are uncommon, or are a last-of-its-kind property type in the area. Each reasonably foreseeable project would be evaluated for its potential to affect historic or cultural resources, and would implement site-specific mitigation measures accordingly in appropriate CEQA analyses.

Three archaeological resources have been identified within the project area; all are isolated pieces of historic glass. No further archaeological resources were identified during the site investigation. It is possible, although unlikely, that resources could be unearthed during project excavation activities. Mitigation measures have been included to avoid or reduce potential project impacts on unrecorded archaeological resources (Mitigation Measure MM CR-2), unrecorded paleontological resources (Mitigation Measure MM CR-3), and human remains (Mitigation Measure MM CR-4) during construction. Similar mitigation measures are expected to be included on all future proposed projects

within the Metropolitan Bakersfield area, on a project-by-project basis. Future projects in the City and county would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar mitigation measures during construction. Therefore, cumulative impacts from past, present, and future projects would not be cumulatively significant and the potential cumulative impact from the project's contribution would be less than cumulatively considerable.

Section 4.5
Geology and Soils

4.5.1 Introduction

This section of the draft environmental impact report (DEIR) describes the affected environment and regulatory setting related to the geologic and soil characteristics of the project site and surrounding area. It also describes the potential geologic and soil impacts that could result from implementation of the project as well as mitigation measures to reduce such impacts. The environmental setting information and analysis in this section is based on the geologic hazards investigation prepared by Krazan and Associates in January 2008 (*Geologic Hazards Investigation, Proposed Commercial Development, State Route 99 and Hosking Avenue, Bakersfield, California*; see Appendix H). Because geologic conditions do not change over the course of a few years, the setting and conclusions stated in the 2008 report are still considered valid for the purposes of this DEIR.

4.5.2 Environmental Setting

The following provides a discussion of the project site's geologic setting, nearby faults and seismic history, and local geologic conditions, including possible geologic hazards and soils.

4.5.3 Regional Geologic Setting

The proposed project would be located on the eastern margin of the Great Valley Geomorphic Province of California, in the southern portion of the San Joaquin Valley. The San Joaquin Valley is bordered on the south by the Transverse Ranges, on the east by the Sierra Nevada, on the west by Coast Ranges, and on the north by the Sacramento Valley portion of the Great Valley. The 450-mile-long Great Valley is an asymmetrical structural trough that is filled with Mesozoic and Cenozoic sediments up to 5 miles thick.

The Sierra Nevada is a southwesterly tilted fault block consisting of igneous and metamorphic rocks of pre-Tertiary age. This block makes up the basement beneath the San Joaquin Valley. The Coast Ranges are folded and faulted sedimentary and metasedimentary rocks of Mesozoic and Cenozoic age.

4.5.4 Local Geologic Setting

Alluvial fans created by the Kern River are the principal features in the Bakersfield area. The area in which the proposed project would be located is characterized by a belt of conjoining alluvial fans and plains (of low relief) between dissected uplands. As such, the project site's topography is relatively flat. The site is composed of alluvial deposits, consisting of sands and silts.

The general area is known for significant oil and gas production. Five medium to large oil fields are located in the vicinity of the project site. They are the Kern River, Kern Bluff, Fruitvale, Mountain View, and Edison Oil Fields. The project site is located south of the Stockdale Oil Field and the Union Avenue Oil Field. Significant production from these oil fields began in the mid-1930s. According to the California Department of Oil, Gas, and Geothermal Resources (DOGGR), both the Stockdale Oil Field and the Union Avenue Oil Field are currently active and producing (Department of Conservation 2014).

4.5.4.1 Project Site Soils

The near-surface and surface deposits at the project site consist of silty sand, sandy silt, and sand. The surface soil is categorized as Kimberlina fine sandy loam, 0% to 2% slopes. This soil is characterized by a moderately fine to coarse texture and moderately drained soils derived mostly from granite. Near-surface deposits consist of Quaternary fan deposits, composed of loosely consolidated sand, silt, clay, and gravel, that have been classified as younger alluvium. The soils are moderately permeable.

Fill material was encountered in some of the soil borings performed as part of the geologic hazards investigation. The fill material consists of 1.5 to 2 feet of silty sand and sandy silt soil, varying in strength from loose to compact. Underlying the fill material is approximately 4 to 5 feet of silty sand, sandy silt, or sand of medium density. The investigation also indicated that soils below the fill material are moderately strong, ranging from slightly to moderately compressible. Soils found below 6 to 7 feet were composed of layers of medium-dense to very dense silty sand, sandy silt, sandy-clayey silt, and sand. These soils were moderately strong and slightly compressible.

Localized Geologic Hazards

Soil Erosion

Soil erosion, which can be caused by wind and water runoff, is a type of soil degradation. The potential for erosion to occur is affected by the soil's properties, including texture, the size of aggregates, the presence of carbonates, and, in organic soils, the degree of decomposition. Losses due to erosion can be greatly reduced through properly executed design and construction as well as effective enforcement of ordinances related to grading, landscaping, and drainage. Erosion induced by seismic activity can occur on gentle to steep slopes that have been covered by loose sediments. Fissures, steep slopes, and offsets along a fracture zone may enhance seismically induced erosion. As mentioned in the *Project Site Soils* section, above, Kimberlina fine sandy loam soils located on site are moderately permeable and found in areas with a 0% to 2% slope. This soil type has characteristically slow runoff and slight water erosion potential. Furthermore, the project site is located within Federal Emergency Management Agency (FEMA) Zone C (i.e., an area of minimal flooding).

Lateral Spreading

Lateral spreading is the lateral movement of saturated soil deposits caused by rapid ground motion, such as that experienced during an earthquake. It can also be artificially induced. When coherent material, either bedrock or soil, rests on materials that liquefy, the upper units may undergo fracturing and extension and then subside, translate, rotate, disintegrate, or liquefy and flow. Lateral spreading in fine-grained materials on shallow slopes is usually progressive (United States Geological Survey 2004). Lateral spreading potential was analyzed for onsite soils. The site was deemed unlikely to undergo lateral spreading.

Subsidence

Land subsidence is the gradual, local settling or shrinking of the earth's surface, with little or no horizontal motion. Subsidence normally results from hydrocompaction, peat oxidation, or gas, oil, or water extraction. Subsidence has occurred within the San Joaquin Valley. Typical types of subsidence occurring in the San Joaquin Valley include tectonic subsidence, subsidence from the extraction of oil and gas, subsidence from groundwater withdrawal, and subsidence caused by hydrocompaction of moisture-deficient alluvial deposits. The project site, specifically, is not known to be subject to significant subsidence hazards.

Liquefaction

Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. A site's susceptibility to liquefaction is a function of depth, density, groundwater level, and the magnitude of an

earthquake. Liquefaction-related phenomena can include lateral spreading, ground oscillation, flow failure, loss of bearing strength, subsidence, and buoyancy effects. For liquefaction to occur, the soil must be saturated and relatively loose. According to the results of the geologic hazards investigation, the liquefaction potential at the project site is considered very low.

Collapsible Soils

Collapsible soils are those that undergo settlement upon wetting, even without the application of additional load, also known as hydrocompaction, which occurs when water weakens the bonds between soil particles and reduces the bearing capacity of that soil. Collapsible soils are typically associated with alluvial fans, windblown materials, or colluvium. Soil collapse can occur when the land surface is saturated to depths greater than those reached by typical rain events. This saturation eliminates the clay bonds that hold the soil grains together. The potential for saturated, loose, granular sediments at the project site is unlikely. The project site's soils are not conducive to hydro-collapse.

Expansive Soils

Expansive soils are fine-grained soils (generally high-plasticity clays) that can undergo a significant increase in volume with an increase in water content as well as a significant decrease in volume with a decrease in water content. Changes in the water content of highly expansive soils can result in severe distress for structures constructed on or against the soils. Surface and near-surface soils observed at the project site consist of sandy silt, silty sand, and sand. These types of soils are considered to have a very low to moderate potential.

4.5.5 Applicable Regulations

4.5.5.1 The Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code (PRC) Chapter 7.8, Division 2, the California Geological Survey (CGS) is directed to delineate seismic hazard zones. The purpose of the act is to reduce the threat to public health and safety and minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by CGS in their land use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

4.5.5.2 California Building Code

The Title 24 (California Building Code [CBC]) of the California Code of Regulations (CCR) applies to all applications for commercial building permits. The CBC contains the administrative regulations of the California Building Standards Commission and regulations of \ state agencies that implement or enforce building standards. Local agencies must ensure that developments in their jurisdictions comply with the guidelines contained in the CBC. Cities and counties can, however, adopt building standards beyond those provided in the CBC.

State Water Resources Control Board Construction General Permit (2009-0009-DWQ)

The general permit requirements apply to construction or demolition activities, including, but not limited to, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance equal to or greater than 1 acre.

The Construction General Permit requires development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map that shows the construction site perimeter; existing and proposed buildings, lots, and roadways; stormwater collection and discharge points; general topography, both before and after construction; and drainage patterns across the project. The SWPPP must list the best management practices (BMPs) the discharger will use to protect stormwater runoff and indicate the placement of those BMPs (State Water Resources Control Board 2015).

4.5.5.3 Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) contains a safety element, which is based on state law. The MBGP sets forth goals and polices related to seismic events and potential effects, including liquefaction and subsidence, to ensure the protection of public health. The following policy from the MBGP is relevant to the proposed project:

- Adopt and maintain high standards for seismic performance of buildings through prompt adoption and careful enforcement of the most current seismic standards of the Uniform Building Code.

4.5.5.4 City of Bakersfield Municipal Code

Section 15.05 of the City of Bakersfield Municipal Code adopts by reference the CBC, 2013 edition (including Chapter 1, Division II, Appendix I and Appendix J, which was based on the 2012 International Building Code), and is declared to be the building code of the city for the purpose of regulating the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, use, height, and maintenance of all structures and certain

equipment therein specifically regulated within the incorporated limits of the issuance of permits.

4.5.6 Impacts and Mitigation

4.5.6.1 Methodology

In this DEIR, geological impacts are evaluated in two ways: Impacts of the proposed project on the local geologic environment are considered as are impacts of geological hazards on components of the proposed project that may result in substantial damage to structures or infrastructure or expose people to substantial risk of injury. Potential significant impacts associated with the project site were identified following a review of the *Geologic Hazards Investigation, Proposed Commercial Development, State Route 99 and Hosking Avenue, Bakersfield, California* (Appendix H).

4.5.6.2 Criteria for Determining Significance

Criteria for determining the significance of impacts related to geology and soils are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
   2. Strong seismic ground shaking.
   3. Seismic-related ground failure, including liquefaction.
   4. Landslides.

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

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

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

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.

Thresholds a and e were evaluated during the initial study process and were determined to result in less-than-significant impacts. As such, these impacts are not further evaluated below. For a detailed discussion of these impacts, refer to Appendix A.

4.5.6.3 Project Impacts

Impact GEO-1. The project would not result in substantial soil erosion or the loss of topsoil.

Construction

Grading of soils would be required as part of proposed project construction activities. Grading activities would require approximately 650,000 cubic yards (cy) of cut and approximately 550,000 cy of fill, resulting in an approximately 100,000 cy of soil surplus that would require export. Activities such as this could exacerbate erosion conditions (if they exist) by exposing soils and adding additional water to the soil from irrigation. Also, the compaction of soils by heavy equipment may minimally reduce the infiltration capacity of the soils (exposed during construction) and increase runoff and erosion potential. The project area is relatively flat and thus would not involve grading on steep slopes, which are prone to erosion. However, earthmoving activities (e.g., excavating and grading) could loosen soil and contribute to future soil loss and erosion by wind and stormwater runoff.

The proposed project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, Order No. 2009-0009-DWQ, because the project would result in 1 or more acres of land disturbance. To conform to the requirements of the NPDES Construction General Permit, a SWPPP would need to be prepared (see Section 4.8, *Hydrology and Water Quality*). This would specify BMPs to prevent construction pollutants, including eroded soils (such as topsoil), from moving offsite(State Water Resources Control Board 2015). Additionally, soils on site are considered moderately permeable. These are found in areas with a 0% to 2% slope. The onsite soil has characteristically slow runoff and slight water erosion potential. Furthermore, the project site is located within FEMA Zone C, an area of minimal flooding. Given the project site's soil characteristics, implementation of the aforementioned NPDES permit and BMP requirements would mitigate impacts related to soil erosion during construction activities.

Operation

Operation of the proposed project would not result in substantial soil erosion or loss of topsoil. The proposed project would involve the development of a regional retail shopping center, a four-story hotel, and associated surface parking. As such, the majority of the project site would contain impervious surfaces that would not be susceptible to erosion. Furthermore, the proposed project's design emphasizes the creation of appealing congregating spaces, which would consist of generous landscaped areas that would help stabilize and anchor any exposed

soil that is not covered by an impervious surface. These landscaped areas are expected to be maintained during the life of the project and thus would not expose underlying soil to erosion. Therefore, erosion impacts resulting from operation of the proposed project would be less than significant.

Mitigation Measures

No mitigation required.

Level of Significance after Mitigation

Less than significant.

Impact GEO-2. The project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

Landslides

The project site is relatively flat, and thus, landslides would not occur.

Lateral Spreading

Lateral spreading potential was analyzed for onsite soils as part of the project site's geologic hazards investigation. The lack of liquefiable soils, low to moderate seismicity in the area, distance of proposed project structures from the existing Kern Island Channel, and lack of saturated, cohesionless sediments make lateral spreading at the project site unlikely. As such, impacts related to lateral spreading would not affect short- or long-term implementation of the proposed project.

Subsidence

Petroleum and groundwater withdrawal occurs throughout Kern County. Because of this, the potential exists for subsidence to occur. However, the project site is not known to be subject to significant subsidence hazards and is not located within a DOGGR-recognized oil field (Department of Conservation 2014). Furthermore, the project site does not include groundwater or petroleum extraction wells onsite. As such, impacts related to subsidence are not expected to affect short- or long-term implementation of the proposed project.

Liquefaction

Onsite soils located above 35 feet below ground surface (bgs) are non-liquefiable because of the absence of groundwater (groundwater depth was measured at 35

feet bgs). Soils below 35 feet are classified as loose to medium-dense saturated sandy soils and, therefore, have a slight potential for liquefaction during a seismic event. According to the liquefaction analysis conducted as part of the geologic hazards investigation, these soils have a liquefaction safety factor of 1.13 to 5.0, making liquefaction potential at the project site unlikely. As such, impacts related to liquefaction are not expected to affect short- or long-term implementation of the proposed project.

Collapsible Soils

According to information obtained during the geologic hazards investigation, collapsible soils are unlikely to occur on the project site. Groundwater is located at approximately 35 feet bgs; thus, the potential for saturated, loose, granular sediments at the project site is considered low. Furthermore, the project site's soils are not conducive to hydro-collapse because of the medium-density soil, low void ratio, and moderate to high measured penetration resistance. Impacts related to collapsible soils are not expected to affect short- or long-term implementation of the proposed project.

Construction of the proposed project would be subject to applicable ordinances found in the City of Bakersfield Municipal Code and the 2013 CBC (CCR Title 24). This would further reduce potential impacts related to unstable soils (which, as described above, are unlikely) by requiring the project to be built to withstand geologic hazards. As a result, impacts would be less than significant.

Mitigation Measures

No mitigation required.

Level of Significance after Mitigation

Less than significant.

Impact GEO-3. The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life and property.

Surface and near-surface soils observed at the project site consist of sandy silt, silty sand, and sand. These types of soils are considered to have very low to moderate expansion potential. The moderate potential is attributed to the trace clays found during the geologic hazards investigation. However, clay was found in very small amounts (less than 1% of the soil content in the analyzed samples), making significant expansion unlikely. Furthermore, construction of the proposed project would be subject to applicable ordinances found in the City of Bakersfield Municipal Code and the 2013 CBC (CCR Title 24), which would further reduce potential impacts related to expansive soils by requiring the

project to be built to withstand geologic hazards. As such, impacts related to expansive soils would be less than significant.

Mitigation Measures

No mitigation required.

Level of Significance after Mitigation

Less than significant.

4.5.6.4 Cumulative Impacts

As discussed in Section 4.5.5, *Applicable Regulations*, various mechanisms are in place to reduce seismic risks at the project level, including the project-specific hazards evaluation processes mandated by the Seismic Hazards Mapping Act as well as the seismic design standards promulgated by the City's Building Code. Although there would be some residual level of risk, because seismic hazards cannot be entirely avoided, the proposed project would not contribute considerably to existing cumulative impacts related to seismic hazards.

Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, topographic alteration, and erosion, usually are site specific and generally do not combine with similar effects occurring with other projects in the City. Implementation of the provisions of the City Building Code, California Building Code, National Pollutant Discharge Elimination System permit requirements, and MBGP safety policies would ensure that potential site-specific geotechnical conditions would be addressed fully in the design of the project and that potential impacts would be maintained at less-than-significant levels. The proposed project would not contribute to adverse soil, geologic, or seismic cumulative impacts.

Section 4.6
Greenhouse Gas Emissions

4.6.1 Introduction

This section describes the environmental and regulatory setting for greenhouse gas (GHG) emissions and climate change. It also describes impacts on GHG emissions and climate change that would result from implementation of the project and identifies mitigation for significant impacts where feasible and appropriate. Please refer to Section 4.2, *Air Quality*, for analysis of criteria pollutant emissions and air quality impacts.

4.6.2 Environmental Setting

4.6.2.1 Climate Change

The phenomenon known as the *greenhouse effect* keeps the atmosphere near the Earth's surface warm enough for the successful habitation of humans and other life forms. Present in the Earth's lower atmosphere, GHGs play a critical role in maintaining the Earth's temperature; GHGs trap some of the long-wave infrared radiation emitted from the Earth's surface that would otherwise escape to space. According to Assembly Bill (AB) 32, California's Global Warming Solutions Act, GHGs include the following gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF_6), and hydrofluorocarbons (HFCs). The California Environmental Quality Act (CEQA) Guidelines (§ 15364.5) also identify these six gases as GHGs.

Visible sunlight passes through the atmosphere without being absorbed. Some of the sunlight striking the earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface; some of the heat is not trapped by GHGs and escapes into space. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the earth (Center for Climate and Energy Solutions 2011).

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the Earth's lower atmosphere and induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth's system that are collectively referred to as *climate change*.

4.6.2.2 Greenhouse Gases

The primary GHGs generated by the project would be CO_2, CH_4, and N_2O. Each of these gases is discussed in detail below. Note that HFCs, SF_6, and PFCs are not discussed, as these gases are primarily generated by industrial and manufacturing processes, which are not anticipated as part of the project.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in the Intergovernmental Panel on Climate Change (IPCC) reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2 equivalent (CO_2e), which compares the gas in question to that of the same mass of CO_2 (CO_2 has a global warming potential of 1 by definition).

Table 4.6-1 lists the global warming potential of CO_2, CH_4, and N_2O, their lifetimes, and abundances in the atmosphere.

Table 4.6-1. Lifetimes and Global Warming Potentials of Several Greenhouse Gases

Greenhouse Gases	Global Warming Potential (100 years)	Lifetime (years)	2014 Atmospheric Abundance
CO_2 (ppm)	1	50–200	394
CH_4 (ppb)	28	9–15	1,893
N_2O (ppb)	265	121	326

CH_4 = methane
CO_2 = carbon dioxide
N_2O = nitrous oxide
ppb = parts per billion by volume
ppm = parts per million by volume
Sources: Myhre et al. 2013; Blasing 2014; National Oceanic and Atmospheric Administration 2014.

Carbon Dioxide

CO_2 is the most important anthropogenic GHG and accounts for more than 75% of all GHG emissions caused by humans. Its atmospheric lifetime of 50 to 200 years ensures that atmospheric concentrations of CO_2 will remain elevated for decades even after mitigation efforts to reduce GHG concentrations are promulgated (Intergovernmental Panel on Climate Change 2007a). The primary sources of anthropogenic CO_2 in the atmosphere include the burning of fossil fuels (including motor vehicles), gas flaring, cement production, and land use changes (e.g., deforestation, oxidation of elemental carbon). CO_2 can also be removed from the atmosphere by photosynthetic organisms.

Atmospheric CO_2 has increased from a pre-industrial concentration of 280 parts per million (ppm) to 394 ppm in 2014 (Intergovernmental Panel on Climate Change 2007b; National Oceanic and Atmospheric Administration 2014).

Methane

CH_4, the main component of natural gas, is the second most abundant GHG and has a GWP of 28 (Myhre et al. 2013). Sources of anthropogenic emissions of CH_4 include growing rice, raising cattle, using natural gas, landfill outgassing, and mining coal (National Oceanic and Atmospheric Administration 2005). Certain land uses also function as both a source and a sink of CH_4. For example, wetlands are a terrestrial source of CH_4, whereas undisturbed, aerobic soils act as a CH_4 sink (i.e., they remove CH_4 from the atmosphere).

Atmospheric CH_4 has increased from a pre-industrial concentration of 715 parts per billion (ppb) to 1,893 ppb in 2014 (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

Nitrous Oxide

N_2O is a powerful GHG, with a GWP of 265 (Myhre et al. 2013). Anthropogenic sources of N_2O include agricultural processes (e.g., fertilizer application), nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions. N_2O also is used in rocket engines and racecars and as an aerosol spray propellant. Natural processes, such as nitrification and denitrification, can also produce N_2O, which can be released to the atmosphere by diffusion. In the United States, more than 70% of N_2O emissions are related to agricultural soil management practices, particularly fertilizer application.

N_2O concentrations in the atmosphere have increased 18% from pre-industrial levels of 270 ppb to 326 ppb in 2014 (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

4.6.2.3 Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 4.6-2 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

Table 4.6-2. Global, National, State, and Local GHG Emissions Inventories

Emissions Inventory	CO_2e (metric tons)
2004 IPCC Global GHG Emissions Inventory	49,000,000,000
2012 EPA National GHG Emissions Inventory	6,526,000,000
2012 ARB State GHG Emissions Inventory	458,680,000
2005 Kern County GHG Emissions Inventory	27,045,617

ARB = California Air Resources Board
CO_2e = carbon dioxide equivalent
EPA = U.S. Environmental Protection Agency
GHG = greenhouse gas
IPCC = Intergovernmental Panel on Climate Change
Sources: Intergovernmental Panel on Climate Change 2007a; U.S. Environmental Protection Agency 2014a; California Air Resources Board 2014; San Joaquin Valley Air Pollution Control District 2012

4.6.3 Applicable Regulations

4.6.3.1 Federal

Although there is currently no federal overarching law specifically related to climate change or the reduction of GHGs, the U.S. Environmental Protection Agency (EPA) is developing regulations under the Clean Air Act (CAA) that may be adopted in the next 2 years pursuant to EPA's authority under the CAA. Foremost among recent developments have been the settlement agreements between EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries; the U.S. Supreme Court's decision in *Massachusetts v. EPA*; and EPA's "Endangerment Finding," "Cause or Contribute Finding," and Mandatory Reporting Rule. Although periodically debated in Congress, there is no federal legislation concerning GHG emissions limitations. In *Coalition for Responsible Regulation, Inc., et al. v.*

EPA, the United States Court of Appeals upheld EPA's authority to regulate GHG emissions under the CAA.

4.6.3.2 State

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The Governor of California has also issued several executive orders related to the state's evolving climate change policy. Of particular importance is the direction provided by AB 32, which establishes a statewide GHG reduction goal of achieving 1990 emissions levels by 2020.

In the absence of federal regulations, control of GHGs is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. Summaries of key policies, regulations, and legislation relevant to the project are provided below.

Senate Bills 1078/107/X 1-2 and Executive Order S-14-08—Renewables Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)

Senate Bills (SBs) 1078 and 107, California's Renewables Portfolio Standard (RPS), obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached by no later than 2010. The California Public Utilities Commission and California Energy Commission are jointly responsible for implementing the program. Executive Order S-14-08 set forth a longer range target of procuring 33% of retail sales by 2020. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33% of their energy from renewable resources by the year 2020.

Assembly Bill 1493—Pavley Rules (2002, Amendments 2009)

Known as "Pavley I," AB 1493 standards are the nation's first GHG standards for automobiles. AB 1493 requires the California Air Resources Board (ARB) to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as "Pavley II," now referred to as the "Advanced Clean Cars" measure) has been proposed for vehicle

model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025.

Assembly Bill 32, Global Warming Solutions Act (2006)

AB 32 codifies California's 2020 GHG emissions goal by requiring the state to reduce global warming emissions to 1990 levels by 2020. It further directs ARB to enforce the statewide cap that would begin phasing in by 2012. AB 32 was signed and passed into law by Governor Arnold Schwarzenegger on September 27, 2006. The act authorizes ARB to adopt market-based compliance mechanisms including cap-and-trade, and allows a 1-year extension of the targets under extraordinary circumstances.

Executive Order S-01-07, Low Carbon Fuel Standard (2007)

Executive Order S-01-07 essentially mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California.[1]

Assembly Bill 32 Scoping Plan (2008/2014)

On December 11, 2008, ARB adopted the Scoping Plan as directed by AB 32, and approved its first update on May 22, 2014. The AB 32 Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California. Measures outlined in the AB 32 Scoping Plan include a cap-and-trade system, car standards, LCFS, landfill gas control methods, energy efficiency, green buildings, renewable electricity standards, and refrigerant management programs.

The AB 32 Scoping Plan provides an approach to reduce emissions to achieve the 2020 target, and to initiate the transformations required to achieve the 2050 target. The 2008 AB 32 Scoping Plan indicated that a 29% reduction below the estimated "business-as-usual" (BAU) levels would be necessary to return to 1990 levels by 2020. The 2011 supplement (Functional Equivalent Document) to the AB 32 Scoping Plan emission inventory revisions indicated that a 16% reduction below the estimated BAU levels would be necessary to return to 1990 levels by 2020. This revision was due to the slowing economy between 2008 and 2010.

[1] ARB approved the LCFS on April 23, 2009 and the regulation became effective on January 12, 2010. The U.S. District Court for the Eastern District of California ruled in December 2011 that the LCFS violates the Commerce Clause of the U.S. Constitution. ARB appealed this ruling in 2012 and on September 18, 2013, a 9th U.S. Circuit Court of Appeals panel upheld the LCFS, ruling that the program does not violate the Commerce Clause and remanded the case to the Eastern District.

California Energy Efficiency Standards and Green Building Standards Code—Title 24 (2008/2011)

The California Energy Commission periodically updates the energy efficiency requirements for residential and non-residential buildings. The currently applicable standards were adopted in 2012. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (California Code of Regulations Title 24) in 2008. Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, water conservation, material conservation, and internal air contaminants. The standards took effect in January 1, 2011.

State CEQA Guidelines (2010)

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity of determining potential climate change effects of the project and proposing mitigation as necessary. The State CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (§ 15064.4).

State CEQA Guidelines § 15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; offsite measures, including offsets that are not otherwise required, to mitigate a project's emissions; and measures that sequester carbon or carbon-equivalent emissions.

Greenhouse Gas Cap-and-Trade Regulation (2010/2011)

ARB has recently implemented a program, per the AB 32 Scoping Plan, to develop a cap-and-trade type system applicable to specific industries that emit more than 25,000 metric tons of CO_2e per year. The AB 32 Scoping Plan identifies a cap-and-trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. Under cap-and-trade, an overall limit on GHG emissions from capped sectors will be established by the

cap-and-trade program and facilities subject to the cap will be able to trade permits (allowances) to emit GHGs.

4.6.3.3 Regional and Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District's (SJVAPCD) GHG guidance is intended to streamline CEQA review by pre-quantifying emissions reductions that would be achieved through the implementation of best performance standards (BPS). Projects are considered to have a less-than-significant cumulative impact on climate change if they meet any of the following conditions.

- Comply with an approved GHG reduction plan.
- Achieve a score of at least 29[2] using any combination of approved operational BPS.
- Reduce operational GHG emissions by at least 29% over BAU conditions (demonstrated quantitatively).

SJVAPCD's guidance recommends quantification of GHG emissions for all projects in which an EIR is required, regardless of whether BPS achieve a score of 29 (San Joaquin Valley Air Pollution Control District 2009).

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) contains a safety element based on state law. The MBGP sets forth goals and polices to ensure the protection of public health related to GHG emissions. The following policies from the MBGP are relevant to the proposed project:

- Encourage the use of mass transit, carpooling, and other transportation options to reduce vehicle miles traveled.
- Promote the use of bicycles by providing attractive bicycle paths and requiring provision of storage facilities in commercial and industrial projects.
- Cooperate with Golden Empire Transit and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts.
- Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings.

2 A score of 29 represents a 29% reduction in GHG emissions relative to unmitigated conditions (1 point = 1%). This goal is consistent with the reduction targets established by AB 32.

- Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel.
- Require the provision of secure, convenient bike storage racks at shopping centers, office buildings, and other places of employment in the Bakersfield Metropolitan area.
- Encourage the provision of shower and locker facilities by employers, for employees who bicycle or jog to work.
- Develop a plan to ensure that all parking lots are 40% shaded at maturity to help alleviate "heat island effect."
- Encourage the use of reflective roofing material and other measures to reduce the "heat island effect."

4.6.4 Impacts and Mitigation

4.6.4.1 Methodology

Construction

Project construction would generate short-term emissions of CO_2, CH_4, and N_2O. Emissions would originate from mobile and stationary construction equipment exhaust, as well as employee haul truck vehicle exhaust. Mass emissions generated by these sources were estimated using the California Emissions Estimator Model (CalEEMod) and the assumptions described in Section 4.2, *Air Quality*. Construction of Phase I would occur between 2015 and 2016 and construction of Phase II would occur between 2017 and 2018.

Operation

Project operation would generate long-term emissions of CO_2, CH_4, and N_2O. Primary sources of emissions include vehicle exhaust, energy usage, water consumption, waste and wastewater generation, and area sources. GHG emissions generated by these sources were estimated using CalEEMod and the assumptions described in Section 4.2, *Air Quality*. Please refer to the Air Quality Impact Analysis (Appendix F) for more detailed information on the approach and methods used to estimate emissions.

4.6.4.2 Criteria for Determining Significance

CEQA Thresholds

Criteria for determining the significance of impacts related to GHG are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

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

To make these determinations above, the following criteria were used to evaluate impacts related to the proposed project.

Greenhouse Gases

Climate change is a global problem and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors), which are primarily pollutants of regional and local concern. Given their long atmospheric lifetimes (see Table 4.6-1), GHGs emitted by countless sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative.

As discussed in Section 4.6.3.3, SJVAPCD adopted GHG guidance to assist lead agencies in assessing a project's significance for GHGs under CEQA. The guidance does not identify a threshold for construction impacts, but recommends emissions be quantified and disclosed. The guidance outlines a tiered approach for evaluating the significance of operational GHG emissions. With respect to the first criterion, the City of Bakersfield has not adopted a qualifying GHG reduction plan or climate action plan (CAP). Accordingly, SJVAPCD's first analysis criterion does not apply to the proposed project. As such, emissions are evaluated according to the second and third criteria, where a 29% reduction in GHG emissions, compared with BAU conditions, would be determined to have less-than-significant individual and cumulative impacts related to GHG. The analysis of project-related GHG emissions relative to the SJVAPCD's 29% reduction threshold included amortizing construction emissions over the proposed project's 30-year operational lifespan and adding the amortized construction emissions to operational emissions.

Climate Change

The California Second District Court of Appeals has held that while an EIR must analyze the environmental effects that may result from a project, an EIR is not required to examine the effects of the environment, such as sea level rise, on a project (see *Ballona Wetlands Land Trust v. City of Los Angeles*, 201 Cal. App. 4th 455). In its decision, the Court called into question the validity of portions of the State CEQA Guidelines that require consideration of impacts of the environment on a project. The Ballona decision potentially eliminates the need for lead agencies in the second appellate district to consider the impacts of climate change on proposed projects. The Ballona decision did not, however, call into question the State CEQA Guidelines amendments enacted in 2010 that establish how GHG emissions are to be analyzed and mitigated under CEQA.

Unless binding legislation that overturns the Ballona decision is adopted,[3] this decision is expected to be argued as precedent in CEQA cases throughout the state for the premise that CEQA does not need to examine the impacts of the environment on a project. Nonetheless, courts outside of the second appellate district will have the discretion to differ in their interpretation of the State CEQA Guidelines and may find that an analysis of the effects of climate change on proposed projects is required.

Accordingly, a qualitative discussion of the issue has been provided below using the following criteria:

- Would the project subject property and persons to otherwise avoidable physical harm in light of inevitable climate change?

4.6.4.3 Project Impacts

Impact GHG-1. The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction

Construction of the proposed project would generate emissions of CO_2, CH_4, and N_2O from mobile and stationary construction equipment exhaust, as well as employee vehicle and haul truck exhaust. Estimated construction emissions associated with the proposed project are summarized in Table 4.6-3. Refer to the

3 On March 21, 2012, the California Supreme Court denied case review and depublication requests submitted by several environmental organizations. However, while the California Supreme Court denied case review of the Ballona decision, on November 26, 2013, the California Supreme Court granted review of *California Building Industry Association v. Bay Area Air Quality Management District* to settle whether CEQA requires an evaluation of how existing environmental conditions will affect a proposed project.

Air Quality Impact Analysis (Appendix F) for model outputs and detailed assumptions.

Table 4.6-3. Estimated Construction GHG Emissions (metric tons per year)

Source	CO_2	CH_4	N_2O	CO_2e
Phase I Construction Emissions	1,158.78	0.19	<0.01	1,162.69
Phase II Construction Emissions	2,347.65	0.22	<0.01	2,352.21
Total Construction Emissions	3,506.43	0.40	<0.01	3,514.90
Amortized Construction Emissions (30-year lifespan)	116.88	0.01	<0.01	117.16

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
Source: Appendix F

As shown in Table 4.6-3, construction of the project would generate 3,515 metric tons of CO_2e during the construction period. This is equivalent to adding about 740 typical passenger vehicles per year to the road during construction (U.S. Environmental Protection Agency 2014b). Emissions would be short term and cease once construction is complete in 2018.

Operation

Operation of the project would generate direct and indirect GHG emissions. Sources of direct emissions would include mobile vehicle trips, natural gas combustion, and landscaping activities. Indirect emissions would be generated by electricity generation and consumption, waste and wastewater generation, and water use.

As discussed above, in order for impacts of the project to be considered less than significant in terms of GHG, at least a 29% reduction from BAU emissions must be achieved by 2020. Estimated total emissions (amortized construction + operational) associated with the proposed project are summarized in Table 4.6-4.

Table 4.6-4. Estimated Project-related Operational GHG Emissions (metric tons per year)

Source	CO_2	CH_4	N_2O	CO_2e
Amortized Construction Emissions (30-year lifespan) (see Table 4.6-3)	116.88	0.01	<0.01	117.16
Operational Emissions				
Area Emissions	0.10	<0.01	<0.01	0.10
Energy Emissions	2,274.31	0.09	0.03	2,284.48
Mobile Emissions	9,355.68	0.47	<0.01	9,365.45
Waste Emissions	118.31	6.99	<0.01	265.14
Water Emissions	143.69	1.87	0.05	196.99
Total Operational Emissions	11,892.09	9.42	0.07	12,112.16
Total Project Emissions (Operational + Amortized Construction)[a]	12,008.97	9.43	0.07	12,229.32

[a] Values differ slightly from the Air Quality Impact Analysis (Appendix F) due to changes in project-level mitigation, which are reflected in the above total.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
Source: Appendix F

As shown in Table 4.6-4, total emissions associated with the proposed project (amortized construction + operational) are 12,229 metric tons CO_2e. Consistent with SJVAPCD's GHG guidance, emissions must be reduced by 29% over BAU to result in a less-than-significant impact on global climate change. Achieving this target would ensure that the proposed project is consistent with the state's current climate change policy objectives outlined in AB 32.

Table 4.6-5 summarizes year 2011 BAU emissions associated with the proposed project. Year 2011, the year ARB last updated the AB 32 Scoping Plan, was used as a conservative emissions estimate for BAU conditions, which does not account for emissions reductions achieved since the 2002–2004 baseline period as allowed in the SJVAPCD CEQA Guidance. BAU emissions do not include any project-level mitigation or the effects of future local, state, or federal actions to reduce GHG emissions. These actions, programs, and initiatives undertaken by the state will contribute to project-level emissions reductions. For example, the state's RPS will reduce the carbon content of electricity through requirements for increased renewable energy. Renewable resources, such as wind and solar power, produce electricity, just like coal and other traditional sources, but do not emit any GHGs. By generating a greater amount of energy through renewable resources, electricity provided to the project would be cleaner and less GHG-intensive than if the state had not required the RPS. Other state strategies that were considered in the emissions analysis include Pavley, LCFS, and Title 24 (refer to Section 4.6.3.2 for a description of these regulations).

In addition to summarizing 2011 BAU conditions, Table 4.6-5 also summarizes total 2020 emissions associated with the proposed project (amortized construction + operational), including the effects of statewide actions to reduce GHG emissions and the effects of Mitigation Measures MM GHG-1 and MM GHG-2, which require electric-powered landscaping equipment, high-efficiency water fixtures, and onsite recycling and compositing services.

Table 4.6-5. Comparison of BAU and Project Mitigated Emissions (metric tons per year)

Parameter	Metric Tons CO_2e
2011 BAU	17,229.62
Required Reductions (29% below 2011 BAU)	4,996.59
Total Project (Amortized Construction + Operational) Mitigated (2020)	12,229.32
Reductions Achieved (total project minus 2011 BAU)	-5,000.30
Percentage Reduction Achieved	29%
SJVAPCD Threshold	29%
Threshold Met?	**YES**

BAU = business as usual
CO_2e = carbon dioxide equivalent
SJVAPCD = San Joaquin Valley Air Pollution Control District

As shown in Table 4.6-5, combined state and project-level mitigation would reduce operational GHG emissions by 29%, relative to BAU conditions, consistent with SJVAPCD's threshold of achieving a 29% reduction below BAU conditions. Accordingly, construction and operation of the project would result in a less-than-significant impact on global climate change.

Mitigation Measures

MM GHG-1. Implement Onsite Mitigation to Reduce Operational Emissions. Prior to the issuance of grading permits, the project proponent shall submit evidence to the City of Bakersfield Planning Division to demonstrate adherence to the following: The project proponents will incorporate the following onsite mitigation into the project design to reduce greenhouse gas emissions associated with project operations:

(a) Install high-efficiency lighting to reduce consumption of electricity for lighting, which reduces emissions associated with the generation of electricity. A 75% lighting energy reduction was applied to the proposed project based on the performance of Energy STAR–certified light bulbs, which consume 70–90% less energy than traditional incandescent bulbs;

(b) Install low-flow bathroom faucets to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water;

(c) Install low-flow toilets to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water;

(d) Use water-efficient irrigation systems to reduce water consumption and thereby reduce emissions associated with the generation of power used to transport water; and

(e) Institute onsite recycling and composting services to reduce offsite, waste-related emissions associated with the proposed project.

MM GHG-2. Reduction of Operational GHG Emissions. Prior to the issuance of final occupancy for each phase of development, the project proponent shall submit a focused Greenhouse Gas Report that identifies measures for the reduction by 29% of the project's "business as usual" operational carbon dioxide equivalent emissions as quantified in this Environmental Impact Report prepared for the project. The focused air analysis may reference combined state and project-level mitigation that would reduce greenhouse gas emissions and shall be submitted to the San Joaquin Valley Air Pollution Control District for review and comment regarding the methodology used to quantify the reductions. The study can be for each individual phase of construction or for the entire project. Any mitigation program for the reduction of greenhouse gases adopted by the City of Bakersfield or the San Joaquin Valley Air Pollution Control District, which can be implemented for the specific project site and that provides equal or more effective mitigation than this mitigation measure, can be utilized as a replacement for the requirements of this mitigation measure.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact GHG-2. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The City of Bakersfield has not adopted a CAP to reduce community GHG emissions. Accordingly, the most applicable GHG reduction policy to the project is AB 32, which codified the state's GHG emissions reduction targets for the future. Consistency with AB 32 is evaluated in this impact.

AB 32 codifies the state's GHG emissions reduction targets for 2020. ARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. Some reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards. Some would come from changes pertaining to sources of electricity and increased energy efficiency at existing facilities. The remainder would need

to come from state and local plans, policies, or regulations that will lower carbon emissions, relative to business as usual conditions.

As discussed above, Mitigation Measures MM GHG-1 and MM GHG-2 include numerous policies to reduce operational GHG emissions. These measures are consistent with strategies identified in the AB 32 Scoping Plan, as well as statewide goals to improve energy efficiency, reduce building energy consumption, and conserve natural resources. Operational GHG reductions achieved by these mitigation measures, when combined with state actions, would reduce emissions by 29% (see Table 4.6-5) relative to business-as-usual conditions. Comparing emissions with business-as-usual conditions enables an analysis of project-level impacts against SJVAPCD's GHG guidance, which is based on the state's 2020 AB 32 reduction goals. Accordingly, emissions associated with the project would not conflict with AB 32. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact GHG-3. The proposed project would not subject property and persons to otherwise avoidable physical harm in light of inevitable climate change.

Unavoidable climate change may result in a range of potential impacts on the project and adjacent areas, such as increased temperatures, increased heat events, worsened air quality, increased storm intensity, increased wildland fire frequency or intensity, changes in disease and pest vectors, and changes in water supply. Apart from increased storm intensity and wildland fire (discussed below), the project has no potential to subject people or structures to additional harm from these potential effects of climate change. The project would not induce regional growth with construction of the shopping center and hotel. Patrons would be present in Kern County with or without the project and, thus, would be subject to general climate change effects regardless of implementation of the project.

There are only two potential climate change effects for which the project could potentially place people or structures at risk from those effects: potential increased storm intensity and increased wildland fire. While inland flooding might change with potential increase in storm intensity, there are insufficient data at this time to reasonably predict what future inland flooding risks may occur from changes in storm intensity resulting from climate change. As to wildland

fires, the project is not within a wildland area and, therefore, is not considered to be a high fire risk.

Therefore, the project would not result in significant increased risk to people or structures from climate change. The impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

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Section 4.7
Hazards and Hazardous Materials

4.7.1 Introduction

This section describes the environmental and regulatory setting for hazards and hazardous materials. It also describes impacts on hazards and hazardous materials that would result from implementation of the proposed project, and mitigation for significant impacts where feasible and appropriate.

Environmental database and site-specific hazardous materials information in this section is based primarily on the Phase I Environmental Site Assessment (Phase I ESA) report prepared for the Bakersfield Gateway Project NEC of State Highway 99 and Hosking Avenue, Bakersfield, California (Appendix I) by BSK Associates (October 2014).

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) Title 22, the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is defined in CCR Title 22 as:

> [a] substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed. (CCR Title 22 § 66260.10.)

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

4.7.2 Environmental Setting

4.7.2.1 Project Site History

Based on aerial photograph information obtained in the Phase I ESA, the proposed project site has been associated with agricultural land use as early as 1946 and lasting until 2006. The site has historically been cultivated for a variety of non-permanent crops. Phase I ESA information also suggests that three former dwelling-size structures were located near the south-central portion, northeastern corner, and east-central portion of the site.

4.7.2.2 Current Project Site Conditions

The project site is currently vacant/unused (with the only notable features being a drainage basin near the south-central portion of the site and a trench located on parcel 9). The project site is relatively flat with an elevation ranging between 358 and 354 feet above mean sea level. Surface and near-surface soils consist of sandy silt, silty sand, sandy silt or silty sand with trace clay, and sand.

4.7.2.3 Environmental Concerns

Potential Environmental Concerns for the Project Site

The Phase I ESA did not identify any Recognized Environmental Conditions (RECs) in connection with the proposed project site. However, the Phase I ESA identified specific previous uses that have occurred on site and existing conditions that have the potential to result in environmental concerns. Each of these is discussed separately below. RECs are described in detail below.

Agricultural Chemicals

The proposed project site has been associated with agricultural land use from as early as 1946 until at least 2006. During this time, the site has been used for the production of nonpermanent agricultural crops and, as such, pesticides and herbicides have likely been applied at the site. Consequently, pesticides, herbicides, and associated metals may be present in near-surface soils at residual concentrations.

Abandoned Utilities

Abandoned underground utilities (e.g., potable water pipes, gas pipes) associated with former onsite dwellings may be located at the project site. However, evidence of abandoned utilities was not observed during the site reconnaissance conducted as part of the Phase I ESA.

Underground Storage Tanks

There is no evidence that there are or have previously been any aboveground storage tanks (ASTs) or underground storage tanks (USTs) located on the site. However, if a UST was used during historic agricultural activities, it would have likely stored potable or irrigation water. The limited size of the agricultural operations at the project site would not have warranted herbicides, pesticides, fuels, or other hazardous materials in amounts required to be stored in USTs or ASTs.

Illegal Dumping

According to information recorded during completion of the Phase I ESA, illegal dumping has occurred on the proposed project site. Burned debris, a burned and discarded mattress, 5-gallon containers with unknown contents, and discolored soil were all observed on site.

Abandoned Well

An abandoned irrigation well is located in the north-central portion of the site. Additionally, one other well with above-grade water piping is located in the southeastern corner of parcel 44.

Discolored Soils and Chemical Spills

Discolored soil was observed at two locations: one near the 5-gallon containers in the southwestern portion of the site and the other near the discarded mattress in the northwestern portion of the site. The soils appear to have been affected as part of the illegal dumping activities that occurred on site.

Asbestos and Lead-Based Paint Contamination

A review of historical topographic maps and aerial photographs identified two dwelling-sized structures near the northeastern corner and the east-central portion of the site as early as 1912 until at least 1954. Results of the Phase I ESA also suggested that a third structure in the southern portion of the site (a concrete

foundation was observed during the Phase I ESA) was on site as early as 1978. As such, there is potential that historic onsite structures contained asbestos and/or lead-based paint. The structures have since been removed and the site remains vacant and unused.

Recognized Environmental Conditions in the Project Site and Surrounding Areas

RECs refer to the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property (ASTM E1527-13). These conditions generally present a material risk of harm to public health or the environment and generally would be the subject of an enforcement action if brought to the attention of appropriate government agencies.

Project Site

The Phase I ESA did not identify RECs in connection to the site and did not identify the proposed project site in any environmental database researched. However, information obtained during preparation of the Phase I ESA suggested that there were several areas of potential environmental concern pertaining to the site's historic land use (as described in detail above under *Potential Environmental Concerns for the Project Site* and summarized here). Discolored soil was observed during a site reconnaissance in the vicinity of the drainage basin (near the abandoned 5-gallon containers), which suggests there may be potential for some affected soil. The discolored soils appear to be a result of illegal dumping activities on site.

Because of the site's historic agricultural land use, there is a possibility that pesticides, herbicides, and associated metals may be present in near-surface soils.

A review of historical topographic maps and aerial photographs suggests that there have been structures on site as early as 1912. Consequently, there is potential that onsite soils may have been affected with asbestos and or lead-based paint at the time the aforementioned structures were demolished.

Offsite Properties

Four sites were identified in the Phase I ESA as being properties of interest to the project and warranted further analysis. Further analysis was deemed necessary because of their environmental history, distance to the project site, and environmental status. Table 4.7-1 lists these properties.

Table 4.7-1. Properties of Interest

Site	Address and approximate distance from the proposed project	Status
Elementary School No. 12	Berkshire Rd, west of K-9 canal. Formerly located 832 feet east-northeast of the proposed project site.	The former elementary school was part of a Preliminary Endangerment Assessment (PEA) and a supplemental site investigation in 2006. No contaminants of concern were identified. No other concerns related to the site noted.
Kern Valley Packing Company	7100 H Street. Located 0.25 mile north-northeast of the proposed project site.	The site was part of the Leaking Underground Storage Tank program and was identified as having hydrocarbon-affected soil. Three cubic yards of soil were excavated and the site received closure in August of 1990. In 2010, a small spill (20 gallons) of mineral oil occurred on site, caused by vandalism. Containment and cleanup of the spill were performed. No other violations noted.
Elementary School No. 11	Hoskings Avenue and Monitor Street. Located 0.5 mile east-southeast of the proposed project site.	The elementary school was part of a PEA and a supplemental site investigation because of the site's previous agricultural use. No contaminants were identified and the investigation officially closed in March of 2005.
Proposed McKee Road School	2923 McKee Road. Located 0.75 mile southwest of the proposed project site.	The site underwent a PEA in 2009 because of the location's previous agricultural use. Arsenic, chlordane, dichlorodiphenyldichloroethane (DDD), dichlorodiphenyldichloroethylene (DDE), and dichlorodiphenyltrichloroethane (DDT) were confirmed to be on site. Removal of contaminants was performed and the site was granted closure in August of 2010.

4.7.3 Applicable Regulations

4.7.3.1 Federal

Resource Conservation and Recovery Act

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act (RCRA), 42 United States Code (USC) § 6901 et seq. RCRA was established in 1976 to protect human health and the environment, reduce waste, conserve energy and natural resources, and minimize the generation of hazardous waste. Under the authority of the 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 Code of Federal Regulations (CFR) 260–299. Other applicable federal laws and regulations include the following.

- 49 CFR 172 and 173: These regulations establish standards for the transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests.
- 40 CFR Subchapter I—Solid Wastes: These regulations implement the provisions of the Solid Waste Act and RCRA. These regulations also establish the criteria for the classification of solid waste disposal facilities (landfills), hazardous waste characteristic criteria and regulatory thresholds, hazardous waste generator requirements, and requirements for management of used oil and universal wastes.
- 40 CFR 355 Appendix A—The List of Extremely Hazardous Substances and Their Threshold Planning Quantities: This list is part of a regulation that establishes requirements for a facility to provide information necessary for developing and implementing state and local chemical emergency response plans, and requirements for emergency notification of chemical releases, including releases of Extremely Hazardous Substances as defined by the Comprehensive Environmental Response, Compensation, and Liability Act.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law (42 USC 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides

for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP (40 CFR 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling, and transportation. Regulations include the DOT's Hazard Materials Program, Oil Spill Prevention and Response, Emergency Response, Packaging Requirements, and Highway Transportation, among others.

Occupational Safety and Health Administration: Hazardous Materials Standards (29 CFR 1910 Subpart H)

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards, and it provides technical assistance and consultation programs for employers and employees. OSHA hazardous materials standards are listed in 29 CFR 1910 Subpart H.

4.7.3.2 State

Department of Toxic Substances Control Site Cleanup Programs

The California Department of Toxic Substances Control (DTSC) is charged with restoring, protecting, and enhancing the environment; ensuring public health, environmental quality, and economic vitality by regulating hazardous waste; conducting and overseeing cleanups; and developing and promoting pollution prevention. The DTSC meets these goals by implementing programs aimed at overseeing cleanups; preventing releases by ensuring waste is properly generated, handled, transported, stored, and disposed of; enforcing laws against those who inappropriately manage hazardous wastes; promoting pollution reduction;

encouraging reuse and recycling; performing toxicological evaluations on a site; and involving the public in DTSC's decision making. Contaminated site cleanup programs include the Voluntary Cleanup Program and the California Land Reuse and Revitalization Program, among others.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) (California Health and Safety Code, Chapter 6.11, §§ 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the environmental and emergency response programs and provides authority to the Certified Unified Program Agency (CUPA). The CUPA is designed to protect public health and the environment from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes. This is accomplished via inspections, emergency response, enforcement, and site mitigation oversight. The CUPA for the City of Bakersfield (City) is the Bakersfield Fire Department's Prevention Services Division.

California Government Code

Government Code § 65962.5 required the DTSC, the State Department of Health Services, the California State Water Resources Control Board, and the California Integrated Waste Management Board to compile and annually update lists of hazardous waste sites and land designated as hazardous waste property throughout the state. The Secretary for Environmental Protection consolidated the information (also known as the Cortese List) submitted by these agencies.

California Public Resources Code

The California Environmental Quality Act (CEQA) (California Public Resources Code, Division 13, Environmental Protection) § 21092.6, *Location of Projects on Hazardous Waste Sites List*, directs the lead agency to consult the lists compiled pursuant to Section 65962.5 of the Government Code to determine whether a project and any alternatives are located on a site that is included on any list, as described in the *Recognized Environmental Conditions in the Project Site and Surrounding Areas* subsection above. The project site does not contain any listed sites per Section 65962.5 of the Government Code.

State Water Resources Control Board Construction General Permit (2009-0009-DWQ)

The general permit requirements apply to construction or demolition activities including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than 1 acre.

The Construction General Permit requires the development and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list best management practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs (State Water Resources Control Board 2015).

4.7.3.3 Local

Kern County Environmental Health Services Department Water Well and Small Water System Program

The Kern County Environmental Health Services Department (KCEHSD), Water Well and Small Water System Programs (Water Well Program) ensures that the public receives water that is safe to drink and the quantity supplied is adequate to meet the community's needs. The Water Well Program also issues permits to construct, reconstruct, and properly abandon, close, or destroy water wells (County of Kern Environmental Health Division 2015). Proper decommissioning of abandoned wells on the proposed project site may require an inspection and approval by KCEHSD prior to destruction.

Kern County Operational Area Hazardous Materials Area Plan

According to the Kern County Operational Area Hazardous Materials Area Plan:

> Hazardous materials emergencies are the result of: threatened releases, highway accidents, clandestine drug laboratories, train derailments, pipeline transportation accidents, pesticide drift incidents, or related fire and/or spills at fixed facilities.

The Hazardous Materials Area Plan identifies local, state, and federal responsibilities during incidents involving the release or threatened release of hazardous substances.

City of Bakersfield Fire Department

The City of Bakersfield Fire Department Environmental Services Division (BFD-ESD) maintains jurisdiction over hazards, hazardous materials, and hazardous materials spills within the City. Authority for the BFD-ESD is granted by Section 8.60 of the Municipal Code. The BFD-ESD is responsible for handling existing hazards and providing oversight of cleanup and remedial efforts. Typically, once a site has been identified and cleanup measures are determined to be needed, BFD-ESD will review the site evaluation and associated cleanup plan and goals. Prior to cleanup, BFD-ESD is required to concur or approve work plans based on site-specific plans. Upon implementation of the cleanup plan, BFD-ESD will witness cleanup, review results, and then sign the site off as cleaned. Personnel assigned to the hazardous materials team are certified by the State of California as Hazardous Materials Technicians or Specialists. The Bakersfield Fire Department's Prevention Services Division serves as the City's CUPA agency. The Bakersfield Fire Department also oversees the implementation of Hazardous Materials Business Plans (HMBP). An HMBP is a document containing detailed information on the:

- Hazardous materials/wastes stored and/or generated at a facility;
- Emergency response plans and procedures in the event of a substantial release or threatened release of a hazardous material/waste;
- Training program including hazardous communications, annual training refresher courses, and safety procedures in the event of a release or threatened release of a hazardous material; and
- Consolidated contingency plans.

4.7.4 Impacts and Mitigation

4.7.4.1 Methodology

The following impact analysis is based on an evaluation of onsite and adjacent land conditions and the likelihood or ability of these conditions to affect components of the proposed project. Based upon the existing conditions described above, the impact analysis assesses the direct and indirect impacts related to hazards and hazardous materials and determines whether the proposed project would exceed a threshold listed below.

4.7.4.2 Criteria for Determining Significance

Criteria for determining the significance of impacts related to hazards and hazardous materials are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

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

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

f) Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

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

Thresholds c, e, and h were evaluated during the initial study process and were determined to result in no impacts related to emissions within 0.25 mile of a school, airport land use plans, and wildland fires, respectively. As such, these impacts are not further evaluated below. For a detailed discussion of these impacts, refer to Appendix A.

4.7.4.3 Project Impacts

Impact HAZ-1. The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction

Project construction would involve routine transport, use, and disposal of hazardous materials such as fuels, solvents, paints, oils, grease, and caulking. Such transport, use, and disposal must be compliant with applicable regulations such as the RCRA, DOT Hazardous Materials Regulations, and Bakersfield Fire Department's Prevention Services Division (local CUPA) regulations.

Compliance with these federal, state, and local regulations, in combination with construction BMPs implemented through a project-specific SWPPP (per requirements of the State Water Resources Control Board's Construction General Permit 2009-0009-DWQ), would ensure that all hazardous materials would be used, stored, and disposed of properly.

Although small amounts of fuels solvents, paints, oils, grease, and caulking would be transported, used, and/or disposed of during the construction phase, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. Furthermore, it is expected that handling and storage of fuels and other flammable materials during construction activities would follow OSHA and local standards for fire protection and prevention. Consequently, no significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction of the proposed project is anticipated.

Operation

It is anticipated that the proposed project would use hazardous materials typical of commercial operations (e.g., solvents cleaning agents, paints, pesticides, herbicides, petroleum fuels, propane, oil filters, used oil, batteries, and aerosol cans). These hazardous material products are generally used in maintenance activities and in small, localized amounts. Any spills that may occur would be cleaned up as soon as they occur as required by CUPA regulations. Moreover, the existing HMBP for the proposed project would be modified, if necessary, to include a description of any new hazardous materials that might be used during future operations and would be subject to approval and oversight by Bakersfield Fire Department's Prevention Services Division.

Although the proposed project might account for an increase in amounts of common types of hazardous materials, normal routine use of these products would not result in a significant hazard to residents or workers in the vicinity. In addition, the proposed project would not handle acutely hazardous materials, substances, or waste. Therefore, operational activities would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste during operation of the proposed project. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact HAZ-2. The proposed project would 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.

Implementation of the proposed project is not expected to 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. As mentioned under Impact HAZ-1, construction-related hazardous materials would be used during construction of the proposed project, including fuel, solvents, paints, oils, grease, and caulking. It is possible that any of these substances could be released during construction activities. However, compliance with federal, state, and local regulations, along with construction BMPs implemented through a project-specific SWPPP, would ensure that all hazardous materials are used, stored, and disposed of properly, which would minimize potential impacts related to a hazardous materials release during the construction phase of the project.

As described in Section 4.7.2, *Environmental Setting*, four sites near the proposed project site were identified during the environmental database review as warranting further analysis to determine if they could potentially affect the proposed project. They are Elementary School No. 12, Kern Valley Packing Company, Elementary School No. 11, and the proposed McKee Road School. As mentioned, two of the three school sites (Elementary School No. 12 and Elementary School No. 11) were part of a PEA and a supplemental site investigation. No contaminants were identified in either case. The third school site (McKee Road School) also underwent a PEA and arsenic, chlordane, DDD, DDE, and DDT were confirmed to be on site (soil impact only). The site was remediated and was granted closure in August of 2010. The remaining site (Kern Valley Packing Company) was a Leaking Underground Storage Tank site that was identified as having hydrocarbon-affected soil. Remediation was performed and the site received closure in 1990. In 2010, a small spill of mineral oil occurred to onsite soil at Kern Valley Packing Company, caused by vandalism of an onsite transformer. Containment and cleanup of the spill were performed with no further impact on the project site. As such, the aforementioned offsite properties are unlikely to have had a deleterious effect on the project area.

Historical land use at the project site has included agricultural activities. As such, it is possible that residual traces of pesticides and herbicides may be present on the site. Construction and operation activities conducted during implementation of the project may generate dust and expose construction personnel to such chemicals. Additionally, discolored soil was observed in the vicinity of the rusted, empty, 5-gallon containers in the drainage basin, suggesting that there may be potential for soil affected by illegal dumping activities. Furthermore, two dwelling-sized structures were located on site as early as 1912, and a third structure was on site as early as 1978. As such, there is potential that these structures may have contained asbestos and/or lead-based paint that could have

affected nearby soils at the time of demolition activities. However, implementation of Mitigation Measures **MM HAZ-1** through **HAZ-2** described below would reduce this impact to a less-than-significant level. The aforementioned mitigation measure was based on the recommendations included in the Phase I ESA.

As described previously, the proposed project might account for an increase in amounts of common types of hazardous materials. These hazardous material products are generally used in small amounts, and any spills that may occur are limited in scope and spill area and would be cleaned up soon after they occur, as required by CUPA regulations. Moreover, the existing HMBP for the proposed project would be modified, if necessary, to include a description of any new hazardous materials that might be used during future operations and would be subject to approval and oversight by the Bakersfield Fire Department. Therefore, operation of the proposed project would result in a less-than-significant impact related to hazards to the public or to the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials.

Mitigation Measures

MM HAZ-1. Prior to the issuance of grading permits, the project proponent shall provide retain a qualified environmental consulting firm to prepare a Phase II Environmental Site Assessment to evaluate the topics listed below. Any remediation activities identified by the study shall be conducted under the oversight of the City of Bakersfield Fire Department Environmental Services Division, which serves as the local Certified Unified Program Agency. A copy of the final report, as well as evidence to demonstrate compliance with any remediation measures, shall be provided to the City of Bakersfield Planning Division prior to the issuance of the first grading and/or building permits. Project construction activities (unrelated to remediation activities) and site occupancy will not be permitted if it is determined the site is contaminated until the Environmental Services Division determines the site has been safely remediated and is suitable for construction and operation activities to commence.

(a) **Soil Sampling in Area with Discolored Soils.** The study shall collect soil samples in the vicinity of potentially affected soil (discolored soil near the drainage basin at the south-central portion of the site) and analyze the samples to evaluate if illegal dumping activities have affected soils in the area. If hazardous materials are discovered in the soils, the study shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division.

(b) **Soil Sampling for Lead and Asbestos.** The study shall collect soil samples near the foundation (in the southern portion of the site) and analyze them for lead and asbestos to evaluate if demolition activities have potentially affected the soils in the area. Concurrent with sample collection mentioned above, soil

samples shall also be collected in the vicinity of the former dwelling-sized structures near the northeastern corner and the east-central portion of the site and analyzed for lead and asbestos to evaluate if demolition activities have potentially affected the soils in the area. If hazardous materials are discovered in the sampled soils, the study shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division.

(c) **Soil Sampling for Agricultural Pesticides.** The study shall collect soil samples across the site and analyze them for organochlorine pesticides, arsenic, and lead. If hazardous materials are discovered in the soils, the qualified hazardous materials professional shall provide recommendations on the steps required for proper treatment and/or removal and disposal of contaminated soil to the satisfaction of the City of Bakersfield Fire Department Environmental Services Division.

MM HAZ-2. The project shall continuously comply with the following best management practices during all construction activities and operations of the project:

(a) **Discovery of Asbestos.** In the event that suspect asbestos-containing materials are uncovered during project construction, work at the project sites shall immediately halt and a qualified hazardous materials professional shall be contacted and brought to the project sites to make a proper assessment of the suspect materials. All potentially friable asbestos-containing materials shall be removed in accordance with federal, State, and local laws and the National Emissions Standards for Hazardous Air Pollutants guidelines prior to ground disturbance that may disturb such materials.

(b) **Discovery of Oil Wells**. In the event that abandoned or unrecorded wells or above-ground fuel storage tanks are uncovered or damaged during excavation or grading activities, all work shall cease in the vicinity of the well or above-ground fuel storage tanks, and the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, shall be contacted for requirements and approval; copies of said approvals shall be submitted to the City of Bakersfield. The California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, may determine that remedial plugging operations may be required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact HAZ-3. The proposed project is not located on a site that is included on a list of hazardous materials

sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Implementation of the proposed project would not create any impacts associated with being included on list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As mentioned above, the environmental database research conducted during preparation of the Phase I ESA provided no current or historical hazardous material information regarding the proposed project site.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

No impacts.

Impact HAZ-4. The proposed project would be located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area.

A private airstrip, the Costerisan Farms Airport, is approximately 1.7 miles to the southwest of the project site. The airport is a small-scale, unattended, private airstrip that is not recognized in the Kern County Airport Land Use Compatibility Plan(County of Kern 2011) . Therefore, there are no safety compatibility criteria associated with the airport, including an airport influence area. The airport comprises a grass runway and houses two single-engine aircraft (Pilot Outlook 2015). Based on information obtained, the airstrip appears to service a very small number of local flights and, as such, is not anticipated to result in a safety hazard to people residing or working in the area. Additionally, the proposed project involves implementation of a commercial development (which is typically a compatible land use with larger public airports requirements), and therefore would not be considered incompatible with a smaller scale private airstrip. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact HAZ-5. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

It is expected that access to all roadways would be maintained during the construction phase of the project. This would ensure that emergency response personnel have adequate access to the site and surrounding area. Additionally, all construction staging (for construction equipment and materials) and temporary construction parking areas would be contained within the footprint of the project site. This would eliminate any potential interference with emergency vehicles during construction activities. Also, the proposed project would not include any characteristics (e.g., permanent road closures) that would physically impair or otherwise interfere with long-term emergency response or evacuation in the project vicinity.

In addition, during construction activities, the proposed project would be required to comply with the current Kern County Operational Area Hazardous Materials Area Plan. This plan identifies responsibilities and provides coordination of emergency response at the local level in the event of a hazardous materials incident. Compliance with established procedures, rules, and regulations for emergency response would reduce the impacts to less-than-significant levels.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.7.4.4 Cumulative Impacts

Cumulative projects with the potential to have a deleterious effect on the proposed project are sites that are nearest the project footprint. A review of the cumulative project list identified one site within 0.25 mile of the proposed project, as shown in Table 3-4.

Table 4.7-2. Hazardous Materials Cumulative Projects

Site Description	Address	Status
21,881 square foot religious facility	8601 S H St	Final building permit issued

Similar to those during implementation of the proposed project, activities related to the construction of the religious facility mentioned above would likely involve the routine transport, disposal, and handling of hazardous materials, and intermittent use and transport of petroleum-based lubricants, solvents, fuels, herbicides, and pesticides. However, it is expected that the project would not involve "routine" transport, use, or disposal of hazardous materials typically used in construction. Additionally, hazardous materials transport, disposal, and handling are not expected to be part of typical operational activities at religious facilities. Therefore, impacts would be less than significant and would not have the potential to contribute to hazards associated with cumulative projects.

Section 4.8
Hydrology and Water Quality

4.8.1 Introduction

This chapter discusses the impacts of the project with respect to hydrology and water quality. It provides environmental setting information that is relevant to hydrology and water quality for the vicinity, describes the hydrology and water quality of the project area, lists the thresholds of significance that form the basis of the environmental analysis, and assesses whether the project would result in significant impacts with respect to hydrology and water quality.

4.8.2 Environmental Setting

4.8.2.1 Climate

The climate of the City of Bakersfield (City) is characterized as desert with long, hot, dry summers, and brief, cool, moist (but not wet) winters. The average daily temperature in the City ranges from 47.2 °F (degrees Fahrenheit) in December to 83.1 °F in July. Average monthly precipitation within the City ranges from 0 to 1.4 inches. About 90% of all precipitation falls from October through April. Table 4.8-1 shows average total monthly and average total annual precipitation and evapotranspiration[1] rates (inches per month and inches per year, respectively) in and around the project area (City of Bakersfield 2014).

1 Evapotranspiration is the loss of water from a vegetative surface through the combined processes of plant transpiration and soil evaporation.

Table 4.8-1. Average Annual Precipitation and Evapotranspiration

Month	Average Total ETo [a] (in)	Average Total Precipitation [b] (in)
January	1.22	0.98
February	2.20	1.05
March	3.66	0.94
April	5.67	0.61
May	7.44	0.39
June	8.15	0.11
July	8.67	0.02
August	7.81	0.01
September	5.67	0.08
October	4.03	0.26
November	2.13	0.53
December	1.22	0.85
TOTAL	57.87	5.83

Notes:
[a] ETo data was collected from the California Irrigation Management Information System - Station 125 Arvin-Edison (CIMIS 2014). The period of record for the data is 3/22/1995 to 07/01/2014.
[b] Precipitation data was obtained from the Bakersfield WSO Airport, California (040442) Station (Western Regional Climate Center 2015). The period of record for the data is 10/1/1937 to 12/31/2005.
ETo = reference (or potential) evapotranspiration. ETo is an estimate of the water used by a well-watered, full-cover grass surface, 8 to 15 centimeters in height (the reference crop); therefore, it represents a conservative estimate.
in = inches

4.8.2.2 Regional Surface Water Resources

The project site is within the Kern River watershed within the larger Tulare Lake Hydrologic Region.

Tulare Lake Basin

Tulare Lake Hydrologic Region is in the southern portion of the San Joaquin Valley. The hydrologic region's area is approximately 17,050 square miles (10.9 million acres), which includes all of King and Tulare counties and most of Kern and Fresno counties. In the southern portion of the region, significant geographic features include the lakebeds of the former Buena Vista/Kern and Tulare lakes, composing the southern half of the region; the Coast Range to the west; the Tehachapi Mountains to the south; and the southern Sierra Nevada to the east.

Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern rivers. Alterations of these rivers for agricultural purposes have dramatically changed the region in the last century.

The Tulare Lake Hydrologic Region is separated into several hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. In the alluvial fan/basin subarea, southwest- to south-flowing rivers, creeks, and irrigation canal systems convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries from the western flanks of the Sierras. (Department of Water Resources 2013).

Kern River Watershed

Within the Tulare Lake Hydrologic Region, the Kern River watershed is the largest drainage basin by area and produces the second-highest runoff. Drainage originates in the Inyo and Sequoia national forests and Sequoia National Park and flows south into Lake Isabella. Downstream of Isabella Dam, the river flows southwest along the southern edge of the Greenhorn Mountains before emerging from mountains east of Bakersfield. Downstream of Bakersfield, the river is diverted through a series of canals and ditches to irrigate the farms of the southern San Joaquin Valley and provide municipal water supplies to the City of Bakersfield and surrounding areas. The mouth of the river is the Buena Vista Lake Bed (Department of Water Resources 2013).

Local Surface Hydrology

The project site is currently undeveloped and unpaved. No natural streams or rivers, either perennial or intermittent, cross the project site. However, as shown in Figure 2-2, some water features are very close and/or adjacent to the project site. The nearest water feature is the main branch of the Kern Island Canal (approximately 80 feet to the east), which runs north-south and is adjacent and to the east of South H Street. The Arvin-Edison Canal trends east-west approximately 0.25 mile to the north of the project sit. The West Branch Canal trends north-south within a residential area to the west of the project site. The Kern River flows trends east-west and is approximately 6 miles north of the project site. The Central Valley Regional Water Quality Control Board (RWQCB) considers the Kern River and the various receiving water canals (including the Arvin-Edison and Kern Island Canals) to be waters of the United States (Central Valley RWQCB 2002). The Kern Island Canal has a direct connection to waters of the United States at the Kern Island headgate (located in the Panorama Vista Preserve), which is where Kern River water is diverted from the river into the canal.

The Kern Island Canal is an irrigation canal that primarily serves farmland located on the Kern Lakebed, south of Bakersfield. It originates from a common diversion of the Carrier Canal and Eastside Canal at Manor Street in Bakersfield that originates from the Kern River. The canal eventually diverges into three branches, known as the West, Central, and East branches, which terminate at the Kern Lakebed.

The West Branch Canal is one of the three branches of the California Aqueduct, which forms at a split with the East Branch in Southern Kern County. The West Branch continues to head toward its terminus at Pyramid Lake and Castaic Lake in the Angeles National Forest to supply the western Los Angeles basin. It passes through parts of Kern and Los Angeles counties. The California Aqueduct is operated by the State of California Department of Water Resources (DWR) and conveys water from Northern California to Southern California, including Kern County.

The Arvin-Edison Canal is owned and operated by the Arvin-Edison Water Storage District (AEWSD). AEWSD is a Central Valley Project (CVP) contractor; its current facilities were primarily constructed in the 1960s and are based on the conjunctive use of surface water imported from the CVP, State Water Project, Kings River, and groundwater resources that underlie most of AEWSD. AEWSD owns wells that it uses to supply previously banked groundwater to farms within its service area when surface water supplies are deficient. The AEWSD Intake Canal takes deliveries from the multiple water sources described above for ultimate delivery to its service area.

The Kern River is about 165 miles long and is the southernmost river in the San Joaquin Valley. The Kern River is one of the few rivers in the Central Valley that does not contribute water to the CVP; however, the Friant Kern Canal, a CVP supplier, joins the river approximately 4 miles west of downtown Bakersfield.

Surface Water Quality

Historical land uses at the project site include agricultural production, but the site is currently vacant land. Illegal dumping has occurred on the project site; however, the project site is not listed as a hazardous materials site or waste disposal site in any regulatory databases (Appendix I).

The Lower Kern River segment that flows through Bakersfield is not listed for any impairments on the 303(d) list pursuant to the Clean Water Act (EPA 2011). Beneficial uses designated by the State Water Resources Control Board (SWRCB) for the Lower Kern River are Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Water Supply (PROC), Hydropower Generation (POW), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Preservation of Rare and Endangered Species (RARE), and Groundwater Recharge (GWR) (SWRCB 2004).

Local Surface Water Supplies

Bakersfield's sole source of surface water is the Kern River. The City acquired historic water rights on the Kern River through its purchase of Tenneco's Kern River holdings in 1976. However legal proceedings between 1996 and 2007 investigated the potential forfeiture of appropriative Kern River water rights owing to non-use. The Kern River was originally designated as a river with Fully Appropriated Status by SWRCB in 1964. In February 2010, SWRCB issued an order revising the status of the Kern River, finding that the river was no longer fully appropriated (City of Bakersfield 2014). More information on surface water supplies is provided in Section 4.11, *Public Utilities and Services*.

4.8.2.3 Regional Groundwater Resources

The groundwater sub-basin underlying Bakersfield is the Kern County sub-basin. The Kern County sub-basin is one of the seven sub-basins within the San Joaquin Valley Basin that transport, filter, and store water. The other sub-basins within the San Joaquin Valley Basin are the Kings, Kaweah, Tulare Lake, Tule, Westside, and Pleasant Valley sub-basins. In turn, the San Joaquin Valley Basin is one of twelve groundwater basins that make up the Tulare Lake Hydrologic Region. Four main rivers provide the majority of the surface water runoff for the Region: the Kings, Kaweah, Tule, and Kern rivers.

The Kern County Groundwater sub-basin is bounded on the north by the Kern County line and the Tule Groundwater sub-basin, on the east and southeast by granitic bedrock of the Sierra Nevada foothills and Tehachapi Mountains, and on the southwest and west by the marine sediments of the San Emigdio Mountains and Coast Ranges. Principal rivers and streams include Kern River and Poso Creek. Active faults include the Edison, Pond-Poso, and White Wolf faults. Average precipitation values range from 5 inches at the sub-basin interior and from 9 to 13 inches at the sub-basin margins to the east, south, and west. Natural recharge is primarily from stream seepage along the eastern sub-basin and the Kern River; recharge of applied irrigation water, however, is the largest contributor. The Kern County sub-basin covers 3,040 square miles. This sub-basin is described in detail in California's Groundwater, Bulletin 118 (Department of Water Resources 2006).

Groundwater depth at the project site is 43 feet below ground surface, which is shallower than the typical depth to groundwater (85 to 175 feet below ground surface) found in the proposed project's vicinity. This shallower groundwater depth is likely due to seepage from the nearby Kern Island Canal (Krazan & Associates 2008).

Overdraft Conditions

The total water in storage is estimated to be 40,000,000 acre-feet, with dewatered aquifer storage estimated to be 10,000,000 acre-feet. The average sub-basin water level is essentially unchanged from 1970 to 2000, after experiencing cumulative changes of approximately -15 feet through 1978, a 15-foot increase through 1988, and an 8-foot decrease through 1997. However, net water level changes in different portions of the sub basin were quite variable through the period from 1970 to 2000. These changes ranged from increases of over 30 feet at the southeast valley margin and in the Lost Hills/Buttonwillow areas to decreases of over 25 and 50 feet in the Bakersfield area and McFarland/Shafter areas, respectively (Department of Water Resources 2006)

Groundwater Extraction and Recharge

The Kern County sub-basin is not an adjudicated basin, which means a Watermaster has not been appointed to oversee extraction rates and recharge in the basin. Instead, the City manages its groundwater resources based on measured and recorded recharge and banking operations. Sources of recharge to the Kern County sub-basin include precipitation and runoff, Kern River channel and canal seepage, and spreading/banking at the Kern Delta Water District's (KDWD) Kern Island recharge basins. Bakersfield's Wholesale Water System accurately monitors these activities on a daily basis and publishes an annual report. Bakersfield's Domestic Water Supply System accurately records groundwater pumping and deliveries from surface water treatment plants. One of the goals of water resources management is to limit groundwater extractions to no more than the "safe yield" for the groundwater basin. "Safe yield" occurs when the amount of water pumped from the basin is less than or equal to replenishment of water into the basin.

Local Groundwater Supplies

The proposed project is within the service area of the Greenfield County Water District (GCWD). GCWD obtains 100% of its water supply from groundwater wells within its Domestic Water Service System area. This groundwater is the seepage losses attributable to the diversion and delivery of Kern River water through the portion of the Kern Island Main and Central canals lying within GCWD's sphere of influence.

Existing Groundwater Use

GCWD obtains 100% of its water supply from groundwater wells within its Domestic Water Service System area. The sole source of water for GCWD is groundwater in the form of canal seepage from the Kern River Canal. GCWD has historically purchased and provided approximately 2,500 to 3,000 acre-feet per

year of canal seepage water from the Kern Water District. Table 4.8-2 outlines the historical water demand for the Greenfield Water District from 2002 to 2013. For this period of record, 97% of demand was for residential uses.

Table 4.8-2. Historical Local Groundwater Usage 2002–2013

Year	Acre-feet	Gallons (Millions)
2002	1,291	421
2003	1,575	531
2004	1,925	627
2005	2,169	707
2006	2,492	812
2007	2,580	841
2008	2,560	834
2009	2,451	799
2010	2,282	744
2011	2,336	761
2012	2,566	836
2013	2,750	898

Groundwater demand has increased overall during this period, although there was a decreasing trend of water use from 2007 to 2010. Both 2007 and 2008 were classified as critically dry years in the San Joaquin Valley, whereas 2009 and 2010 were classified as Below Normal and Above Normal Years. Water conservation measures of GCWD customers and GCWD groundwater pumping methods (e.g., reductions in pressure) were likely responsible for this brief decline in water demand.

4.8.2.4 Dam Failure Inundation

In the event of failure of Isabella Dam, areas around metropolitan Bakersfield would be flooded. According to maps developed by the U.S. Army Corps of Engineers, Bakersfield would be inundated by 1 foot of water 6 to 8 hours following a catastrophic dam breach. Maximum depth of inundation would occur along the banks of the Kern River at depths greater than 30 feet (Kern County 2008).

4.8.2.5 Site Erosion Potential

Factors that affect the water erosion potential of a site include topography and management, soil type and structure, and rainfall intensity.

Areas with significant slopes are more susceptible to erosion because velocity of runoff increases with greater slopes. As described in Section 4.5, *Geology and Soils*, the surface soil is categorized as Kimberlina fine sandy loam, 0% to 2% slopes. Therefore, the site does not have significant slopes that would contribute to high erosion potential.

Because the site is mostly flat, runoff from the site likely mostly flows as sheet flow. 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. The higher the value, the more susceptible the soil is to sheet and rill erosion by water. The average K factor for the site is 0.32, indicating the site is moderately susceptible to sheet and rill erosion (USDA 2014).

The intensity, duration, and time of year of rainfall are the key factors in assessing erosion potential. Some areas are more prone to erosive rains at critical times (e.g., late summer) than others. However, as shown above in section 4.8.2.1, *Climate*, the highest precipitation in Bakersfield occurs during the months of January, February, and March (USDA 2007).

4.8.3 Applicable Regulations

4.8.3.1 Federal Regulations

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. The permits regulate the discharge of dredged and fill materials (CWA Section 404), construction-related stormwater discharges (CWA Section 402), and activities that may result in the discharges of pollutants (CWA Section 401) into waters of the United States, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands.

Section 303(d) and Total Maximum Daily Loads

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969, the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the Total Maximum Daily Load process to assist in guiding the application of state water quality standards, requiring the states to identify streams whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish the Total

Maximum Daily Load, or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse impacts. None of the water bodies in the project vicinity are impaired per CWA Section 303(d).

Section 401—Water Quality Certification

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States. Water Quality Certifications are issued by one of the nine geographically separated RWQCBs in California. Under the CWA, the RWQCB must issue or waive a Section 401 Water Quality Certification for a project to be permitted under CWA Section 404.

Section 402—National Pollutant Discharge Elimination System

The U.S. Environmental Protection Agency administers the National Pollutant Discharge Elimination System (NPDES). In California, it authorizes the SWRCB to oversee the NPDES program through the RWQCBs (see related discussion under the section on the *Porter-Cologne Water Quality Control Act*, below). The project site is under the jurisdiction of the Central Valley RWQCB.

NPDES General Permit for Construction Activities

Construction projects that disturb more than 1 acre of land are required to obtain coverage under the statewide NPDES General Permit for Construction Activities (Permit No. CAS000002). This permit requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes a site map and a description of proposed construction activities, demonstration of compliance with relevant local ordinances and regulations, and description of best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants.

NPDES General Municipal Stormwater Permit

CWA Section 402 mandates programmatic permits for municipalities to address stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4) (MS4 Permit). Phase I MS4 regulations cover municipalities with populations greater than 100,000, certain industrial processes, or construction activities disturbing an area of 5 acres or more. Phase II (Small MS4) regulations require that stormwater management plans be developed by municipalities with populations smaller than 100,000 and construction activities disturbing 1 or more acres of land area.

MS4 Permits require that cities and counties develop and implement programs and measures to reduce the discharge of pollutants in stormwater discharges to the maximum extent possible, including management practices, control techniques, system design and engineering methods, and other measures as appropriate. As part of permit compliance, these permit holders have created stormwater management plans for their respective locations. These plans outline the requirements for municipal operations, industrial and commercial businesses, construction sites, and planning and land development. These requirements may include multiple measures to control pollutants in stormwater discharge. During implementation of specific projects under the program, project applicants will be required to follow the guidance contained in the stormwater management plans as defined by the permit holder in that location.

Discharges from Kern County's MS4 and the City's MS4 (collectively, the Co-permittees) are regulated under Waste Discharge Requirements for the County of Kern and the City of Bakersfield for Urban Storm Water Discharges, NPDES Permit No. CA00883399, Order No. 5-01-130, issued June 14, 2001. Operational compliance with NPDES would be regulated by the Kern County Standard Urban Stormwater Mitigation Plan (SUSMP). The Kern County SUSMP and Design Manual are described further below in section 4.8.3.3, *Local Regulations*.

4.8.3.2 State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, passed in 1969, acts in concert with the federal CWA (see the section on the *Clean Water Act* above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. The Central Valley RWQCB is one of these nine regional boards and regulates water quality control measures within the City. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface water and groundwater supplies, but much of its daily implementation is delegated to the nine RWQCBs.

The Porter-Cologne Water Quality Control Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and that establish narrative and numerical water quality objectives for those waters. Basin plans are primarily implemented by using the NPDES permitting system to regulate waste discharges so that water quality objectives are met. Basin plans, updated every 3 years, provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act also assigns responsibility for implementing CWA Sections 401, 402 and 303(d) to the SWRCB and the nine RWQCBs. The Tulare Basin Plan governs water quality matters in the Tulare Basin. Because the proposed project would comply with the NPDES permitting system, it would not violate the Tulare Basin Plan.

4.8.3.3 Sustainable Groundwater Management Act

On September 16, 2014 Governor Edmund G. Brown, Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills, Senate Bill 1168 (Pavley), Assembly Bill 1739 (Dickinson), and Senate Bill 1319 (Pavley), together make up the Sustainable Groundwater Management Act (SGMA). The act will establish phased requirements for high- and medium-priority basins to adopt groundwater sustainability plans, depending on whether or not a basin is in critical overdraft. It will require adoption of groundwater sustainability plans by January 31, 2020, for all high- or medium-priority basins in overdraft condition and by January 31, 2022 for all other high- and medium-priority basins unless legally adjudicated or otherwise managed sustainably.

DWR implemented the California Statewide Groundwater Elevation Monitoring (CASGEM) Program in response to legislation enacted in California's 2009 Comprehensive Water package. As part of the CASGEM Program and pursuant to the California Water Code (CWC §10933), DWR is required to prioritize California groundwater basins, so as to help identify, evaluate, and determine the need for additional groundwater level monitoring. The CASGEM Groundwater Basin Prioritization Basin Score determined the Kern County Subbasin to be a High Priority basin and to have an overall basin ranking score of 22.5. Basin impacts used to determine this ranking are subsidence, overdraft, and water quality degradation (Appendix D).

The SGMA established a new structure for managing California's groundwater resources at a local level. The SGMA requires, by June 30, 2017, the formation of locally controlled Groundwater Sustainability Agencies (GSAs), which must develop Groundwater Sustainability Plans in Bulletin 118-defined groundwater basins or subbasins that were designated by DWR as medium or high priority. As a result of the Kern County Subbasin's high-priority basin status, a GSA will need to be formed by local agencies for the subbasin, and DWR will need to be notified by June 30, 2017. GCWD will likely be a member of the GSA, once it is formed. Moreover, the project would be required to comply with any future requirements that come from any adopted groundwater sustainability plan from the locally established groundwater agency.

4.8.3.4 Executive Order B-29-15

On April 1, 2015, California Governor Edmund G. Brown, Jr. issued Executive Order B-29-15 as part of the State of Emergency actions due to severe drought conditions. The Order states that SWRCB shall impose restrictions to achieve a statewide 25% reduction in potable urban water usage through February 28, 2016. These restrictions will require water suppliers to California's cities and towns to reduce usage compared to the amount used in 2013. These restrictions should consider the relative per capita water usage of each water supplier's

service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use.

GCWD is considered to be a small water supplier (serving fewer than 3,000 connections), which are required to either reduce water use by 25%, or restrict outdoor irrigation to no more than two days per week. These smaller urban suppliers, that collectively serve less than 10% of Californians, must submit a report on December 15, 2015 to demonstrate compliance (Appendix D).

4.8.3.5 Local Regulations

Kern County Standard Urban Stormwater Mitigation Plan

The City combine resources with several other Kern County agencies and cities through the Kern County Stormwater Program to comply with regulations set by the CWA. The Kern County SUSMP is part of the County's municipal stormwater program to address pollution from new development and redevelopment by the private sector. The SUSMP contains a list of minimum required BMPs for designated projects that must be incorporated into project plans by developers. The proposed project is subject to the SUSMP requirements (Central Valley RWQCB 2002).

The City is one of the permittees under the primary Kern County NPDES permit (Municipal Stormwater Discharge Permit No. CA00883399), and projects in the City are subject to the SUSMP requirements (Central Valley RWQCB 2002). The Kern County SUSMP requirements are met within the City of Bakersfield through the implementation of the City's Design Manual (Chapter 2.1, General) (City of Bakersfield 1989).

City of Bakersfield Standards for Drainage

As noted above, the City satisfies the SUSMP requirements under the Kern County NPDES permit (Municipal Stormwater Discharge Permit No. CA00883399) through implementation of the City's Design Manual (Chapter 2.1, General) (City of Bakersfield 1989).

The general purpose of the standards is to convey and dispose of water generated by storms, springs, or other sources in such a manner that adjacent improvements, existing or projected, would be free of impacts from 10-, 25-, or 100-year storm events. The standards require that all development be designed so as not to increase the flow of water onto adjacent properties except as otherwise provided by the standards. Increased flow is permissible by the standards if the City Engineer finds that the developer has furnished downstream facilities of adequate design. The standards require that water be received and discharged at

locations that existed prior to development, unless diversion is required as part of a comprehensive drainage plan. If the latter is required, sufficient design modifications are required by the standards to provide all affected properties with the predevelopment flood protection levels. Alternatives to the design standards are permissible under the standards and may be allowed by the City Engineer if the case's circumstances reasonably require such to satisfy public interest and if they remain in conformity with the general objectives of the standards. All drainage facilities other than those accepted for maintenance by the City must be maintained by an entity with taxing powers. The standards require that such an entity be established prior to recordation of the final map, at the expense of the subdivider (City of Bakersfield 1989).

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) contains a water resources section in its Conservation Element and a storm drainage section in its Public Services and Facilities element (City of Bakersfield and Kern County 2002). The MBGP sets forth goals and polices related to fundamental water resource issues in the Metropolitan Bakersfield area. The following goals and polices from the MBGP are applicable to the proposed project:

- conserve and augment the available water resources of the planning area;
- assure adequate groundwater resources remain available to the planning area;
- assure that adequate surface water supplies remain available to the planning area;
- continue cooperative planning for and implementation of programs and projects, which will resolve water resource deficiencies and water quality problems;
- protect planning area groundwater resources from further quality degradation; and
- ensure the provision of adequate storm drainage facilities to protect planning area residents from flooding resulting from stormwater excess.

Kern County Groundwater Ordinance

The Kern County Groundwater Ordinance is a state policy to facilitate the transport and transfer of water and water rights where consistent with the public welfare of the place of export. This ordinance only applies to the counties "native groundwater." "Native groundwater" does not include water that is recharged by artificial means, including water recharged through groundwater banking programs, and originates outside Kern County and its watershed areas (Kern County 1998).

4.8.4 Impacts and Mitigation

4.8.4.1 Methodology

Impacts related to hydrology, water quality, and water resources were assessed based on technical reports prepared for the proposed project, other available data (e.g., maps, soil surveys), and professional judgment.

Potential impacts resulting from implementing the proposed project were analyzed by comparing existing conditions, as described in section 4.8.2, *Environmental Setting*, with conditions during construction and/or operation and maintenance of the project. The analysis assesses the direct, indirect, short-term, and long-term impacts related to surface hydrology, flood hazards, groundwater recharge, and surface and groundwater quality as described below.

Surface Water Hydrology: The surface water hydrology impact analysis considered potential changes in the physical characteristics of water bodies, impervious surfaces, and drainage patterns throughout the project area as a result of project implementation.

Groundwater Recharge: Impacts on groundwater recharge were assessed by comparing existing sources of recharge with recharge capabilities following project implementation. Recharge is determined by the ability of water to infiltrate into the soil.

Surface and Groundwater Quality: Impacts of the proposed project on surface water and groundwater quality were analyzed using existing information on existing water quality conditions (i.e., 303(d)-listed water bodies). These conditions were then compared to conditions under the proposed project for potential project-related sources of water contaminants generated or inadvertently released during project construction (e.g., sediments, fuel, oil, concrete) and operation. The potential for water quality objectives to be exceeded and beneficial uses to be compromised as a result of the proposed project was also considered.

Flood Hazards: The impact analysis for flood risk was conducted using Federal Emergency Management Agency National Flood Insurance Program maps to determine whether the project area overlaps with existing designated 100-year and 200-year floodplains.

4.8.4.2 Criteria for Determining Significance

Criteria for determining the significance of impacts related to hydrology and water quality are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Violate any water quality standards or waste discharge requirements.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted).

c) 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 that would result in substantial erosion or siltation onsite or offsite.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.

e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

f) Otherwise substantially degrade water quality.

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

h) Place within a 100-year flood hazard area structures that would impede or redirect floodflows.

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

j) Contribute to inundation by seiche, tsunami, or mudflow.

Thresholds g, h, and j were evaluated during the initial study process and were determined to result in no impacts related to placing housing within a 100-year flood hazard area, placing structures within a 100-year flood hazard area, and contributing to inundation by seiche, tsunami, or mudflow, respectively. As such, these impacts are not further evaluated below. For a detailed discussion of these impacts, refer to Appendix A.

4.8.4.3 Project Impacts

Impact WQ-1. The proposed project would violate water quality standards or waste discharge requirements.

The proposed project could potentially violate water quality standards and waste discharge requirements. The project site encompasses approximately 85 acres, and the project could discharge new urban pollutants from the site.

Construction

During construction, the project could result in an increase in surface water pollutants such as sediment, oil and grease, and miscellaneous wastes from construction activities. Water quality would be temporarily affected if disturbed sediments were discharged via existing stormwater collection systems. Increased turbidity resulting from construction-related sediment discharge can introduce compounds toxic to aquatic organisms, increase water temperature, and stimulate the growth of algae.

The delivery, handling, and storage of construction materials and wastes, along with use of construction equipment, could also introduce the risk of stormwater contamination. Staging areas or building sites can be sources of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Impacts associated with metals in stormwater include toxicity to aquatic organisms, such as bioaccumulation, and the potential contamination of drinking supplies. Pesticide use (including herbicides and fungicides) associated with site preparation work (as opposed to pesticide used for landscaping) is another potential source of stormwater contamination during construction. Pesticide impacts on water quality include toxicity to aquatic species and bioaccumulation in larger species. Larger pollutants, such as trash, debris, and organic matter, are additional pollutants that could be associated with construction activities. Impacts include health hazards and aquatic ecosystem damage associated with bacteria, viruses, and vectors and physical changes to the aquatic ecosystem. Without BMPs installed and/or followed, construction impacts on water quality would be potentially significant and could lead to exceedance of water quality objectives or criteria.

Construction at the project site would disturb more than 1 acre. Therefore, the preparation and implementation of a SWPPP would be required, in accordance with the General Construction Permit. The SWPPP would list BMPs that would be implemented to protect stormwater runoff and include monitoring of BMP effectiveness. At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP would specify properly designed, centralized storage areas that keep these materials out of the rain. If grading must be conducted during the rainy season,

the primary BMPs selected would focus on erosion control (i.e., keeping sediment on the site).

The SWPPP would specify BMPs to ensure that water quality standards or waste discharge requirements are not violated. BMPs selected would be designed to comply with the requirements of the Central Valley RWQCB and would be subject to review and approval by the City. BMPs during construction may include but not be limited to the following:

- Silt fence
- Fiber roll
- Street sweeping and vacuuming
- Stockpile management
- Vehicle and equipment maintenance
- Erosion control mats and spray-on applications
- Desilting basin
- Gravel bag berm
- Sandbag barrier
- Spill prevention and control
- Concrete waste management
- Water conservation practices

Such measures are routinely developed for construction sites and are proven to be effective in reducing pollutant discharges from construction activities. Implementation of the SWPPP during construction would ensure water quality objectives, standards, and wastewater discharge thresholds would not be violated. The SWPPP would be prepared by the project applicant and approved by the City prior to commencement of construction activities. As selection of the appropriate BMPs is a standard process of the engineering review and grading plan approval, impacts from construction on water quality would be less than significant, and no mitigation is required for construction impacts.

Operation

Operations of the project would create concentrated mixed-use commercial and high-density residential centers surrounded by medium-density residential uses on previously undeveloped, pervious surfaces. This would significantly alter the land use at the site. Site runoff likely would be typical of other urban areas and contain pollutants such as household chemicals, landscaping fertilizers, trash, heavy metals, and other substances. Furthermore, site operations would introduce more vehicles to the site, which could increase the potential for vehicle-related pollutants to build up on impervious surfaces and discharge in runoff when the

wet season begins. Periodic use of pesticides (including herbicides and fungicides) for landscaping could introduce additional pollutants.

New storm drains constructed for the project likely would be discharged to an onsite detention and infiltration facility. With compliance with the Kern County MS4 Permit, as well as with City and Kern County stormwater requirements, good housekeeping and stormwater management and treatment design BMPs would be implemented during operation, and the use of vegetation and other landscaped areas would assist in reducing the potential for pollutants to be discharged to onsite storm drains. The proposed project would not violate any water quality standards or waste discharge requirements. Therefore, the project's operational impacts would be less than significant with implementation of Mitigation Measure MM WQ-1.

Mitigation Measures

MM WQ-1. Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Stormwater Management and Design.** The project proponent shall coordinate with the City of Bakersfield Public Works Department to design the project to ensure that all project runoff can be accommodated by the receiving stormwater system. Design elements shall include, if needed, onsite stormwater management measures, such as onsite detention or selected upgrades to the receiving system. Onsite stormwater management facilities shall be designed and constructed to capture runoff and provide treatment before discharge of pollutant-generating surfaces, including parking areas and buildings and in compliance with City of Bakersfield design standards.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-2. The proposed project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted).

Construction

The depth to shallow groundwater within the project site is at least 43 feet below ground surface. Excavation for the project would be required for installation of utilities, building foundation, and other infrastructure. However, these features would not require deep excavation; therefore, potential groundwater dewatering during construction would be unlikely to occur. If dewatering is necessary, it would be conducted according to the proper regulations and permit requirements from the City, Kern County, and/or Central Valley RWQCB.

In addition, potential use of groundwater during construction for dust control, concrete pouring, and other activities would be minimal and temporary, and therefore would not result in groundwater depletion.

As a result, there would be no impact on groundwater resources from construction dewatering or use, and impacts on groundwater supplies during construction would be less than significant.

Operation

Groundwater recharge may be affected by the proposed project. The proposed project would add approximately 800,000 square feet of leasable commercial space and associated parking lots and internal drives on approximately 85 acres, which could potentially interfere with groundwater recharge by decreasing the amount of pervious surfaces on the site. The site would be converted from 100% pervious to approximately 78.5% impervious.

Existing Kern County stormwater regulations require that new developments in the Bakersfield metropolitan area that cannot be served by the existing MS4 include retention basins to contain and infiltrate runoff from the development. If new developments can be served by the existing MS4 retention basins, then storm water would be discharged through the existing MS4 retention basins. Retentions ponds are designed to be separate from local groundwater supplies to prevent movement of dissolved pollutants from surface water to groundwater sources.

The project would not be served by MS4 retention basins, and therefore runoff from the site would be infiltrated and the project would not interfere substantially with groundwater recharge. The proposed project would treat onsite stormwater runoff in an onsite infiltration basin, which would help recharge the underlying groundwater aquifer. Low-impact development stormwater treatment methods for water quality would also be required to ensure infiltrated groundwater would not cause underlying groundwater to exceed water quality objectives or adversely affect beneficial uses.

Groundwater aquifer supplies may be affected by operation of the proposed project and the project may be subject to future requirements that come from any adopted groundwater sustainability plan from the locally established GSA pursuant to the SGMA. GCWD would use pumped groundwater to meet the project's water demands. According to the Draft Project WSA, the project groundwater demand is anticipated to be 376.4 acre-feet per year, or approximately 12.6% of the anticipated total system demand of 3,346 acre-feet per year in 2015 (including the proposed project). Project demands would be met through GCWD's existing groundwater rights from native aquifer supplies, as well Mr. John Giumarra's overlying groundwater rights for the same aquifer that will be pumped from GCWD wells (Page 1 of Appendix D). An Agreement for Overlying Lands would be executed, in which GCWD acts as an agent, to allow GCWD to utilize Mr. Giumarra's Overlying Groundwater Rights as a landowner, and which would then require new wells to be drilled. District demands would also continue be met with pumping native groundwater, which GCWD has been using to serve its existing customers based on existing groundwater rights. To ensure water supply reliability during single dry year or multiple dry years, GCWD will use its storage reserve of canal seepage water from KDWD. As part of an Urban Customer Service Agreement, GCWD receives 100% of the surface water seepage losses from the Kern Island Canal system as groundwater recharge and to maintain groundwater aquifer levels. This water would be used only during times of water shortages (Appendix D).

Although there would be sufficient water supplies for the project and the GCWD service area as indicated by the WSA (Appendix D), given the current drought conditions and the reasonably foreseeable continued stress on available water, the project would implement Mitigation Measure MM WQ-2 (a), Water-Efficient Design Measures, which would help reduce the total water demand identified in the WSA. Should LAFCO deny the annexation into GCWD's service area, however, an alternative water supply sufficient for the life of the project must be identified and secured for the project, and would require approval from the alternative water supplier and the City, as required by MM WQ-3. Other options may include connecting with City lines on the west side of SR-99 or to California Water Service Company (Cal Water) to the north, which in the case of Cal Water would also require a service area expansion.

Therefore, with construction and operation of an infiltration basin for recharge, installation of water-efficient infrastructure, and an agreement with KDWD for additional water supplies, groundwater depletion would be avoided, and impacts on groundwater recharge and supplies would be less than significant after MM WQ-2 is incorporated.

Mitigation Measures

MM WQ-2. Prior to the issuance of building permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that the project has been designed in compliance with the following:

(a) **Water-Efficient Fixtures (Outdoor).** The project shall use water-efficient fixtures and recirculated or recycled water (where available) and water-efficient irrigation systems with rain detection/soil moisture–sensing devices. Water features such as outdoor fountains, if used, shall be designed to minimize water loss from overspill, evaporation, and percolation and shall be recirculated.

(b) **Water-Efficient Fixtures (Indoor).** The project shall use water-efficient fixtures including showerheads with 1.5 gallons per minute or better, toilets with 1.28 gallons per flush or better, urinals with 0.5 gallon per flush or better, and lavatory faucets with 0.8 gallon per minute or better. Toilets should also use dual-flush. No single-pass cooling systems shall be installed. Additionally, the project proponent shall incorporate the use of water recycling or reuse measures (gray water and process recycling systems) in suitable indoor applications wherever feasible. Feasibility that relies on cost shall be demonstrated with a complete budget to be considered a cause for infeasibility.

(c) **Drought-Tolerant Landscaping.** All landscaping shall be drought-tolerant (i.e., low-water demand) and native/adapted/non-invasive plant species in accordance with the appropriate climate zone such as described in the New Sunset Western Garden Book, and shall be subject to approval by the City of Bakersfield.

WQ-3. Water Supply Alternatives. Prior to issuance of grading/building permits, the project proponent will (1) achieve annexation of the remaining portion of the site to the Greenfield County Water District; and (2) surrender Overlying Groundwater Rights as a part of the annexation process. If annexation cannot be achieved, the project proponent shall demonstrate an alternative supply of water sufficient to serve the life of project, with the alternative means to be approved by the City of Bakersfield and the water supplier.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-3. The proposed project would not 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 that would result in substantial erosion or siltation onsite or offsite.

Erosion is a group of natural processes, including weathering, dissolution, abrasion, corrosion, and transportation, by which material is worn away from the Earth's surface. Siltation is sediment suspended in stagnant water or carried by moving water, which often accumulates on the bottom of rivers, bays, and other water bodies. Alteration of drainage patterns can increase the rate of erosion by increasing the volume or velocity of runoff.

Construction

Construction activities have the potential to alter existing drainage and result in substantial erosion on or off site. However, BMPs, such as erosion control measures, would be put in place during construction of storm drains in areas of land disturbance to prevent erosion and sediment transport from excavated soils and fill materials. See Impact WQ-1 for a discussion of potential construction-related erosion impacts and methods to reduce these impacts. Therefore, impacts related to the alteration of existing drainage patterns during construction, which would result in erosion, would be less than significant.

Operation

The existing drainage patterns would be altered through the construction of new urban development and conversion of the site from mostly pervious to mostly impervious, but the project would not alter the course of a stream or river. Increased stormwater velocity as a result of increased impervious surface area has the potential to cause erosion or siltation downstream. However, all development within the City is required by ordinance to comply with an approved drainage plan that avoids onsite and offsite flooding, erosion, and siltation issues.

The following low-impact development measures would be implemented to reduce stormwater volume and velocity and thus reduce erosion potential.

- Vegetated swales
- Infiltration basin

Therefore, with implementation of prescribed low-impact development design measures, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-4. The proposed project would not 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 that would result in flooding onsite or offsite.

Construction

Use of vehicles and equipment during construction would not impede or redirect drainage flows to create flooding conditions. Moreover, BMPs would be required during construction to ensure the drainage system stays operational and is not altered significantly from the existing condition, which would ensure water volumes and velocities from construction-related water use and from a storm event would be accommodated. Consequently, impacts related to the alteration of existing drainage patterns during construction, which would result in flooding, would be less than significant.

Operation

The existing drainage pattern on the site would be substantially altered through the construction of new urban development. The proposed project would increase the amount of impermeable surfaces on the project site and thereby increase the amount of stormwater runoff, but the project would not alter the course of a stream or river. An increased rate or amount of stormwater runoff from the increase in impervious surface area at the project site would be managed by the inclusion of the following stormwater management features.

- Onsite infiltration basin to manage stormwater runoff, prevent flooding, and improve water quality.
- Vegetated swales, grass filter strips, and/or bio-retention basins to reduce stormwater volume and velocity.

Therefore, potential for flooding on site or off site would be low, and impacts related to flooding would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-5. The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Construction

Implementation of the SWPPP would include several BMPs (examples of which are discussed under Impact WQ-1), which would slow onsite runoff and ensure that the available capacity of the existing stormwater facilities would be sufficient for the small increase in BMP-treated runoff water. Therefore, construction of the proposed project would not create or contribute to runoff water that would exceed the available capacity of existing stormwater drainage systems. Impacts related to construction would be less than significant.

Operation

The project site is covered completely by permeable soils. The proposed project would substantially increase the amount of impermeable surfaces on the project site by constructing commercial structures and parking lots and could contribute to increased sources of polluted runoff during wet weather conditions from urban pollutants, including trash, debris, rubber, greases, oils, and other vehicular fluids that leak on surface parking areas.

As discussed above, low-impact development treatment measures, such as vegetated swales and an onsite infiltration basin, would be incorporated into the design of the site to treat stormwater and reduce stormwater velocity before discharge to storm detention facilities for infiltration. Therefore, operation of the proposed project would not exceed the capacity of storm drainage facilities, and impacts related to polluted runoff would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-6. The proposed project would not otherwise substantially degrade water quality.

See Impact WQ-1 for a discussion of construction impacts on water quality and violations of water quality objectives and standards. Other construction water quality impacts could include those that result from wetland dredge and fill. However, no wetland dredge or fill would be required to construct the proposed project. Therefore, similar to Impact WQ-1, this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact WQ-7. The proposed project would not 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.

Dam failures are rated as a low-probability, high-loss event. The project site is approximately 39 miles southwest of Lake Isabella and within the dam failure inundation zone. According to the U.S. Army Corps of Engineers, the Bakersfield area would be inundated with 1 foot of water 6 to 8 hours following a catastrophic dam breach, and maximum depths could reach 5 to 10 feet at the project site. However, an emergency evacuation plan is in place for the Isabella Dam and would be implemented in the event that the dam fails.

While a failure of Isabella Dam could expose people or structures to a risk of loss, injury, or death at the site, these risks would not be a result of the project,

and the lead time of 6 to 8 hours would be sufficient to evacuate the site prior to inundation. Furthermore, implementation of evacuation plans contained in the MBGP Update Environmental Impact Report (City of Bakersfield 2002) would reduce this impact to a less-than-significant level.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.8.4.4 Cumulative Impacts

Water Quality

Development of the proposed project and other development within Bakersfield would potentially degrade stormwater quality by contributing pollutants during construction and operation. Stormwater quality varies according to surrounding land uses, impervious surface area, and topography, as well as the intensity and frequency of rainfall or irrigation. Runoff can contain grease, oil, and metals accumulated in streets and driveways, as well as sediment and other particulates, animal waste, pesticides, herbicides, fertilizer, and trash.

Cumulative development could affect water quality if the land use change, the intensity of land use changes, and/or drainage is altered such that the introduction of pollutants to surface water or groundwater is facilitated. Land use changes would potentially alter the type and concentration of pollutants in stormwater runoff, and increased intensity of land use would potentially increase pollutant concentrations. The most common sources of stormwater pollutants in urban areas are from construction sites, streets, parking lots, large landscaped areas, and household and industrial materials dumped into storm drains.

The combined effects on water quality from the proposed project and other projects in Bakersfield could result in a cumulatively significant impact. However, new projects within the City are subject to the requirements of the Municipal National Pollutant Discharge Elimination System Permit, the Construction General Permit, and the City's municipal codes as they relate to water quality; these regulatory requirements have been designed to be protective of water quality. Additionally, development projects would be subject to an environmental review process, which would identify potential site- and/or project-specific water quality impacts and mitigate for any potential significant

impacts. Therefore, there would be a less-than-significant cumulative impact on water quality as a result of proposed project implementation.

Groundwater

Development of the proposed project and other development within Bakersfield would potentially decrease recharge to groundwater aquifers and cause overdraft in aquifers from insufficient supply. However, most of the surrounding area is developed and therefore cumulative projects are likely redevelopment or infill projects in urbanized areas where recharge does not occur. Cumulative development would not be expected to substantially increase the amount of impervious surfaces, so groundwater recharge potential from percolating rainfall would not be adversely affected, and indirect lowering of the local groundwater table is not likely to occur.

Cumulative projects within the Greenfield County Water District service area would result in greater demand for groundwater. Any project that would be subject to Senate Bill (SB) 610 would be required to complete a Water Supply Assessment to determine if there is sufficient water supply for the next 20 years.

Any water demand for cumulative projects not subject to SB 610 is assumed not to be cumulatively considerable and is part of the smaller water demands associated with regional water planning. Therefore, with implementation of SB 610, the proposed project's contribution to cumulative groundwater overdraft impacts would not be cumulatively considerable, and there would be a less-than-significant cumulative impact.

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Section 4.9
Land Use and Planning

4.9.1 Introduction

This section addresses the proposed project's impacts on existing and surrounding uses, as well as the proposed project's consistency with applicable land use policies and development regulations that control allowable land uses, development intensity, and development standards. New development can result in physical impacts on the environment and affect the character of an area. The land use and planning analysis discusses the proposed project's potential to result in adverse physical environmental impacts that would occur if the proposed project is deemed incompatible with surrounding development or land use patterns, or if the proposed project is inconsistent with plans and policies that have jurisdiction over the project site.

The proposed project's potential to physically divide an established community was previously found to be less than significant in the Initial Study/Notice of Preparation (IS/NOP) (Appendix A), and is not further addressed in this section.

4.9.2 Environmental Setting

4.9.2.1 Project Site Conditions

The project site has historically been cultivated for a variety of seasonal crops. Based on historic aerial photographs, the project site has been associated with agricultural operations from as early as 1946 until 2006, when it became vacant (BSK Associates 2014). As of the publication of the NOP for the Draft Environmental Impact Report (DEIR), which establishes the baseline for impact analysis pursuant to the California Environmental Quality Act (CEQA), the project site remains vacant and unused for any other purpose. There are no structures on the project site except for an abandoned irrigation well at the northern boundary.

4.9.2.2 Surrounding Land Uses

Development extending south from the City of Bakersfield (City) has reached the project vicinity. The project site is adjacent to vacant land to the north and south and residential development to the west and east. Table 3-1 in Chapter 3, *Project Description and Environmental Setting*, summarizes characteristics of the currently developed and vacant land adjacent to the project site at the time the project's NOP was circulated to the agencies and the general public. Existing land uses beyond the vacant property to the north include a CarMax facility, a Walmart Super Center, and a Lowe's Home Improvement store. A Vallarta Supermarket and Greenlawn Mortuary and Cemetery are located to the northeast and northwest of the project site, respectively. Properties to the east of the project site and South H Street (and adjacent to the Kern Island Canal) contain existing residential developments. Land to the south is currently vacant. State Route (SR) 99 borders the entire project site's western perimeter, with single-family residential and general commercial to its west. Local features are shown in Figure 3-3 in Chapter 3, *Project Description and Environmental Setting*.

4.9.3 Applicable Regulations

The surrounding project vicinity is within the incorporated City limits and land use decisions fall within the jurisdiction of the Metropolitan Bakersfield General Plan (MBGP) and the City of Bakersfield Zoning Ordinance. The existing planning and zoning programs that are applicable to the project site are discussed below.

4.9.3.1 Metropolitan Bakersfield General Plan

Development and land use decisions within the City are guided by the MBGP, which covers approximately 408 square miles. The MBGP is a jointly adopted plan by both the City and Kern County. The MBGP planning area is bound on the south by Bear Mountain Boulevard, on the east by Edison and Tower Line Roads, and on the west generally by Enos Lane and Interstate 5. The northern boundaries of the MBGP area trend east-west approximately 0.25 mile north of 7th Standard Road, and continue east through the central portion of the Kern River Oil Field until they terminate near the Sequoia National Forest along SR 178.

Existing and Proposed Land Use Designations

The project site is in an area that is designated for a variety of land uses, including low-density residential (LR), low-medium density residential (LMR), high-medium density residential (HMR), and general commercial (GC). The MBGP land use designations that currently apply to the site are LR, LMR, HMR,

and GC (Figure 3-4 in Chapter 3, *Project Description and Environmental Setting*), which are defined as follows:

- **(LR) Low-Density Residential:** Areas developed with less than or equal to 7.26 dwelling units per net acre consisting of single-family detached housing, typical of tract developments.
- **(LMR) Low-Medium-Density Residential:** In the City, areas with greater than 4.0 and less than or equal to 10.0 dwelling units per net acre composed largely of attached, single-family townhomes, duplexes, and zero lot line developments. May apply to small multiple-family structures, such as triplexes, and mobile home parks that require a full array of urban services.
- **(HMR) High-Medium-Density Residential:** In the City, areas with greater than 7.26 and less than or equal to 17.42 dwelling units/net acre.
- **(GC) General Commercial:** Maximum floor area ratio[1] (FAR) of 1.0, and four stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents).

MBGP land use designations surrounding the project site include GC to the north; LR to the east and the south; and GC, LMR, and LR to the west of the project site and the adjacent SR 99.

The proposed project requests approval of a general plan amendment (GPA) to designate the entire project site as GC (a portion of the project site is already designated GC). The proposed GPA would change those portions of the site designated LR, LMR, and HMR to:

- **(GC) General Commercial:** A maximum FAR of 1.0 and 4 stories tall (for retail and service facilities that provide a broad range of goods and services, which serve the day-to-day needs of nearby residents) (City of Bakersfield and Kern County 2002).

Relevant General Plan Goals and Policies

The MBGP also contains goals, policies, and implementation measures for land uses in the planning area. Goals represent the direction that the City and Kern County believe that development in the planning area should take. Policies set a specific direction and guide actions based on the goals. The proposed project's consistency with these goals and policies is summarized under Impact LUP-1.

The applicable MBGP land use element goals and policies include the following:

- Goal 1. Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.

[1] FAR is defined for commercial land use in the MBGP (City of Bakersfield and Kern County 2002) as gross building area divided by net parcel area.

- Goal 2. Accommodate new development which provides a full mix of uses to support its population.
- Goal 3. Accommodate new development which is compatible with and complements existing land uses.
- Goal 4. Accommodate new development which channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- Goal 6. Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.
- Goal 7. Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.
- Policy 15. Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.
- Policy 16. Allow for the development of a variety of commercial uses, including those which serve residents (groceries, clothing, etc.), highway users, and tourist-visitors.
- Policy 18. Require all new commercial designations be assigned to sites where the aggregate of all contiguous parcels designated for commercial use is no less than five (5) acres, except for approved specific plans, parcels to be developed for highway-oriented service uses at freeway on- and off-ramps, or where physical conditions are such that commercial is the only logical use of the property.
- Policy 20. The depth of new commercial development shall be at least half the length of the street frontage. Exceptions may be made where existing development or physical constraints provide a more logical shape.
- Policy 21. Encourage a separation of at least one-half mile between new commercial designations.
- Policy 22. Locate major (regional) commercial uses in proximity to existing regional centers (such as Valley Plaza and East Hills Mall) and in proximity to future regional serving commercial centers in the downtown, southwest, northwest, and northeast, as designated on the Land Use Policy Map.
- Policy 24. Encourage the clustering of commercial development in compact areas, rather than extended along streets and highways.
- Policy 28. Require that commercial development provide design features such as screen walls, landscaping and height, setback, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.

- Policy 29. Require that automobile and truck access to commercial properties sited adjacent to designated residential parcels be located at the maximum practical distance from the residential parcel.
- Policy 30. Street frontages along all new commercial development shall be landscaped.
- Policy 30A. Require new large retail commercial development projects to evaluate urban decay impacts on existing commercial uses as set forth in the implementation measures.
- Policy 39. Enhance existing and establish new centers as the principal focus of development and activity in the planning area, around which other land uses are grouped. Centers should be linked by adequate transportation facilities and may be linked to the Kern River, canals, or other resource amenities. Centers may be differentiated by functional activity, density/intensity, and physical character.
- Policy 48. Enhance pedestrian activity in principal activity centers of the planning area.
- Policy 63. Encourage the use of creative and distinctive signage which establishes a distinctive image of the planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations.
- Policy 67. Develop a distinctive identity for the Bakersfield region which differentiates it as a unique place in the Southern San Joaquin Valley.
- Policy 69. Allow variation in the use of street trees, shrubs, lighting, and other details to give streets better visual continuity and increased shade canopy.
- Policy 70. Provide the installation of street trees which enhance pedestrian activity and convey a distinctive and high quality visual image.
- Policy 71. Encourage landscaping the banks of flood control channels, canals, roadways and other public improvements with trees to provide a strong visual element in the planning area.
- Policy 72. Promote the establishment of attractive entrances into communities, major districts, and transportation terminals, centers, and corridors within the planning area.
- Policy 78. Accommodate new projects which are infill or expansion of existing urban development.
- Policy 79. Provide for an orderly outward expansion of new "urban" development (any commercial, industrial, and residential development having a density greater than one unit per acre) so that it maintains the continuity of existing development, allows for incremental expansion of infrastructure and public services, minimizes impacts on natural environmental resources, and provides a high quality environment for living and business.

- Policy 81. Allow for flexibility in the specific siting of multi-family residential and commercial uses from the locations generally depicted on the Land Use Map in areas that are undeveloped, used for resource production, or are developed at very low densities through Planned Unit Development, Planned Commercial Developments and Specific Plans, provided that:
  - the overall density and distribution of the land use is maintained;
  - multi-family and commercial uses are located in proximity to principal roadways, public transit, employment nodes, commercial services, and recreational uses and within 330 feet of the location depicted on the land uses on the Land Use Policy Map;
  - uses are sited to take advantage of pedestrian greenbelts, recreational amenities, and natural environmental resources; and
  - the availability of infrastructure to the site or adjacent service areas is not adversely impacted.
- Policy 89. Encourage new uses and buildings in pedestrian sensitive areas to incorporate design characteristics which include:
  - walls which are aesthetically treated by use of color, materials, offset planes, columns, and/or architectural details, to provide visual interest to pedestrians;
  - landscaping, including trees, flowering shrubs, and ground cover;
  - pedestrian amenities, such as benches, trash receptacles and signage oriented to pedestrians;
  - design amenities related to street level such as awnings, arcades, and paseos;
  - visual access to interior of buildings; and
  - uses other than parking and traffic circulation between the sidewalk and building.
- Policy 99. Develop a plan to ensure that all parking lots are 40 percent shaded at maturity to help alleviate "heat island effect."
- Policy 100. Encourage the use of reflective roofing material and other measures to reduce the "heat island effect."

4.9.3.2 City of Bakersfield Zoning Ordinance

The City of Bakersfield Zoning Ordinance implements the goals and policies of the MBGP. More specifically, the zoning ordinance is intended to accomplish the following:

- assist in providing a definite plan of development for the City and guide, control, and regulate the future growth of the City in accordance with the MBGP; and

- protect the established character and the social and economic stability of agricultural, residential, commercial, industrial, and other areas within the City and to assure the orderly and beneficial development of such areas.

The zoning ordinance accomplishes these objectives by establishing various zones within the incorporated territory of the City and then defining what is or is not a lawful action in a given area. The zoning ordinance defines areas in which it is allowable to erect structures, governs the height and design of such structures, and determines the uses that may occur in those structures by providing guidelines for allowable businesses, adequate provision of parking and overall project design, maintenance of structures, and open space in the built environment. The project site is zoned R-1 by the City, allowing the following uses:

- **(R-1) One-Family Dwelling:** Typically characterized by single-family subdivision. However, other allowable structures and uses such as accessory buildings (i.e., garages, greenhouses, and swimming pools), home-based daycares, and home occupations can be incorporated.

The land uses surrounding the project site are zoned for various uses. The parcel directly north of the project site is zoned C-2 and adjacent parcels to the east are zoned R-1/PUD (One-Family Dwelling/Planned Unit Development) and R-1 (One-Family Dwelling). Adjacent parcels to the south are also zoned R-1 and parcels west of the project site and SR 99 are zoned C-2 and R-1.

The proposed project requests approval of a zone change to modify the zoning on a major portion of the site from R-1 to C-2/PCD zone, as follows:

- **(C-2/PCD) Regional Commercial/Planned Commercial Development Zone:** Typically associated with larger commercial centers that may contain a number of larger scale stores as well as a mixture of smaller retail outlets, which can include any use permitted for C-0 (Professional and Administrative Office) and C-1 (Neighborhood Commercial), apparel and accessory stores, automobile dealerships, computer software stores, department stores, weekend farmers' markets, hardware stores, hotels, restaurants, and other eating-related places, sporting goods stores, theaters, and public or commercial parking.

Two remaining areas of the project site are already zoned C-2 (Figure 3-5 in Chapter 3, *Project Description and Environmental Setting*). The entire project site would be rezoned to C-2 with a PCD overlay zone. The C-2 zone permits development of concentrated large-scale retail operations providing a broad range of goods and services that serve the metropolitan market area. The intent of the PCD designation is to provide flexibility for commercial developments so that a more cohesive design can be achieved. PCD zoning allows for innovative design and diversification in the relationship of various uses, buildings, structures, lot sizes, and open spaces while ensuring compliance with the general plan and the intent of the municipal code.

4.9.3.3 Metropolitan Bakersfield Habitat Conservation Plan

The goal of the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) is to acquire, preserve, and enhance native habitats that support endangered and sensitive species, while allowing urban development to proceed as set forth in the MBGP. The MBHCP is intended to meet the requirements of both state and federal endangered species acts. In addition, the MBHCP complies with state and federal environmental regulations set forth in the National Environmental Policy Act (NEPA) and CEQA. The study area covered by the MBHCP contains both City and Kern County jurisdictions. Upon payment of required mitigation fees and receipt of City project approval, a development applicant would become a sub-permittee and would be allowed the incidental take of species in accordance with state and federal endangered species laws. The project site is within the boundaries of the MBHCP.

4.9.4 Impacts and Mitigation

4.9.4.1 Methodology

The potential land use and planning impacts associated with the proposed project were evaluated through a qualitative comparison of the anticipated project effects with existing site conditions and characteristics of surrounding land uses. The proposed project was evaluated for consistency with existing land use plans, regulations, and policies applicable to the project site and its vicinity. Significant impacts would occur if the proposed project would result in adverse physical environmental impacts when evaluated in accordance with the significance criteria described in the next section.

4.9.4.2 Criteria for Determining Significance

The criteria used to determine the significance of an impact on land use and planning are based on Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Physically divide an established community.

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

c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

Inconsistency with plans and policies alone would not necessarily constitute a significant impact, unless the inconsistency results in what would be considered an adverse physical change to the environment.

Threshold a) was evaluated during the initial study process and was determined to result in less-than-significant impact related to physical division of an established community. As such, this impact is not further evaluated below. For a detailed discussion of this impact, refer to Appendix A.

4.9.4.3 Project Impacts

Impact LUP-1. The proposed project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

The proposed project site is within the City of Bakersfield and is subject to the land use designations, goals, and policies contained within the MBGP and the Bakersfield Municipal Code, Title 17: Zoning. Under the MBGP, the site's current land use designations are LR, LMR, HMR, and GC, and the current zoning of the majority of the site is R-1, with a small portion being C-2. The proposed project must be consistent with the MBGP and the zoning regulations detailed by the zoning ordinance. The proposed project's operational impacts and construction impacts related to consistency with the City's goals, policies, and regulations are summarized and discussed separately below.

The proposed project involves a request for the approval of a GPA from the current designations to GC, as well as a Zone Change from R-1 to C-2/PCD.

Construction

The two construction phases would include grading activities, foundation construction, building construction, and finishing work. Construction is anticipated to be complete in late 2015.

Construction activities would be contained on site. However, because of the nature of some of the construction activities, there could be some temporary, localized, site-specific disruptions to land uses in the area, related primarily to construction traffic from trucks and equipment, possible partial or full street closures, access disruptions to facilities and parking, increased noise and vibration, and increased air pollution emissions.

The existing facilities directly adjacent to the project site, and other sensitive land uses such as nearby residences, would be most susceptible to temporary construction impacts. However, these impacts would not be considered significant adverse impacts because they would be short in duration, occurring intermittently and limited to daytime hours. The following sections of this document provide more detailed information on potential construction impacts on land uses in the vicinity: Section 4.2, *Air Quality*; Section 4.10, *Noise*; and Section 4.12, *Transportation and Traffic*.

Construction activities associated with the proposed project would be generally consistent with the policies and guidelines in local land use plans, and there would be a less-than-significant impact.

Operation

The proposed project is not currently consistent with the general plan designation or zoning for the site. However, the proposed project includes an application for a GPA to change onsite areas with existing land use designations of LR, LMR, and HMR to GC; the northeastern corner of the project site is already designated GC. The proposed project also includes a zone change application to modify areas with existing zoning of R-1 to C-2/PCD; one remaining area (in the northeastern corner) of the project site is already zoned C-2. A PCD overlay is also proposed. The PCD zone, when used in combination with the proposed C-2 commercial zone, defines allowable uses, and ensures that future site development is compatible with surrounding development and recognizes unique site characteristics. All properties surrounding the project site contain existing housing or are designated and zoned for residential and/or commercial use. The approval of these requested land use and zoning changes are at the discretion of the City. An analysis of the proposed project's operational consistency with applicable plans and policies is presented below.

Metropolitan Bakersfield General Plan

Because the MBGP incorporates other relevant Kern County planning programs by reference (Kern County 2004), only the proposed project's consistency with the MBGP is discussed herein. The analysis of land use impacts evaluates the proposed land use designations and development patterns in comparison with existing land use designations.

The proposed project would construct and operate a commercial development on 85 acres consisting of a 240-room hotel and a retail commercial center on 800,000 square feet of leasable commercial space. The proposed GPA and ultimate development of the properties would alter the existing planned land use on a major portion of the project site from residential land use designations (LR, LMR, and HMR) to GC. The proposed project would result in a land use designation not currently reflected in the MBGP and a net increase in the overall commercial square footage compared with the MBGP.

The proposed project would not change the overall density and distribution of the land use in the vicinity of the project site. The proposed project would expand

upon the general land use patterns in the City. The proposed project would provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City and greater Kern County, satisfy a majority of the shopping needs of the surrounding existing and planned neighborhoods, and provide a multi-level hotel. Because much of the project vicinity contains existing residential and commercial uses or is designated and zoned for residential and/or commercial development, the proposed project is compatible with existing land uses. The GC designation allows for a maximum FAR of 1.0 and buildings of four stories (for retail and service facilities that provide a broad range of goods and services that serve the day-to-day needs of nearby residents). Should the proposed GPA be approved, the proposed future development of the project site would be under 1.0 FAR and would be compatible with the MBGP, which limits building height in C-2 zones to 90 feet, approximately six stories (Ord. 3395 § 3). Therefore, approval of the proposed GPA would represent a less-than-significant impact.

In addition to providing desired land use patterns, the MBGP also sets forth goals and policies that guide development within the City. Table 4.9-1 provides an analysis of the applicable land use goals and policies as they relate to the proposed project. As discussed in the table, the proposed project would be largely consistent with the goals and policies of the MBGP. Therefore, impacts would be less than significant.

Table 4.9-1. Project Consistency with the Metropolitan Bakersfield General Plan Land Use Element

Goals and Policies	Project Consistency
Goal 1. Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.	The proposed project would increase the development footprint of the City. Additionally, the proposed project is a regional commercial center with two anchor buildings, a cinema, and restaurants, a major regional draw that is sparse in the southern San Joaquin Valley. Therefore, the proposed project would increase the City's role as the capital of the southern San Joaquin Valley. The proposed project is consistent with this MBGP goal or policy.
Goal 2. Accommodate new development which provides a full mix of uses to support its population.	Areas surrounding the project site consist of predominantly existing or planned residential land uses with some commercial land uses. The proposed project is a regional commercial center and, therefore, would be a contrasting land use to most of its surroundings. This would result in a mixture of uses in an area that would likely have been completely occupied by similar residential land uses if the project site's existing designation and zoning were maintained. Additionally, the project site is in an intensified activity center area described in the MBGP. The proposed project's design and scale are consistent with this "centers" concept, which is described in the MBGP as "the focusing of new development into distinctive centers that are separated by low land use densities." The centers concept provides for a land use pattern consisting of several concentrated mixed-use commercial and high-density residential centers surrounded by medium-density residential uses. As the MBGP points out, this concept "encourages people to live and work in the same place and, thus, serves to minimize sprawl and reduce traffic, travel time, infrastructure costs, and air pollution." The proposed project is consistent with this MBGP goal or policy.
Goal 3. Accommodate new development which is compatible with and complements existing land uses.	The proposed project is a regional commercial center. Its objective is to provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City and greater Kern County and to assemble a variety of retailers that will satisfy a majority of the shopping needs of the surrounding existing and planned uses. Because much of the project

Goals and Policies	Project Consistency
	vicinity contains existing or planned residential and commercial development, the proposed project is compatible with existing land uses. The proposed project is consistent with this MBGP goal or policy.
Goal 4. Accommodate new development which channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.	Phased and orderly urban development has extended south from the City's core to reach the project site. This is evidenced by the existing housing east of the project site and existing and proposed development to the north. All open areas adjacent to and surrounding the project site have been designated and zoned for urban development. Development at the project site would occur in two phases and would be in line with this orderly buildout of the City. Infrastructure and public improvements have occurred in the vicinity of the project site to accommodate development. In addition, development of the proposed project would include additional infrastructure improvements mandated by the City. The proposed project is consistent with this MBGP goal or policy.
Goal 6. Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.	The proposed project site is an in-fill project located in an urbanized area and contains a limited amount of natural environmental features. As demonstrated in other sections of this DEIR, all impacts on the natural environment would be mitigated to the extent feasible. Cumulative impacts on air quality, noise, and traffic would be significant and unavoidable. This DEIR has accounted for environmental hazards such as wildland fire, flood, and accidental hazardous material spillage. Additionally, the proposed project must comply with all applicable federal, state, and local safety measures and the Hazardous Materials Area Plan 2012, which provides local emergency response coordination in the event of a hazardous materials incident. The proposed project is consistent with this MBGP goal or policy.
Goal 7. Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.	The proposed project would be zoned C-2/PCD, which allows flexibility in design standards but requires that development standards and cohesive design drive the commercial concept. This concept would be allowed to maintain a level of distinction, but is required to be compatible with surrounding uses. The proposed project is consistent with this MBGP goal or policy.
Policy 15. Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.	The proposed project is a major regional center unlike any in the Metropolitan Bakersfield area. The proposed project is consistent with this MBGP goal or policy.
Policy 16. Allow for the development of a variety of commercial uses, including those which serve residents (groceries, clothing, etc.), highway users, and tourist-visitors.	The proposed project would develop a variety of leasable commercial space highlighted by two anchor stores, 18 commercial buildings, restaurants, and a cinema. A hotel that would be within the C-2 height restrictions proposed. This commercial center would provide shopping, entertainment, and lodging opportunities that are accessible from SR 99 for residents, highway users, and tourist-visitors. The proposed project is consistent with this MBGP goal or policy.
Policy 18. Require all new commercial designations be assigned to sites where the aggregate of all contiguous parcels designated for commercial use is no less than five (5) acres, except for approved specific plans, parcels to be developed for highway-oriented service uses at freeway on- and off-ramps, or where physical	The project site is 85 acres, which is much larger than the minimum 5 acres for new commercial designations required by this policy. The proposed project is consistent with this MBGP goal or policy.

Goals and Policies	Project Consistency
conditions are such that commercial is the only logical use of the property.	
Policy 20. The depth of new commercial development shall be at least half the length of the street frontage. Exceptions may be made where existing development or physical constraints provide a more logical shape.	The project site encompasses an entire block bound by Berkshire Road, South H Street, Hosking Avenue, and SR 99 to the north, east, south, and west, respectively. The proposed project is consistent with this MBGP goal or policy.
Policy 21. Encourage a separation of at least one-half mile between new commercial designations.	The project site is south of, and adjacent to, vacant land currently zoned C-2 and therefore would not be at least 0.5 mile from another commercial designation. However, this MBGP policy encourages, but does not require, that commercial designations be at least 0.5 mile distant. Additionally, the proposed project is consistent with the centers concept outlined in the MBGP. The concentrated commercial area that would result from the proposed project and development of the zoned C-2 area to the north, as well as nearby existing commercial uses along Panama Lane farther north, provides for the high-density mixed-use commercial nucleus surrounded by medium-density residential envisioned in the centers concept. The proposed project is consistent with this MBGP goal or policy.
Policy 22. Locate major (regional) commercial uses in proximity to existing regional centers (such as Valley Plaza and East Hills Mall) and in proximity to future regional serving commercial centers in the downtown, southwest, northwest, and northeast, as designated on the Land Use Policy Map.	The proposed project site is in an intensified activity center area as shown in Figure II-2 and described on pages II-2 and II-3 of the MBGP. The proposed project's design and scale are consistent with this centers concept, as it provides for the high-density mixed-use commercial nucleus surrounded by medium-density residential envisioned in the centers concept. The proposed project is consistent with this MBGP goal or policy.
Policy 24. Encourage the clustering of commercial development in compact areas, rather than extended along streets and highways.	The proposed project is a regional commercial development project that clusters various commercial opportunities in one center. The project site encompasses an entire block bound by Berkshire Road, South H Street, Hosking Avenue, and SR 99 to the north, east, south, and west, respectively. The proposed project is consistent with this MBGP goal or policy.
Policy 28. Require that commercial development provide design features such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.	The project design includes design features in areas adjacent to existing and potential future residential land use (namely to the east and south) to reduce noise, traffic, and parking impacts. Planned setback and lighting restrictions would reduce impacts on residences from noise, traffic, parking, and differences in scale. Setbacks would be in conformance with City requirements and, during the installation of lighting standards, luminaries with filtering louvers and hoods would be provided to minimize light spill to adjacent properties. Nighttime evaluation would be conducted to ensure that spillover light and glare are avoided, and documentation of the final testing results would be provided to the City for acceptance before granting the developer a final certificate of occupancy. Landscaping using street trees and shrubs would be employed around the periphery of the project site to reduce noise, traffic, and parking impacts on residences. Impacts resulting from differences in scale would be avoided through the above design features. Additionally, the proposed project is consistent with one- and two-story commercial development occurring in the area.
Policy 29. Require that automobile and truck access to commercial properties sited adjacent to designated residential parcels be located at the maximum practical distance from the residential parcel.	The proposed project would include up to three access points: two along South H Street to the east and one along Berkshire Road to the north. Because of proposed improvements along Hosking Avenue associated with the SR99/Hosking Avenue Interchange Project, it is impractical to allow access into the commercial center from this road. Additionally, direct access from SR 99 (or any freeway) is never allowed for safety reasons; therefore, only Berkshire Road and South H Street can be used for commercial center access. As a result, access

Goals and Policies	Project Consistency
	to commercial properties adjacent to designated residential parcels are located at the maximum practical distance from the residential parcel. The proposed project is consistent with this MBGP goal or policy.
Policy 30. Street frontages along all new commercial development shall be landscaped.	The project design includes landscaped street frontages in accordance with the City's municipal code. The proposed project is consistent with this MBGP goal or policy.
Policy 30A. Require new large retail commercial development projects to evaluate urban decay impacts on existing commercial uses as set forth in the implementation measures.	This DEIR includes an urban decay analysis (Section 4.1, *Aesthetics and Urban Decay*). The urban decay analysis for the proposed project has determined that, although there is a potential for vacancies of one or more of the retail stores, the vast majority of at-risk space (80,000 square feet) is in prime locations and would likely to be reoccupied in short time (Alfred Gobar Associates 2014). Therefore, the proposed project would provide valuable commercial opportunities to capture economic demands generated by the regional marketplace without causing urban decay (AUD-1). The proposed project is consistent with this MBGP goal or policy.
Policy 39. Enhance existing and establish new centers as the principal focus of development and activity in the planning area, around which other land uses are grouped. Centers should be linked by adequate transportation facilities and may be linked to the Kern River, canals, or other resource amenities. Centers may be differentiated by functional activity, density/intensity, and physical character.	The proposed project site is in an intensified activity center area as described in the MBGP. The project's design and scale are consistent with this centers concept, as the proposed project, coupled with other existing commercial land uses, provides for the high-density mixed-use commercial nucleus surrounded by medium-density residential envisioned in the centers concept. The proposed project is consistent with this MBGP goal or policy.
Policy 48. Enhance pedestrian activity in principal activity centers of the planning area.	The proposed project site is in an intensified activity center area described in the MBGP. The proposed project's design emphasizes pedestrian movement and appealing congregating areas and includes a pedestrian shopping promenade and an entertainment plaza (lifestyle center) found roughly in the center of the project site. Generous sidewalks and landscaping, pedestrian arcades, and trellises connect the larger tenants, restaurants, a hotel, and a parking structure on the perimeter of the project site with this lifestyle center. The proposed project is consistent with this MBGP goal or policy.
Policy 63. Encourage the use of creative and distinctive signage which establishes a distinctive image of the planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations.	The MBGP encourages, but does not require, the use of creative and distinctive signage. Although there are currently no renderings for the proposed project's signage, given its design and scale and the project proponent's commitment to aesthetics and pedestrian movement, it is likely that the signage would match this commitment. The proposed project is consistent with this MBGP goal or policy.
Policy 67. Develop a distinctive identity for the Bakersfield region which differentiates it as a unique place in the Southern San Joaquin Valley.	The proposed project is a major regional center unlike any in Metropolitan Bakersfield or the southern San Joaquin Valley. The proposed project is consistent with this MBGP goal or policy.
Policy 69. Allow variation in the use of street trees, shrubs, lighting, and other details to give streets better visual continuity and increased shade canopy.	The proposed project's landscaping would employ street trees, shrubs, lighting, and other details to give streets better visual continuity and increased shade canopy. The proposed project is consistent with this MBGP goal or policy.
Policy 70. Provide the installation of street trees which enhance pedestrian activity and convey a distinctive and high quality visual image.	The proposed project's design emphasizes pedestrian movement and appealing congregating areas and includes a pedestrian shopping promenade and a lifestyle center found roughly in the center of the project site. The proposed project's landscaping would include street trees along the periphery and internal sidewalks and surface parking lots to enhance the emphasized pedestrian movement. The proposed project is consistent with this MBGP goal or policy.

Goals and Policies	Project Consistency
Policy 71. Encourage landscaping the banks of flood control channels, canals, roadways and other public improvements with trees to provide a strong visual element in the planning area.	There are no channels and canals at the project site. The proposed project's landscaping would employ street trees, shrubs, lighting, and other details to give streets better visual continuity and increased shade canopy. The proposed project is consistent with this MBGP goal or policy.
Policy 72. Promote the establishment of attractive entrances into communities, major districts, and transportation terminals, centers, and corridors within the planning area.	The entrances to the proposed commercial center would include landscaping, attractive signage, and lighting. The proposed project is consistent with this MBGP goal or policy.
Policy 78. Accommodate new projects which are infill or expansion of existing urban development.	Orderly urban development has extended from the City core to the project site, as evidenced by the existing housing east of the project site and proposed development to the north. All open areas adjacent to and surrounding the project site have been designated and zoned for development. Development at the project site is a logical expansion of this existing and adjacent urban development. The proposed project is consistent with this MBGP goal or policy.
Policy 79. Provide for an orderly outward expansion of new "urban" development (any commercial, industrial, and residential development having a density greater than one unit per acre) so that it maintains the continuity of existing development, allows for incremental expansion of infrastructure and public services, minimizes impacts on natural environmental resources, and provides a high quality environment for living and business.	Orderly urban development has extended from the City core to the project site, as evidenced by the existing housing east of the project site and proposed development to the north. All open areas adjacent to and surrounding the project site have been designated and zoned for development. Development at the project site would be consistent with this orderly buildout of the City. Infrastructure and public improvements have accommodated development in the vicinity of the project site. Development of the proposed project would include additional infrastructure improvements mandated by the City. As shown in this DEIR for the proposed project, all impacts on the natural environment would be mitigated to the maximum extent feasible. The proposed project DEIR has concluded that the remaining potential significant effects of the proposed project on the human and natural environments would be mitigated to a less-than-significant level. Therefore, the proposed project would provide a high-quality environment for living and business. The proposed project is consistent with this MBGP goal or policy.
Policy 81. Allow for flexibility in the specific siting of multi-family residential and commercial uses from the locations generally depicted on the Land Use Map in areas which are undeveloped, used for resource production, or are developed in at very low densities through Planned Unit Development, Planned Commercial Developments and Specific Plans, provided that: The overall density and distribution of the land use is maintained; Multi-family and commercial uses are located in proximity to principal roadways, public transit, employment nodes, commercial services, and recreational uses and within 330 feet of the location depicted on the land uses on the Land Use Policy Map; uses are sited to take advantage of pedestrian greenbelts, recreational amenities, and natural environmental resources; and the availability of infrastructure to the site or	The approval of the general plan designation and concurrent zone change to C-2/PCD would provide flexibility to the specific siting of the commercial use at the project site. The proposed project would not change the overall density and distribution of the land use in the vicinity of the project site. The proposed project would expand upon the general land use patterns within the City and would be close to South H Street and Hosking Avenue, two principal roadways that contain public transit, employment nodes, and commercial services. Additionally, the proposed project would provide sidewalks for pedestrian use with tie-ins to existing sidewalks. The proposed project would not impede the use of infrastructure to the site but would enhance infrastructure such as road improvements along South H Street and Hosking Avenue. The proposed project is consistent with this MBGP goal or policy.

Goals and Policies	Project Consistency
adjacent service areas is not adversely impacted.	
Policy 89. Encourage new uses and buildings in pedestrian sensitive areas to incorporate design characteristics which include: walls that are aesthetically treated by use of color, materials, offset planes, columns, and/or architectural details, to provide visual interest to pedestrians; landscaping, including trees, flowering shrubs, and ground cover; pedestrian amenities, such as benches, trash receptacles and signage oriented to pedestrians; design amenities related to street level such as awnings, arcades, and paseos; visual access to interior of buildings; and uses other than parking and traffic circulation between the sidewalk and building.	The proposed project's design emphasizes pedestrian movement and appealing congregating areas and includes a pedestrian shopping promenade. Generous sidewalks and landscaping, pedestrian arcades, and trellises would connect the larger tenants, restaurants, and hotel on the perimeter of the project site with this lifestyle center. The pedestrian shopping promenade and entertainment plaza would be enhanced by water features, dining patios, covered arcades, and landscaping. The entertainment plaza would include a dining plaza, a theater, and some retail shops. The entertainment plaza would then transition into the pedestrian shopping promenade's pedestrian-oriented Main Street. The proposed project would include detailed paving design with extensive use of shade trees. Construction material would be smooth stucco on the larger buildings and the small retail shops. Column covers and extensive use of green screen would also be employed. The proposed project is consistent with this MBGP goal or policy.
Policy 99. Develop a plan to ensure that all parking lots are 40 percent shaded at maturity to help alleviate "heat island effect."	The proposed project's landscaping plan has been designed with plant materials (heights and canopy coverage) and sun angles in mind in order to ensure that all parking lots are 40% shaded at maturity. The proposed project is consistent with this MBGP goal or policy.
Policy 100. Encourage the use of reflective roofing material and other measures to reduce the "heat island effect."	The proposed project encourages, but does not mandate, reflective roofing material. The City has historically interpreted this policy as a directory policy and not a mandatory one. The proposed roofing material, while not reflective, would be of a light color in order to reduce the heat island effect. The proposed project is consistent with this MBGP goal or policy.

Source: City of Bakersfield and Kern County 2002.

City of Bakersfield Zoning Ordinance

Because the City cannot approve a project unless it is consistent with the City's zoning ordinance, the applicant is proposing to change onsite areas with existing zoning of R-1 to C-2, consistent with the GPA. One remaining area (in the northeastern corner) is already zoned C-2.

C-2 zoning is associated with larger commercial centers that may contain a number of larger-scale stores and a mix of smaller retail outlets. These centers can include any use permitted for C-0 zone and C-1 zone, apparel and accessory stores, automobile dealerships, computer software stores, department stores, weekend farmers' markets, hardware stores, hotels, restaurants and other eating-related places, sporting goods stores, theaters, and public or commercial parking.

In connection with the commercial zone, a PCD overlay zone is also proposed. PCD zoning allows for innovative design and diversification in the relationship of various uses, buildings, structures, lot sizes, and open spaces while ensuring compliance with the general plan and the intent of the municipal code. These sites would be required to comply with the development standards, setback requirements, and other restrictions to avoid potential impacts associated with urban encroachment.

Should the proposed zone change be approved, the proposed future development of the site would then be compatible with the City's zoning ordinance. Therefore, approval of the proposed zone change would represent a less-than-significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact LUP-2. The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

As discussed in Section 4.3, *Biological Resources*, the project site would be within the MBHCP and the proposed project would be consistent with the goals and policies outlined in the MBHCP. Payment of development impact fees would reduce impacts on species covered under the MBHCP, as detailed in Section 4.3, *Biological Resources*, Mitigation Measures MM BIO-1 and MM BIO-2. Therefore, there would be a less-than-significant impact.

Mitigation Measures

Implementation of Mitigation Measures MM BIO-1 and MM BIO-2 (Section 4.3, *Biological Resources*) would reduce impacts to less-than-significant levels.

Level of Significance after Mitigation

Impacts would be less than significant.

4.9.4.4 Cumulative Impacts

Cumulative land use and planning impacts would occur if the proposed project contributed cumulatively through inconsistency or incompatibility with land use plans and programs or a habitat conservation plan or a natural communities conservation plan within the general vicinity of the project. The Metropolitan Bakersfield area currently has several established plans for growth and development within the next decades. The MBGP Land Use Element establishes

the projected growth for the City as well as land use designations for the entire MBGP area.

Development projects proposed in the Metropolitan Bakersfield area consist of a number of planned or approved projects that include commercial, multi-family residential, and industrial development as well as transportation-related development. Major planned projects near the proposed project include a 120,870-square-foot neighborhood shopping center north of the project site at 1601 Panama Lane and the Interchange Project at the southwestern corner of the proposed project site.

The proposed project impacts would not cumulatively contribute to land use impacts in the Metropolitan Bakersfield area, as each project is required to be consistent with the City's established general plan goals, policies, and implementation measures. Impacts associated with the proposed project would be generally consistent with the policies and guidelines in local land use plans would be mitigated to less-than-significant levels. Likewise, proposed cumulative projects must be consistent with the Metropolitan Bakersfield planning goals and policies and must be reviewed and approved by the City and County prior to implementation. Therefore, land use and planning impacts from the proposed project would not be cumulatively considerable.

Section 4.10
Noise

4.10.1 Introduction

This section discusses the existing noise conditions in the project area and the potential noise impacts associated with construction and operation of the proposed project. This discussion is based on information and analysis prepared by Brown-Buntin Associates, Inc. in the report titled *Environmental Noise Assessment, Proposed Commercial Development, South H Street and Hosking Avenue, Bakersfield, California* (June 1, 2015), which is attached in its entirety as Appendix J. The report includes definitions of acoustical terminology and acronyms used in this section.

The proposed project's potential to expose persons to excessive noise levels from public airports was eliminated (i.e., found to have no impact) during the Initial Study/Notice of Preparation (IS/NOP) scoping process (see Appendix A for the IS/NOP). Therefore, this impact is not discussed further.

4.10.2 Environmental Setting

The environmental setting for noise describes the surrounding context of land uses and noise receptors, and provides a discussion of existing ambient traffic noise.

4.10.2.1 Surrounding Land Uses and Noise Receptors

Land use in the immediate project vicinity is vacant and residential, with vacant land to the north, existing single-family residences to the east, vacant land to the south, and State Route (SR) 99 to the west. There is a block wall between the existing residences and South H Street that serves as a sound barrier between the homes and the project site.

4.10.2.2 Existing Ambient Traffic Noise

The existing noise environment in the project vicinity is dominated by traffic noise from SR 99 and other local roadways. Measurements of existing ambient noise levels in the project vicinity were conducted at five locations in the project vicinity between May 14, 2014 and January 20, 2015. The locations of the measurement sites were the northeastern corner of the project site (Site #1); adjacent to the southeastern corner of the project site (Site #2); the southwestern corner of the project site (Site #3); on the north side of Panama Lane, east of Springbrook Drive (Site #4); and south of Hosking Avenue, east of Sophia Street. Figure 4.10-1 shows the locations of the noise measurement sites. Sites #1 and #2 were approximately 200 feet west of the centerline of H Street and were intended to provide data that were representative of ambient noise levels in the backyards of the homes on the east side of the street (because of the existing canal that parallels H Street, access to the area near those backyards was not possible). Additionally, Site #1 was in the vicinity of the proposed hotel within the project site. It should be noted that at the time of measurement, an existing, large berm of soil was present between Site #3 and SR 99, which provided acoustical shielding from traffic noise on SR 99. Therefore, noise levels reported for Site #3 are lower than what would normally be expected at that location. Table 4.10-1 shows the measured ambient noise levels at the five noise measurement sites. Traffic was the only noise source identified during the measurements.

Figure 4.10-1
Noise Measurement Site Locations
SR 99/Hosking Commerical Center Project

Table 4.10-1. Summary of Noise Measurements

Location	Date, Time	Measured Noise Levels, dBA							
		L_{eq}	L_{min}	L_{max}	$L_{1.7}$	$L_{8.3}$	L_{25}	L_{50}	L_{90}
Site #1	5/14/2014, 10:20–10:35 a.m.	60.5	48.8	74.7	69.3	63.4	59.8	56.9	51.8
	5/14/2014, 11:20–11:35 a.m.	60.2	48.7	69.7	67.0	64.5	61.1	57.6	52.4
	5/14/2014, 2:15–2:30 p.m.	61.0	49.0	80.7	68.4	62.5	59.8	57.3	53.0
Site #2	5/14/2014, 10:00–10:15 a.m.	56.8	45.8	70.4	64.2	60.5	56.9	54.1	49.1
	5/14/2014, 11:00–11:15 a.m.	57.4	45.3	69.9	65.4	61.1	57.8	55.1	49.5
	5/14/2014, 12:30–12:45 p.m.	63.0	47.1	86.8	68.7	63.0	57.5	54.9	50.9
Site #3	5/14/2014, 10:40–10:55 p.m.	58.6	48.5	68.7	64.9	62.1	59.7	57.1	50.9
	5/14/2014, 11:40–11:55 a.m.	59.0	47.5	70.5	66.4	62.6	59.6	56.6	51.1
	5/14/2014, 1:55–2:10 p.m.	58.1	50.1	63.4	62.1	60.9	59.6	57.7	53.4
Site #4	1/20/2015, 10:35-10:40 a.m.	66.8	44.9	75.0	72.8	70.8	68.4	65.4	57.6
	1/20/2015, 11:15–11:30 a.m.	66.4	49.7	71.8	70.8	69.4	67.9	65.7	59.2
	1/20/2015, 2:40–2:55 p.m.	65.5	46.2	71.4	70.7	69.2	66.8	64.9	54.0
Site #5	1/20/2015, 10:50–11:05 a.m.	63.4	47.4	75.5	73.8	68.3	61.8	56.0	50.1
	1/20/2015, 11:40–11:55 a.m.	63.0	43.3	77.7	74.4	67.0	61.4	56.9	49.7
	1/20/2015, 3:05–3:20 p.m.	64.6	45.2	76.5	74.8	71.1	61.7	55.4	50.1

dBA = A-weighted decibels, the sound pressure level in decibels as measured using the A weighting filter network, which de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear.
L_{eq} = equivalent sound level, the average of the sound energy occurring over the measurement period
L_{max} = maximum sound level
L_{min} = minimum sound level
L_{xx} = percentile-exceeded sound level, the sound level exceeded for a given percentage of a specified period (e.g., L_{25} is the sound level exceeded 25% of the time and L_{50} is the sound level exceeded 50% of the time).
Source: Appendix J

Existing traffic noise levels from roadways in the project vicinity site were also calculated using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and data provided by Ruettgers & Schuler Civil Engineers, the traffic consultants for the proposed project (Appendix K). Noise levels from traffic on SR 99 were predicted using data obtained from the California Department of Transportation (Caltrans). Additional details regarding the analysis methodology are provided in the impact analysis section, below, and in the Environmental Noise Assessment (Appendix J). Existing traffic noise levels were determined for nearby street segments. For local streets, the noise level was predicted at a typical residential setback (assumed to be 75 feet from the center of the roadway). For SR 99, the noise level was predicted at a setback of 150 feet from the center of the roadway. Table 4.10-2 shows the existing traffic noise levels at these segments, which range from approximately 56 to 74 decibels (dB) Community Equivalent Noise Level (CNEL).

Table 4.10-2. Existing Traffic Noise Levels in the Vicinity of the Project Site

Roadway Name	Segment	Traffic Noise Level, dB CNEL[1]
Berkshire Road	South H Street to Union Avenue (SR 204)	62.6
White Lane	West of Union Avenue	64.1
	Hughes Lane to H Street	68.2
	H Street to Monitor Street	65.3
	Wible Road to SR 99	69.7
Panama Lane	Gosford Road to Ashe Road	58.3
	Ashe Road to Stine Road	62.8
	Stine Road to Akers Road	63.5
	Akers Road to Wible Road	69.6
	Wible Road to SR 99	70.8
	SR 99 to South H Street	68.2
	South H Street to Union Avenue (SR 204)	59.5
	Union Avenue (SR 204) to Cottonwood Road	63.1
Hosking Avenue	Stine Road to Wible Road	62.2
	Wible Road to SR 99	58.5
	SR 99 to South H Street	66.1
	South H Street to Union Avenue (SR 204)	55.8
	Union Avenue (SR 204) to Cottonwood Road	56.6
Taft Highway (SR 119)	Ashe Road to Stine Road	64.1
	Stine Road to Akers Road	64.1

Roadway Name	Segment	Traffic Noise Level, dB CNEL[1]
	Akers Road to Wible Road	64.1
	Wible Road to South H Street	64.8
	South H Street to Chevalier Road	65.4
Panama Road	Chevalier Road to Cottonwood Road	64.5
South H Street	White Lane to Pacheco Road	62.2
	Pacheco Road to Fairview Road	65.7
	Fairview Road to Panama Lane	65.7
	Panama Lane to Hosking Avenue	59.9
	Hosking Avenue to McKee Road	60.6
	McKee Road to Taft Highway (SR 119)	62.3
Cottonwood Road	Hosking Avenue to Panama Lane	62.0
South Union Avenue (SR 204)	White Lane to Pacheco Road	68.3
	Fairview Road to Panama Lane	60.5
	Panama Lane to Hosking Avenue	64.9
	Hosking Avenue to Panama Lane	65.6
	Pacheco Road to Fairview Lane	66.3
SR 99	South of Panama Lane [2]	73.7

Notes:
[1] At a typical residential setback (assumed to be 75 feet from the center of the roadway).
[2]150 feet from the center of SR 99.
dB CNEL = decibels Community Equivalent Noise Level
SR = State Route
Source: Appendix J

4.10.3 Applicable Regulations

4.10.3.1 State Noise Standards

The State of California Governor's Office of Planning and Research has published recommended guidelines for the preparation and content of a noise element of a general plan. Each jurisdiction is required to consider these guidelines when developing the general plan noise element and determining acceptable noise levels within the community. Based on the guidelines, the City of Bakersfield (City) has developed noise standards as part of the Metropolitan Bakersfield General Plan (MBGP) and the municipal code.

The City of Bakersfield does not have regulations that define acceptable levels of vibration. Therefore, guidance provided by Caltrans' *Transportation and Construction Vibration Guidance Manual* (refer to Appendix J) were used for assessing the significance of vibration from construction activities. The manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided in Tables 4.10-3 and 4.10-4, below, and are presented in terms of peak particle velocity[1] (PPV) in inches per second (in/sec).

Table 4.10-3. Caltrans Guideline Vibration Annoyance Potential Criteria

	Maximum PPV (in/sec)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

in/sec = inches per second
PPV = peak particle velocity

Table 4.10-4. Caltrans Guideline Vibration Damage Potential Threshold Criteria

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second
PPV = peak particle velocity

[1] The maximum instantaneous positive or negative peak amplitude of the vibration velocity, measured in inches per second.

4.10.3.2 City of Bakersfield Municipal Code

Chapter 9.22 (Section 9.22.050) of the City of Bakersfield's municipal code addresses noise during construction. It specifies that construction activity performed within 1,000 feet of a residential dwelling is only permitted between the hours of 6 a.m. and 9 p.m. on weekdays, and between 8 a.m. and 9 p.m. on weekends.

4.10.3.3 Metropolitan Bakersfield General Plan

Chapter VII, Noise Element, of the MBGP (City of Bakersfield and Kern County 2002) contains noise standards that apply to the project.

For transportation noise sources (e.g., traffic), the noise element sets a standard of 65 dB CNEL at the exterior of noise-sensitive uses. Noise-sensitive uses include residences, schools, hospitals, transient lodging, and recreational areas.

For stationary (i.e., non-transportation) noise sources such as commercial land uses, the noise element applies hourly noise level performance standards at residential and other noise-sensitive uses. Table 4.10-5 summarizes the applicable hourly noise level standards.

Table 4.10-5. Hourly Noise Level Performance Standards for Non-Transportation Noise Sources

	Maximum Acceptable Noise Level (dBA)	
Min./Hr. (L_{xx})	Day (7 a.m.–10 p.m.)	Night (10 p.m.–7 a.m.)
30 (L_{50})	55	50
15 (L_{25})	60	55
5 ($L_{8.}3$)	65	60
1 ($L_{1.7}$)	70	65
0 (L_{max})	75	70

Note:
L_n means the percentage of time the noise level is exceeded during an hour. For example, L_{50} means the level exceeded 50 percent of the hour, and L_{25} is the level exceeded 25 percent of the hour.
dBA = A-weighted decibels
L_{max} = maximum sound level
Source: City of Bakersfield and Kern County 2002.

The MBGP Noise Element sets standards for project-related noise impacts and cumulative noise impacts from mobile (transportation-related) noise sources affecting existing noise-sensitive land uses. Those standards are listed below.

Standards for Project-Related Noise Impacts from Mobile Sources

A significant increase of existing ambient noise levels affecting existing noise-sensitive land uses (receptors), and requiring the adoption of practical and feasible mitigation measures, is deemed to occur where a project will cause:

- *An increase of the existing ambient noise level by 5 dB or more, where the existing ambient level is less than 60 dB CNEL;*
- *An increase of the existing ambient noise level by 3 dB or more, where the existing ambient level is 60 to 65 dB CNEL;*
- *An increase of the existing ambient noise level by 1.5 dB or more, where the existing ambient level is greater than 65 dB CNEL*

Standards for Cumulative Noise Impacts from Mobile Sources

The project's contribution to noise increases would normally be considered cumulatively considerable and significant when ambient noise levels affect noise sensitive land uses (receptors) and when the following occurs.

- *A project increases the ambient (cumulative without project) noise level by 1 dB or more;*

and

- *The cumulative with project noise level cause the following:*
  - *An increase of the existing ambient noise level by 5 dB or more, where the existing ambient level is less than 60 dB CNEL;*
  - *An increase of the existing ambient noise level by 3 dB or more, where the existing ambient level is 60 to 65 dB CNEL;*
  - *An increase on the existing ambient noise level by 1.5 dB or more, where the existing ambient level is greater than 65 dB CNEL.*

4.10.4 Impacts and Mitigation

4.10.4.1 Methodology

CEQA requires determination of the significance of noise impacts and vibration associated with proposed projects. Noise and vibration generated by the proposed project was assessed against CEQA noise-related requirements and the applicable regulations described above.

The process of assessing the significance of noise impacts associated with the proposed project first involved identifying the applicable thresholds at which significant impacts on noise-sensitive uses would occur. Next, noise levels associated with project-related activities were predicted and compared with the significance thresholds. Details regarding assumptions and methods used to predict noise levels are discussed under each impact type and in Appendix J.

4.10.4.2 Significance Criteria

Criteria for determining the significance of impacts related to noise are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

a) Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.

b) Expose persons to or generate excessive groundborne vibration or groundborne noise levels.

c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

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

f) Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

Threshold e was evaluated during the initial study process and was determined to result in no impacts related to public use airports. As such, this impact is not further evaluated below. For a detailed discussion of this impact, refer to Appendix A.

4.10.4.1 Project Impacts

Impact NOI-1. The proposed project would expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.

The impacts related to noise are discussed separately for construction and operational effects below.

Construction

Two types of short-term noise impacts could occur during construction of the proposed project. First, temporary increases in traffic noise levels could occur as a result of construction crews and equipment entering and exiting the project site, and would most likely take place during the morning and evening hours of commute. Such noise increases would be transient in nature and the effect on longer-term ambient noise levels (such as the daily CNEL) would be small. Therefore, short-term construction-related impacts associated with commuting workers and transportation of equipment to the project site would be less than significant.

The second type of short-term noise impact would be related to noise generated during project construction. Estimated noise levels generated by construction activities are discussed under Impact NOI-3, below. There are no specific noise level limits identified by the City of Bakersfield municipal code for construction activities. However, the municipal code does place strict limits on the days and times during which construction activity is permitted, and construction activity outside of these hours would be considered a significant impact. Therefore, Mitigation Measure MM NOI-1 is provided to ensure compliance with the municipal code and to reduce the potential impact to less-than-significant levels.

Operation

Traffic-Related Impacts

At Offsite Noise-Sensitive Receptors

Future traffic noise levels from roadways near the project site were calculated using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The model is based upon reference energy emission levels for automobiles, medium trucks (two axles), and heavy trucks (three or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic data for local streets were obtained from the traffic study provided by Ruettgers & Schuler

Civil Engineers (Appendix K). Traffic data for SR 99 were obtained from Caltrans. The day/evening/night distribution of traffic and the percentages of trucks on the roadways used for modeling were obtained from similar studies conducted in the area by Brown-Buntin Associates. Noise attenuation provided by existing noise barriers along the analyzed roadways were taken into consideration. For a typical 6-foot-tall wall along most roads, the reduction is about 5 dB.

Using the FHWA model, traffic noise levels both with and without the project were determined for 2017 (Phase I) and 2020 (Phase II) traffic conditions. For local streets, the noise level was predicted at a typical residential setback (assumed to be 75 feet from the center of the roadway). For SR 99, the noise level was predicted at a setback of 150 feet from the center of the roadway. Table 4.10-6 shows the 2017 traffic noise levels and Table 4.10-7 shows the 2020 traffic noise levels. The tables include the predicted changes in noise level that are attributable to the project; however, it is noted that the potential impact of these increases is assessed under the threshold for Impact NOI-3, below.

Under 2017 conditions, the project would trigger an exceedance of the City's exterior noise standard of 65 dB CNEL at one location. This location is adjacent to Taft Highway (SR 119) between Wible Road and South H Street, where the noise level would increase from 65.0 to 65.1 dB CNEL. Because the existing ambient level is between 60 and 65 dB CNEL, the increase must be 3 dB or more to trigger a significant impact. An increase of 0.1 dB CNEL would not be perceptible and is therefore considered less than significant.

Under 2020 conditions, the project would trigger an exceedance of the City's exterior noise standard of 65 dB CNEL at one location. This location is adjacent to Panama Road between Chevalier Road and Cottonwood Road, where the noise level would increase from 64.9 to 65.2 dB CNEL. Because the existing ambient level is between 60 and 65 dB CNEL, the increase must be 3 dB or more to trigger a significant impact. An increase of 0.3 dB CNEL would not be perceptible and is therefore considered less than significant.

It is noted that there are a number of other roadway segments with predicted noise levels in excess of 65 dB CNEL under 2017 and/or 2020 conditions. However, the impacts at these locations are considered to be less than significant because the noise levels would exceed 65 dB CNEL with or without the project and are, therefore, not project-generated.

Under 2017 conditions, the project would not trigger any exceedance of the 70 dB CNEL limit. Therefore, the impact would be less than significant.

Under 2020 conditions, the project would trigger an exceedance of the 70 dB CNEL limit at one location. This location is adjacent to Panama Lane between Akers Road and Wible Road, where the noise level would increase from 69.8 to 70.1 dB CNEL. Because the existing ambient level is greater than 65 dB CNEL, the increase must be 1.5 dB or more to trigger a significant impact. An increase of 0.3 dB CNEL would not be perceptible and is therefore considered less than significant.

It is noted that there is one other roadway segment (Panama Lane between Wible Road and SR 99) with predicted noise levels in excess of 70 dB CNEL under 2020 conditions. However, the noise impacts adjacent to the roadway are considered to be less than significant because the noise levels would occur with or without the project and are, therefore, not project-generated.

The hypothetical alternatives for mitigating traffic noise at existing offsite residential locations are construction of sound walls/barriers, relocation or demolition of adversely affected residences, and sound insulation of residences. Where walls/barriers are feasible, they are usually the most practical and cost-effective way to reduce traffic noise impacts.

The majority of the homes along the potentially affected roadways described above front the roadway. It would therefore not be possible to construct contiguous noise walls, as they would eliminate access to the individual homes. Additionally, because walls would have to be constructed on private property, individual agreements for the construction would have to be negotiated with each property owner. If an agreement could not be reached with one or more property owner, the resulting gaps in the wall would compromise its effectiveness. Demolition and sound insulation are usually not considered to be feasible or desirable alternatives. Therefore, it does not appear that there are any feasible measures to further reduce offsite traffic noise impacts along the above-described roadways.

Table 4.10-6. 2017 Traffic Noise Levels in the Vicinity of the Project Site

		Traffic Noise Level, dB CNEL[1]			
Roadway Name	**Segment**	**No Project**	**With Project**	**Change**	**Significant Impact?**
Berkshire Road	South H Street to Union Avenue (SR 204)	62.7	63.6	0.9	No
White Lane	West of Union Avenue	64.2	64.4	0.2	No
	Hughes Lane to H Street	68.3	68.4	0.1	No
	H Street. to Monitor Street	65.4	65.4	0	No
	Wible Road to SR 99	69.7	69.8	0.1	No
Panama Lane	Gosford Road to Ashe Road	58.9	58.9	0	No
	Ashe Road to Stine Road	63.0	63.2	0.2	No
	Stine Road to Akers Road	63.8	64.0	0.2	No
	Akers Road to Wible Road	69.7	69.9	0.2	No
	Wible Road to SR 99	71.0	71.2	0.2	No
	SR 99 to South H Street	68.5	69.1	0.6	No
	South H Street to Union Avenue (SR 204)	59.9	60.5	0.6	No
	Union Avenue (SR 204) to Cottonwood Road	63.4	63.9	0.5	No
Hosking Avenue	Stine Road to Wible Road	62.8	64.0	1.2	No
	Wible Road to SR 99	59.0	60.3	1.3	No
	SR 99 to South H Street	66.6	68.7	2.1	No[2]
	South H Street to Union Avenue (SR 204)	56.2	57.5	1.3	No
	Union Avenue (SR 204) to Cottonwood Road	57.1	58.7	1.6	No

Roadway Name	Segment	Traffic Noise Level, dB CNEL[1]			
		No Project	With Project	Change	Significant Impact?
Taft Highway (SR 119)	Ashe Road to Stine Road	64.3	64.4	0.1	No
	Stine Road to Akers Road	64.4	64.6	0.2	No
	Akers Road to Wible Road	64.4	64.7	0.3	No
	Wible Road to South H Street	65.0	65.1	0.1	No
	South H Street to Chevalier Road	65.6	65.7	0.1	No
Panama Road	Chevalier Road to Cottonwood Road	64.7	64.9	0.2	No
South H Street	White Lane to Pacheco Road	62.3	62.5	0.2	No
	Pacheco Road to Fairview Road	65.8	66.2	0.4	No
	Fairview Road to Panama Lane	65.8	66.3	0.5	No
	Panama Lane to Hosking Avenue	60.3	61.8	1.5	No
	Hosking Avenue to McKee Road	61.2	63.1	1.9	No
	McKee Road to Taft Highway (SR 119)	62.7	63.9	1.2	No
Cottonwood Road	Hosking Avenue to Panama Lane	62.4	62.7	0.3	No
South Union Avenue (SR 204)	White Lane to Pacheco Road	68.5	68.7	0.2	No
	Fairview Road to Panama Lane	60.8	61.3	0.5	No
	Panama Lane to Hosking Avenue	65.3	65.7	0.4	No
	Hosking Avenue to Panama Lane	66.2	66.4	0.2	No
	Pacheco Road to Fairview Lane	66.5	66.8	0.3	No

Notes:
[1] At a typical residential setback (assumed to be 75 feet from the center of the roadway).
[2] Noise increase is not considered significant because there are no noise-sensitive receptors; see discussion under Impact NOI-3.
dB CNEL = decibels Community Equivalent Noise Level
SR = State Route
Source: Appendix J

Table 4.10-7. 2020 Traffic Noise Levels in the Vicinity of the Project Site

		Traffic Noise Level, dB CNEL[1]			
Roadway Name	**Segment**	**No Project**	**With Project**	**Change**	**Significant Impact?**
Berkshire Road	South H Street to Union Avenue (SR 204)	62.8	63.8	1.0	No
White Lane	West of Union Avenue	64.3	64.5	0.2	No
	Hughes Lane to H Street	68.4	68.5	0.1	No
	H Street. to Monitor Street	65.4	65.5	0.1	No
	Wible Road to SR 99	69.8	69.9	0.1	No
Panama Lane	Gosford Road to Ashe Road	59.5	59.6	0.1	No
	Ashe Road to Stine Road	63.2	63.4	0.2	No
	Stine Road to Akers Road	64.1	64.3	0.2	No
	Akers Road to Wible Road	69.8	70.1	0.3	No
	Wible Road to SR 99	71.1	71.3	0.2	No
	SR 99 to South H Street	68.8	69.4	0.6	No
	South H Street to Union Avenue (SR 204)	60.3	60.9	0.6	No
	Union Avenue (SR 204) to Cottonwood Road	63.7	64.2	0.5	No
Hosking Avenue	Stine Road to Wible Road	63.3	64.5	1.2	No
	Wible Road to SR 99	59.5	60.7	1.2	No
	SR 99 to South H Street	67.0	69.0	2.0	No[2]
	South H Street to Union Avenue (SR 204)	56.6	57.9	1.3	No
	Union Avenue (SR 204) to Cottonwood Road	57.7	59.1	1.4	No

Roadway Name	Segment	Traffic Noise Level, dB CNEL[1]			
		No Project	With Project	Change	Significant Impact?
Taft Highway (SR 119)	Ashe Road to Stine Road	64.6	64.6	0.0	No
	Stine Road to Akers Road	64.7	64.9	0.2	No
	Akers Road to Wible Road	64.7	65.0	0.3	No
	Wible Road to South H Street	65.2	65.3	0.1	No
	South H Street to Chevalier Road	65.7	65.9	0.2	No
Panama Road	Chevalier Road to Cottonwood Road	64.9	65.2	0.3	No
South H Street	White Lane to Pacheco Road	62.4	62.6	0.2	No
	Pacheco Road to Fairview Road	65.9	66.3	0.4	No
	Fairview Road to Panama Lane	66.0	66.5	0.5	No
	Panama Lane to Hosking Avenue	60.8	62.2	1.4	No
	Hosking Avenue to McKee Road	61.8	63.6	1.8	No
	McKee Road to Taft Highway (SR 119)	63.2	64.3	1.1	No
Cottonwood Road	Hosking Avenue to Panama Lane	62.9	63.1	0.2	No
South Union Avenue (SR 204)	White Lane to Pacheco Road	68.8	68.9	0.1	No
	Fairview Road to Panama Lane	61.1	61.6	0.5	No
	Panama Lane to Hosking Avenue	65.7	66.1	0.4	No
	Hosking Avenue to Panama Lane	66.7	66.9	0.2	No
	Pacheco Road to Fairview Lane	66.7	67.0	0.3	No

Notes:
[1] At a typical residential setback (assumed to be 75 feet from the center of the roadway).
[2] Noise increase is not considered significant because there are no noise-sensitive receptors; see discussion under Impact NOI-3.
dB CNEL = decibels Community Noise Equivalent Level
SR = State Route
Source: Appendix J

At Onsite Noise-Sensitive Receptors

The proposed commercial development includes two proposed hotels to be located in the northeastern corner of the project site. Transient lodging (hotels and motels) are considered to be a noise-sensitive land use as described by the City's Noise Element and, as such, would be subject to the exterior noise level standards of 65 dB CNEL. Worst-case traffic noise levels at the hotels would be expected to occur in the future as a result of long-term growth in traffic. Therefore, to assess potential impacts under the worst-case foreseeable conditions, the analyses are based on 2035 traffic volumes.

The exterior noise level standard of 65 dB CNEL would be applied to common outdoor activity areas of the hotel such as the pool area or common courtyard. The specific design details for the proposed hotels are currently unknown. The approximate distance from the exterior of the proposed hotel to South H Street is 150 feet from the centerline of the roadway. Using the above-described FHWA traffic model, the future (2035) with project traffic noise exposure at the exterior of the closest façade facing South H Street would be approximately 64.4 dB CNEL. At this setback from the roadway, the exterior noise impact would be less than significant.

Onsite Noise Source Impacts

Sources of noise from the shopping center could potentially include truck deliveries, loading docks, parking lot vehicle movements, heating, venting, and air conditioning (HVAC) equipment, and trash compactors.

Truck movements that do not occur on a public roadway are considered to be a stationary noise source that would be subject to the City's stationary noise standards. Based on the conceptual layout plans for the project, which include the placement of stores along the eastern side of the site, the distance from probable truck delivery routes to the nearest residences is approximately 350 feet. File data for slowly moving heavy trucks indicate that the maximum noise level (L_{max}) is approximately 73 A-weighted decibels (dBA) at 50 feet. Accounting for distance to residences and the attenuation provided by the existing block wall bordering the residences, the L_{max} in yards of the closest residences is estimated to be about 55 dBA. This level is below the 75 dBA (daytime) and 70 dBA (nighttime) L_{max} criteria in the noise element. Therefore, noise impacts from onsite truck movements would be less than significant.

Any loading docks would be located no closer than 350 feet from the residences. File data for loading docks where refrigerated trucks unload indicate that at 75 feet, the L_{50} noise level during a busy hour of activity is 57 dB. Accounting for distance and the existing wall, the estimated L_{50} at the nearest residential yards is about 39 dB. This is below the 55 dBA (daytime) and 50 dBA (nighttime) level exceeded 50 percent of the hour (L_{50}) criteria in the noise element. Therefore, noise impacts from loading dock activities would be less than significant.

Noise from traffic in parking lots is typically limited by low speeds and is not usually considered to be significant. Human activity in parking lots that can produce noise includes voices, stereo systems, and the opening and closing of car doors and trunk lids. Such activities are sporadic and can occur at any time. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 to 65 dBA at a distance of 50 feet. For this project, the closest proposed parking lots would be approximately 300 feet from the closest existing homes. It is noted that these would be relatively small parking areas and the vast majority of the parking stalls for the project would be toward the center of the project site, where they would be shielded from the surrounding land uses by the intervening commercial and hotel buildings. As such, overall parking lot noise levels at surrounding properties would be very low and would not be expected to exceed the standards of the City's noise element. Therefore, noise impacts from parking lots would be less than significant.

Based upon noise studies conducted by Brown-Buntin Associates for other projects, the maximum noise level produced by a typical un-enclosed trash compactor (Hydra-Fab Model 1200) is approximately 74 dBA at a distance of 10 feet from the equipment, or approximately 45 dBA at a distance of 300 feet (approximate distance from the closest proposed store to nearby homes). Because trash compactors operate intermittently, they would not produce noise levels in excess of the City's daytime or nighttime maximum noise level standards, and the impact would be less than significant.

It can be assumed that the project would include roof-mounted HVAC units on commercial buildings. Based upon data from large stores similar to those proposed for the project, it is estimated that noise levels from roof-mounted HVAC units at the closest homes to the project site would be in the range of 40 to 45 dBA. This includes the assumption that the buildings would include rooftop parapets that would provide acoustic shielding of roof-mounted HVAC units. These levels generally would not be audible above existing ambient noise levels at the nearby homes and would comply with the City's daytime and nighttime noise level standards. Therefore, noise impacts from HVAC equipment would be less than significant.

Mitigation Measures

Mitigation measure MM NOI-1, below, is provided to ensure that construction noise complies with the City's municipal code.

MM NOI-1. The project shall continuously comply with the following best management practices during all construction activities and operations of the project:

(a) **Limit Construction Hours.** No construction activity (including the transportation or delivery of any materials, tools, equipment, or personnel to or from the project site, or the loading or unloading of such materials, tools, equipment, or personnel) within 1,000 feet of a residence shall take place outside of the City's permitted hours of 6 a.m. to 9 p.m. on weekdays and

8 a.m. to 9 p.m. on weekends. In addition, all construction equipment shall be equipped with adequate mufflers and be properly maintained.

(b) **Operational Noise.** The project shall be designed to limit the amount of offsite noise generated from future commercial uses to ensure that impacts on any neighboring single-family zoned properties are reduced to below the noise thresholds established by the Metropolitan Bakersfield General Plan.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact NOI-2. The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

The impacts related to noise are discussed separately for construction and operational effects below.

Construction

The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. None of these sources are anticipated from the project site. Vibration from construction activities could be detected at the closest sensitive land uses, which are approximately 300 feet to the west of the project site. Typical vibration levels at a distance of 300 feet caused by construction equipment that is anticipated at the project site are summarized in Table 4.10-8.

Table 4.10-8. Typical Vibration Levels during Construction

Equipment	PPV (in/sec) at 300 feet
Bulldozer (Large)	0.006
Bulldozer (Small)	0.00019
Loaded Truck	0.005
Vibratory Roller	0.013

in/sec = inches per second
PPV = peak particle velocity

Table 4.10-8 indicates that the equipment with the highest potential vibration levels would be a vibratory roller. While in use, the roller could produce vibration levels of approximately 0.013 PPV (in/sec) at the closest residence, and

these levels would be reduced when the equipment is operating at locations farther from the homes. As described in Tables 4.10-3 and 4.10-4, such levels would not be expected to cause damage to any of the described building types and would be barely perceptible at the closest residence. Therefore, vibration impacts from project construction would be less than significant.

Operation

After full project buildout, it is not expected that ongoing operational activities would result in any vibration impacts at nearby sensitive uses. Activities related to trash bin collection could result in minor onsite vibrations as the bin is placed back onto the ground, but such vibrations would not be expected to be felt at the closest offsite sensitive uses. Therefore, vibration impacts from project operation would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No mitigation measures are required, and the impacts would be less than significant.

Impact NOI-3. The proposed project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

The impacts related to noise are discussed separately for construction and operational effects below.

Construction

Construction activities would be temporary and all associated noise would cease once the project is complete. Therefore, there would be no permanent increase in noise from construction, and there would be no impact.

Operation

Traffic-Related Impacts

Referring to Table 4.10-6, traffic noise increases on nearby roadways from the project would range from 0 to 2.1 dB CNEL under 2017 conditions. The only noise increase that would exceed the City's criteria is adjacent to Hosking Avenue between SR 99 and South H Street, where the predicted increase of 2.1 dB would exceed the applicable threshold of 1.5 dB (which applies because the No Project noise level would be above 65 dB CNEL). However, there are no noise-sensitive receptors along this roadway segment. Therefore, the impact would be less than significant.

Referring to Table 4.10-7, traffic noise increases on nearby roadways from the project would range from 0 to 2.0 dB CNEL under 2020 conditions. The only noise increase that would exceed the City's criteria is adjacent to Hosking Avenue between SR 99 and South H Street, where the predicted increase of 2.0 dB would exceed the applicable threshold of 1.5 dB (which applies because the No Project noise level would be above 65 dB CNEL). However, there are no noise-sensitive receptors along this roadway segment. Therefore, the impact would be less than significant.

Onsite Noise Source Impacts

Noise levels for the various operational noise sources are predicted to be relatively low at the nearest noise-sensitive receptors for a number of reasons, including the sporadic nature of many of the noise sources, the large distances between the sources and receivers, and the various shielding provided by intervening walls and buildings. All noise levels are predicted to be below the applicable City noise standards. The range of measured ambient noise levels at locations that are representative of the closest homes (i.e., Site #1 and Site #2) already include levels that approach or exceed the City's stationary noise standards. The addition of lower noise levels from project operations would not be expected to cause substantial increases in the overall noise levels, and the impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No mitigation measures are required, and the impacts would be less than significant.

Impact NOI-4. The proposed project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The impacts related to noise are discussed separately for construction and operational effects below.

Construction

As discussed under Impact NOI-1, above, temporary increases in traffic noise levels that could occur as a result of construction crews and equipment entering and exiting the project site would be less than significant.

Project construction noise could occur at various locations within and near the project site throughout the buildout period. During construction of the project, noise from construction activities would potentially affect noise-sensitive land uses in the immediate area. The distance from the closest residence to the project site is approximately 300 feet.

An analysis of construction noise levels was conducted using the FHWA Roadway Construction Noise Model to quantify potential noise levels that could occur at nearby residences during the various phases of construction. The model assumes percentages of usage times that are typical for the various types of construction equipment and provides noise levels in terms of the equivalent sound level (L_{eq}). Noise levels reported in Table 4.10-9 reflect those that could be expected at a distance of 300 feet from construction activities, the approximate distance from the project site to the closest residences, for the assumed construction schedule. Noise levels reported in the table also consider acoustic shielding provided by existing sound walls along the nearby residences. These levels are considered to be a conservative worst-case estimate based on grouping a large number of equipment items in a very small area located closest to the nearest homes. In reality, such a situation would likely not occur or would exist only very briefly.

The existing ambient noise levels measured at Site #1 and Site #2, which are representative of the closest homes, are up to 61 and 63 dBA L_{eq}, respectively. The worst-case construction noise levels summarized in Table 9 (i.e., 67 dBA during grading) would increase these existing ambient noise levels by approximately 5 to 7 dBA. While these increases would be clearly audible at the affected homes, the overall impact would be considered less than significant for the following reasons: (1) the highest noise levels would only occur for a small portion of the estimated total 80 days of scheduled grading; (2) noise levels from other phases of construction would be 2 to 14 dBA lower; and (3) noise levels from all phases of construction would decrease substantially when located farther from the homes (for any of the closest receptors, the majority of the project site is

over 1,000 feet away; at this distance, the construction noise levels would be approximately 10 dBA lower than the noise levels shown in Table 4.10-9).

Table 4.10-9. Existing Traffic Noise Levels in the Vicinity of the Project Site

Phase	Equipment	Total Number of Days	L_{eq}, dBA
Phase I Site Preparation (6/1/15–6/19/15)	3 rubber tired dozers 4 tractors/loaders/backhoes	15	65
Phase I Grading (6/19/15–8/7/15)	2 excavators 1 grader 1 rubber tired dozer 2 scrapers 2 tractors/loaders/backhoes	35	67
Phase I Building Construction (8/7/15–7/22/16)	1 crane 3 forklifts 1 generator set 3 tractors/loaders/backhoes 1 welder	250	64
Phase I Paving (7/22/16–9/9/16)	2 pavers 2 pieces of paving equipment 2 rollers	35	64
Phase I Painting (9/9/16–10/28/16)	1 air compressor (6 hours/day)	35	53
Phase II Site Preparation (1/1/17–1/27/17)	3 rubber tired dozers 4 tractors/loaders/backhoes	20	65
Phase I Grading (1/27/17–3/30/17)	2 excavators 1 grader 1 rubber tired dozer 2 scrapers 2 tractors/loaders/backhoes	45	67
Phase II Building Construction (3/30/17–9/5/18)	1 crane 3 forklifts 1 generator set 3 tractors/loaders/backhoes 1 welder	375	64

Phase	Equipment	Total Number of Days	L_{eq}, dBA
Phase II Paving (9/5/18–10/23/18)	2 pavers 2 pieces of paving equipment 2 rollers	35	64
Phase II Painting (10/23/18–12/10/18)	1 air compressor (6 hours/day)	35	53

dBA = A-weighted decibels
L_{eq} = equivalent sound level
Source: Appendix K

Operation

Project-related traffic and onsite operations would be considered permanent noise sources. Therefore, there would be no temporary or periodic increases in ambient noise levels associated with project-related traffic or onsite operations, and there would be no impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No mitigation measures are required, and the impacts would be less than significant.

Impact NOI-5. The proposed project would not be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

The project site is within the vicinity of private airstrip Costerisan Farms Airport, which is approximately 1.7 miles southwest of the project site, in the City of Bakersfield. This is a small unattended private use airstrip with a grass runway that houses two single-engine aircraft (Pilot Outlook n.d.). No noise data are publicly available, but based on the airstrip description it appears to service a very small number of flights and would not be anticipated to generate substantial noise levels at the project site. Therefore, the impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No mitigation measures are required, and the impacts would be less than significant.

4.10.4.2 Cumulative Impacts

A review of the related past, present, and future projects in the vicinity did not reveal any land uses with stationary (i.e., non-transportation) noise sources that would be expected to contribute significantly to the cumulative noise levels at the noise-sensitive receptors affected by the project. This is consistent with the observation that existing ambient noise levels in the project vicinity are dominated by traffic noise. Furthermore, onsite noise sources at any new developments in the area would be required to comply with the noise standards of the City's Noise Element and Municipal Code.

With respect to traffic noise in the project vicinity, the potential for substantial cumulative noise impacts exists as a result of the ongoing conversion of primarily agricultural and/or vacant land to urban uses that would generate a substantial amount of new vehicular traffic on nearby roadways, as well as the new interchange at SR 99 and Hosking Avenue.

Table 4.10-10 compares existing (2014) traffic noise levels with 2035 (with project) traffic noise levels. The City's criteria for determining cumulative noise impacts for mobile sources indicate than cumulative noise levels would not be cumulatively considerable at any location.

Table 4.10-10. Year 2035 Cumulative Traffic Noise Analysis

Roadway Name/Segment	Traffic Noise Level, dB CNEL[1]						Cumulatively Considerable?
	2014 No Project	2035 With Project	Change	2035 No Project	2035 With Project	Change	
Berkshire Road: South H Street to Union Avenue (SR 204)	62.6	64.3	1.7	63.5	64.3	0.8	No
White Lane: West of Union Avenue	64.1	65.0	0.9	64.8	65.0	0.2	No
White Lane: Hughes Lane. to H Street	68.2	69.0	0.8	68.9	69.0	0.1	No
White Lane: H Street. to Monitor Street	65.3	65.8	0.5	65.8	65.8	0.0	No
White Lane: Wible Road to SR 99	69.7	70.1	0.4	70.0	70.1	0.1	No
Panama Lane: Gosford Road to Ashe Road	58.3	62.6	4.3	62.6	62.6	0.0	No
Panama Lane: Ashe Road to Stine Road	62.8	64.4	1.6	64.2	64.4	0.2	No
Panama Lane: Stine Road to Akers Road	63.5	65.5	2	65.4	65.5	0.1	No
Panama Lane: Akers Road to Wible Road	69.6	70.7	1.1	70.5	70.7	0.2	No
Panama Lane: Wible Road to SR 99	70.8	71.9	1.1	71.8	71.9	0.1	No
Panama Lane: SR 99 to South H Street	68.2	70.9	2.7	70.5	70.9	0.4	No
Panama Lane: South H Street to Union Avenue (SR 204)	59.5	62.6	3.1	62.2	62.6	0.4	No
Panama Lane: Union Avenue (SR 204) to Cottonwood Road	63.1	65.6	2.5	65.3	65.6	0.3	No
Hosking Avenue: Stine Road to Wible Road	62.2	66.8	4.6	66.2	66.8	0.6	No
Hosking Avenue: Wible Road to SR 99	58.5	62.8	4.3	62.1	62.8	0.7	No
Hosking Avenue: SR 99 to South H Street	66.1	70.6	4.5	69.3	70.6	1.3	No
Hosking Avenue: South H Street to Union Avenue (SR 204)	55.8	59.4	3.6	58.5	59.4	0.9	No
Hosking Avenue: Union Avenue (SR 204) to Cottonwood Road	56.6	61.2	4.6	60.4	61.2	0.8	No
Taft Highway (SR 119): Ashe Road to Stine Road	64.1	65.9	1.8	65.9	65.9	0.0	No
Taft Highway (SR 119): Stine Road to Akers Road	64.1	66.3	2.2	66.1	66.3	0.2	No
Taft Highway (SR 119): Akers Road to Wible Road	64.1	66.4	2.3	66.2	66.4	0.2	No
Taft Highway (SR 119): Wible Road to South H Street	64.8	66.3	1.5	66.3	66.3	0.0	No
Taft Highway (SR 119): South H Street to Chevalier Road	65.4	66.8	1.4	66.6	66.8	0.2	No

Roadway Name/Segment	Traffic Noise Level, dB CNEL[1]						Cumulatively Considerable?
	2014 No Project	2035 With Project	Change	2035 No Project	2035 With Project	Change	
Panama Road: Chevalier Road to Cottonwood Road	64.5	66.2	1.7	66.0	66.2	0.2	No
South H Street: White Lane to Pacheco Road	62.2	62.9	0.7	62.7	62.9	0.2	No
South H Street: Pacheco Road to Fairview Road	65.7	66.8	1.1	66.4	66.8	0.4	No
South H Street: Fairview Road to Panama Lane	65.7	67.1	1.4	66.6	67.1	0.5	No
South H Street: Panama Lane to Hosking Avenue	59.9	63.9	4	63.0	63.9	0.9	No
South H Street: Hosking Avenue to McKee Road	60.6	65.9	5.3	64.9	65.9	1.0	No
South H Street: McKee Road to Taft Highway (SR 119)	62.3	66.0	3.7	65.3	66.0	0.7	No
Cottonwood Road: Hosking Avenue to Panama Lane	62.0	65.2	3.2	65.1	65.2	0.1	No
South Union Avenue (SR 204): White Lane to Pacheco Road	68.3	70.1	1.8	70.0	70.1	0.1	No
South Union Avenue (SR 204): Fairview Road to Panama Lane	60.5	62.9	2.4	62.6	62.9	0.3	No
South Union Avenue (SR 204): Panama Lane to Hosking Avenue	64.9	68.0	3.1	67.7	68.0	0.3	No
South Union Avenue (SR 204): Hosking Avenue to Panama Lane	65.6	69.7	4.1	69.6	69.7	0.1	No
South Union Avenue (SR 204): Pacheco Road. to Fairview Lane	66.3	68.1	1.8	67.8	68.1	0.3	No

Notes:
[1] At a typical residential setback (assumed to be 75 feet from the center of the roadway).
dB CNEL = decibels Community Equivalent Noise Level
SR = State Route
Source: Appendix J

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Section 4.11
Public Services and Utilities

4.11.1 Introduction

This section discusses the existing public services and utilities in the project area and examines impacts related to capacity or potential deficiencies in public services and utilities that could occur with project approval and implementation. The assessment of impacts is based on the project's potential to result in physical environmental effects on existing public services or utilities and/or any proposed new or expanded public services or utilities. Project impacts on schools and parks were determined to be less than significant in the initial study/notice of preparation (Appendix A) and are not discussed in this section.

4.11.2 Environmental Setting

Public services and utilities in the area that could be affected by the proposed project include fire protection and emergency services, police protection and law enforcement services, wastewater treatment facilities, stormwater drainage facilities, water supply services, solid waste services, and energy supplies. Existing public services and utilities that serve the project area include Kern County Fire Department (KCFD); City of Bakersfield Fire Department (BFD); Kern County Emergency Medical Services (County EMS); Bakersfield Police Department (BPD); Kern County Sheriff's Office (Sheriff's Office); Bakersfield Department of Public Works (BDPW), Solid Waste and Wastewater Divisions; Kern County Waste Management Department (County Waste Management Department); City of Bakersfield Water Resources Department (City Water Resources Department); and Pacific Gas and Electric Company (PG&E).

4.11.2.1 Fire Protection and Prevention and Emergency Services

Fire protection, prevention, and emergency services for the Metropolitan Bakersfield area are provided through joint implementation measures between the County of Kern and the City of Bakersfield (City). KCFD would be the first respondent to the project area. In the event that the primary responding engine is unable to respond, the next available and closest unit would be sent, which may include units from BFD. Services provided by KCFD, BFD, and County EMS are discussed below.

Kern County Fire Department

KCFD provides the primary fire and rescue response within the project area and to more than 500,000 people in the unincorporated areas of Kern County and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. KCFD protects an area that covers more than 8,000 square miles and includes regional transportation corridors such as Interstate 5 and State Route (SR) 99.

KCFD staffs 46 full-time fire stations that are broken into seven battalions for operational management. Each battalion covers a large geographical area and includes five to eight fire stations. The proposed project is in Battalion 4, which covers the southern portion of the unincorporated Bakersfield area. The battalion includes six fire stations, covering Lamont, Greenfield, Old River, Edison, and the southeastern Bakersfield area (Kern County Fire Department 2012).

KCFD Station No. 52, which is 1.4 miles south of the project site at 312 Taft Highway, would be the primary responder to the project area. The station has a response area of 65 square miles.

City of Bakersfield Fire Department

BFD provides fire suppression services, emergency medical services, swift-water response services, hazardous materials regulation, aggressive fire prevention and safety education, disaster preparedness training, and a technical rescue team (City of Bakersfield and Kern County 2002). BFD also has a hazardous materials response team, which consists of at least four firefighters who are trained to specialist level (Federal Emergency Management Agency 2005).

BFD currently operates 15 fire stations. The closest station, BFD Station No. 13, is approximately 1.7 miles west of the project site. The next closest is Station No. 5, which is 2.4 miles north of the project site. Station No. 14 is in the project vicinity as well, approximately 5.2 miles to the west. These fire stations would be able to respond, when necessary, to service calls that originate from the project site.

Emergency Medical Services

County EMS is the lead agency for medical services in Kern County. System participants in the county include the public, fire departments, ambulance companies, hospitals, emergency medical technicians (EMTs), and other emergency service providers. In addition, County EMS provides certification for EMTs, paramedics, specialized nurses, and specialized dispatchers. County EMS provides rapid response to serious medical emergencies, including day-to-day emergencies as well as disaster-related medical response situations. County EMS also has a preventative health care function.

The range of responsibility for County EMS involves the following:

- Public safety dispatch services;
- Fire services;
- Private ground and air ambulance response, treatment, and transport services;
- Law enforcement agencies;
- Hospitals and specialty care centers;
- Training institutions and programs for County EMS personnel;
- Managed care organizations;
- Preventative health care; and
- Citizen and medical advisory groups (County EMS 2015).

Wildfire Potential

According to the maps prepared by the California Department of Forestry and Fire Protection (CAL FIRE), the project site is within a Local Responsibility Area with an "unzoned" fire hazard severity zone. CAL FIRE has determined that Kern County does not contain Very High Fire Hazard Severity Zones in a Local Responsibility Area. As such, all of Kern County is designated "unzoned" on the Fire Hazard Severity Zone map. Moreover, the land surrounding the project site is within a Local Responsibility Area with an "unzoned" fire hazard severity zone (CAL FIRE 2015).

4.11.2.2 Police Protection

Police protection for the Metropolitan Bakersfield area, including the project site, is provided by BPD and the Sheriff's Office. Their respective services and facilities are discussed below.

City of Bakersfield Police Department

BPD provides police protection and law enforcement services in the project area. Central headquarters is at 1601 Truxtun Avenue in Bakersfield, approximately 6.4 miles north of the project site.

BPD operates out of three main divisions: Support Services Division, Investigations Division, and Operations Division. Each division is responsible for various duties within the department. The Support Services Division's main responsibility is to provide community outreach and support the rest of BPD by planning for future needs and developing officer-training programs. The Investigations Division's primary duty is to investigate crimes, including crimes related to homicide, robbery, domestic violence, burglary, auto theft, and narcotics. The Operations Division's primary duties include traditional police

activities, such as patrolling, responding to requests for assistance, and enforcing traffic regulations (Bakersfield Police Department 2015).

Central headquarters for BPD is a full-service police station that houses operations, traffic, animal control, investigation, and support services. This station serves the area east of SR 99, from the Kern River floodplain to SR 119 (Taft Highway). In addition, the Westside Substation, at 1301 Buena Vista Road, has personnel who provide service to the area west of SR 99, from Snow Road to Taft Highway.

Kern County Sheriff's Office

The County Sheriff's Department supplements BPD's services. Both agencies maintain a Mutual Aid Agreement that is carried out under the California Master Mutual Aid Agreement Plan, as codified under the California Mutual Aid Act. The act requires all public service agencies and departments, political subdivisions, and municipal corporations to be made available to each other to provide services for relief against natural disasters, fires, rescues, riots, and crime (State of California 2014).

The sheriff is the county's chief law enforcement officer. In addition to providing police services to the unincorporated portions of the county, the sheriff is responsible for overseeing the jail system, providing bailiff and prisoner transportation service to the courts, search and rescue services, coroner services, and civil processes (e.g., serving papers for lawsuits).

The County Sheriff's Office has 1,202 sworn and civilian employees (i.e., 567 authorized deputies who are deployed in patrol, substation, detective, court services, and special investigations units; 338 deputies who are deployed in detention facilities; and 297 men and women who make up the professional support staff, which is assigned throughout Kern County) (Kern County Sheriff's Office 2015).

4.11.2.3 Wastewater

BDPW, Wastewater Division, provides wastewater service to the city of Bakersfield and is funded by sewer service charges and connection fees. BDPW provides wastewater treatment service to the city from two treatment plants, Plant No. 2 and Plant No. 3. The proposed project is within the service boundary of Treatment Plant No. 3, located at 6901 McCutchen Road, approximately 2.8 miles west of the project site. The City completed upgrades to and expansion of Plant No. 3 in June 2010, which involved expanding the plant's dry-weather average flow capacity of 16 million gallons per day (mgd) to 32 mgd, with provision for future expansion to 64 mgd. The upgrades also included secondary and tertiary treatment processes, odor control systems, a new operations building, and a new maintenance shop. The plant has a current daily average flow of up to 17.2 mgd and a maximum flow of 18.4 mgd (Roldan pers. comm.).

There are currently no major trunk lines that traverse the project site or areas adjacent to the project site. A 48-inch trunk line that transfers wastewater to Plant No. 3 is located under Hosking Avenue; it terminates approximately 2,000 feet east of the project site. As part of expansion of wastewater treatment capacity, the City will also expand its wastewater collection system. This includes extending the trunk lines in the vicinity of the project site, allowing the site and areas that have been recently annexed by the City to connect to the extended lines (Parsons Corporation 2006).

4.11.2.4 Water Supply

Water for the project site would be provided by Greenfield County Water District (GCWD), which receives its current water from canal seepage water from Kern Delta Water District (KDWD). Their respective services and capabilities are discussed below. The project site does not currently support any uses that require water.

Greenfield County Water District

The proposed project would be served water by the GCWD. GCWD is a California water supplier providing water to 2,860 single- and multiple-family residential customers and 29 commercial/institutional accounts as of December 2014. GCWD serves approximately 2 to 3% of the Bakersfield population.

The GCWD service area is 201 acres (3.15 square miles), 1,235 acres (2.07 square miles) of which are developed with residential and commercial land uses, along with schools and institutional land uses. Undeveloped land in the GCWD service area is primarily farmland, although GCWD has no agricultural customers. Total land within the service area is 3,919 acres (6.12 square miles). Most of the 85-acre project site is already within the GCWD service area. Approximately 17 acres at the southern end of the project site are proposed for annexation into the GCWD service area. As required by California law, a proposed annexation must also be approved by the Kern County Local Agency Formation Commission (LAFCO). A Municipal Services Review is under preparation relating to the pending annexation, and a draft annexation application has been submitted to LAFCO for a pre-filing review and comment. GCWD, not the property owner(s), is the applicant for annexation. Should LAFCO deny the annexation, an alternative water supply sufficient for the life of the project must be identified and secured for the project, and would require approval from the alternative water supplier and the City.

Groundwater is the primary source of municipal water supply from GCWD. GCWD currently extracts 100% of its water supply from five groundwater wells that pump native groundwater and stores water in four water storage tanks located within its service area based on GCWD's appropriative and prescriptive groundwater rights. This water is currently used for the GCWD's primary water supply.

However, there are secondary surface water supplies that are delivered to the groundwater aquifer in the form of surface water seepage, received by GCWD in order to offset the needs of the district. As part of an Urban Customer Service Agreement, GCWD receives 100% of the surface water seepage losses from the Kern Island Canal system (through the portion of the Kern Island Main and Central Canals from KDWD) as groundwater recharge to maintain groundwater aquifer levels and to supplement supplies (Urban Customer Service Agreement Amendment, effective January 1, 2014). This water would be used only during times of water shortages.

Kern Delta Water District

The KDWD service area is 129,000 acres (201.5 square miles), 89,212 acres of which make up the historical utility service areas of five former canal companies, with about 35,615 acres in non-utility areas. Roads and rights-of-way cover approximately 4,133 acres within the district, leaving about 124,867 acres (typically rounded to 125,000 acres) available for agriculture or other development.

KDWD manages three water sources: groundwater, imported water, and local surface water. Surface water is provided to agricultural customers to supplement groundwater pumping by individual landowners. Pumped groundwater supplements this demand. Additionally, KDWD has acquired imported State Water Project (SWP) water rights and obtains other water sources as available through various contracts and exchanges (Kern Delta Water District 2013).

Groundwater provides most of the municipal supply for KDWD, which is replenished locally from natural recharge, canal seepage, spreading basins, and recycled water. In addition, KDWD recharges water on behalf of small community water systems including GCWD to maintain groundwater levels and support municipal pumping. In this capacity, KDWD has served as a municipal and industrial wholesaler for groundwater replenishment.

KDWD owns and operates approximately 814 acres of spreading basins throughout its service area to allow for groundwater replenishment. These basins have been constructed since 2003 as part of a joint project with the Metropolitan Water District of Southern California (MWD). Although these facilities were constructed to support the KDWD banking arrangement with MWD, KDWD also operates these facilities for local groundwater replenishment and storage of excess surface water when available. Basins have been constructed or are under construction at seven locations in Kern Island, Buena Vista, Stine, Farmers, and Eastside service areas.

KDWD participates in several of the formal banking projects along the Kern River to optimize its use of water sources and provide overdraft protection of the groundwater system. From 1995 through 2006, KDWD banked approximately 63,660 acre-feet of excess SWP water, Central Valley Project water, and high-flow Kern River water in Berrenda Mesa, Pioneer Project, COB 2800, and Kern Water Bank. Of that amount, approximately 23,670 acre-feet were banked for

subsequent recovery and approximately 39,990 acre-feet were banked for overdraft protection.

4.11.2.5 Solid Waste

Solid waste collection services (residential and commercial) are provided within the city by BDPW, Solid Waste Division, and contracted private haulers. In the unincorporated area, a County-franchised hauler is used. All solid waste generated in the area is disposed of in Kern County–operated landfills (City of Bakersfield and Kern County 2002).

BDPW, Solid Waste Division, would provide solid waste disposal services to the proposed project. In addition to providing landfill services, BDPW, Solid Waste Division, operates a recycling program for newspapers, cardboard, junk mail, office paper, magazines, aluminum cans, tin cans, clear glass, green glass, brown glass, and plastic bottles. Construction materials can be recycled at the Mount Vernon Recycling Center. The materials will be processed and reused in construction or improvement projects (City of Bakersfield 2015).

The Metropolitan Bakersfield area is served primarily by two landfills. The proposed project would be served by the Bakersfield Metropolitan (Bena) Sanitary Landfill, which is operated by the County Waste Management Department. The facility is approximately 14 miles east of the project area at 2951 Neumarkel Road in Caliente, California. As of July 2013, the Bena landfill had a maximum permitted capacity of 53,000,000 cubic yards and a remaining capacity of 32,808,260 cubic yards, or 62% (CalRecycle 2014). The maximum permitted volume of waste per day is 4,500 tons.

4.11.2.6 Energy

PG&E, the electricity and gas provider in Kern County, has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year, depending on hydrologic conditions. Regional electricity loads also tend to be higher in the summer because higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

Natural Gas

Natural gas supplies to California are expected to remain plentiful for the next several decades. The total resource base (i.e., gas that is recoverable with today's technology) for the lower 48 states is estimated to be about 975 trillion cubic feet, enough to continue current production levels for more than 50 years. Technology enhancements will continue to enlarge this resource base; however, production capacity increases remain less certain. Despite this concern, production in the continental United States will grow steadily, jumping 56% between 2012 and 2040 (EIA 2014).

The project site is within the service area of PG&E, which serves its 16 million customers through 70,000 miles of natural gas transmission and distribution lines (PG&E 2015a). The gas supply for the project site would come from the Kern River Corridor, which receives gas from suppliers in the Rocky Mountains. A new natural gas pipeline and new regulator station near the corner of Ashe Road and Berkshire Road, 2.6 miles east of the project site, completed construction in November 2014 (PG&E 2014). The new pipeline and upgraded equipment will work together to meet the growing demand for natural gas service and increase reliability for the area.

PG&E has existing natural gas infrastructure within the project area that can serve future development on the site. This existing infrastructure is limited to small distribution lines; pipelines are available in areas that are adjacent to the project site. The closest point of connection is located east of the intersection of Berkshire Road and South H Street.

Electricity

PG&E provides electrical power as far north as the city of Eureka and as far south as the city of Bakersfield. The electrical power that PG&E distributes is derived from the company's generating plants, which use hydropower, gas-fired steam, or nuclear energy. Power can also be purchased from out-of-state generators. The electricity is carried in bulk over a network, or "grid," of high-voltage transmission lines that connect power plants to substations. Substations use transformers to "step down" the voltage of the electricity to lower levels that can be used by consumers, such as residents and businesses (PG&E 2015b).

PG&E currently has power lines in the vicinity of the project site that meet existing demand. There is no need for additional infrastructure (such as a new substation) to supply the proposed project with electricity.

4.11.2.7 Abandoned Utilities

As described in the proposed project's Phase I Environmental Site Assessment (Appendix I), abandoned underground utilities have been found near the project site. Although the project site is not within an oil field, a plugged and abandoned Shell Western E & P–owned dry well (Shell-KCY Dennen) is approximately 0.25 mile west of the project site, plugged and abandoned Texas Crude Exploration–owned oil well (Delfino) is approximately 0.5 mile west of the project site, plugged and abandoned Amoco Production Company–owned well (M.G. Davis) is approximately 0.75 mile southwest of the project site, and the plugged and abandoned Shell Western E & P–owned well (Shell-KCY Andre) is approximately 0.75 mile northwest of the project site. Otherwise, existing or former plugged/abandoned, shut-in, water injection, or producing oil or gas wells are not and have not previously been associated with the project site.

4.11.3 Regulatory Setting

4.11.3.1 California State Bill 610

In accordance with the requirements of Senate Bill 610, effective January 1, 2002, a Water Supply Assessment (WSA) is required for any *development project*, as defined in Water Code Section 10912, that is subject to the California Environmental Quality Act (CEQA). Any such project requires a city or county to consider a WSA to determine whether projected water supplies will be able to meet the project's anticipated water demand. The proposed project meets the definition of a *project* in California Water Code Section 10912 because it includes commercial development that exceeds 500,000 square feet.

4.11.3.2 Sustainable Groundwater Management Act

On September 16, 2014 Governor Edmund G. Brown, Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills, Senate Bill 1168 (Pavley), Assembly Bill 1739 (Dickinson), and Senate Bill 1319 (Pavley), together make up the Sustainable Groundwater Management Act (SGMA). The act will establish phased requirements for high- and medium-priority basins to adopt groundwater sustainability plans, depending on whether or not a basin is in critical overdraft. It will require adoption of groundwater sustainability plans by January 31, 2020, for all high- or medium-priority basins in overdraft condition and by January 31, 2022 for all other high- and medium-priority basins unless legally adjudicated or otherwise managed sustainably.

The California Department of Water Resources (DWR) implemented the California Statewide Groundwater Elevation Monitoring (CASGEM) Program in response to legislation enacted in California's 2009 Comprehensive Water package. As part of the CASGEM Program and pursuant to the California Water Code (CWC §10933), DWR is required to prioritize California groundwater basins, so as to help identify, evaluate, and determine the need for additional groundwater level monitoring.The CASGEM Groundwater Basin Prioritization Basin Score determined the Kern County Subbasin to be a High Priority Basin and to have an overall basin ranking score of 22.5. Basin impacts used to determine this ranking are subsidence, overdraft, and water quality degradation (Appendix D).

The SGMA established a new structure for managing California's groundwater resources at a local level. The SGMA requires, by June 30, 2017, the formation of locally controlled Groundwater Sustainability Agencies (GSAs), which must develop Groundwater Sustainability Plans in Bulletin 118-defined groundwater basins or subbasins that were designated by DWR as medium or high priority. As a result of the Kern County Subbasin's high-priority basin status, a GSA will need to be formed by local agencies for the subbasin, and DWR will need to be notified by June 30, 2017. GCWD will likely be a member of the GSA, once it is formed.

4.11.3.3 Executive Order B-29-15

On April 1, 2015, California Governor Edmund G. Brown, Jr. issued Executive Order B-29-15 as part of the State of Emergency actions due to severe drought conditions. The Order states that the State Water Resources Control Board shall impose restrictions to achieve a statewide 25% reduction in potable urban water usage through February 28, 2016. These restrictions will require water suppliers to California's cities and towns to reduce usage compared to the amount used in 2013. These restrictions should consider the relative per capita water usage of each water supplier's service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use.

GCWD is considered to be a small water supplier (serving fewer than 3,000 connections), which are required to either reduce water use by 25%, or restrict outdoor irrigation to no more than two days per week. These smaller urban suppliers, that collectively serve less than 10% of Californians, must submit a report on December 15, 2015 to demonstrate compliance (Appendix D).

4.11.3.4 California Integrated Waste Management Act

In response to a serious disposal crisis in 1989, the California Integrated Waste Management Act (Assembly Bill [AB] 939) was passed. Among other things, AB 939 (Chapter 1095, Statutes of 1989) requires a 50% reduction in net solid waste being disposed of in landfills. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible."

4.11.3.5 Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan sets forth policies and goals for public services and utilities. Those related to the proposed project are listed below (City of Bakersfield and Kern County 2002).

General Utilities

- Develop funding principles and programs that will ensure that all new development will pay for the incremental costs of the public facilities and services—utilities bridges, parks, and public safety facilities—both onsite and offsite, to serve such development.
- Require all new development to pay its pro rata share of the cost of necessary expansion in municipal utilities, facilities, and infrastructure for which it generates demand and upon which it is dependent.

Water Distribution

- Ensure the provision of adequate water service to all developed and developing portions of the planning area.

- Require that all new development proposals have an adequate water supply available.

Sewer Service

- Ensure the provision of adequate sewer service to serve the needs of existing and planned development in the planning area.
- Provide trunk sewer availability to and treatment/disposal capacity for all metropolitan urban areas to enable cessation or prevention of the use of septic tanks where such usage creates potential public health hazards or may impair groundwater quality and assist in the consolidation of sewerage systems. Provide sewer service for urban development regardless of jurisdiction.
- Define benefit-related areas in which appropriate development fees will be assessed or assessment districts will be established to defray the costs of the wastewater collection, treatment, and disposal facilities necessary to serve such areas.

Solid Waste

- Ensure the provision of adequate solid waste disposal services to meet the demand for these services in the planning area.
- Comply with, and update as required, the adopted county solid waste management plan.

Police and Fire

- Ensure that the Metropolitan Bakersfield area maintains a high level of public safety for its citizenry.
- Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.
- Require discretionary projects to assess impacts on police and fire services and facilities.

4.11.4 Impacts and Mitigation

Potential impacts on public service agencies and utility services that could result from implementation of the proposed project are discussed below.

4.11.4.1 Methodology

The potential impacts associated with the proposed project are evaluated on a quantitative and qualitative basis through coordination with respective service

agencies. Existing demand is compared with demand associated with the proposed project, and the difference is analyzed to determine if a significant impact would occur. Significant impacts would occur if the proposed project were to result in physical impacts from any proposed or needed expansion of or upgrade to public facilities or utilities or an insufficient capacity, supply, or conveyance of utilities. Utility demand was estimated using the generation and consumption factors discussed below.

Wastewater generation rates estimate the amount of wastewater, such as sewage or bath water, produced from individual land uses associated with a proposed project. Estimates for the proposed project relied on the wastewater generation factors provided in the *L.A. CEQA Thresholds Guide* (2006). However, wastewater generation rates were not available for all of the individual types of land uses. As such, the Commercial Use generation rate of 80 gallons per day (gpd) per 1,000 gross square feet was used to estimate wastewater generation from the various commercial land uses proposed as part of the project, including the theater, several restaurants, and anchor stores.

Water demand rates estimate the amount of water required by individual uses related to a proposed project per year. These rates are calculated by using average water demand rates, in gpd, for the total area of development. Individual land uses are broken down into retail, hotel, landscaping, and contingency land uses because each land use has a different annual water demand. More information regarding water demand rates can be found in the administrative draft of the *Water Supply Assessment for the SR 99/Hosking Commercial Center Project* prepared by ICF International in 2015 (Appendix D).

Solid waste generation rates estimate the amount of waste created by residences or businesses over a certain amount of time (e.g., day, year). Waste generation rates include all discarded materials, regardless of recycling or disposal in a landfill at a later date. Waste generation rates for commercial activities can be used to estimate the impact of new developments on the local waste stream (CalRecycle 2015a). According to the solid waste generation rates provided by CalRecycle, it is estimated that commercial uses generate 13 pounds of waste per day for every 1,000 square feet of development (CalRecycle 2015b).

Natural gas and electricity demand rates estimate the amount of energy required by each individual land use of a project per year. These rates are based on CalEEMod utility consumption rates (Appendix F), which in turn rely on the California Energy Commission–sponsored California Commercial End Use Survey and Residential Appliances Saturation Survey.

4.11.4.2 Criteria for Determining Significance

The criteria for determining the significance of impacts related to public services and utilities are based on criteria contained in Appendix G of the State CEQA Guidelines.

The proposed project could have a significant impact on the environment if it would result in any of the following:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

   i. Fire protection,
   ii. Police protection,
   iii. Schools,
   iv. Parks, or
   v. Other public facilities;

b) Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board;

c) 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;

d) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

e) Have insufficient water supplies available to serve the project from new or expanded entitlements;

f) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity with respect to serving the project's projected demand in addition to the provider's existing commitments;

g) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;

h) Fail to comply with federal, state, and local statutes and regulations related to solid waste; or

i) Result in the wasteful, inefficient, and unnecessary consumption of energy.

Thresholds a.iii, a.iv, and a.v were evaluated during the initial study process. It was determined that less-than-significant impacts related to schools, parks, and other public facilities would result with project implementation. As such, these impacts are not evaluated below. For a detailed discussion, refer to Appendix A.

4.11.4.3 Project Impacts

Impact PS-1. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities or a need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.

According to the maps prepared by CAL FIRE, the project site is within a Local Responsibility Area with an "unzoned" fire hazard severity zone. CAL FIRE has determined that Kern County does not contain designated Very High Fire Hazard Severity Zones in a Local Responsibility Area. As such, all of Kern County is designated "unzoned" on the Fire Hazard Severity Zone map. Similarly, the land surrounding the project site is within a Local Responsibility Area with an "unzoned" fire hazard severity zone (CAL FIRE 2015).

Construction and operation of the project would not increase the risk of wildfires in the area. The project site is currently privately owned vacant land, bordered by existing residential development to the east and SR 99 to the west. Land to the north and south is vacant and undeveloped. As discussed under the Environmental Setting section, CAL FIRE has determined that Kern County does not contain designated Very High Fire Hazard Severity Zones in a Local Responsibility Area and has indicated that the project site is within a Local Responsibility Area with an "unzoned" fire hazard severity zone. Kern County does not contain areas that are designated as Very High Fire Hazard Severity Zones in a Local Responsibility Area and is therefore considered "unzoned" (CAL FIRE 2015). Accordingly, the project is not expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts related to wildfires would be less than significant.

The onsite workforce for assembly and construction would consist of laborers, electricians, supervisory personnel, support personnel, and construction management personnel. The presence of construction workers would be a temporary occurrence. Operation of the project would provide longer term employment opportunities in the area. The presence of construction and operational personnel would result in increased demand for fire protection and emergency response services on the project site, both for fire suppression and medical emergencies.

As previously stated, KCFD Station No. 52 would provide primary fire suppression and emergency medical services (along with County EMS) at the project site. Station No. 52 is about 1.4 miles south of the site in the city of

Bakersfield. The project, which would include emergency access routes and other safety features, would incorporate plans for fire protection. Under the project, the project proponent would pay development fees for fire protection infrastructure and services determined necessary according to the county's assessment formulas. Therefore, because the payment of development impact fees is required, no mitigation is needed. In addition, a development agreement would be entered into between the City and the project applicant, requiring a fair-share contribution to pay for increased demand for BFD and emergency response services. The contribution would be used by BFD to ensure that adequate fire station facilities, equipment, and department personnel are available to serve the project area and maintain current response times. These implementation programs would also be used to maintain funding for County EMS and standing agreements with public and private agencies regarding mutual emergency aid.

As part of the approval process, the proposed project would be required to conform to the Uniform Fire Code and the City of Bakersfield Municipal Code, Sections 15.64.010 to 15.64.480. These codes require projects to include specific design features, thereby ensuring sufficient water pressure for fire flows, appropriate emergency access, and the use of approved building materials. Conformance with these codes helps to reduce the risks associated with fire hazards and related emergencies. Accordingly, all construction plans would be approved by the fire marshal or an appropriate representative to ensure that all fire code requirements are incorporated into the proposed project. Mitigation measure MM PS-1 will ensure that water flow for firefighting purposes would be sufficient. Therefore, because mandatory development impact fees would be paid to offset any project-related fire protection and emergency service impacts and MM PS-1 would ensure sufficient water for firefighting, impacts would be less than significant.

Mitigation Measures

MM PS-1: Adequate Fire Flows. Before start of construction, a fire flow test shall be required to demonstrate availability of 2,000 gallons of water per minute at 20 pounds per square inch over a 4-hour period.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact PS-2. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities or a need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for police protection services.

The proposed project would not result in significant adverse impacts on police and law enforcement services. The proposed project has no residential components that would increase the population, thereby resulting in a demand for additional staff members to maintain an appropriate personnel-per-capita ratio.

According to BPD, given the number of service calls at similar commercial and retail sites, the proposed project would result in an increased need for police officers in the regional area (Lyle Martin pers. comm.). However, the proposed project would not require the construction of a new police station, expansion of an existing police station, or substantially lower the personnel-to-resident ratios in the city.

As part of the proposed project, prior to approval of tentative tract maps or recordation of final maps, the applicant would be required to pay development impact fees to the City that would be used for hiring new law enforcement personnel and purchasing additional equipment. The fee would be made under the authority of a development agreement and as a condition of approval. The development agreement would define the appropriate funding mechanism.

The applicant would be required to incorporate design features consistent with BPD's Crime Prevention Unit and BPD's recommendations for project safety components. In addition, a security camera system with monitoring capabilities would be required as part of the development review and tentative tract map approval process (Lyle Martin pers. comm.). The proposed project would undergo site plan review by the City Planning Department and BPD to ensure that it incorporates design elements that improve public safety. These include lighting standards for streets and parks, landscaping that does not hinder the visibility of doors and windows, fencing and lighting that direct foot traffic, well-lit entrances to store fronts, planning considerations and the elimination of traffic hazards during the proposed project's site design processes, and preventing the creation of unintentionally isolated locations for individuals who are engaged in retail activities or moving within or around the project site. Incorporation of these project elements would ensure that impacts on police services would be reduced to a less-than-significant level. Therefore, because development impact fees would be paid to offset any project-related police protection and law enforcement service impacts and design features would be incorporated during the development plan review and approval process, no mitigation is required.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-1. The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

The proposed project would be designed to be fully compliant with existing wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. The proposed project would be connected to the sanitary sewer system, and wastewater would be removed by domestic sewer systems that would be installed as part of the project. These flows would be treated at BDPW Plant No. 3, which operates at approximately 54% of capacity (Roldan pers. comm.). In addition, permanent stormwater best management practices would be required to help ensure that site runoff would be minimized and treated, resulting in no adverse effects on existing water quality in the area. Therefore, implementation of the proposed project would not violate the wastewater treatment requirements of the Central Valley Regional Water Quality Control Board (see the analysis under Impact U-2 for further discussion regarding treatment capacity at Plant No. 3).

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-2. The proposed project would not 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.

Potable and irrigation water would be supplied to the project site by GCWD. Wastewater from the proposed project would be treated by BDPW. The construction and operational impacts of the proposed project on water and wastewater facilities are discussed in more detail below.

Water Facilities

During construction of the proposed project, water needed for construction would be provided through existing water lines on the site. Dust suppression would require daily watering with the use of water trucks; however, the water usage during construction would be short term. In addition, the water would be trucked to the site and would not require new or expanded water conveyance facilities.

During operation of the proposed project, project water demands would be met through GCWD's existing groundwater rights from native aquifer supplies, as well Mr. Giumarra's overlying groundwater rights for the same aquifer that will be pumped from GCWD wells (page 1 of Appendix D). An Agreement for Overlying Lands in which GCWD acts as an agent will be executed to allow GCWD to utilize John Giumarra' s Overlying Groundwater Rights as a landowner, which would then require new wells to be drilled.

There is currently no water use on site. Therefore, the project's water demand would all be new water demand for the project site. Table 4.11-1 shows the estimated water demand with the proposed project. With a water demand of 376.4 acre-feet per year, no additional offsite water infrastructure would be required (GCWD 2015). Impacts related to water infrastructure would be less than significant.

Table 4.11-1. Projected Annual Water Demand by the Proposed Project

Land Use	Area of Development	Water Demand Rate (gpd) per Unit	Acre-Feet per Year per Unit	Gallons per Day	Acre-Feet per Year
Retail (square feet)[1]	800,000	0.346	0.00039	276,800	310.3
Hotel (square feet)[2]	78,000	0.273	0.00031	21,320	23.9
Landscaping (acres)[3]	4	0	2.0000	7,137	8.000
Contingency[4]	10%	0	0	30,510	34.2
		Total:		335,767 gpd	376.4 AFY*

Notes:

*Parking spaces would not require water.

GCWD = Greenfield County Water District; gpd = gallons per day; AFY = acre-feet per year.

[1] Used water demand factors for Shopping Center in the GCWD Calculation of Single-Family Residence Equivalents for Water Service

[2] Assumption: The proposed project includes a hotel in two separate facilities with approximately 240 rooms. The average area of a hotel room is 325 square feet. This results in 78,000 square feet of proposed hotel space.

[3] Pervious/landscaped areas would compose about 5% of the site. The GCWD stated in a response to an Info Request that proposed landscaped areas would cover 4 acres (174,240 square feet).

[4] A 10% contingency is included to provide additional buffer due to unforeseen circumstances. This results in a very conservative estimate considering that the water demand factors are also considered to be conservative due to overestimating future growth.

Source: Water demand rates and AFY rates are based on 1995 water demand factors (GCWD Calculation of Single-Family Residence Equivalents for Water Service) provided by the GCWD for the *Water Supply Assessment for the SR 99/Hosking Commercial Center Project* prepared by ICF International in February 2015 (Appendix D).

Wastewater Facilities

Wastewater treatment for onsite construction workers would be provided by porta-potties, and stormwater best management practices would ensure that runoff would not leave the site in large quantities or go untreated. No new wastewater treatment facilities are proposed or would be required during the construction phase.

Table 4.11-2 shows the projected amount of wastewater that would be generated by the proposed project. The wastewater would be conveyed through the trunk line under Hosking Avenue to BDPW Plant No. 3, which is located west of the project site. The trunk line would be improved in order to serve the proposed project and a project sewer study will be required as mitigation measure MM U-1 to ascertain the specific upgrade requirements. Moreover, Plant No. 3 operates at approximately 54% of capacity (Roldan pers. comm.), leaving sufficient capacity for the project as well as future projects. No construction of new water or wastewater treatment facilities or expansion of existing treatment facilities would be required. Impacts would be less than significant with mitigation.

Table 4.11-2. Projected Wastewater Generated by the Proposed Project

Land Use	Number of Units or Square Feet of Development	Wastewater Generation Rate (gpd)[a]	Expected Wastewater Flow (gpd)
Mixed Commercial and Retail*	800,000	80 gpd per 1,000 gross square feet	64,000 gpd
Other: Hotel	240 rooms	130 gpd per room	31,200 gpd
		Total:	95,200 gpd[b]

[a] Wastewater generation rates are based on values provided by the *L.A. CEQA Thresholds Guide*.

[b] Parking spaces would not generate wastewater.

*Wastewater generation rates were not available for all of the individual types of land uses. As such, the Commercial Use generation rate was used to estimate wastewater generation from various commercial land uses proposed as part of the project, including the theater, several restaurants, and anchor stores.

gpd = gallons per day.

Source: City of Los Angeles 2006.

Mitigation Measures

MM U-1. Sewer Capacity. Prior to the issuance of building permits for the first phase of development, or along with submittal of a tentative subdivision map, whichever occurs first, the project proponent shall submit a comprehensive Sewer Study to the City Engineer to determine and verify sufficient sewer capacities downstream of the project. The developer shall construct additional sewer infrastructure to accommodate sewer capacities as identified in the Sewer Study to the satisfaction of the City Engineer.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-3. The proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Given that the project site is undeveloped and generally permeable in its present state, runoff from the current project site would be less than it would be under developed conditions. However, there is currently no existing storm drain system for the project area, which could result in substantial runoff in times of heavy downpour compared with a developed condition that includes a comprehensive storm drain system. The project would install a new stormwater drain system to ensure that stormwater is conveyed, slowed, and treated onsite prior to discharge. Onsite stormwater facilities would most likely consist of a series of catch basins and surface drainage features that would convey water to an onsite sump where stormwater would percolate into the ground. All development within the city is required by ordinance to comply with an approved drainage plan that would avoid onsite and offsite flooding, erosion, and siltation issues. Further discussion of site drainage impacts is provided in Section 4.8, *Hydrology and Water Quality*. Impacts would be less than significant.

Construction and installation of the storm drain system would result in temporary air emissions, greenhouse gas (GHG) emissions, and noise from construction and trenching equipment. These potential impacts are addressed in the air quality, GHG emissions, and noise sections of this DEIR, respectively.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-4. The proposed project would have sufficient water supplies available to serve the project from new or expanded entitlements.

Construction

Water would be required during construction for activities, such as dust control during grading and site preparation and concrete mixing and preparation.

Potential for groundwater dewatering during construction is addressed in Section 4.8, *Hydrology and Water Quality*. Water usage during construction of the proposed project is expected to be minimal and to occur intermittently during the construction period. The proposed project would obtain its water supply for construction from GCWD, and there would be sufficient supplies for use during the construction period. Therefore, impacts on water supplies during construction would be less than significant.

Operation

There is currently no water use on site. Therefore, the project's water demand would all be new water demand for the project site. As shown in Table 4.11-1, the proposed project would create an estimated 376.4 AFY of new water demand. This is approximately 12.6% percent of the Districts' anticipated total system demand of 3,346 AF in 2015, and 7.5% of overall treated water demands of 5,046 AFY by 2035 (Appendix D).

Table 4.11-3 compares GCWD current supplies (groundwater seepage) and demands within the entire district, including those of the project. The WSA concluded that GCWD would have sufficient water supplies to meet project demands. Project demands would be met by current groundwater aquifer supplies and the landowner's overlying groundwater rights for the next 20 years, and during dry years by using stored supplies of Kern River canal surface water seepage purchased from KDWD. Therefore, GCWD will have sufficient water supply to meet GCWD demands and project demands within the entire service area for the duration of the WSA planning period. Groundwater levels would continue to be monitored, and should levels begin to decline, alternative supplies from the KDWD surface water seepage reserve bank or the landowner's overlying groundwater rights could be used to meet project demands while maintaining sustainable groundwater levels within the native aquifer.

Table 4.11-3. Greenfield County Water District Supply/Demand Comparison with Project

	Year				
	2015[4]	2020	2025	2030	2035
Expected Demand with Project (AF)	2,970	3,771	4,196	4,621	5,046
Available Canal Surface Water Seepage (AF)[1]	4,500	+4,500	+4,500	+4,500	+4,500
Groundwater well aquifer (primary source)[2, 3]	2,970	3,395	3,820	4,245	4,670

Notes:

[1] This is the volume of water that is available for GCWD to purchase each year. This volume is cumulative, from 2008 through February 2015. GCWD has banked 21,642 AF. However, because the total volume that is actually available in the aquifer is unknown, the annual maximum is shown here (with a plus sign to show that it is additive) to maintain conservative assumptions and provide a supply buffer.

[2] Due to the un-adjudicated basin, quantification of actual water volumes within the native groundwater aquifer is not required. However, it can be at least partially accounted for using projected demands (which are based on historical annual extractions) and relatively stable groundwater levels. In addition, surface water seepage from the Kern Island Canal helps to recharge the basin and offset potential impacts of groundwater extractions and provide a reserve of groundwater for future use.

[3] The volume of available supply within the aquifer includes Giumarra' s overlying groundwater rights. The volume of water available via Mr. John Giumarra's overlying groundwater rights is currently unknown. Should GCWD secure an agreement and utilize these rights, groundwater would be extracted from the five existing GCWD wells, and it would be monitored on a regular basis.

4 The project is not expected to begin operation until 2017. Therefore, this demand volume is the same as that without the project. Project demands will be approximately 3,346 AF in 2017.

AF = acre-feet

GCWD = Greenfield County Water District

To provide GCWD with additional water supplies, KDWD has agreed to establish a new water supply agreement and provide additional water to meet the needs of GCWD and meet other anticipated demand growth within the GCWD service area. As part of the new agreement, KDWD will bank water for GCWD through a groundwater basin by way of seepage via direct recharge in existing spreading basins provided by KDWD for the benefit of the project area, as part of KDWD's groundwater banking program. KDWD operates a ground water-banking program, in which water is recharged in the Kern Island Recharge Basin and/or Kern Island Canal and banked for future extraction and use.

The exact time when this new agreement would be invoked is not certain because the future demand estimate was based on an assumed growth rate. If demand increases at a rate higher than expected, the new agreement could be invoked earlier than 2030. Furthermore, if demand increases at a rate lower than expected and water supply deficit does not occur by 2030, KDWD has made a financial commitment to paying for the rights to additional water through a tiered payment system. The new water supply agreement is anticipated to be approved by KDWD and GCWD before the certification of the project EIR. With this

agreement, the project would have a sufficient water supply throughout the planning horizon.

In addition to these additional water supplies, water use will be reduced through water conservation measures. GCWD will continue to implement several existing water conservation measures and begin to implement new measures as part of its water conservation program (Appendix D). Mitigation Measure MM WQ-2 would require onsite mitigation, such as the use of water-efficient fixtures and drought-tolerant landscaping to further reduce the project's water demand. Should LAFCO deny the annexation into GCWD's service area, however, an alternative water supply sufficient for the life of the project must be identified and secured for the project, and would require approval from the alternative water supplier and the City, as required by MM WQ-3. Other options may include connecting with City lines on the west side of SR-99 or to California Water Service Company (Cal Water) to the north, which in the case of Cal Water would also require a service area expansion. Therefore, with the use of GCWD existing groundwater rights and overlying groundwater rights, as well as implementation of GCWD water conservation measures and project water-efficient infrastructure and management measures including MM WQ-2, potential impacts on water supply would be less than significant.

Mitigation Measures

Implement **MM WQ-2.** Water Efficient Fixtures (Outdoor), Water Efficient Fixtures (Indoor), and Drought-Tolerant Landscaping.

Implement **MM WQ-3**. Water Supply Alternatives.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-5. The proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The proposed project would not result in significant impacts on sewers or wastewater treatment facilities. Table 4.11-2 (above) shows the projected amount of wastewater that would be generated by the proposed project. In total, the proposed project would generate approximately 95,200 gpd. Wastewater generated by the proposed project would be conveyed through the trunk line under Hosking Avenue to BDPW Plant No. 3, which is located west of the project site. A sewer study will be required to ascertain the upgrades necessary to ensure that the trunk line continues to have adequate capacity to serve the

proposed project. No construction of new wastewater treatment facilities or expansion of existing treatment facilities would be required; however, upgrades to existing conveyance infrastructure would be required pursuant to MM U-1, as discussed under Impact U-2.

The existing capacity of Plant No. 3 is 32 mgd. The plant has an average flow of 17.2 mgd and a maximum flow of 18.4 mgd (Roldan pers. comm.). The proposed project is anticipated to result in a demand of 95,200 gpd, which would be less than 0.3% of the plant's daily capacity. Therefore, the plant would have adequate capacity to serve project demand. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-6. The project would not be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

The proposed project is in the Metropolitan Bakersfield area, which is served primarily by two landfills. The proposed project would be served by the Bena landfill, which is operated by the County Waste Management Department. Construction and operational impacts related to solid waste are discussed in more detail below.

Construction

There are no existing buildings onsite; therefore, no construction debris would be generated by demolition activities. Site grading may encounter some debris onsite, such as plastic beverage containers and food packaging, various scrap metals, and other discarded waste. This type of debris would most likely be sent to landfills; however, the quantity would be minimal and would have a negligible effect on the capacity of the existing Bena landfill.

The proposed project would involve construction of a commercial center, hotel and related facilities, and surface parking spaces and the installation of landscaping. These construction activities would be expected to occur in two phases. Leftover construction materials and debris, such as metals, glass, or wood, would be reused or recycled. Other waste, such as paints and solvents, would be disposed of at an appropriate hazardous waste facility. The solid waste that would be sent to the Bena landfill would be limited to the small portion of construction waste that would not be suitable for reuse or recycling and would not be hazardous. This would meet the diversion requirements set forth by

AB 939 and would dramatically reduce the amount of solid waste transferred to landfills.

Mitigation Measure MM U-2 would be required to ensure compliance with the City's recycling goals. Therefore, because a substantial majority of the construction materials would be recycled or reused onsite instead of being disposed of in a local landfill, solid waste impacts on existing landfills from construction materials would be less than significant with mitigation incorporated.

Operation

During operation, the proposed project would generate waste from retail and hotel uses. Solid waste generated at the project site would be processed at the Bena landfill, which, as of July 2013, had a remaining capacity of 32,808,260 cubic yards, or 62%. It is estimated that the proposed project would produce 5.4 tons of solid waste per year, according to rates from CalRecycle's Waste Characterization table. A factor of 1 ton to 3.7 cubic yards converts the project's 5.4 tons of solid waste per year to 19.98 cubic yards, or 0.00006% of capacity at the Bena landfill. Therefore, existing landfills would have sufficient capacity for the proposed project, and solid waste impacts on existing landfills from debris associated with project operation would be less than significant.

The continued generation of solid waste within the county is placing pressure on local landfills, and the additional waste generated by the proposed project would increase stress on these landfills. To minimize impacts on local landfills, the proposed project would be operated in compliance with the City's recycling programs, consistent with City ordinances to reduce the solid waste generated by development proposals. Mitigation is required to ensure compliance with the City's recycling program. After mitigation, impacts would be less than significant.

Table 4.11-4. Estimated Waste Generation Rates

Land Use	Development Size	Waste Generation Rate[1]	Expected Solid Waste Generation
Mixed Commercial and Retail	800,000 square feet	13 pounds/1,000 gross square feet/day	10,400 pounds/day
Other: Hotel	240 rooms	2 pounds/room/day	480 pounds/day
Total:			10,880 pounds/day (5.4 tons/year)

[1] Waste generation rates are based on values provided by CalRecycle (2015b).

Mitigation Measures

MM U-2. Waste Management Plan. Prior to the issuance of building permits, the project proponent shall submit a waste management plan to the City of Bakersfield to demonstrate how the project will comply with Assembly Bill 939

and achieve 50% or greater diversion rate for both construction and operational solid waste. In addition, the project shall institute onsite recycling and composting services to reduce offsite, waste-related emissions associated with the proposed project as identified under MM GHG-1.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-7. The proposed project would not fail to comply with federal, state, and local statutes and regulations related to solid waste.

Construction and operation of the proposed project would comply with federal, state, and local statutes and regulations related to solid waste, namely AB 939, as described in the Regulatory Setting, above. Solid waste generated by the proposed project would be disposed of in accordance with AB 939, with oversight from the City's local enforcement agency. Therefore, the proposed project would comply with applicable solid waste laws, and impacts would be less than significant with mitigation.

Mitigation Measures

Implement mitigation measure MM U-2 and MM GHG-1.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact U-8. The proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Natural Gas

The proposed project would not result in significant impacts on natural gas services. The project site is undeveloped and does not currently have natural gas service. The proposed project's projected natural gas demand is based on calculations from Section 4.6, *Greenhouse Gas Emissions*, of this document. Estimated natural gas usage for the proposed project is summarized in Table 4.11-5. The proposed 800,000 square feet of commercial retail uses is projected to consume approximately 8.9 million British thermal units (BTUs) of natural gas per year, while the proposed hotel is projected to consume approximately 2.9 million BTUs of natural gas per year, for a combined total of approximately 11.8 million BTUs per year. This is a small percentage of natural gas usage compared with the overall amount used within Kern County. Specifically, in 2013, the county used approximately 254 trillion BTUs of natural gas.

As indicated in the Environmental Setting section, natural gas supplies to California are expected to remain plentiful for the next several decades. The total resource base (i.e., gas that is recoverable with today's technology) for the lower 48 states is estimated to be about 975 trillion cubic feet, enough to continue current production levels for more than 50 years. Additional pipeline capacity and open access have contributed to the long-term availability of natural gas supplies for California (California Gas and Electric Utilities 2014). Interstate pipelines that currently serve California include the Ruby, El Paso Natural Gas Company, Kern River Transmission Company, Mojave Pipeline Company, Gas Transmission Northwest, Transwestern Pipeline Company, Questar Southern Trails, Tuscarora, and Bajanorte/North Baja pipelines (California Gas and Electric Utilities 2014). Therefore, an adequate volume of natural gas exists to supply the demands of the proposed project. The project applicant would work with PG&E to design and install the necessary infrastructure that would tie into existing lines within existing roadways.

PG&E has natural gas lines in the project vicinity that supply residential and commercial customers. It is anticipated that PG&E will be able to accommodate the proposed project. Small natural gas distribution pipelines would be installed within the site to connect project facilities to existing PG&E infrastructure. This would result in minor construction impacts along existing utility easements. These impacts are discussed in the respective resource sections (e.g., air quality, GHG emissions, noise) of this DEIR. Impacts associated with the supply of natural gas would be less than significant.

Table 4.11-5. Project Demand for Natural Gas

Proposed Land Used[1]	Demand[2] (BTU per year)
Mixed Commercial and Retail	8,920,000
Other: Hotel	2,920,000
Estimated Total Project Demand:	11,800,000

[1] Parking and landscape areas do not require natural gas and were excluded from consideration.

[2] Demand for natural gas is based on GHG emissions calculations. See Section 4.6, *Greenhouse Gas Emissions*, of this document for an explanation of the calculation method.

BTU = British thermal units.

Source: CalEEMod calculations (Appendix F); California Energy Commission 2006 and 2010.

Electricity

PG&E currently has power lines in the vicinity of the project that serve existing demand (Appendix I). The existing power lines would be capable of supporting mixed retail as part of future development (Settlemire pers. comm.). There is no need for additional infrastructure (such as a new substation) to supply the proposed project with electricity (Settlemire pers. comm.).

Detailed information regarding daily, monthly, or yearly usage is proprietary information of the utility and is unavailable. Summer loads produce the highest demands in the Central Valley because of a variety of uses, including irrigation for agricultural production and the operation of residential and commercial air conditioners. The proposed project's demand for electricity is summarized in Table 4.11-6.

Table 4.11-6. Project Demand for Electricity

Proposed Land Use[1]	Unmitigated Demand[2] (kWh/yr)	Mitigated Demand (kWh/yr)
Mixed Commercial and Retail	7,300,000	4,770,000
Other: Hotel	1,020,000	873,600
Estimated Total Project Demand:	8,320,000	5,643,600

[1] Parking and landscaped areas do not require natural gas and were excluded from consideration.

[2] Demand for electricity based is on GHG emissions calculations. See Section 4.6, *Greenhouse Gas Emissions*, of this document for an explanation of the calculation method.

kWh/yr = kilowatt-hours per year.

Source: CalEEMod calculations (Appendix F); California Energy Commission 2006 and 2010.

It is estimated that total demand from the proposed project would be approximately 8,320,000 kilowatt-hours per year (kWh/yr), based on calculations from Section 4.6, *Greenhouse Gas Emissions*, of this document. With implementation of the mitigation identified in Section 4.6, electricity usage would dip to 5,643,600 kWh/yr. Application of the mitigation measures would ensure that the project would not result in the wasteful, inefficient, or unnecessary consumption of energy.

The electrical infrastructure for the proposed project would be designed according to current codes and applicable safety standards. The proposed project would not require major electrical power lines or substations, which could substantially affect the environment. The existing electrical distribution system would be upgraded within the project boundaries. The construction of these facilities would PG&E to meet current and future foreseeable demand from the project site. The applicant would work with PG&E to design and install the appropriate infrastructure to supply electricity to the project site. Mitigation Measure MM GHG-1 would require onsite mitigation incorporated in the project design to reduce consumption of electricity through the use of high-efficiency lighting. With Mitigation Measure MM GHG-1, impacts associated with the needed upgrades and the installation of new infrastructure would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM GHG-1.

Level of Significance after Mitigation

Impacts would be less than significant.

4.11.4.4 Cumulative Impacts

The cumulative context for public services and utilities impacts is growth within the planning area, as reflected in the 2002 MBGP. The associated potential increase in population is considered in the cumulative scenario.

Cumulative impacts on public services would occur if other projects would unduly tax the ability of public service agencies to provide adequate services and response times in the communities that they serve, resulting in the need to construct new or expanded facilities. The construction or expansion of those facilities could result in significant environmental impacts.

Cumulative impacts on utilities and service systems would occur if utility providers would be unable to provide adequate water, wastewater, energy, or solid waste disposal services and accommodate other projects. Because of existing local infrastructure, the proposed project is expected to place less-than-significant demand on public services and utilities.

The projects identified in Table 3-4 would substantially increase demands on public service providers and utility services, including the need for infrastructure expansion. At present, adequate sources of energy and water are available, and wastewater infrastructure and landfill capacity are also adequate. Over the long term, the current water supply available to GCWD would not be sufficient beyond 2030. However, GCWD will be entering into an agreement with Kern Delta Water District to provide sufficient water supplies through GCWD's long-term planning horizon, and to specifically address multiple dry years, as well. Moreover, it is reasonable to assume that, as new development applications are submitted to the City, new impact fees will be assessed and collected to ensure that adequate police and fire protection services continue to be provided.

Currently, several utility agencies are expanding capacity and increasing production to meet the increasing needs of the City, the blueprint for which is provided in the City's general plan and regional growth estimates. Recently, Bakersfield Department of Public Works increased the total treatment capacity of Plant No. 3. In addition, Pacific Gas and Electric Company is currently expanding the capacity of its energy infrastructure. Incorporation of the measures identified above for the proposed project would reduce impacts to less-than-cumulatively considerable levels.

Section 4.12
Transportation and Traffic

4.12.1 Introduction

This section presents a description of the existing and future transportation infrastructure and traffic conditions in the project vicinity; assesses potential construction and operating impacts of the proposed project on the transportation system; and presents the mitigation measures that have been identified to address those impacts. The study area for the transportation analysis includes the southern metropolitan Bakersfield area that could potentially be affected by traffic generated during project construction and after the project is completed.

The analysis in this section is based primarily on the traffic study prepared for the project by Ruettgers & Schuler Civil Engineers (March 2015), which is included in this DEIR as Appendix C. Existing conditions are provided using 2014 data, and analyses were prepared for future years 2017 (Phase I Opening Year), 2020 (Phase II Opening Year), and 2035 (Long-term).

4.12.2 Environmental Setting

4.12.2.1 Study Area

The project site is in southern Bakersfield and is bounded by State Route (SR) 99 to the west, Berkshire Road to the north, South H Street to the east, and Hosking Avenue to the south. The study area is bounded by White Lane to the north, Cottonwood Road to the east, Taft Highway (SR 119)/Panama Road to the south, and Ashe Road to the west. The study area was reviewed and approved by the City of Bakersfield Traffic Department.

The study area includes 53 analysis intersections, of which 48 currently exist and 5 are expected to be in place in the future. Of these 53 analysis intersections, 16 are unsignalized and 37 are signalized. The study area consists of all intersections at which the proposed project is expected to add 50 or more vehicle trips during

the weekday PM peak hour, based on transportation modeling results. The study area also includes 9 roadways that have been divided into 36 analysis segments.

A variety of land uses are present in the study area, including agricultural, residential, industrial, and commercial uses. Located adjacent to the project site are agricultural land to the south, undeveloped commercial property to the north, and residential development to the east. Commercial development is predominant along major transportation corridors, including Panama Lane, White Lane, Stine Road, and Wible Road. Industrial uses are present to the north of the project site along SR 99. The remainder of the study area primarily consists of residential development, with a high level of new residential development currently being constructed in the area south of Panama Lane and west of SR 99.

4.12.2.2 Analysis Periods

Intersection analysis was completed for three peak periods: PM peak hour (between 7:30 a.m. and 8:30 a.m.), PM peak hour (between 4:30 and 5:30 p.m.) and Saturday midday peak hour (between 1:00 p.m. and 2:00 p.m.). Roadway segment analysis was based on average daily traffic (ADT), which represents the average number of vehicle trips that occur on a typical weekday.

4.12.2.3 Roadways

Roadways in the City are classified as follows:

- Freeways provide service to through-traffic exclusively, with no access to abutting property or at-grade intersections.
- Expressways are arterial highways with at least partial control of access that may or may not be divided or have grade separations at intersections and may be an interim facility for an ultimate freeway.
- Arterials are used primarily by through-traffic, with a minimal function to provide access to abutting property.
- Collectors function to connect local streets with arterials, and provide access to abutting property.
- Local streets are used exclusively for property access, with through-traffic discouraged.

The Bakersfield roadway system is based on a grid system with arterial roadways spaced at approximate 1-mile intervals, except in the central area where spacing is closer. Typically, collector streets are spaced at 0.5-mile intervals between arterials, which also are planned in a grid pattern.

Regional Highways

Regional access to the project site is provided by SR 99, which is a major north-south route that runs through the central valley of California, extending from Interstate 5 south of Bakersfield to Sacramento. SR 99 operates as an eight-lane freeway from Wilson Road to Airport Drive, with six lanes elsewhere in Kern County. As the major Central Valley connector, SR 99 carries regional traffic in addition to local traffic. SR 99 is the only north-south freeway that passes through Bakersfield, and abuts the west boundary of the project site.

SR 58 is an east-west freeway linking SR 99 with cities east of Bakersfield. It carries less traffic than SR 99. The other freeways in the region include SR 178, SR 184, SR 119, and SR 223. In addition to these state routes, Interstate 5 is a north-south oriented interstate route to the southwest and west of the City and accommodates additional regional traffic through the area.

City Streets

The following are the major roadways in the study area.

- **Akers Road** is a north-south collector road between Stine Road and Wible Road, and operates as a two-lane facility at various stages of widening. Akers Road currently provides access to residential and agricultural areas north and south of McKee Road, respectively.
- **Ashe Road** is designated as an arterial and currently operates as a two-lane road south of Panama Lane and as a fully improved arterial north of Panama Lane. Within the study area, Ashe Road provides access to residential and commercial areas north of Panama Lane and agricultural as well as developing residential areas south of Panama Lane.
- **Berkshire Road** is an east-west collector road that exists as a two-lane roadway at various stages of widening and improvement in the project vicinity. Berkshire Road extends from Colony Street to the east and to north-south arterials. It also provides access to the project from the north.
- **Colony Street** is a north-south roadway that crosses the Arvin Edison Canal and provides a connection from Berkshire Road to Panama Lane. Colony Street is a two-lane facility south of the canal and a four-lane facility to the north, and it has curb and gutter and concrete sidewalk along its length.
- **Cottonwood Road** is designated as an arterial. Within the study area, it is a two-lane, north-south roadway with graded shoulders and provides access to agricultural and low-density residential land uses.
- **Fairview Road** is an east-west roadway east of SR 99 midway between Panama Lane and Pacheco Road. It is designated as a collector road and provides access to residential land uses within the study area. Fairview Road is currently a two-lane roadway with graded shoulders adjacent to residential development.

- **Gosford Road** is designated as an arterial and provides access to residential, commercial, and agricultural land uses within the study area. It is currently a two-lane road south of Panama Lane and is at various stages of widening and improvement adjacent to development from Panama Lane to District Boulevard. Gosford Road operates as a six-lane facility north of District Boulevard. North of Stockdale Highway, Gosford Road exists as Coffee Road. Gosford Road/Coffee Road is one of four north-south arterials that cross the Kern River west of SR 99 and, therefore, serves as a major north-south corridor in the western metropolitan Bakersfield area.
- **Harris Road** is an east-west roadway west of SR 99 midway between Panama Lane and Pacheco Road. It is designated as a collector road and operates as a two-lane facility east of Stine Road and as a four-lane facility west of Stine Road. Harris Road provides access to residential and industrial land uses within the study area.
- **Hosking Avenue** is an east-west arterial from Stine Road midway between McKee Road and Berkshire Road and crosses SR 99 without an interchange (Hosking Avenue becomes McCutchen Road west of Stine Road). Hosking Avenue is a four-lane facility where it is fully expanded adjacent to developed areas, and has fewer than four lanes next to areas that are not yet fully developed. Hosking Avenue provides access to residential and agricultural areas. The Regional Transportation Impact Fee (RTIF) program includes a new interchange at Hosking Avenue and SR 99, as well as new traffic signals at various arterial and collector intersections within the study area. The interchange is currently under construction and is assumed complete for further scenarios.
- **Hughes Lane** is a north-south roadway southwest of the project site midway between Wible Road and South H Street. It is designated as a collector road and is currently an improved two-lane roadway. Hughes Lane provides access to residential land uses within the study area.
- **McCutchen Road** is an east-west arterial that becomes Hosking Avenue to the west of Stine Road. It exists in various stages of widening and improvement adjacent to development, and provides access to agricultural and residential areas.
- **McKee Road** is an east-west collector road that is currently a two-lane roadway at various stages of widening in the project vicinity. While McKee Road does not currently cross SR 99, it does provide access to residential neighborhoods on the east and west sides of SR 99.
- **Monitor Street** is a two-lane, north-south roadway midway between South H Street and South Union Avenue. It is designated as a collector road and provides access to residential areas. The RTIF includes installing traffic signals at Hosking Road.
- **Mountain Ridge Drive** is a north-south roadway in various stages of widening that provides access to residential and developing residential areas between Berkshire Road and Taft Highway.
- **Pacheco Road** is an east-west two-lane roadway that extends west from Cottonwood Road midway between Fairview Road and White Lane and

crosses under SR 99 without an interchange. It is designated as a collector road within the study area and provides access to residential and industrial land uses.

- **Panama Lane** is designated as an arterial. It extends east from SR 43 near Interstate 5 through the southern metropolitan Bakersfield area, with an interchange connection at SR 99. Panama Lane operates as a four- or six-lane facility at various stages of widening and improvement within the study area and provides access to residential and commercial land uses. The RTIF includes adding additional lanes west of Stine Road as well as installing traffic signals at various arterial and collector intersections.
- **Panama Road** is an east-west arterial that extends east from SR 99 through southern metropolitan Bakersfield. It is a two-lane roadway with graded shoulders and provides access to the City of Lamont and outlying agricultural areas.
- **South H Street** is a north-south arterial that extends from SR 119 (Taft Highway) to Brundage Lane and continues northward through downtown Bakersfield as H Street. It is a four-lane roadway north of Panama Lane and narrows to a two-lane roadway south of Panama Lane. South H Street provides access to residential, commercial, and industrial land uses within the study area. The RTIF includes adding two lanes south of Panama Lane and installing traffic signals at Hosking Avenue, Berkshire Road, and intersections farther south.
- **South Union Avenue** is designated as an arterial and was formerly a segment of SR 99. South Union Avenue extends from State Route 99 to Brundage Lane, and continues north to Columbus Street as Union Avenue. (The segment of Union Avenue between Brundage Lane and Golden State Highway is part of SR 204.) Within the project vicinity, South Union Avenue operates with four lanes and has paved shoulders and a median. It provides access to residential, commercial, and industrial areas. The RTIF includes adding two lanes within the study area and installing new traffic signals at Hosking Avenue and Berkshire Road.
- **Sparks Street** is a two-lane roadway that extends from Pacheco Road to Buckley Avenue midway between South Union Avenue and Cottonwood Road. It is designated as a collector road and provides access for residential areas.
- **State Route 99** is a major north-south route through the central valley of California, extending from Interstate 5 south of Bakersfield to Sacramento. SR 99 operates as an eight-lane freeway from Wilson Road to Airport Drive, with six lanes elsewhere in Kern County.
- **State Route 119 (Taft Highway)**, an east-west roadway, is designated as an expressway west of SR 99 (SR 119) and as an arterial east of SR 99. It is currently a two-lane roadway at various stages of widening adjacent to development between SR 99 and South Union Avenue. Taft Highway continues as a two-lane roadway with graded shoulders east of South Union Avenue along the Panama Road alignment. Taft Highway provides access to SR 99 from the communities of Greenfield, Weedpatch, and Lamont.

- **Stine Road** is designated as an arterial and currently exists at full improvement width north of Panama Lane and at various stages of widening adjacent to development south of Panama Lane. Stine Road provides access to agricultural, residential, commercial, and industrial land uses within the study area. The RTIF includes adding two lanes south of Panama Lane and installing traffic signals at Hosking Avenue, Berkshire Road, and intersections farther south.
- **White Lane** is an east-west arterial extending east from Allen Road, providing access to residential and commercial land uses through the southern metropolitan Bakersfield area. It currently exists within the study area as a six-lane roadway with a raised center median and an interchange at SR 99.
- **Wible Road** is a north-south arterial adjacent to SR 99. It currently operates as a four-lane roadway north of Panama Lane and as a two-lane roadway at various widths and stages of improvement south of Panama Lane. Wible Road continues as Oak Street north of Stockdale Highway/Brundage Lane. It provides access to residential, commercial, and industrial land uses within the study area. The RTIF includes adding two lanes south of Panama Lane and installing traffic signals at Hosking Avenue, Mc Kee Road, and Taft Highway.

Level of Service

Level of service (LOS) is the primary measurement used to determine the operating quality of a roadway segment or intersection. In general, LOS is measured by the ratio of traffic volume to roadway capacity (V/C) or by the average delay experienced by vehicles on the facility. The quality of traffic operation is graded into one of six LOS designations, A, B, C, D, E, or F, with LOS A representing the best range of operating conditions and LOS F representing the worst.

LOS standards are used to evaluate the transportation impacts of long-term growth. In order to monitor roadway operations, jurisdictions adopt standards by which the minimum acceptable roadway operating conditions are determined, and deficiencies may be identified. The City of Bakersfield has adopted a standard of LOS C for its roadways. Therefore, any roadway or intersection operating at LOS D or worse is considered deficient.

Mitigation is required where project traffic reduces roadway operations to LOS D or worse. Where the pre-project condition of the roadway is already below LOS C, mitigation is required where the LOS degrades below the pre-project LOS.

Intersection Level of Service

The City of Bakersfield calculates intersection LOS according to methodologies presented in the Highway Capacity Manual (Transportation Research Board 2010). LOS is calculated along roadway segments by comparing the actual number of vehicles using a roadway (volume of traffic) to its carrying capacity. For signalized and all-way stop-controlled intersections, LOS is measured by the average delay (seconds per vehicle) experienced by vehicles that travel through

the intersection. For one-way and two-way stop-controlled intersections, LOS depends on the amount of delay experienced by vehicles on the stop-controlled approaches. Table 4.12-1 and Table 4.12-2 present the definitions for unsignalized and signalized intersection LOS, respectively.

Table 4.12-1. LOS Definitions for Unsignalized Intersections

Average Control Delay	Level of Service	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
> 10 and ≤ 15	B	Short traffic delays
> 15 and ≤ 25	C	Average traffic delays
> 25 and ≤ 35	D	Long traffic delays
> 35 and ≤ 50	E	Very long traffic delays
> 50	F	Extreme delays

Table 4.12-2. LOS Definitions for Signalized Intersections

Volume/Capacity	Control Delay (seconds per vehicle)	Level of Service
< 0.60	≤ 10	A
0.61 – 0.70	> 10 and ≤ 20	B
0.71 – 0.80	> 20 and ≤ 35	C
0.81 – 0.90	> 35 and ≤ 55	D
0.91 – 1.00	> 55 and ≤ 80	E
> 1.0	> 80	F

Existing peak hour turning movement volumes were field-measured at all existing study intersections in 2014. Existing conditions analysis is based on the traffic volumes obtained from those counts.

Existing LOS at the 16 unsignalized intersections and 37 signalized intersections are presented in Table 4.12-3 and Table 4.12-4, respectively, for the existing conditions counts collected in 2014.

Table 4.12-3. Existing 2014 Levels of Service at Unsignalized Intersections

ID	Intersection	Stop Control Direction[1]	AM	PM	Sat
17	Golden Gate Drive/Panama Lane	Northbound/ Southbound	A/B	A/F	A/C
27	Sparks Street/Panama Lane[2]	Northbound/ Southbound	-/-	-/-	-/-
28	Cottonwood Road/Panama Lane	Overall Intersection	B	C	B
36	South Union Avenue/Berkshire Road	Overall Intersection	D	A	A
38	Ashe Road/McCutchen Road	Eastbound/ Westbound	A/A	A/A	A/A
39	Mountain Ridge Drive/McCutchen Road	Northbound/ Southbound	A/A	B/B	B/B
41	Akers Road/Hosking Avenue	Overall Intersection	C	C	B
43	Hughes Lane/Hosking Avenue	Northbound	C	B	B
49	Cottonwood Road/Hosking Avenue	Eastbound/ Westbound	A/-	B/-	B/-
53	South H Street/McKee Road	Overall Intersection	A	A	A
54	South Union Avenue/McKee Road	Eastbound/ Westbound	C/B	B/B	B/C
56	Akers Road/Taft Highway (SR 119)	Northbound/ Southbound	B/-	D/-	B/-
58	Hughes Lane/Taft Highway (SR 119)	Northbound/ Southbound	B/-	C/-	B/-
61	Shannon Drive/Taft Highway	Northbound/ Southbound	A/A	A/A	C/A
63	Cottonwood Road/Panama Road	Overall Intersection	A	B	C
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	A

[1] At all-way stop-controlled intersections, LOS is average of all movements; at one-way and two-way stop-controlled intersections, LOS is provided for each stop-controlled leg of the intersection.

[2] Future intersection at location where future roadway is planned—expected to be in place after 2020 and before 2035.

SR = State Route

Table 4.12-4. Existing 2014 LOS at Signalized Intersections

ID	Intersection	AM	PM	Sat
3	Wible Road/White Lane	C	C	C
4	Southbound SR 99 off-ramp/White Lane	B	B	B
5	Northbound SR 99 off-ramp/White Lane	A	A	A
6	South H Street/White Lane	C	E	C
8	South Union Avenue/White Lane	C	C	C
9	South H Street/Pacheco Road	C	C	C
10	South Union Avenue/Pacheco Road	C	C	B
14	South H Street/Fairview Road	C	C	B
15	South Union Avenue/Fairview Road	B	B	B
16	Ashe Road/Panama Lane	C	C	C
18	Stine Road/Panama Lane	C	C	C
19	Akers Road/Panama Lane	B	B	B
20	Wible Road/Panama Lane	B	C	C
21	Southbound SR 99 off-ramp/Panama Lane	B	B	B
22	Northbound SR 99 off-ramp/Panama Lane	B	B	A
23	Colony Street/Panama Lane	B	C	C
24	South H Street/Panama Lane	B	C	C
25	Monitor Street/Panama Lane	C	B	B
26	South Union Avenue/Panama Lane	B	C	B
33	Colony Street/Berkshire Road [1]	-	-	-
34	South H St/Berkshire Road	C	C	C
37	South H Street/Project Site[1]	-	-	-
40	Stine Road & Hosking Ave	C	C	C
42	Wible Road & Hosking Ave	C	C	B
44	SB 99 off ramp & Hosking Ave	-	-	-
45	NB 99 on ramp & Hosking Ave	-	-	-
46	South H Street & Hosking Avenue	C	C	C
47	Monitor St/Hosking Avenue	C	C	C
48	South Union Avenue/Hosking Avenue	C	B	C
55	Stine Road/Taft Highway (SR 119)	A	A	A
57	Wible Road/Taft Highway (SR 119)	B	B	C
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	B	C	C
60	South H Street/Taft Highway	C	C	B

ID	Intersection	AM	PM	Sat
62	South Union Avenue/Panama Road	C	C	C
74	Ashe Road/Taft Highway (SR 119)	C	D	C
76	Gosford Road/McCutchen Road	A	A	B
87	Gosford Road/Panama Lane	F	F	C

[1] Access point to proposed project site – would not exist under No Project conditions.

SR = State Route

The following intersections are operating at an LOS that fails to meet the City standard under existing 2014 conditions.

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17) operates at LOS F during the PM peak hour.
- South Union Avenue/Berkshire Road (ID36) operates at LOS D during the AM peak hour.
- Akers Road/Taft Highway (SR 119) (ID 56) operates at LOS D during the PM peak hour.

Signalized

- South H Street/White Lane (ID 6) operates at LOS E during the PM peak hour.
- Ashe Road/Taft Highway (SR 19) (ID 74) operates at LOS D during the PM peak hour.
- Gosford Road/Panama Lane (ID 87) operates at LOS F during the AM and PM peak hours.

Traffic Signal Warrant Analysis

Peak hour signal warrants were evaluated for each of the signalized intersections in the study based on the California Manual on Uniform Traffic Control Devices for Streets and Highways (California Department of Transportation 2014). A signal warrant defines the minimum condition under which the installation of a traffic control signal might be warranted. Meeting this threshold condition does not require that a traffic signal be installed at a particular location, but rather that other traffic factors and conditions be evaluated in order to determine whether the signal is justified. Signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above LOS C, or operate below LOS C and not meet signal warrant criteria.

The results of the signal warrant analysis for existing conditions are provided in the traffic report, included in this DEIR as Appendix C. The following five intersections meet the signal warrant under existing conditions:

- Cottonwood Road/Panama Lane (ID 28)
- Akers Road/Hosking Avenue (ID 41)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Cottonwood Road/Taft Highway (SR 119) (ID 63)

Roadway Level of Service

Table 4.12-5 summarizes roadway capacities that have been defined by the City, which were used for the roadway LOS calculations. For the analysis roadways in the study area, existing V/C ratio was calculated by dividing the existing ADT of each roadway by its capacity. A V/C ratio of 0.80 is the highest value that corresponds to LOS C (Transportation Research Board 2000). Therefore, a roadway with a V/C ratio greater than 0.80 fails to meet the adopted City LOS standard. Table 4.12-6 presents the existing V/C ratios for the study area roadways.

Table 4.12-5. Roadway Capacity by Facility Type

Roadway Type	Capacity (vehicles per day)
8-Lane Freeway	187,500
6-Lane Freeway	140,625
4-Lane Freeway	93,750
6-Lane Expressway	75,000
6-Lane Arterial	60,000
4-Lane Arterial	40,000
4-Lane Collector	30,000
2-Lane Collector	15,000

Table 4.12-6. Existing 2014 Roadway Volume to Capacity Ratio

Roadway Segment	Capacity	ADT	V/C
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	6,859	0.46
White Ln: W. of Union Ave	40,000	9,722	0.24
White Ln: Hughes Ln–H St	40,000	25,201	0.63
White Ln: H St–Monitor St	40,000	12,837	0.32
White Ln: Wible Rd – SR 99	60,000	35,530	0.59
Panama Ln: Gosford Rd–Ashe Rd	22,500	8,097	0.36
Panama Ln: Ashe Rd–Stine Rd	47,500	23,082	0.49
Panama Ln: Stine Rd–Akers Rd	60,000	27,246	0.45
Panama Ln: Akers Rd–Wible Rd	60,000	34,489	0.57
Panama Ln: Wible Rd–SR 99	60,000	46,229	0.77

Roadway Segment	Capacity	ADT	V/C
Panama Ln: SR 99–S. H St	50,000	24,953	0.50
Panama Ln: S. H St–Union Ave (SR 204)	40,000	10,688	0.27
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	7,832	0.52
Hosking Rd: Stine Rd–Wible Rd	15,000	6,339	0.42
Hosking Ave: Wible Rd–SR 99	15,000	8,571	0.57
Hosking Ave: SR 99–S. H St	15,000	15,663	1.04
Hosking Ave: S. H St–S. Union Ave	15,000	4,546	0.30
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	1,731	0.12
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	9,687	0.65
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	9,728	0.65
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	9,737	0.65
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	11,563	0.77
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	13,138	0.88
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	10,724	0.71
S. H St: White Ln–Pacheco Rd	40,000	20,087	0.50
S. H St: Pacheco Rd–Fairview Rd	40,000	14,073	0.35
S. H St: Fairview Rd–Panama Ln	40,000	14,156	0.35
S. H St: Panama Ln–Hosking Ave	40,000	11,699	0.29
S. H St: Hosking Ave–McKee Rd	40,000	4,386	0.11
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	6,477	0.16
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	5,999	0.40
S. Union Ave: White Ln–Pacheco Rd	40,000	25,621	0.64
S. Union Ave: Fairview Rd–Panama Ln	40,000	13,636	0.34
S. Union Ave: Panama Ln–Hosking Rd	40,000	11,792	0.29
S. Union Ave: Hosking Rd–Panama Rd	40,000	13,804	0.35
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	16,114	0.40

ADT = Average Daily Traffic
SR = State Route
V/C = volume to capacity ratio

The table shows that the following two roadway segments fail to meet the City standard.

- Hosking Avenue, between SR 99 and South H Street, is operating at a V/C ratio of 1.04.
- Taft Highway (SR 119), between South H Street and Chevalier Road, is operating at a V/C ratio of 0.88.

Non-Motorized Transportation

The Kern County Bicycle Master Plan and Complete Streets Recommendations were adopted by Kern County in October 2012 to catalogue existing bicycle facilities and to identify opportunities for improvements and additional opportunities to promote bicycling in the region. There are more than 67 miles of existing bicycle facilities in unincorporated Kern County, and more than 30 miles of bike lanes exist throughout the City.

The Kern River Bike Path, which is the premier bicycle facility in the county, exists between Stockdale Highway at the Kern River crossing and Gordon's Ferry. In the vicinity of the project site, there are bike lanes along Panama Lane, Ashe Road, Stine Road, Wible Road, White Lane, and South H Street. Bicycle facilities are also planned in the future along Panama Road, Panama Lane east of Cottonwood Road, and Cottonwood Road south of Panama Lane (Kern Council of Governments 2012). Pedestrian access is provided via sidewalks, crosswalks, and proximity to residential areas.

Transit

Golden Empire Transit (GET) provides local bus service in Bakersfield, operating 16 routes throughout the metropolitan region. Four transit centers are located in Bakersfield. The Southwest Transit Center is on Wible Road, just north of Wilson Road, approximately 3 miles north of the project site. The Downtown Transit Center is approximately 5 miles to the north, in downtown Bakersfield. The Bakersfield College Transit Center is on Panorama Drive, adjacent to the college, about 9 miles north and east of the project site. Lastly, the Cal State Bakersfield Transit Center is along Stockdale Highway and Old River Road, about 6 miles northwest of the project site.

GET Route 62 (Greenfield/Valley Plaza) runs nearest the project site. This route provides service between Greenfield Senior Center, Golden Valley High School, Taft Highway, Panama Lane, White Lane Walmart, Southwest Transit Center, and Valley Plaza. The nearest bus stop is at Golden Valley High School, at the intersection of Hosking Avenue and Arkwood Street (about 0.75 mile east of the project site). GET also provides paratransit service called GET-A-Lift, which is a special transportation service designed to provide curb-to-curb service within GET's service area to qualified persons with disabilities. GET-A-Lift uses air conditioned lift-equipped vans.

Kern County provides bus service through the Kern Regional Transit System (KRT). This system serves the rural communities in the county and provides service between Bakersfield and those communities. The KRT routes are primarily accessed at the transit centers. Amtrak provides rail service to and from Bakersfield and the Central Valley cities to the north. The Amtrak station is at Truxtun Avenue and S Street, approximately 5 miles northeast of the project site.

4.12.3 Applicable Regulations

Traffic analysis in the state of California is guided by policies and standards set at the state level by the California Department of Transportation (Caltrans) and by local jurisdictions. Because the proposed project is within City boundaries, the project would adhere to adopted City transportation policies. The Kern Council of Governments (KernCOG) oversees and conducts regional transportation planning efforts for local government jurisdictions within Kern County.

4.12.3.1 Regional Transportation Plan/Sustainable Communities Strategy

Kern County's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted in June 2014 and is the long-term (20-year) general plan for the region's transportation network prepared and overseen by KernCOG. The RTP includes the Regional Transportation Improvement Program (RTIP), the Congestion Management Program (CMP), and the Sustainable Communities Strategy (SCS), which are described in the following sections.

Regional Transportation Improvement Plan

The RTIP lists projects proposed for implementation in the region during a 5-year period and is updated every 2 years. Transportation projects are described in detail, with funding allocated by source and fiscal year. RTIP projects are categorized according to the transportation system to which they apply, i.e., state highways, local highways/expressways, or local streets and roads. Although eligible, transit projects are not included in the RTIP; rather, they are funded by the federal aid programs and included in the Federal Transportation Improvement Program. RTIP projects are implemented prior to the failure of the intersection or roadway, thus avoiding any long-term impacts.

Congestion Management Program

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a CMP. KernCOG is designated as the entity responsible for administering and updating the CMP. The CMP is designed to ensure that a balanced transportation system is developed that ties population growth, traffic growth, and land use decisions to transportation system performance standards and air quality improvement.

The purpose of the CMP is to: (1) monitor the performance of the transportation system; (2) develop programs to address near-term and long-term congestion; and (3) better integrate transportation and land use planning.

State law requires the CMP to include the following elements: (1) land use analysis program; (2) LOS standards; (3) public transit standards; (4) trip reduction and travel demand strategies; and (5) capital improvement program. In addition to these components, KernCOG is required to develop a traffic database for use in a countywide model and to monitor the implementation of the CMP.

As the designated congestion management agency, KernCOG must establish a system of roadways that will be monitored in relation to established LOS standards. The goal of the CMP is to identify a regional network and work toward maintenance of LOS E or better on the highways and roads that are identified in this network. Those roads currently experiencing worse traffic congestion have been accepted at their existing traffic level of LOS F. By doing this, cities and Kern County will not be penalized through loss of gas tax funds for not meeting the new CMP LOS E standard.

The CMP requirement was born of the realization that large capital projects alone cannot solve congestion problems and local land use decisions contribute to roadway congestion. Until recently, Metropolitan Bakersfield and other urbanizing areas in Kern County have been able to absorb increased traffic and have met transportation needs by adding some local roads, the Mojave Bypass, and a few more buses. But the Kern region no longer can assimilate additional traffic because of this continuing growth.

Within the study area, SR 99 and SR 119 (Taft Highway) are part of the designated CMP. As detailed in the 2014 RTP, there are no roadway segments in the study area identified as operating at LOS F.

4.12.3.2 Local Mitigation Impact Fee Program

The City of Bakersfield has established a local mitigation impact fee program for traffic improvements that are not listed on the RTIF Project Facilities List. These improvements typically are associated with collector streets but also may be associated with local streets. Furthermore, if an improvement is required for a specific project, and it is beyond what was contemplated in the RTIF, the improvement must be a local mitigation requirement. These fees are assessed on land developers to fund roadway projects that will relieve congestion attributable to growth.

Similarly to the RTIF, after the impact fees are collected, they are placed in a separate interest account, per the requirements of Government Code 66000 et seq. The timing to use the transportation funds is determined in a manner similar to the RTIF—through the 5-year CIP. This program also is overseen by the City's Public Works Department. The periodic traffic counts, review of traffic accidents, and review of traffic trends throughout the City are performed by City staff. The City uses these data to determine the timing for the improvements on the facilities list. Improvements are identified within each of the 5-year cycles and reviewed periodically to determine whether improvements should be shifted into another year based on the traffic counts, accidents, and trends. The City uses the previously referenced data to determine the timing for the improvements on

the facilities list and to ensure that needed improvements are constructed prior to that time the LOS is forecast to fail to achieve the performance levels established by the City. In this way, improvements are constructed before the LOS goes below the City's performance standards to ensure that project-specific significant impacts are avoided. The CIP establishes a timeframe to fund and design improvements and for the City to hire a contractor to build the improvements.

4.12.3.3 Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan (MBGP) sets forth policies and goals for traffic and transportation. Those related to the proposed project are listed below.

Streets

- **Policy 6** – Design and locate site access driveways to minimize traffic disruption where possible considering items such as topography, past parcelization and other factors.
- **Policy 7** – Minimize direct and uncontrolled property access from arterials.
- **Policy 16** – Require that truck access to commercial and industrial properties be designed to minimize impacts on adjacent residential parcels.
- **Policy 17** – Require buildings expected to be serviced by delivery trucks to provide off-street facilities for access and parking.
- **Policy 34** – Minimize the impacts of land use development on the circulation system. Review all development plans, rezoning applications, and proposed general plan amendments with respect to their impact on the transportation system, and require revisions as necessary.
- **Policy 35** – Require new development and expansion of existing development in incorporated areas to fully provide for on-site transportation facilities including streets, curbs, traffic control devices, etc.
- **Policy 36** – Prevent streets and intersections from degrading below Level of Service "C" where possible due to physical constraints (as defined in a Level of Service Standard) or when the existing Level of Service is below "C" prevent where possible further degradation due to new development or expansion of existing development with a three part mitigation program: adjacent right-of-way dedication, access improvements, and/or an area-wide impact fee. The area-wide impact fee would be used where the physical changes for mitigation are not possible due to existing development and/or the mitigation measure is part of a larger project, such as freeways, which will be built at a later date.
- **Policy 37** – Require new development and expansion of existing development to pay for necessary access improvements, such as street extensions, widenings, turn lanes, signals, etc., as identified in the transportation impact report as may be required for a project.

- **Policy 39** – Require new development and expansion of existing development to pay or participate in its pro rata share of the costs of expansions in area-wide transportation facilities and services which it necessitates.

Bikeways

- **Policy 7** – Provide bicycle parking facilities at activity centers such as shopping centers, employment sites, and public buildings.

Parking

- **Policy 3** – Ensure that adequate on-site parking supply and parking lot circulation is provided on all site plans in accordance with the adopted parking standards.
- **Policy 4** – Discourage the intrusion of non-neighborhood parking in residential areas.

4.12.4 Impacts and Mitigation

4.12.4.1 Methodology

Potential transportation impacts and corresponding mitigation measures were considered for project construction and for operational conditions in 2017, 2020, and 2035. The traffic evaluation was prepared by Ruettgers & Schuler Civil Engineers in March 2015, included as Appendix C in this DEIR. Traffic conditions for 2014 are provided for informational purposes to convey traffic conditions when the environmental analysis for the project was compiled; however, impacts associated with the project would not occur until completion of Phase I in 2017 and upon completion of Phase II in 2020. Future cumulative project impacts are analyzed for 2035.

To evaluate potential transportation impacts of the proposed project once it is built and fully occupied, the following elements were assessed.

- **Trip Generation.** Projections were made of the typical number of additional trips that the proposed would generate, based on rates established by the Institute of Transportation Engineers (ITE).
- **Trip Distribution and Network Assignment.** The distribution of project-generated trips onto the roadway network (based on the KernCOG model) was evaluated.
- **Future Baseline (No Project) Conditions.** Projections of existing 2014 and future baseline (without project) traffic conditions in 2017 and 2020 were based on future growth and cumulative projects in the area.

- **Future Conditions with Project.** Impacts of the proposed project on the roadway system were assessed by adding the estimated project-generated trips onto the projected baseline traffic conditions for expected buildout year for each of the phases in 2017 and 2020.
- **Access, Parking, and Safety.** Project impacts were assessed relative to the City of Bakersfield Municipal Code requirements.

These elements are described in more detail in the following sections.

Trip Generation

Table 4.12-7 summarizes the estimated project-generated trips. The primary source of trip generation rates was the *ITE Trip Generation Manual* (Institute of Transportation Engineers 2003). Trips estimated for an anchor, a likely national retailer tenant, were based on project site surveys. Additional explanation about trip generation procedures is provided in the traffic report prepared for the proposed project (Appendix C).

Table 4.12-7. Project Trip Generation Summary

	Daily Trips	Peak Hour Trips					
		AM		PM		Saturday	
		In	Out	In	Out	In	Out
Phase I (2017)							
Hotel (120 rooms)	701	38 (59%)	26 (41%)	37 (51%)	35 (49%)	0 (0%)	0 (0%)
Shopping Center (300,000 sf)	15,045	204 (62%)	125 (38%)	653 (48%)	707 (52%)	1,007 (52%)	930 (48%)
Anchor[1] (100,000 sf)	1,333	41 (61%)	26 (39%)	64 (48%)	69 (52%)	128 (48%)	139 (52%)
Pass-by[2]	-305	-12	-8	-15	-16	-170	-160
Capture[3]	-752	-10	-6	-33	-35	-57	-53
Phase I New Trips	**16,022**	**261**	**163**	**706**	**760**	**908**	**856**
Phase II (2020)							
Hotel (240 rooms)	1,775	75 (59%)	52 (41%)	73 (51%)	71 (49%)	95 (56%)	75 (44%)
Shopping Center (700,000 sf)	24,942	328 (62%)	201 (38%)	1,099 (48%)	1,191 (52%)	1,670 (52%)	1,541 (48%)
Anchor[1] (100,000 sf)	1,333	41 (61%)	26 (39%)	64 (48%)	69 (52%)	128 (48%)	139 (52%)
Pass-by[2]	-466	-17	-12	-21	-21	-284	-263
Capture[3]	-1,247	-16	-10	-55	-60	-95	-88
Phases I & II New Trips	**26,337**	**411**	**257**	**1,160**	**1,250**	**1,514**	**1,404**

[1] Anchor Trip Rates determined from actual site surveys.
[2] Shopping Center only.
[3] Applied to anchor for dual trip purposes.
sf = square feet.

Trip Distribution and Network Assignment

Traffic distribution from the proposed project was estimated based on the KernCOG traffic model data, a review of existing development and proposed development entitlements, growth in the study area, and market research data prepared for the proposed project. KernCOG's TP+ transportation model forecasts regional travel demand based on locally approved general plan land use entitlements, input from local planning departments, and state and federal data sources. The model is maintained and frequently updated by KernCOG with regular input from member agencies to account for amendments to general plan land use entitlements and new development projects, and generally is considered the primary source used by local planning agencies for traffic and air quality model data for the Metropolitan Bakersfield area. A model run was requested by

Ruettgers & Schuler to isolate and show the project traffic trip distribution. A "select zone analysis" was prepared that shows project-only volumes on the street system. The output from the select zone analysis model run was used to define the study scope and to distribute project traffic. In general, project traffic was distributed with the percentage splits shown in Table 4.12-8.

Table 4.12-8. Project Trip Distribution and Assignment

Direction	Percentage	Roadways
North	33	SR 99 and South H Street
East	17	Berkshire Road and Hosking Avenue
South	23	SR 99 and South H Street
West	27	Hosking Avenue

SR = State Route

Future Baseline (No Project) Conditions

Future traffic volumes account for pending general plan amendment (GPA) and zone change applications for proposed residential and commercial developments in southern and western Bakersfield areas. Average annual growth rates that range between 1 and 5% were applied to existing traffic volumes on each of the study area roadways to estimate future traffic volumes for the years 2017, 2020, and 2035 (cumulative analysis). These rates were developed based on a combination of factors, including the 2035 KernCOG traffic model output, historical growth rates, and the addition of turning movement volumes from other approved future projects in the study area (including the medical facility to the north). The growth rates effectively capture the City's current and expected growth over the relevant time periods addressed in this EIR.

2017 Conditions

Tables 4.12-9, 4.12-10, and 4.12-11 summarize the conditions projected at the stop-controlled intersections, signalized intersections, and roadway segments, respectively, under future baseline conditions for 2017. Under 2017 baseline conditions, the following 11 unsignalized intersections, seven signalized intersections, and three roadway segments are projected to exceed LOS C in 2017 without the project during one or more of the analysis periods.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17)
- South Union Avenue/Berkshire Road (ID 36)

- Ashe Road/McCutchen Road (ID 38)
- Mountain Ridge Drive/McCutchen Road (ID 39)
- Akers Road/Hosking Avenue (ID 41)
- South H Street/McKee Road (ID 53)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)

Signalized

- Wible Road/White Lane (ID 3)
- South H Street/White Lane (ID 6)
- South Union Avenue/White Lane (ID 8)
- Monitor Street/Panama Lane (ID 25)
- Stine Road & Hosking Avenue (ID 40)
- Ashe Road/Taft Highway (SR 19) (ID 74)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Hosking Avenue, between SR 99 and South H Street
- Taft Highway (SR 119), between Wible Road and South H Street
- Taft Highway (SR 119), between South H Street and Chevalier Road

Table 4.12-9. Unsignalized Intersection Operations (2017)

			2017 Baseline		
ID	Intersection	Stop Control Direction	AM	PM	Saturday
17	Golden Gate Drive/Panama Lane	Northbound/ Southbound	F/F	F/F	F/F
27	Sparks Street/Panama Lane[1]	Northbound/ Southbound	-/-	-/-	-/-
28	Cottonwood Road/Panama Lane	Overall Intersection	C	C	B
36	South Union Avenue/Berkshire Road	Overall Intersection	F	B	B
38	Ashe Road/McCutchen Road	Eastbound/Westbound	F/F	F/F	A/A
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	D/C	F/F	C/C
41	Akers Road/Hosking Avenue	Overall Intersection	D	C	B
43	Hughes Lane/Hosking Avenue	Northbound	C	C	B

ID	Intersection	Stop Control Direction	2017 Baseline AM	2017 Baseline PM	2017 Baseline Saturday
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C/B	C/B	C/-
53	South H Street/McKee Road	Overall Intersection	F	A	A
54	South Union Avenue/McKee Road	Eastbound/Westbound	F/D	F/F	C/C
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	F/E	F/F	F/-
61	Shannon Drive/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/F
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	B	C	D
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	A

[1] Future Intersection
SR = State Route

Table 4.12-10. Signalized Intersection Operations (2017)

ID	Intersection	2017 Baseline AM	2017 Baseline PM	2017 Baseline Saturday
3	Wible Road/White Lane	C	D	C
4	Southbound SR 99 off-ramp/White Lane	B	B	B
5	Northbound SR 99 off-ramp/White Lane	B	A	B
6	South H Street/White Lane	D	E	C
8	South Union Avenue/White Lane	C	D	C
9	South H Street/Pacheco Road	C	C	C
10	South Union Avenue/Pacheco Road	C	C	B
14	South H Street/Fairview Road	C	C	B
15	South Union Avenue/Fairview Road	C	B	B
16	Ashe Road/Panama Lane	C	C	B
18	Stine Road/Panama Lane	C	C	C
19	Akers Road/Panama Lane	C	B	B
20	Wible Road/Panama Lane	C	B	C
21	Southbound SR 99 off-ramp/Panama Lane	B	B	B
22	Northbound SR 99 off-ramp/Panama Lane	B	B	A
23	Colony Street/Panama Lane	C	C	C
24	South H Street/Panama Lane	B	C	C
25	Monitor Street/Panama Lane	E	B	B
26	South Union Avenue/Panama Lane	B	C	C
33	Colony Street/Berkshire Road[1]	-	-	-
34	South H St/Berkshire Road	C	C	C

ID	Intersection	2017 Baseline AM	PM	Saturday
37	South H Street/Project Site[1]	-	-	-
40	Stine Road & Hosking Ave	C	D	C
42	Wible Road & Hosking Ave	C	C	C
44	SB 99 off ramp & Hosking Ave	-	-	-
45	NB 99 on ramp & Hosking Ave	-	-	-
46	South H Street & Hosking Avenue	C	C	C
47	Monitor St/Hosking Avenue	C	C	C
48	South Union Avenue/Hosking Avenue	C	B	C
55	Stine Road/Taft Highway (SR 119)	C	B	C
57	Wible Road/Taft Highway (SR 119)	C	B	C
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	B	C	C
60	South H Street/Taft Highway	C	C	B
62	South Union Avenue/Panama Road	C	C	C
74	Ashe Road/Taft Highway (SR 119)	C	D	C
76	Gosford Road/McCutchen Road	A	C	B
87	Gosford Road/Panama Lane	F	F	F

[1] Access point to proposed project site – would not exist under No Project conditions.
SR = State Route

Table 4.12-11. Roadway Segment Operations (2017)

Roadway Segment	Capacity	2017 Baseline ADT	V/C
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	7,067	0.47
White Ln: W. of Union Ave	40,000	9,961	0.25
White Ln: Hughes Ln–H St	40,000	25,767	0.64
White Ln: H St–Monitor St	40,000	13,073	0.33
White Ln: Wible Rd – SR 99	60,000	35,882	0.60
Panama Ln: Gosford Rd–Ashe Rd	22,500	9,339	0.42
Panama Ln: Ashe Rd–Stine Rd	47,500	24,179	0.51
Panama Ln: Stine Rd–Akers Rd	60,000	28,914	0.48
Panama Ln: Akers Rd–Wible Rd	60,000	35,534	0.59
Panama Ln: Wible Rd–SR 99	60,000	47,630	0.79
Panama Ln: SR 99–So. H St	50,000	26,911	0.54
Panama Ln: S. H St–Union Ave (SR 204)	40,000	11,679	0.29

		2017 Baseline	
Roadway Segment	Capacity	ADT	V/C
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	8,400	0.56
Hosking Rd: Stine Rd–Wible Rd	15,000	7,219	0.48
Hosking Ave: Wible Rd–SR 99	15,000	9,641	0.64
Hosking Ave: SR 99–S. H St	15,000	17,366	1.16
Hosking Ave: S. H St–S. Union Ave	15,000	4,981	0.33
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	1,961	0.13
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	10,298	0.69
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	10,406	0.69
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	10,431	0.70
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	12,131	0.81
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	13,677	0.91
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	11,267	0.75
S. H St: White Ln–Pacheco Rd	40,000	20,390	0.51
S. H St: Pacheco Rd–Fairview Rd	40,000	14,418	0.36
S. H St: Fairview Rd–Panama Ln	40,000	14,585	0.36
S. H St: Panama Ln–Hosking Ave	40,000	12,971	0.32
S. H St: Hosking Ave–McKee Rd	40,000	5,050	0.13
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	7,138	0.18
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	6,651	0.44
S. Union Ave: White Ln–Pacheco Rd	40,000	27,125	0.68
S. Union Ave: Fairview Rd–Panama Ln	40,000	14,586	0.36
S. Union Ave: Panama Ln–Hosking Rd	40,000	12,938	0.32
S. Union Ave: Hosking Rd–Panama Rd	40,000	15,757	0.39
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	16,970	0.42

[1] Roadway is fully improved; no mitigation.

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

2020 Conditions

Tables 4.12-12, 4.12-13, and 4.12-14 summarize the conditions projected at the stop-controlled intersections, signalized intersections, and roadway segments, respectively, under future baseline conditions for 2020. Under 2020 baseline conditions, the following 14 unsignalized intersections, eight signalized intersections, and four roadway segments are projected to exceed LOS C during one or more of the analysis periods by 2020.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17)
- Cottonwood Road/Panama Lane (ID 28)
- South Union Avenue/Berkshire Road (ID 36)
- Ashe Road/McCutchen Road (ID 38)
- Mountain Ridge Drive/McCutchen Road (ID 39)
- Akers Road/Hosking Avenue (ID 41)
- Hughes Lane/Hosking Avenue (ID 43)
- Cottonwood Road/ Hosking Avenue (ID 49) (Recently Signalized)
- South H Street/McKee Road (ID 53)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)

Signalized

- Wible Road/White Lane (ID 3)
- South H Street/White Lane (ID 6)
- South Union Avenue/White Lane (ID 8)
- South H Street/Panama Lane (ID 24)
- Monitor Street/Panama Lane (ID 25)
- Stine Road & Hosking Avenue (ID 40)
- Ashe Road/Taft Highway (SR 119) (ID 74)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Panama Lane, between Wible Road and SR 99
- Hosking Avenue, between SR 99 and South H Street
- Taft Highway (SR 119), between Wible Road and South H Street
- Taft Highway (SR 119), between South H Street and Chevalier Road

Table 4.12-12. Unsignalized Intersection Operations (2020)

			2020 Baseline		
ID	Intersection	Stop Control Direction	AM	PM	Saturday
17	Golden Gate Drive/Panama Lane	Northbound/Southbound	F/F	F/F	F/F
27	Sparks Street/Panama Lane[1]	Northbound/Southbound	-/-	-/-	-/-
28	Cottonwood Road/Panama Lane	Overall Intersection	D	E	C
36	South Union Avenue/Berkshire Road	Overall Intersection	F	C	B
38	Ashe Road/McCutchen Road	Eastbound/Westbound	F/F	F/F	B/B
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	E/D	F/F	C/D
41	Akers Road/Hosking Avenue	Overall Intersection	F	E	C
43	Hughes Lane/Hosking Avenue	Northbound	F	C	B
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C/C	C/C	E/-
53	South H Street/McKee Road	Overall Intersection	F	A	B
54	South Union Avenue/McKee Road	Eastbound/Westbound	F/E	F/F	C/C
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-
61	Shannon Drive/Taft Highway	Northbound/Southbound	F/F	F/F	F/F
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	B	C	F
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	A

[1] Future Intersection
SR = State Route

Table 4.12-13. Signalized Intersection Operations (2020)

		2020 Baseline		
ID	Intersection	AM	PM	Saturday
3	Wible Road/White Lane	C	D	C
4	Southbound SR 99 off-ramp/White Lane	B	B	B
5	Northbound SR 99 off-ramp/White Lane	B	A	A
6	South H Street/White Lane	D	F	C
8	South Union Avenue/White Lane	C	D	C
9	South H Street/Pacheco Road	C	C	C
10	South Union Avenue/Pacheco Road	C	C	B
14	South H Street/Fairview Road	C	C	B
15	South Union Avenue/Fairview Road	B	B	B
16	Ashe Road/Panama Lane	B	C	C
18	Stine Road/Panama Lane	C	C	C
19	Akers Road/Panama Lane	C	B	B
20	Wible Road/Panama Lane	C	C	C
21	Southbound SR 99 off-ramp/Panama Lane	C	B	C
22	Northbound SR 99 off-ramp/Panama Lane	B	B	A
23	Colony Street/Panama Lane	C	C	C
24	South H Street/Panama Lane	C	C	D
25	Monitor Street/Panama Lane	E	C	B
26	South Union Avenue/Panama Lane	C	C	C
33	Colony Street/Berkshire Road[1]	-	-	-
34	South H St/Berkshire Road	C	C	C
37	South H Street/Project Site[1]	-	-	-
40	Stine Road & Hosking Ave	C	D	C
42	Wible Road & Hosking Ave	C	C	C
44	SB 99 off ramp & Hosking Ave	-	-	-
45	NB 99 on ramp & Hosking Ave	-	-	-
46	South H Street & Hosking Avenue	C	C	C
47	Monitor St/Hosking Avenue	C	C	C
48	South Union Avenue/Hosking Avenue	C	B	C
55	Stine Road/Taft Highway (SR 119)	C	B	C
57	Wible Road/Taft Highway (SR 119)	C	C	C
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	B	C	C
60	South H Street/Taft Highway	C	C	B

ID	Intersection	2020 Baseline AM	2020 Baseline PM	2020 Baseline Saturday
62	South Union Avenue/Panama Road	C	C	C
74	Ashe Road/Taft Highway (SR 119)	C	F	B
76	Gosford Road/McCutchen Road	B	B	B
87	Gosford Road/Panama Lane	F	F	F

[1] Access point to proposed project site – would not exist under No Project conditions.
SR = State Route

Table 4.12-14. Roadway Segment Operations (2020)

Roadway Segment	Capacity	2020 Baseline ADT	2020 Baseline V/C
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	7,281	0.49
White Ln: W. of Union Ave	40,000	10,205	0.26
White Ln: Hughes Ln–H St	40,000	26,347	0.66
White Ln: H St–Monitor St	40,000	13,252	0.33
White Ln: Wible Rd – SR 99	60,000	36,237	0.60
Panama Ln: Gosford Rd–Ashe Rd	22,500	10,770	0.48
Panama Ln: Ashe Rd–Stine Rd	47,500	25,329	0.53
Panama Ln: Stine Rd–Akers Rd	60,000	30,683	0.51
Panama Ln: Akers Rd–Wible Rd	60,000	36,611	0.61
Panama Ln: Wible Rd–SR 99	60,000	49,073	0.82
Panama Ln: SR 99–So. H St	50,000	29,023	0.58
Panama Ln: S. H St–Union Ave (SR 204)	40,000	12,762	0.32
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	9,009	0.60
Hosking Rd: Stine Rd–Wible Rd	15,000	8,222	0.55
Hosking Ave: Wible Rd–SR 99	15,000	10,845	0.72
Hosking Ave: SR 99–S. H St	15,000	19,254	1.28
Hosking Ave: S. H St–S. Union Ave	15,000	5,457	0.36
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	2,222	0.15
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	10,948	0.73
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	11,130	0.74
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	11,173	0.74
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	12,726	0.85
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	14,239	0.95

Roadway Segment	Capacity	2020 Baseline ADT	2020 Baseline V/C
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	11,837	0.79
S. H St: White Ln–Pacheco Rd	40,000	20,697	0.52
S. H St: Pacheco Rd–Fairview Rd	40,000	14,771	0.37
S. H St: Fairview Rd–Panama Ln	40,000	15,027	0.38
S. H St: Panama Ln–Hosking Ave	40,000	14,381	0.36
S. H St: Hosking Ave–McKee Rd	40,000	5,814	0.15
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	7,865	0.20
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	7,374	0.49
S. Union Ave: White Ln–Pacheco Rd	40,000	28,718	0.72
S. Union Ave: Fairview Rd–Panama Ln	40,000	15,602	0.39
S. Union Ave: Panama Ln–Hosking Rd	40,000	14,195	0.35
S. Union Ave: Hosking Rd–Panama Rd	40,000	17,987	0.45
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	17,871	0.45

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

4.12.4.2 Criteria for Determining Significance

The criteria used to determine the significance of an impact on transportation are based on Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

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

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

d) Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

e) Result in inadequate emergency access.

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

Threshold c was evaluated during the initial study process and was determined to result in no impact related to air traffic. As such, this impact is not further evaluated below. For a detailed discussion of this impact, refer to Appendix A.

4.12.4.3 Project Impacts

Impact TR-1. The proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Construction

Temporary increases in traffic from project construction have the potential to increase the LOS on study area roadways as a result of worker commutes, deliveries, temporary road closures, and other construction activities that would occur along or in surrounding roadways. The impact of construction-generated traffic on area traffic volumes and LOS is considered potentially significant, but implementation of a traffic control plan identified in mitigation measure MM TR-1 below would reduce this impact to a less-than-significant level by including requirements such as requiring construction-generated traffic to avoid intersections and roadway segments that operate at LOS D or worse at the peak periods by either traveling different routes or by traveling at non-peak times of day; planning access to existing residences in the area at all times; providing adequate parking for construction workers' vehicles, construction trucks, and equipment within the designated staging areas throughout the construction period; and restricting delivery of construction materials to between the hours of 9:00 a.m. and 3:00 p.m. to avoid more congested morning and evening hours. Additional requirements are also listed in MM TR-1. Construction traffic impacts would be less than significant.

Operation

The first phase of the proposed project is expected to be completely operational in 2017. The second phase of the proposed project is expected to be complete in 2020. In order to estimate future conditions with the project, future traffic was added to the 2014 counts plus the project so that impacts are assessed for 2017 and 2020.

The City of Bakersfield and Kern County have two standards for determining whether project traffic has a significant impact and therefore requires mitigation. First, mitigation is required when the addition of project traffic causes the LOS of an intersection or street segment to drop below LOS C. Second, if an intersection or street operates below LOS C in the base year prior to the addition of project traffic, mitigation would be required only as necessary to maintain the same LOS existing prior to the project's impacts.

Tables 4.12-15, 4.12-16, and 4.12-17 summarize the LOS or V/C ratio projected at the stop-controlled intersections, signalized intersections, and roadway segments, respectively, under future conditions with the proposed project in place.

Table 4.12-15. Unsignalized Intersection Operations with Project (2017)

			2017 Baseline			2017 + Phase I			
ID	Intersection	Stop Control Direction	AM	PM	Saturday	AM	PM	Saturday	Impact?
17	Golden Gate Drive/Panama Lane	Northbound/ Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
27	Sparks Street/Panama Lane[1]	Northbound/ Southbound	-/-	-/-	-/-	-/-	-/-	-/-	No
28	Cottonwood Road/Panama Lane	Overall Intersection	C	C	B	C	D	C	Yes
36	South Union Avenue/Berkshire Road	Overall Intersection	F	B	B	F	B	B	Yes
38	Ashe Road/McCutchen Road	Eastbound/Westbound	F/F	F/F	A/A	F/F	F/F	B/A	Yes
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	D/C	F/F	C/C	D/C	F/F	C/C	Yes
41	Akers Road/Hosking Avenue	Overall Intersection	D	C	B	E	E	C	Yes
43	Hughes Lane/Hosking Avenue	Northbound	C	C	B	D	C	C	Yes
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C/B	C/B	C/-	C/C	C/C	D/-	Yes
53	South H Street/McKee Road	Overall Intersection	F	A	A	F	A	B	Yes
54	South Union Avenue/McKee Road	Eastbound/Westbound	F/D	F/F	C/C	F/D	F/F	C/C	Yes
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-	F/F	F/F	F/-	Yes
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	F/E	F/F	F/-	F/E	F/F	F/-	Yes
61	Shannon Drive/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	B	C	D	B	C	D	Yes
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	A	A	B	A	No

[1] Future Intersection

SR = State Route

Table 4.12-16. Signalized Intersection Operations with Project (2017)

		2017 Baseline			2017 + Project Phase I			
ID	Intersection	AM	PM	Saturday	AM	PM	Saturday	Impact?
3	Wible Road/White Lane	C	D	C	C	D	C	No
4	Southbound SR 99 off-ramp/White Lane	B	B	B	B	B	B	No
5	Northbound SR 99 off-ramp/White Lane	B	A	B	B	A	B	No
6	South H Street/White Lane	D	E	C	D	E	C	No
8	South Union Avenue/White Lane	C	D	C	C	D	C	No
9	South H Street/Pacheco Road	C	C	C	C	C	C	No
10	South Union Avenue/Pacheco Road	C	C	B	C	C	B	No
14	South H Street/Fairview Road	C	C	B	C	C	B	No
15	South Union Avenue/Fairview Road	C	B	B	B	B	C	No
16	Ashe Road/Panama Lane	C	C	B	C	C	C	No
18	Stine Road/Panama Lane	C	C	C	C	C	C	No
19	Akers Road/Panama Lane	C	B	B	C	B	B	No
20	Wible Road/Panama Lane	C	B	C	C	C	C	No
21	Southbound SR 99 off-ramp/Panama Lane	B	B	B	B	B	B	No
22	Northbound SR 99 off-ramp/Panama Lane	B	B	A	B	B	A	No
23	Colony Street/Panama Lane	C	C	C	C	C	C	No
24	South H Street/Panama Lane	B	C	C	C	C	D	Yes
25	Monitor Street/Panama Lane	E	B	B	E	C	B	No
26	South Union Avenue/Panama Lane	B	C	C	B	C	C	No
33	Colony Street/Berkshire Road[1]	-	-	-	D	C	B	Yes
34	South H St/Berkshire Road	C	C	C	C	C	C	No
37	South H Street/Project Site[1]	-	-	-	B	B	B	No
40	Stine Road & Hosking Ave	C	D	C	C	D	C	No

ID	Intersection	2017 Baseline AM	2017 Baseline PM	2017 Baseline Saturday	2017 + Project Phase I AM	2017 + Project Phase I PM	2017 + Project Phase I Saturday	Impact?
42	Wible Road & Hosking Ave	C	C	C	C	C	C	No
44	SB 99 off ramp & Hosking Ave	-	-	-	-	-	-	No
45	NB 99 on ramp & Hosking Ave	-	-	-	-	-	-	No
46	South H Street & Hosking Avenue	C	C	C	C	E	E	Yes
47	Monitor St/Hosking Avenue	C	C	C	C	C	C	No
48	South Union Avenue/Hosking Avenue	C	B	C	C	C	C	No
55	Stine Road/Taft Highway (SR 119)	C	B	C	C	B	C	No
57	Wible Road/Taft Highway (SR 119)	C	B	C	C	B	C	No
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	B	C	C	B	C	C	No
60	South H Street/Taft Highway	C	C	B	C	C	B	No
62	South Union Avenue/Panama Road	C	C	C	C	B	C	No
74	Ashe Road/Taft Highway (SR 119)	C	D	C	C	F	C	Yes
76	Gosford Road/McCutchen Road	A	C	B	A	B	B	No
87	Gosford Road/Panama Lane	F	F	F	F	F	F	Yes

[1] Access point to proposed project site – would not exist under No Project conditions.

SR = State Route

Table 4.12-17. Roadway Segment Operations with Project (2017)

		2017 Baseline		2017 + Phase I		
Roadway Segment	Capacity	ADT	V/C	ADT	V/C	Impact?
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	7,067	0.47	8,137	0.54	No
White Ln: W. of Union Ave	40,000	9,961	0.25	10,293	0.26	No
White Ln: Hughes Ln–H St	40,000	25,767	0.64	26,259	0.66	No
White Ln: H St–Monitor St	40,000	13,073	0.33	13,107	0.33	No
White Ln: Wible Rd – SR 99	60,000	35,882	0.60	36,203	0.60	No
Panama Ln: Gosford Rd–Ashe Rd	22,500	9,339	0.42	9,426	0.42	No
Panama Ln: Ashe Rd–Stine Rd	47,500	24,179	0.51	24,735	0.52	No
Panama Ln: Stine Rd–Akers Rd	60,000	28,914	0.48	29,888	0.50	No
Panama Ln: Akers Rd–Wible Rd	60,000	35,534	0.59	36,743	0.61	No
Panama Ln: Wible Rd–SR 99	60,000	47,630	0.79	49,192	0.82	Yes[1]
Panama Ln: SR 99–So. H St	50,000	26,911	0.54	29,308	0.59	No
Panama Ln: S. H St–Union Ave (SR 204)	40,000	11,679	0.29	12,867	0.32	No
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	8,400	0.56	8,903	0.59	No
Hosking Rd: Stine Rd–Wible Rd	15,000	7,219	0.48	8,781	0.59	No
Hosking Ave: Wible Rd–SR 99	15,000	9,641	0.64	11,663	0.78	No
Hosking Ave: SR 99–S. H St	15,000	17,366	1.16	24,203	1.61	Yes
Hosking Ave: S. H St–S. Union Ave	15,000	4,981	0.33	6,126	0.41	No
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	1,961	0.13	2,464	0.16	No
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	10,298	0.69	10,372	0.69	No
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	10,406	0.69	10,748	0.72	No
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	10,431	0.70	10,880	0.73	No
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	12,131	0.81	12,191	0.81	Yes
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	13,677	0.91	14,041	0.94	Yes

Roadway Segment	Capacity	2017 Baseline ADT	2017 Baseline V/C	2017 + Phase I ADT	2017 + Phase I V/C	Impact?
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	11,267	0.75	11,545	0.77	No
S. H St: White Ln–Pacheco Rd	40,000	20,390	0.51	21,128	0.53	No
S. H St: Pacheco Rd–Fairview Rd	40,000	14,418	0.36	15,349	0.38	No
S. H St: Fairview Rd–Panama Ln	40,000	14,585	0.36	15,741	0.39	No
S. H St: Panama Ln–Hosking Ave	40,000	12,971	0.32	16,395	0.41	No
S. H St: Hosking Ave–McKee Rd	40,000	5,050	0.13	6,815	0.17	No
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	7,138	0.18	8,508	0.21	No
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	6,651	0.44	6,854	0.46	No
S. Union Ave: White Ln–Pacheco Rd	40,000	27,125	0.68	27,692	0.69	No
S. Union Ave: Fairview Rd–Panama Ln	40,000	14,586	0.36	15,645	0.39	No
S. Union Ave: Panama Ln–Hosking Rd	40,000	12,938	0.32	13,633	0.34	No
S. Union Ave: Hosking Rd–Panama Rd	40,000	15,757	0.39	16,131	0.40	No
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	16,970	0.42	17,762	0.44	No

[1] Roadway is fully improved; no mitigation.

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

Table 4.12-18. Unsignalized Intersection Operations with Project (2020)

			2020 Baseline			2020 + Phases I & II			
ID	Intersection	Stop Control Direction	AM	PM	Saturday	AM	PM	Saturday	Impact?
17	Golden Gate Drive/Panama Lane	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
27	Sparks Street/Panama Lane[1]	Northbound/Southbound	-/-	-/-	-/-	-/-	-/-	-/-	No
28	Cottonwood Road/Panama Lane	Overall Intersection	D	E	C	E	E	D	Yes
36	South Union Avenue/Berkshire Road	Overall Intersection	F	C	B	F	C	C	Yes
38	Ashe Road/McCutchen Road	Eastbound/Westbound	F/F	F/F	B/B	F/F	F/F	B/B	Yes
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	E/D	F/F	C/D	F/E	F/F	C/F	Yes
41	Akers Road/Hosking Avenue	Overall Intersection	F	E	C	F	E	E	Yes
43	Hughes Lane/Hosking Avenue	Northbound	F	C	B	F	D	C	Yes
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C/C	C/C	E/-	C/C	C/C	F/-	Yes
53	South H Street/McKee Road	Overall Intersection	F	A	B	F	A	C	Yes
54	South Union Avenue/McKee Road	Eastbound/Westbound	F/E	F/F	C/C	F/F	F/F	C/C	Yes
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-	F/F	F/F	F/-	Yes
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/-	F/F	F/F	F/-	Yes
61	Shannon Drive/Taft Highway	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	B	C	F	B	C	F	Yes
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	A	A	B	B	No

[1] Future Intersection

SR = State Route

Table 4.12-19. Signalized Intersection Operations with Project (2020)

		2020 Baseline			2020 + Project Phases I & II			
ID	Intersection	AM	PM	Saturday	AM	PM	Saturday	Impact?
3	Wible Road/White Lane	C	D	C	C	D	C	No
4	Southbound SR 99 off-ramp/White Lane	B	B	B	B	B	B	No
5	Northbound SR 99 off-ramp/White Lane	B	A	A	B	A	B	No
6	South H Street/White Lane	D	F	C	D	F	C	No
8	South Union Avenue/White Lane	C	D	C	C	D	C	No
9	South H Street/Pacheco Road	C	C	C	C	C	C	No
10	South Union Avenue/Pacheco Road	C	C	B	C	C	B	No
14	South H Street/Fairview Road	C	C	B	B	C	B	No
15	South Union Avenue/Fairview Road	B	B	B	B	B	B	No
16	Ashe Road/Panama Lane	B	C	C	B	C	B	No
18	Stine Road/Panama Lane	C	C	C	C	C	C	No
19	Akers Road/Panama Lane	C	B	B	C	C	B	No
20	Wible Road/Panama Lane	C	C	C	C	C	C	No
21	Southbound SR 99 off-ramp/Panama Lane	C	B	C	C	B	C	No
22	Northbound SR 99 off-ramp/Panama Lane	B	B	A	B	B	A	No
23	Colony Street/Panama Lane	C	C	C	C	C	C	No
24	South H Street/Panama Lane	C	C	D	B	C	F	Yes
25	Monitor Street/Panama Lane	E	C	B	F	C	B	Yes
26	South Union Avenue/Panama Lane	C	C	C	B	C	D	Yes
33	Colony Street/Berkshire Road[1]	-	-	-	F	B	B	Yes
34	South H St/Berkshire Road	C	C	C	D	D	D	Yes
37	South H Street/Project Site[1]	-	-	-	B	C	D	Yes
40	Stine Road & Hosking Ave	C	D	C	C	E	C	Yes

		2020 Baseline			2020 + Project Phases I & II			
ID	Intersection	AM	PM	Saturday	AM	PM	Saturday	Impact?
42	Wible Road & Hosking Ave	C	C	C	C	C	C	No
44	SB 99 off ramp & Hosking Ave	-	-	-	-	-	-	No
45	NB 99 on ramp & Hosking Ave	-	-	-	-	-	-	No
46	South H Street & Hosking Avenue	C	C	C	D	F	F	Yes
47	Monitor St/Hosking Avenue	C	C	C	D	C	C	Yes
48	South Union Avenue/Hosking Avenue	C	B	C	C	C	C	No
55	Stine Road/Taft Highway (SR 119)	C	B	C	C	B	C	No
57	Wible Road/Taft Highway (SR 119)	C	C	C	C	C	C	No
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	B	C	C	C	C	C	No
60	South H Street/Taft Highway	C	C	B	C	C	B	No
62	South Union Avenue/Panama Road	C	C	C	C	C	C	No
74	Ashe Road/Taft Highway (SR 119)	C	F	B	C	E	C	Yes
76	Gosford Road/McCutchen Road	B	B	B	B	B	B	No
87	Gosford Road/Panama Lane	F	F	F	F	F	F	Yes

[1] Access point to proposed project site – would not exist under No Project conditions.

SR = State Route

Table 4.12-20. Roadway Segment Operations with Project (2020)

		2020 Baseline		2020 + Phases I & II		
Roadway Segment	Capacity	ADT	V/C	ADT	V/C	Impact?
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	7,281	0.49	9,025	0.60	No
White Ln: W. of Union Ave	40,000	10,205	0.26	10,815	0.27	No
White Ln: Hughes Ln–H St	40,000	26,347	0.66	27,171	0.68	No
White Ln: H St–Monitor St	40,000	13,252	0.33	13,359	0.33	No
White Ln: Wible Rd – SR 99	60,000	36,237	0.60	36,783	0.61	No
Panama Ln: Gosford Rd–Ashe Rd	22,500	10,770	0.48	10,857	0.48	No
Panama Ln: Ashe Rd–Stine Rd	47,500	25,329	0.53	26,367	0.56	No
Panama Ln: Stine Rd–Akers Rd	60,000	30,683	0.51	32,374	0.54	No
Panama Ln: Akers Rd–Wible Rd	60,000	36,611	0.61	38,633	0.0.64	No
Panama Ln: Wible Rd–SR 99	60,000	49,073	0.82	51,662	0.86	Yes
Panama Ln: SR 99–So. H St	50,000	29,023	0.58	32,971	0.66	No
Panama Ln: S. H St–Union Ave (SR 204)	40,000	12,762	0.32	14,763	0.37	No
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	9,009	0.60	9,993	0.67	No
Hosking Rd: Stine Rd–Wible Rd	15,000	8,222	0.55	10,769	0.72	No
Hosking Ave: Wible Rd–SR 99	15,000	10,845	0.72	14,141	0.94	Yes
Hosking Ave: SR 99–S. H St	15,000	19,254	1.28	30,446	2.03	Yes
Hosking Ave: S. H St–S. Union Ave	15,000	5,457	0.36	7,340	0.49	No
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	2,222	0.15	3,089	0.21	No
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	10,948	0.73	11,022	0.73	No
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	11,130	0.74	11,740	0.78	No
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	11,173	0.74	11,975	0.80	No
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	12,726	0.85	12,786	0.85	Yes
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	14,239	0.95	14,870	0.99	Yes

Roadway Segment	Capacity	2020 Baseline ADT	2020 Baseline V/C	2020 + Phases I & II ADT	2020 + Phases I & II V/C	Impact?
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	11,837	0.79	12,532	0.84	Yes
S. H St: White Ln–Pacheco Rd	40,000	20,697	0.52	21,949	0.55	No
S. H St: Pacheco Rd–Fairview Rd	40,000	14,771	0.37	16,344	0.41	No
S. H St: Fairview Rd–Panama Ln	40,000	15,027	0.38	16,910	0.2	No
S. H St: Panama Ln–Hosking Ave	40,000	14,381	0.36	20,020	0.50	No
S. H St: Hosking Ave–McKee Rd	40,000	5,814	0.15	8,703	0.22	No
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	7,865	0.20	10,144	0.25	No
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	7,374	0.49	7,748	0.52	No
S. Union Ave: White Ln–Pacheco Rd	40,000	28,718	0.72	29,777	0.74	No
S. Union Ave: Fairview Rd–Panama Ln	40,000	15,602	0.39	17,410	0.44	No
S. Union Ave: Panama Ln–Hosking Rd	40,000	14,195	0.35	15,436	0.39	No
S. Union Ave: Hosking Rd–Panama Rd	40,000	17,987	0.45	18,747	0.47	No
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	17,871	0.45	19,262	0.48	No

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

The proposed project would cause an increase in traffic that would have a significant impact on area roadways and intersections in the future. As shown in Table 4.12-7, the completed project is expected to generate 26,337 daily trips on an average weekday and 668 weekday AM peak hour trips, 2,410 weekday PM peak hour trips, and 2,918 Saturday peak hour trips.

The following sections describe the locations projected to exceed the City standard of LOS C under 2017 and 2020 conditions (note that 2035 conditions are described in Chapter 4, *Cumulative Impact Analysis*). Except where noted, the locations and timing of identified deficiencies are the same as they are under No Project conditions. However, in general, the additional trips added to the system by the proposed project would result in higher levels of congestion than without the project.

2017 Conditions with Project

Under 2017 baseline conditions plus the proposed project, the following 14 unsignalized intersections (see Table 4.12-15), five signalized intersections (see Table 4.12-16), and four roadway segments (see Table 4.12-17) are projected to exceed LOS C or V/C ratio of 0.80 during one or more of the analysis periods. For intersections that exceed LOS C during 2017 without Phase I of the project, impacts are also identified when the contribution of Phase I-related traffic would increase delay by more than 5 seconds during the AM, PM, or Saturday peak hours.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17)
- Cottonwood Road/Panama Lane (ID 28)
- South Union Avenue/Berkshire Road (ID 36)
- Ashe Road/McCutchen Road (ID 38)
- Mountain Ridge Drive/McCutchen Road (ID 39)
- Akers Road/Hosking Avenue (ID 41)
- Hughes Lane/Hosking Avenue (ID 43)
- Cottonwood Road/ Hosking Avenue (ID 49) (Recently Signalized)
- South H Street/ McKee Road (ID 53)
- South Union Avenue/ McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)

Signalized

- South H Street/Panama Lane (ID 24)
- Colony Street/Berkshire Road (ID 33)
- South H Street/Hosking Avenue (ID 46)
- Ashe Road/Taft Highway (SR 119) (ID 74)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Panama Lane, between Wible Road and SR 99
- Hosking Avenue, between SR 99 and South H Street
- Taft Highway (SR 119), between Wible Road and South H Street
- Taft Highway (SR 119), between South H Street and Chevalier Road

2020 Conditions with Project

Under 2020 conditions with the project, the following 14 unsignalized intersections (see Table 4.12-18), 10 signalized intersections (see Table 4.12-19), and six roadway segments (see Table 4.12-20) are projected to exceed LOS C or a V/C ratio of 0.8 during one or more of the analysis periods.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17)
- South Union Avenue/ Berkshire Road (ID 36)
- Ashe Road/ McCutchen Road (ID 38)
- Hughes Lane/ Hosking Avenue (ID 43)
- South H Street/McKee Road (ID 53)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)

Signalized

- South Union Avenue/White Lane (ID 8)
- South H Street/Panama Lane (ID 24)
- Monitor Street/Panama Lane (ID 25)

- South Union Avenue/Panama Lane (ID 26)
- Colony Street/Berkshire Road (ID 33)
- South H Street/Berkshire Road (ID 34)
- South H Street/Project Site (ID 37)
- Stine Road & Hosking Avenue (ID 40)
- South H Street & Hosking Avenue (ID 46)
- Ashe Road/Taft Highway (SR 19) (ID 74)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Panama Lane: Wible Road–SR 99
- Hosking Avenue: Wible Road–SR 99
- Hosking Avenue: SR 99–South H Street
- Taft Highway (SR 119): Wible Rd–South H Street
- Taft Highway (SR 119): South H Street–Chevalier Road
- Panama Road: Chevalier Road–Cottonwood Road

Mitigation Measures

MM TR-1. Prior to the issuance of grading permits, the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate compliance with the following:

(a) **Develop and Implement a Traffic Control Plan.** The project proponent shall develop a Construction Traffic Control Plan in accordance with the policies of the City of Bakersfield Public Works Department. The purpose of the Plan is to mitigate construction-related traffic impacts throughout the course of project construction. The Plan may include, but is not limited to, the following elements:

(i) Plan for communicating construction plans with transit providers, emergency service providers, residences, and businesses in the project vicinity that may be affected by project construction.

(ii) Identification of roadway segments or intersections that exceed or are approaching the standard of Level of Service C, and provisions for construction-generated traffic to avoid these locations at the peak periods, either by traveling different routes or by traveling at non-peak times of day.

(iii) Access and circulation plan for use by emergency vehicles when lane closures adjacent to the site are in effect, including provisions for advance notice to local fire and police departments to ensure that

alternative evacuation and emergency routes are designed to maintain response times.

(iv) Plan for maintaining access to existing residences on the east side of South H Street during construction activities.

(v) Provision for adequate parking for construction worker vehicles, construction trucks, and equipment within the designated staging areas throughout the construction period.

(vi) Plan for maintaining pedestrian and bicycle access and circulation during project construction, where safe to do so.

(vii) Provisions for traffic controls on roadways adjacent to the project, if needed during lane closures or major construction activities which affect road right-of-way. Provisions could include flag persons wearing bright orange or red vests and using a Stop/Slow paddle to control oncoming traffic; posting of construction warning signs in accordance with local standards or those set forth in the Manual on Uniform Traffic Control Devices (Federal Highway Administration 2001) in advance of the construction area and at any intersection that provides access to the construction area.

(viii) Written notification provided to contractors regarding appropriate routes to and from the construction site, and the weight and speed limits on local roads used to access the construction site.

(ix) Provisions for signs to be posted at all active construction areas giving the name and telephone number or e-mail address of the City staff person designated to receive complaints regarding construction traffic.

MM TR-2: Phase I Traffic Improvements. Prior to the issuance of building permits for the first phase of project development (Phase I), the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that each of the improvements listed below has been designed in accordance with City Standards and will be constructed prior to Opening Day for Phase I or provide its percent share of the local mitigation transportation fee and/or the Regional Transportation Impact Fee (RTIF). All mitigation will be implemented prior to the impact occurring, pursuant to the mitigation fee programs, and the project proponent shall obtain all necessary encroachment permits prior to construction activities.

(a) Construct improvements at the intersection of Colony Street/Berkshire Road (ID 33) by adding one northbound through lane and one southbound through lane.

(b) Construct improvements at the intersection of South Union Avenue/ Berkshire Road (ID 36) by installing a traffic signal and adding one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, two northbound

through lanes, one northbound right-turn lane, one southbound left-turn lane, two southbound through lanes, and one southbound right-turn lane.

(c) Construct improvements at the intersection of South H Street/Hosking Avenue (ID 46) by adding one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one northbound through lane, one northbound right-turn lane, one southbound through lane, and one southbound right-turn lane.

(d) Construct improvements to widen Hosking Avenue, between State Route (SR) 99 and South H Street, by adding four lanes and a median.

(e) Pay the RTIF to construct improvements and install a traffic signal at the intersection of Golden Gate Drive/Panama Lane (ID 17).

(f) Pay a 13% share of local mitigation transportation fee to construct improvements at the intersection of Monitor Street/Panama Lane (ID 25), which will include the addition of two northbound through lanes and two southbound through lanes.

(g) Pay the RTIF to construct improvements at Cottonwood Road/Panama Lane (ID 28), which will include installation of a traffic signal and the addition of two eastbound left-turn lanes, two eastbound through lanes, one eastbound right-turn lane, two westbound left-turn lanes, two west-bound through lanes, one westbound right-turn lane, two northbound left-turn lanes, one northbound through lane, one northbound right-turn lane, two southbound left-turn lanes, one southbound through lane, and one southbound right-turn lane.

(h) Pay the RTIF to construct improvements at the intersection of Ashe Road/McCutchen Road (ID 38), which will include installation of a traffic signal and the addition of two eastbound left-turn lanes, one eastbound through lane, one eastbound right-turn lane, two westbound left-turn lanes, one westbound through lane, one westbound right-turn lane, two northbound left-turn lanes, two northbound through lanes, one northbound right-turn lane, two southbound left-turn lanes, two southbound through lanes, and one southbound right-turn lane.

(i) Pay the RTIF to construct improvements at the intersection of Mountain Ridge Drive/McCutchen Road (ID 39), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, two eastbound through lanes, one westbound left-turn lane, two westbound through lanes, two northbound left-turn lanes, one northbound right-turn lane, two southbound left-turn lanes, and one southbound right-turn lane.

(j) Pay the RTIF and a 6.96% share of local mitigation transportation fee to construct improvements at the intersection of Cottonwood Road/Hosking Avenue (ID 49), which will include the addition of one eastbound right-turn lane.

(k) Pay the RTIF to construct improvements at the intersection of South H Street/McKee Road (ID 53), which will include the addition of one northbound through lane and one southbound through lane.

(l) Pay the RTIF to construct improvements at the intersection of South Union Avenue/McKee Road (ID 54), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound left-turn lane, one northbound through lane, one northbound right-turn lane, one southbound left-turn lane, one southbound through lane, and one southbound right-turn lane.

(m) Pay the RTIF to construct improvements at the intersection of Akers Road/Taft Highway (ID 56), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound right-turn lane, and one southbound right-turn lane.

(n) Pay the RTIF and a 7.2% share of local mitigation transportation fee to construct improvements at the intersection of Hughes Lane/Taft Highway (ID 58), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound right-turn lane, one northbound right-turn lane, and one southbound right turn lane.

(o) Pay the RTIF and a 3.4% share of local mitigation transportation fee to construct improvements at the intersection of Shannon Drive/Taft Highway (ID 61), which will include installation of a traffic signal and the addition of one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound through lane, one northbound right-turn lane, and one southbound right-turn lane.

(p) Pay the RTIF to construct improvements at the intersection of Cottonwood Road/Taft Highway (SR 119) (ID 63), which will include the addition of one eastbound left-turn lane and one eastbound right-turn lane.

(q) Pay the RTIF to construct improvements at the intersection of Ashe Road/Taft Highway (SR 119) (ID 74), which will include the addition of one eastbound through lane, one eastbound right-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, one northbound right-turn lane, and one southbound left-turn lane.

(r) Pay the RTIF and a 2.08% share of local mitigation transportation fee to construct improvements at the intersection of Gosford Road/Panama Lane (ID 87), which will include the addition of one eastbound through lane, one eastbound right-turn lane, one westbound through lane, two northbound left-turn lanes, one northbound through lane, one northbound right-turn lane, one southbound left-turn lane, and one southbound through lane.

(s) Pay the RTIF to widen Taft Highway (SR 119) between Wible Road and South H Street by two additional lanes.

(t) Pay the RTIF to widen Taft Highway (SR 119) between South H Street and Chevalier Road by two additional lanes.

MM TR-3: Phase II Traffic Improvements. Prior to the issuance of building permits for the second phase of project development (Phase II), the project proponent shall provide evidence to the City of Bakersfield Planning Division to demonstrate that each of the improvements listed below has been designed in accordance with City Standards and will be constructed prior to Opening Day for Phase II (anticipated to be Year 2020, but actual year subject to market conditions) or provide its percent share of the local mitigation transportation fee and/or the Regional Transportation Impact Fee (RTIF). All mitigation will be implemented prior to the impact occurring, pursuant to the mitigation fee programs and the project proponent shall obtain all necessary encroachment permits prior to construction activities.

(a) Pay the RTIF and a 7.61% share of local mitigation transportation fee to construct improvements at the intersection of South Union Avenue/White Lane (ID 8), which would include the addition of one eastbound left-turn lane, one eastbound through lane, one westbound left-turn lane, one northbound right-turn lane, and one southbound right-turn lane.

(b) Pay the RTIF to construct improvements at the intersection of Golden Gate Drive/Panama Lane (ID 17), which would include the addition of one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, two westbound left-turn lanes, one northbound through lane, and one southbound left-turn lane.

(c) Pay the RTIF to construct improvements at the intersection of South Union Avenue/Panama Lane (ID 26), which would include the addition of one eastbound left-turn lane, two eastbound through lanes, one westbound left-turn lane, one westbound through lane, one westbound right-turn lane, one northbound left-turn lane, one southbound left-turn lane, and one southbound right-turn lane.

(d) Pay the RTIF to construct improvements at the intersection of Stine Road/Hosking Avenue (ID 40), which would include the addition of one eastbound left-turn lane, one eastbound through lane, one eastbound right-turn lane, one westbound left-turn lane, one westbound through lane, and one westbound right-turn lane.

(e) Pay the RTIF to construct improvements at the intersection of Hughes Lane/Hosking Avenue (ID 43), which would include the installation of a traffic signal and the addition of two eastbound through lanes, one westbound left-turn lane, two westbound through lanes and one northbound left-turn lane.

(f) Pay the RTIF to construct improvements at the intersection of Akers Road/Taft Highway (ID 56), which would include the addition of one eastbound through lane and one westbound through lane.

(g) Pay the RTIF to Widen Hosking Avenue between Wible Road and State Route 99, which will add two lanes.

(h) Pay the RTIF to Widen Panama Road between Chevalier Road and Cottonwood Road, which will add two lanes.

Level of Significance after Mitigation

As noted in Tables 4.12-21 through 4.12-23, implementation of all mitigation measures listed above would reduce impacts to less-than-significant levels at their respective locations; however, mitigation is not available for impacts identified at one intersection (ID 24: South H Street/Panama Lane) and one roadway segment (Panama Lane, between Wible Road and SR 99). Operations at South H Street/Panama Lane would degrade from LOS C under 2017 baseline conditions to LOS D with Phase I of the project. In 2020, once Phase 2 is implemented, the LOS would further degrade to LOS F. Roadway segment operations along Panama Lane between Wible Road and SR 99 would degrade from a V/C ratio of 0.79 under 2017 baseline conditions to 0.82 with Phase I of the project. In 2020, once Phase II is implemented, the V/C ratio would further degrade to 0.86. Because both of these roadway facilities are built out under existing conditions, no improvements or other mitigation measures are feasible at either location and impacts would remain significant and unavoidable at opening day of Phase I in 2017 and at opening day of Phase II in 2020. As such, two significant and unavoidable impacts would occur.

Table 4.12-21. Unsignalized Intersection Level of Service with Mitigation

ID	Intersection	Stop Control Direction	2017			2020			Significant and Unavoidable?
			AM	PM	Saturday	AM	PM	Saturday	
17	Golden Gate Drive/Panama Lane	Northbound/Southbound	B	B	B	B	B	C	No
28	Cottonwood Road/Panama Lane	Overall Intersection	C	C	C	C	C	B	No
36	South Union Avenue/Berkshire Road	Overall Intersection	B	B	B	B	B	B	No
38	Ashe Road/McCutchen Road	Eastbound/Westbound	C	C	C	C	C	C	No
39	Mountain Ridge Drive/McCutchen Road	Northbound/ Southbound	C	C	C	B	C	C	No
41	Akers Road/Hosking Avenue	Overall Intersection	C	C	C	C	B	C	No
43	Hughes Lane/Hosking Avenue	Northbound	B	B	B	B	B	A	No
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C/-	C/-	C/-	C/-	C/-	C/-	No
53	South H Street/McKee Road	Overall Intersection	B	B	B	B	B	B	No
54	South Union Avenue/McKee Road	Eastbound/Westbound	C	C	A	B	C	A	No
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	C	C	C/-	C	C	C/-	No
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	B	B	C/-	C	C	C/-	No
61	Shannon Drive/Taft Highway	Northbound/Southbound	C	C	C	C	C	C	No
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	B	B	C	C	C	C	No
64	South H Street/Northbound SR 99 off-ramp	Eastbound	-	-	-	A	B	-	No

Table 4.12-22. Signalized Intersection Level of Service with Mitigation

ID	Intersection	2017			2020			Significant and Unavoidable?
		AM	PM	Saturday	AM	PM	Saturday	
6	South H Street/White Lane	-	-	-	C	C	C	No
8	South Union Avenue/White Lane	-	-	-	C	C	C	No
24	South H Street/Panama Lane	N/A	N/A	N/A	N/A	N/A	N/A	Yes
25	Monitor Street/Panama Lane	C	C	B	C	B	C	No
26	South Union Avenue/Panama Lane	-	-	-	C	C	C	No
33	Colony Street/Berkshire Road [1]	B	B	B	B	B	B	No
34	South H St/Berkshire Road	C	C	C	C	C	C	No
37	South H Street/Project Site[1]	B	B	C	B	C	B	No
40	Stine Road & Hosking Ave	C	C	B	C	B	C	No
44	SB 99 off ramp & Hosking Ave	-	-	N/A	-	-	N/A	No
45	NB 99 on ramp & Hosking Ave	-	-	N/A	-	-	N/A	No
46	South H Street & Hosking Avenue	C	C	C	C	C	C	No
74	Ashe Road/Taft Highway (SR 119)	C	C	C	C	-	C	No
87	Gosford Road/Panama Lane	B	B	B	C	B	B	No

[1] Although these values fail to meet the City standard of LOS C, the mitigated level of operations is equal to or better than projected operations under No Project conditions. Therefore, the identified impact is less than significant with mitigation in place.

N/A = not applicable

Table 4.12-23. Roadway Segments with Project with Mitigation

		2017		2020		
Roadway Segment	Capacity	ADT	V/C	ADT	V/C	Impact?
Panama Ln: Gosford Rd–Ashe Rd	22,500 30,000 (2035)	9,426	0.42	10,857	0.48	No
Panama Ln: Wible Rd–SR 99	60,000	-	-	-	-	Yes[1]
Panama Ln: SR 99–So. H St	50,000 60,000 (2035)	29,308	0.59	32,971	0.66	No
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000 30,000 (2035)	8,903	0.59	9,993	0.67	No
Hosking Rd: Stine Rd–Wible Rd	15,000 30,000 (2035)	8,781	0.59	10,769	0.72	No
Hosking Ave: Wible Rd–SR 99	15,000 30,000 (2020)	11,663	0.78	14,141	0.47	No
Hosking Ave: SR 99–S. H St	40,000 (2017)	24,203	0.61	30,446	0.76	No
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000 30,000 (2035)	10,372	0.69	11,022	0.73	No
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000 30,000 (2035)	10,748	0.72	11,740	0.78	No
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000 30,000 (2035)	10,880	0.73	11,975	0.80	No
Taft Hwy (SR 119): Wible Rd–S. H St	30,000 (2017)	12,191	0.41	12,786	0.43	No
Taft Hwy (SR 119): S. H St–Chevalier Rd	30,000 (2017)	14,041	0.47	14,870	0.50	No
Cottonwood Rd: Hosking Ave–Panama Rd	15,000 30,000 (2035)	6,854	0.46	7,748	0.52	No
S. Union Ave: White Ln–Pacheco Rd	40,000 60,000 (2035)	27,692	0.69	29,777	0.74	No
S. Union Ave: Fairview Rd–Panama Ln	40,000	15,645	0.39	17,410	0.44	No
S. Union Ave: Panama Ln–Hosking Rd	40,000	13,633	0.34	15,436	0.39	No
S. Union Ave: Hosking Rd–Panama Rd	40,000 60,000 (2035)	16,131	0.40	18,747	0.47	No
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	17,762	0.44	19,262	0.48	No

[1] Mitigation not available.
ACT = average daily traffic; SR = State Route; V/C = volume to capacity ratio

Impact TR-2: The project would not 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.

The standard established by KernCOG for impacts on designated roads or highways under the CMP is LOS E. The proposed project would not cause any CMP roadways to exceed LOS E. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact TR-3: The project would not substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Construction

No obstacles to sight distance are expected to result from project construction. No sharp roadway curves currently exist in the study area, nor would such curves be created by the proposed project. However, the maneuvering of construction-related vehicles and equipment among the general-purpose traffic on area roadways could potentially cause safety hazards. This impact is considered potentially significant, but preparation of a Traffic Control Plan under MM TR-1 would reduce this impact to a less-than-significant level.

Operation

The proposed site plan would be developed using the *Subdivision and Engineering Design Manual* standards for traffic engineering (City of Bakersfield 2005). The City has a site design and review process that includes review of site entrances, line of sight review, drive approaches, return radii, and

throat width to ensure that there is sufficient space for internal circulation and for safe ingress to and egress from the project site.

The City of Bakersfield Fire Department would be consulted in the design review process to ensure that standards for fire truck turning radii are met and that the site driveways are designed to City standards to prevent excessive queuing. Therefore, impacts would be less than significant.

Mitigation Measures

Impacts would be less than significant with implementation of MM TR-1.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact TR-4: The proposed project would not result in inadequate emergency access.

Construction

Emergency access to the project site could be affected by project construction; specifically, lane closures and construction-related traffic could delay or obstruct the movement of emergency vehicles. This impact is considered potentially significant, but preparation of a Traffic Control Plan under MM TR-1 above would reduce this impact to a less-than-significant level by communicating construction plans with emergency service providers and providing an access and circulation plan for use by emergency vehicles when lane closures adjacent to the site are in effect, including provisions for advance notice to local fire and police departments to ensure that alternative evacuation and emergency routes are designed to maintain response times. Impacts from construction causing a potential emergency access impact would be less than significant.

Operation

The project site has two proposed points of access, both of which would be signalized. One access point would be the intersection of Colony Street/Berkshire Road (ID 33), and the other would be a site access street that intersects with South H Street (ID 37). The City of Bakersfield Fire Department would be consulted during the design review process to ensure that there is sufficient space for fire truck turning radii and drive aisle width. Because the project would not be permitted without adequate fire truck access, operation-related impacts on emergency access would be less than significant.

Mitigation Measures

Impacts would be less than significant with implementation of MM TR-1.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact TR-5: The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The project site is within the GET service area. The GET offers two types of service to the study area: fixed bus route and dial-a-ride. The nearest transit stop to the project site is approximately 0.75 mile away, and several other routes operate in the vicinity. Project construction and operation would not interfere with existing transit service, and increased commercial uses in the area would help to support transit.

In the vicinity of the project site, bike lanes exist along Panama Lane, Ashe Road, Stine Road, Wible Road, White Lane, and South H Street. Bicycle facilities are also planned in the future along Panama Road, Panama Lane east of Cottonwood Road, and Cottonwood Road south of Panama Lane (Kern Council of Governments 2012). Pedestrian access is provided via sidewalks, crosswalks, and proximity to residential areas. The proposed project would not interfere with plans for future bikeways. Berkshire Road, Hosking Avenue, and South H Street would all be widened as a part of the proposed project, and each street would have bike lanes added in each direction.

The proposed project would be designed to accommodate pedestrian movement within and adjacent to the site. Residents would be able to walk from surrounding neighborhoods to the shopping center. Therefore, the proposed project would not result in inconsistencies or obstacles to implementing alternative modes of transportation. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

4.12.4.4 Cumulative Impacts

The traffic impact analysis uses existing traffic counts, published ADT volumes, and data from the KernCOG traffic model. The KernCOG traffic model is a comprehensive analytical model used by the City and Kern County to forecast traffic volumes in the City and Kern County as urban development occurs. The KernCOG model is based on existing development and the MBGP using Department of Finance growth projections. When projects are approved that involve amendments to the MBGP, these areas are added to the model as potential growth areas and generally include full or partial buildout depending on location. In this manner, the KernCOG model is constantly updated to ensure that the baseline data contained therein accurately reflects the traffic volumes associated with urbanization and growth trends in the region.

The cumulative projects and projected growth would add a substantial amount of traffic to the local and regional roadway network. The Interchange Project was also included in the KernCOG projected growth modeling assumptions. Cumulative project traffic growth is included in the analysis of the Year 2030 No Project Condition. The analysis of cumulative impacts is described below.

Tables 4.12-24, 4.12-25, and 4.12-26 show the 2035 Baseline Condition and the with Project (both Phases I and II) condition for unsignalized intersections, signalized intersections, and roadway segments, respectively.

Table 4.12-24. Unsignalized Intersection Operations (2035)

			2035 Baseline			2035 + Phases I & II			
ID	Intersection	Stop Control Direction	AM	PM	Saturday	AM	PM	Saturday	Impact?
17	Golden Gate Drive/Panama Lane	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
27	Sparks Street/Panama Lane	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
28	Cottonwood Road/Panama Lane	Overall Intersection	F	F	F	F	F	F	Yes
36	South Union Avenue/Berkshire Road	Overall Intersection	F	F	F	F	F	F	Yes
38	Ashe Road/McCutchen Road	Eastbound/Westbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
41	Akers Road/Hosking Avenue	Overall Intersection	F	F	F	F	F	F	Yes
43	Hughes Lane/Hosking Avenue	Northbound	F	F	F	F	F	F	Yes
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
53	South H Street/McKee Road	Overall Intersection	F	B	F	F	C	F	Yes
54	South Union Avenue/McKee Road	Eastbound/Westbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
61	Shannon Drive/Taft Highway	Northbound/Southbound	F/F	F/F	F/F	F/F	F/F	F/F	Yes
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	F	F	F	F	F	F	Yes
64	South H Street/Northbound SR 99 off-ramp	Eastbound	D	B	C	D	B	D	Yes

SR = State Route

Table 4.12-25. Signalized Intersection Operations (2035)

		2035 Baseline			2035 + Project Phases I & II			
ID	Intersection	AM	PM	Saturday	AM	PM	Saturday	Impact?
3	Wible Road/White Lane	D	F	E	D	F	E	No
4	Southbound SR 99 off-ramp/White Lane	C	E	B	B	E	B	No
5	Northbound SR 99 off-ramp/White Lane	C	B	B	B	B	B	No
6	South H Street/White Lane	F	F	F	F	F	F	Yes
8	South Union Avenue/White Lane	F	F	F	F	F	F	Yes
9	South H Street/Pacheco Road	E	D	D	F	D	D	Yes
10	South Union Avenue/Pacheco Road	D	D	C	D	D	C	No
14	South H Street/Fairview Road	C	D	C	C	D	C	Yes
15	South Union Avenue/Fairview Road	C	C	D	C	C	E	Yes
16	Ashe Road/Panama Lane	E	C	D	E	D	C	Yes
18	Stine Road/Panama Lane	F	D	F	F	D	F	Yes
19	Akers Road/Panama Lane	E	C	C	E	C	D	Yes
20	Wible Road/Panama Lane	C	C	E	D	D	E	Yes
21	Southbound SR 99 off-ramp/Panama Lane	B	E	E	B	F	E	Yes
22	Northbound SR 99 off-ramp/Panama Lane	C	E	F	C	F	F	Yes
23	Colony Street/Panama Lane	C	F	C	C	F	C	No
24	South H Street/Panama Lane	F	E	F	F	E	F	Yes
25	Monitor Street/Panama Lane	F	C	C	F	C	C	Yes
26	South Union Avenue/Panama Lane	F	F	F	F	F	F	Yes
33	Colony Street/Berkshire Road[1]	-	-	-	E	B	C	Yes
34	South H St/Berkshire Road	D	C	C	F	E	E	Yes
37	South H Street/Project Site[1]	-	-	-	B	C	C	No
40	Stine Road & Hosking Ave	F	F	F	F	F	F	Yes

ID	Intersection	2035 Baseline AM	2035 Baseline PM	2035 Baseline Saturday	2035 + Project Phases I & II AM	2035 + Project Phases I & II PM	2035 + Project Phases I & II Saturday	Impact?
42	Wible Road & Hosking Ave	F	E	F	F	E	F	Yes
44	SB 99 off ramp & Hosking Ave	C	C	A	C	C	C	No
45	NB 99 on ramp & Hosking Ave	C	C	A	B	C	B	No
46	South H Street & Hosking Avenue	F	F	F	F	F	F	Yes
47	Monitor St/Hosking Avenue	F	C	C	F	C	C	Yes
48	South Union Avenue/Hosking Avenue	E	C	F	E	C	F	Yes
55	Stine Road/Taft Highway (SR 119)	F	C	F	F	C	F	Yes
57	Wible Road/Taft Highway (SR 119)	F	F	F	F	F	F	Yes
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	F	F	F	F	F	F	Yes
60	South H Street/Taft Highway	F	C	E	F	D	E	Yes
62	South Union Avenue/Panama Road	D	C	E	D	D	E	Yes
74	Ashe Road/Taft Highway (SR 119)	F	F	C	F	F	C	Yes
76	Gosford Road/McCutchen Road	F	C	B	F	C	B	No
87	Gosford Road/Panama Lane	F	F	F	F	F	F	Yes

[1] Access point to proposed project site – would not exist under No Project conditions.

SR = State Route

Table 4.12-26. Roadway Segment Operations (2035)

		2035 Baseline		2035 + Phases I & II		
Roadway Segment	Capacity	ADT	V/C	ADT	V/C	Impact?
Berkshire Rd: S. H St–Union Ave (SR 204)	15,000	8,453	0.56	10,197	0.68	No
White Ln: W. of Union Ave	40,000	11,521	0.29	12,131	0.30	No
White Ln: Hughes Ln–H St	40,000	29,443	0.74	30,267	0.76	No
White Ln: H St–Monitor St	40,000	14,347	0.36	14,454	0.36	No
White Ln: Wible Rd – SR 99	60,000	38,068	0.63	38,614	0.64	No
Panama Ln: Gosford Rd–Ashe Rd	22,500	21,979	0.98	22,066	0.98	Yes
Panama Ln: Ashe Rd–Stine Rd	47,500	31,948	0.67	32,986	0.69	No
Panama Ln: Stine Rd–Akers Rd	60,000	41,296	0.69	42,987	0.72	No
Panama Ln: Akers Rd–Wible Rd	60,000	42,504	0.71	44,526	0.74	No
Panama Ln: Wible Rd–SR 99	60,000	56,972	0.95	59,561	0.99	Yes
Panama Ln: SR 99–So. H St	50,000	42,342	0.85	46,290	0.93	Yes
Panama Ln: S. H St–Union Ave (SR 204)	40,000	19,883	0.50	21,884	0.55	No
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000	12,782	0.85	13,766	0.92	Yes
Hosking Rd: Stine Rd–Wible Rd	15,000	15,753	1.05	18,300	1.22	Yes
Hosking Ave: Wible Rd–SR 99	15,000	19,531	1.30	22,827	1.52	Yes
Hosking Ave: SR 99–S. H St	15,000	32,257	2.15	43,449	2.90	Yes
Hosking Ave: S. H St–S. Union Ave	15,000	8,613	0.57	10,496	0.70	No
Hosking Ave: S. Union Ave–Cottonwood Rd	15,000	4,149	0.28	5,016	0.33	No
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000	14,865	0.99	14,939	1.00	Yes
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000	15,586	1.04	16,196	1.08	Yes
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000	15,761	1.05	16,563	1.10	Yes
Taft Hwy (SR 119): Wible Rd–S. H St	15,000	16,171	1.08	16,231	1.08	Yes
Taft Hwy (SR 119): S. H St–Chevalier Rd	15,000	17,411	1.16	18,042	1.20	Yes

		2035 Baseline		2035 + Phases I & II		
Roadway Segment	Capacity	ADT	V/C	ADT	V/C	Impact?
Panama Rd.: Chevalier Rd–Cottonwood Rd	15,000	15,153	1.01	15,848	1.06	Yes
S. H St: White Ln–Pacheco Rd	40,000	22,305	0.56	23,557	0.59	No
S. H St: Pacheco Rd–Fairview Rd	40,000	16,671	0.42	18,244	0.46	No
S. H St: Fairview Rd–Panama Ln	40,000	17,446	0.44	19,329	0.48	No
S. H St: Panama Ln–Hosking Ave	40,000	24,093	0.60	29,732	0.74	No
S. H St: Hosking Ave–McKee Rd	40,000	11,763	0.29	14,652	0.37	No
S. H St: McKee Rd–Taft Hwy (SR 119)	40,000	12,782	0.32	15,061	0.38	No
Cottonwood Rd: Hosking Ave–Panama Rd	15,000	12,355	0.82	12,729	0.85	Yes
S. Union Ave: White Ln–Pacheco Rd	40,000	38,198	0.95	39,257	0.98	Yes
S. Union Ave: Fairview Rd–Panama Ln	40,000	21,847	0.55	23,655	0.59	No
S. Union Ave: Panama Ln–Hosking Rd	40,000	22,571	0.56	23,812	0.60	No
S. Union Ave: Hosking Rd–Panama Rd	40,000	34,859	0.87	35,619	0.89	Yes
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	23,149	0.58	24,540	0.61	No

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

2035 Baseline Conditions

Under 2035 baseline conditions, all 16 existing unsignalized intersections that were affected under the previous years, 32 signalized intersections, and 16 roadway segments are projected to be below LOS C.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17) is estimated to operate at LOS F during the AM, PM, and Saturday peak hours
- Sparks Street/Panama Lane (ID 27)
- Cottonwood Road/Panama Lane (ID 28)
- South Union Avenue/Berkshire Road (ID 36)
- Ashe Road/McCutchen Road (ID 38)
- Mountain Ridge Drive/McCutchen Road (ID 39)
- Akers Road/Hosking Avenue (ID 41)
- Hughes Lane/Hosking Avenue (ID 43)
- Cottonwood Road/Hosking Avenue (ID 49)
- South H Street/McKee Road (ID 53) (Recently Signalized)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)
- South H Street/Northbound SR 99 off-ramp (ID 64)

Signalized

- Wible Road/White Lane (ID 3)
- Southbound SR 99 off-ramp/White Lane (ID 4)
- South H Street/White Lane (ID 6)
- South Union Avenue/White Lane (ID 8)
- South H Street/Pacheco Road (ID 9)
- South Union Avenue/Pacheco Road (ID 10)
- South H Street/Fairview Road (ID 14)
- South Union Avenue/Fairview Road (ID 15)

- Ashe Road/Panama Lane (ID 16)
- Stine Road/Panama Lane (ID 18)
- Akers Road/Panama Lane (ID 19)
- Wible Road/Panama Lane (ID 20)
- Southbound SR 99 off-ramp/Panama Lane (ID 21)
- Northbound SR 99 off-ramp/Panama Lane (ID 22)
- Colony Street/Panama Lane (ID 23)
- South H Street/Panama Lane (ID 24)
- Monitor Street/Panama Lane (ID 25)
- South Union Avenue/Panama Lane (ID 26)
- South H Street/Berkshire Road (ID 34)
- Stine Road/Hosking Avenue (ID 40)
- Wible Road/Hosking Avenue (ID 42)
- South H Street/Hosking Avenue (ID 46)
- Monitor Street/Hosking Avenue (ID 47)
- South Union Avenue/Hosking Avenue (ID 48)
- Stine Road/Taft Highway (SR 119) (ID 55)
- Wible Road/Taft Highway (SR 119) (ID 57)
- Southbound SR 99 off-ramp/Taft Highway (SR 119) (ID 59)
- South H Street/Taft Highway (ID 60)
- South Union Avenue/Panama Road (ID 62)
- Ashe Road/Taft Highway (SR 19) (ID 74)
- Gosford Road/McCutchen Road (ID 76)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Panama Lane: Gosford Road–Ashe Road
- Panama Lane: Wible Road–SR 99
- Panama Lane: SR 99–South H Street
- Panama Lane: South Union Avenue (SR 204)–Cottonwood Road
- Hosking Road: Stine Road–Wible Road
- Hosking Avenue: Wible Road–SR 99
- Hosking Avenue: SR 99–South H Street
- Taft Highway (SR 119): Ashe Road–Stine Road

- Taft Highway (SR 119): Stine Road–Akers Road
- Taft Highway (SR 119): Akers Road–Wible Road
- Taft Highway (SR 119): Wible Road–South H Street
- Taft Highway (SR 119): South H Street–Chevalier Road
- Panama Road: Chevalier Road–Cottonwood Road
- Cottonwood Road: Hosking Avenue–Panama Road
- South Union Avenue: White Lane–Pacheco Road
- South Union Avenue: Hosking Road–Panama Road

2035 Conditions with Project

Under 2035 conditions with the project, the following 16 unsignalized intersections, 28 signalized intersections, and 16 roadway segments are projected to exceed LOS C during one or more of the analysis periods.

Intersections

Unsignalized

- Golden Gate Drive/Panama Lane (ID 17)
- Sparks Street/Panama Lane (ID 27)
- Cottonwood Road/Panama Lane (ID 28)
- South Union Avenue/Berkshire Road (ID 36)
- Ashe Road/McCutchen Road (ID 38)
- Mountain Ridge Drive/McCutchen Road (ID 39)
- Akers Road/Hosking Avenue (ID 41)
- Hughes Lane/Hosking Avenue (ID 43)
- Cottonwood Road/Hosking Avenue (ID 49)
- South H Street/McKee Road (ID 53) (Recently Signalized)
- South Union Avenue/McKee Road (ID 54)
- Akers Road/Taft Highway (SR 119) (ID 56)
- Hughes Lane/Taft Highway (SR 119) (ID 58)
- Shannon Drive/Taft Highway (ID 61)
- Cottonwood Road/Panama Road (ID 63)
- South H Street/Northbound SR 99 off-ramp (ID 64)

Signalized

- South H Street/White Lane (ID 6)
- South Union Avenue/White Lane (ID 8)
- South H Street/Pacheco Road (ID 9)
- South H Street/Fairview Road (ID 14)
- South Union Avenue/Fairview Road (ID 15)
- Ashe Road/Panama Lane (ID 16)
- Stine Road/Panama Lane (ID 18)
- Akers Road/Panama Lane (ID 19)
- Wible Road/Panama Lane (ID 20)
- Southbound SR 99 off-ramp/Panama Lane (ID 21)
- South H Street/Panama Lane (ID 24)
- Monitor Street/Panama Lane (ID 25)
- South Union Avenue/Panama Lane (ID 26)
- Colony Street/Berkshire Road (ID 33)
- South H Street/Berkshire Road (ID 34)
- Stine Road/Hosking Avenue (ID 40)
- Wible Road/Hosking Avenue (ID 42)
- South H Street/Hosking Avenue (ID 46)
- Monitor Street/Hosking Avenue (ID 47)
- South Union Avenue/Hosking Avenue (ID 48)
- Stine Road/Taft Highway (SR 119) (ID 55)
- Wible Road/Taft Highway (SR 119) (ID 57)
- Southbound SR 99 off-ramp/Taft Highway (SR 119) (ID 59)
- South H Street/Taft Highway (ID 60)
- South Union Avenue/Panama Road (ID 62)
- Ashe Road/Taft Highway (SR 119) (ID 74)
- Gosford Road/Panama Lane (ID 87)

Roadway Segments

- Panama Lane: Gosford Road–Ashe Road
- Panama Lane: Wible Road–SR 99
- Panama Lane: SR 99–South H Street
- Panama Lane: South Union Avenue (SR 204)–Cottonwood Road

- Hosking Road: Stine Road–Wible Road
- Hosking Avenue: Wible Road–SR 99
- Hosking Avenue: SR 99–South H Street
- Taft Highway (SR 119): Ashe Road–Stine Road
- Taft Highway (SR 119): Stine Road–Akers Road
- Taft Highway (SR 119): Akers Road–Wible Road
- Taft Highway (SR 119): Wible Road–South H Street
- Taft Highway (SR 119): South H Street–Chevalier Road
- Panama Road: Chevalier Road–Cottonwood Road
- Cottonwood Road: Hosking Avenue–Panama Road
- South Union Avenue: White Lane–Pacheco Road
- South Union Avenue: Hosking Road–Panama Road

Mitigation Measures

Implement MM TR-1 through MM TR-3.

Level of Significance after Mitigation

As shown in Tables 4.12-27 through 4.12-29, implementation of all mitigation measures listed above would reduce impacts to less-than-significant levels for their respective locations, with the exception of one unsignalized intersection, seven signalized intersections, and one roadway segment.

1. Operations at unsignalized South Union Avenue/Berkshire Road would remain at LOS F during the Saturday peak hour under 2035 conditions with the project's cumulative contribution and would remain at LOS F with mitigation, resulting in a significant and unavoidable cumulative impact.
2. Operations at signalized South H Street/White Lane would remain at LOS F during the AM and Saturday peak hours under 2035 conditions with the project's cumulative contribution, and would improve to LOS D with mitigation during the PM and Saturday peak hours, resulting in significant and unavoidable impacts.
3. Operations at signalized Stine Road/Panama Lane would remain at LOS F during the AM and Saturday peak hours under 2035 conditions with the project's cumulative contribution, would improve to LOS D with mitigation during the AM peak hour, and would remain at LOS F during the Saturday peak hour, resulting in significant and unavoidable impacts.
4. Mitigation at signalized Akers Road/Panama Lane would remain at LOS E during the AM peak hour under 2035 conditions with the project's

cumulative contribution and would improve to LOS D with mitigation; however, impacts would remain significant and unavoidable.

5. Operations at signalized Wible Road/Panama Lane would degrade from LOS C to LOS D during the AM and PM peak hours under 2035 conditions with the project's cumulative contribution and would remain at LOS D with mitigation, resulting in significant and unavoidable impacts. During the Saturday peak hour for Wible Road/Panama Lane, operations would remain at LOS E under 2035 conditions with the project's cumulative contribution and would improve to LOS F with mitigation; however, impacts would remain significant and unavoidable.
6. Operations at signalized South H Street/Hosking Avenue would remain at LOS F during the Saturday peak hour under 2035 conditions and the project's cumulative contribution and would improve to LOS E with mitigation, and would remain a significant and unavoidable impact.
7. Operations at signalized Southbound SR 99 off-ramp/Taft Highway (SR 119) would remain at LOS F during the Saturday peak hour under 2035 conditions and the project's cumulative contribution and would improve to LOS D with mitigation, and would remain a significant and unavoidable impact.
8. Operations at signalized South H Street/Panama Lane would degrade from LOS C under 2035 baseline conditions to LOS D with the project's cumulative contribution.
9. Roadway segment operations along Panama Lane between Wible Road and SR 99 would degrade from a V/C ratio of 0.79 under 2035 baseline conditions to 0.82 with the project's cumulative contribution. Because both of these roadway facilities are built out under existing conditions, no improvements or other mitigation measures are feasible at either location and impacts would remain significant and unavoidable in the long-term cumulative condition.

Mitigation is not available for impacts identified at four signalized intersections (IDs 4: Southbound SR 99 off-ramp/White Lane, 21: Southbound SR 99 off-ramp/Panama Lane, ID 22: Northbound SR 99 off-ramp/Panama Lane, and ID 24: South H Street/Panama Lane) and one roadway segment (Panama Lane, between Wible Road and SR 99) because their current condition is built out and additional capacity is not possible. Impacts at these three signalized intersections and one roadway segment would remain significant and unavoidable.

Table 4.12-27. Signalized Intersection Level of Service with Mitigation (Cumulative)

		2035			
ID	Intersection	AM	PM	Saturday	Significant and Unavoidable?
6	South H Street/White Lane	C	D	D	Yes
8	South Union Avenue/White Lane	C	C	C	No
9	South H Street/Pacheco Road	C	C	B	No
14	South H Street/Fairview Road	C	C	C	No

ID	Intersection	2035 AM	2035 PM	2035 Saturday	Significant and Unavoidable?
15	South Union Avenue/Fairview Road	C	C	C	No
16	Ashe Road/Panama Lane	C	C	C	No
18	Stine Road/Panama Lane	D	C	F	Yes
19	Akers Road/Panama Lane	D	C	C	Yes
20	Wible Road/Panama Lane	D	D	F	Yes
21	Southbound SR 99 off-ramp/Panama Lane	N/A	N/A	N/A	Yes
22	Northbound SR 99 off-ramp/Panama Lane	-	N/A	N/A	Yes
24	South H Street/Panama Lane	N/A	N/A	N/A	Yes
25	Monitor Street/Panama Lane	C	B	B	No
26	South Union Avenue/Panama Lane	C	C	C	No
33	Colony Street/Berkshire Road [1]	B	B	B	No
34	South H St/Berkshire Road	C	C	C	No
40	Stine Road & Hosking Ave	C	C	C	No
42	Wible Road & Hosking Ave	C	C	C	No
46	South H Street & Hosking Avenue	C	C	E	Yes
47	Monitor St/Hosking Avenue	C	C	C	No
48	South Union Avenue/Hosking Avenue	C	C	C	No
55	Stine Road/Taft Highway (SR 119)	C	B	C	No
57	Wible Road/Taft Highway (SR 119)	C	B	C	No
59	Southbound SR 99 off-ramp/Taft Highway (SR 119)	C	C	D	Yes
60	South H Street/Taft Highway	C	C	C	No
62	South Union Avenue/Panama Road	C	C	C	No
74	Ashe Road/Taft Highway (SR 119)	C	C	C	No
87	Gosford Road/Panama Lane	C	B	C	No

[1] Although these values fail to meet the City standard of LOS C, the mitigated level of operations is equal to or better than projected operations under No Project conditions. Thus, the identified impact is less than significant with mitigation in place.

N/A = not applicable
SR = State Route

Table 4.12-28. Unsignalized Intersection Level of Service with Mitigation (Cumulative)

ID	Intersection	Stop Control Direction	2035			Significant and Unavoidable?
			AM	PM	Saturday	
17	Golden Gate Drive/Panama Lane	Northbound/Southbound	C	B	C	No
27	Sparks Street/Panama Lane[2]	Northbound/Southbound	B	B	B	No
28	Cottonwood Road/Panama Lane	Overall Intersection	B	C	C	No
36	South Union Avenue/Berkshire Road	Overall Intersection	C	C	F	Yes
38	Ashe Road/McCutchen Road	Eastbound/Westbound	C	B	C	No
39	Mountain Ridge Drive/McCutchen Road	Northbound/Southbound	C	C	C	No
41	Akers Road/Hosking Avenue	Overall Intersection	C	C	C	No
43	Hughes Lane/Hosking Avenue	Northbound	A	A	A	No
49	Cottonwood Road/Hosking Avenue	Eastbound/Westbound	C	B	C	No
53	South H Street/McKee Road	Overall Intersection	C	B	C	No
54	South Union Avenue/McKee Road	Eastbound/Westbound	C	C	B	No
56	Akers Road/Taft Highway (SR 119)	Northbound/Southbound	C	B	C	No
58	Hughes Lane/Taft Highway (SR 119)	Northbound/Southbound	C	C	C	No
61	Shannon Drive/Taft Highway	Northbound/Southbound	B	C	C	No
63	Cottonwood Road/Taft Highway (SR 119)	Overall Intersection	D	C	C	No
64	South H Street/Northbound SR 99 off-ramp	Eastbound	A	B	B	No

Table 4.12-29. Roadway Segments with Project with Mitigation (Cumulative)

Roadway Segment	Capacity	2035		Significant and Unavoidable?
		ADT	V/C	
Panama Ln: Gosford Rd–Ashe Rd	22,500 30,000 (2035)	22,066	0.74	No
Panama Ln: Wible Rd–SR 99	60,000	59,561	N/A	Yes
Panama Ln: SR 99–So. H St	50,000 60,000 (2035)	46,290	0.77	No

Roadway Segment	Capacity	2035		Significant and Unavoidable?
		ADT	V/C	
Panama Ln: S. Union Ave (SR 204)–Cottonwood Rd	15,000 30,000 (2035)	13,766	0.46	No
Hosking Rd: Stine Rd–Wible Rd	15,000 30,000 (2035)	18,300	0.61	No
Hosking Ave: Wible Rd–SR 99	15,000 30,000 (2020)	22,827	0.76	No
Hosking Ave: SR 99–S. H St	40,000 (2017)	43,449	0.72	No
Taft Hwy (SR 119): Ashe Rd–Stine Rd	15,000 30,000 (2035)	14,939	0.50	No
Taft Hwy (SR 119): Stine Rd–Akers Rd	15,000 30,000 (2035)	16,196	0.54	No
Taft Hwy (SR 119): Akers Rd–Wible Rd	15,000 30,000 (2035)	16,563	0.55	No
Taft Hwy (SR 119): Wible Rd–S. H St	30,000 (2017)	16,231	0.54	No
Taft Hwy (SR 119): S. H St–Chevalier Rd	30,000 (2017)	18,042	0.60	No
Cottonwood Rd: Hosking Ave–Panama Rd	15,000 30,000 (2035)	12,729	0.42	No
S. Union Ave: White Ln–Pacheco Rd	40,000 60,000 (2035)	39,257	0.65	No
S. Union Ave: Fairview Rd–Panama Ln	40,000	23,655	0.59	No
S. Union Ave: Panama Ln–Hosking Rd	40,000	23,812	0.60	No
S. Union Ave: Hosking Rd–Panama Rd	40,000 60,000 (2035)	35,619	0.59	No
S. Union Ave: Pacheco Rd–Fairview Rd	40,000	24,540	0.61	No

ADT = average daily traffic
SR = State Route
V/C = volume to capacity ratio

Chapter 5
Alternatives Analysis

5.1 Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) identify and evaluate a reasonable range of alternatives to a project that could feasibly avoid or lessen any significant environmental impacts, while substantially achieving the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the proposed project that were considered, identifies alternatives that were eliminated from further consideration and reasons for their rejection, and analyzes several alternatives in comparison with the potential environmental impacts associated with the proposed project.

Key provisions of the State CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below.

> The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if those alternatives would impede to some degree the attainment of the project objectives or would be more costly.
>
> The "no project" alternative shall be evaluated, along with its impacts. The "no project" analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
>
> The range of alternatives required in an EIR is governed by a "rule of reason"; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. Alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
>
> For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
>
> An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, social and political acceptability, technological capacity, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative site.

5.2 Relationship to Project Objectives

An EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote or speculative, or that would not achieve the basic project objectives. The major objectives of the proposed project are identified below.

- Provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City of Bakersfield (City) and greater Kern County.
- Assemble a variety of retailers that would satisfy a majority of the shopping needs of the surrounding existing and planned neighborhoods, thus eliminating the need for residents to leave their neighborhoods for goods and services.
- Provide a multi-level hotel to accommodate regional travelers coming to the site and the greater Bakersfield area.
- Provide a highly visible shopping center for regional shopping needs and community development as well as a buffer between existing residential development east of the project site and State Route (SR) 99.
- Provide a gathering place for City of Bakersfield residents and visitors that includes shopping, entertainment (including a movie theater), and restaurants in a safe and aesthetically appealing environment.
- Facilitate a planned development consisting of national retailers and related in-line tenants consistent with the market objectives of the applicant and its tenants.

5.3 Alternatives Considered

During the preparation of this Draft EIR (DEIR), the City considered several alternatives to the proposed project. The goal for developing a set of possible alternative scenarios was to identify other means to achieve the project's objectives, while lessening or avoiding potentially significant environmental impacts caused by the proposed project.

The following alternatives were identified and are considered by the City in this DEIR:

- Alternative 1, No-Project A—No Build;
- Alternative 2, No-Project B—Build Per Existing Land Use Designations;
- Alternative 3, Reduced Development A—Phase I Buildout Only; and
- Alternative 4, Reduced Development B—Commercial Phase I Only, No Hotel.

These alternatives are described below.

5.3.1 Alternative 1. No-Project A—No Build

Section 15126.6(e) of the State CEQA Guidelines requires the analysis of a no-project alternative. This no-project analysis must discuss the existing condition, as well as what would be reasonably expected to occur in the foreseeable future if the proposed project was not approved. Because the proposed project is a development project, Section 15126.6(e)(3)(B) of the State CEQA Guidelines is directly applicable to the project:

> If the project is…a development project on an identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the "no project" alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

If the proposed project were not approved, one possible effect would be continued use of the land as it is used under existing conditions. At the time of the Initial Study/Notice of Preparation (IS/NOP) scoping period, the project site was vacant land. Therefore, the assumption for this alternative if the proposed project were not approved is that the project site would remain vacant land into the foreseeable future under Alternative 1.

5.3.2 Alternative 2. No-Project B—Build Per Existing Land Use Designations

Another reasonably foreseeable future no-project scenario for the project site, if the proposed project were not approved, would be the eventual development of the site per existing land use designations. Currently the proposed project site is designated for Low Density Residential (LR), Low-Medium Density Residential (LMR), High-Medium Density Residential (HMR), and General Commercial (GC). Figure 2-5 shows the current general plan designations for the project site. The current zoning for the project site is One-Family Dwelling (R-1) and Regional Commercial (C-2). Figure 2-6 shows the current zoning designations for the project site. Under this alternative, the site could be developed with residential and commercial uses without a discretionary approval in accordance with existing development standards pursuant to the respective land use and zoning designations. Ministerial approval by the City in the form of the site and design plan review would be required, as is required for all proposed projects in the City.

Using the most current Metropolitan Bakersfield General Plan (MBGP) Land Use Element map (City of Bakersfield and Kern County 2002), it is estimated that the project site is composed of roughly 50.2 acres of LR, 7.7 acres of LMR, 13.0 acres of HMR, and 15.0 acres of GC by the current land use designations. Using these acreages, Table 5-1 below shows the maximum number of dwelling units and commercial square footage that are assumed for Alternative 2.

Table 5-1. Approximate Number of Dwelling Units and Commercial Square Footage for Alternative 2

Land Use Designation	Acres	Dwelling units/ square footage per acre	Number of Dwelling Units/Commercial Square Footage
Low Density Residential (LR)	50.2	7.26 du/ac	364 dwelling units
Low-Medium Density Residential (LMR)	7.7	10.0 du/ac	77 dwelling units
High-Medium Density Residential (HMR)	13.0	17.42 du/ac	226 dwelling units
General Commercial (GC)	15.0	1.0 floor/area ratio (43,560 sf/ac)	653,400 square feet

Source: City of Bakersfield and Kern County 2002.

Therefore, under Alternative 2, it is estimated that a maximum of 667 dwelling units and 653,400 square feet of general commercial could be developed per the existing land use designations. Alternative 2 is also estimated to generate approximately 6,063 average daily trips (ADT)[1] for residential uses and 82% of the proposed project's ADT for commercial uses, or approximately 21,546 ADT[2] for commercial. This would result in a total of 27,609 ADT for Alternative 2, which is slightly more than would be generated for the proposed project.

5.3.3 Alternative 3. Reduced Development A—Phase I Buildout Only

Alternative 3 would include the buildout of Phase I of the proposed project only. This would include construction of 400,000 square feet of leasable commercial space, development of 120 hotel rooms, 2,683 surface parking spaces[3], and related onsite improvements including the proposed street widening and right-of-way improvements. Based on data presented in the Traffic Study prepared for the proposed project for ADT for Phase I, it is assumed that Alternative 3 would generate approximately 60% of the ADT of the proposed project, or 40% less traffic than the proposed project. Alternative 3 is assumed to be developed on approximately half, or 42.5 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

5.3.4 Alternative 4. Reduced Development B—Commercial Phase I Only, No Hotel

Alternative 4 would include the buildout of the 400,000 square feet of commercial space only as proposed in Phase I of the project, along with 2,550 surface parking spaces[4] and the related onsite improvements, including the proposed street widening and right-of-way improvements. No hotel uses would be developed under this alternative. It is assumed that Alternative 4 would generate 57% of the ADT of the proposed project, or 43% less traffic than the proposed project. Alternative 4 is assumed to be developed on approximately one quarter, or 21.25 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

5.4 Alternatives Considered and Withdrawn

1 CalEEMod Appendix D Table 4.13
2 Phase II of the proposed project would generate 26,275 ADT for commercial uses.
3 Based on 60% of the total parking spaces provided under the proposed project, as only 60% of the proposed project's ADT would be generated under Alternative 3.
4 Based on 57% of the total parking spaces provided under the proposed project, as only 57% of the proposed project's ADT would be generated under Alternative 4.

A lead agency may make an initial determination in an EIR as to which alternatives are feasible and therefore merit in-depth consideration, and which are not feasible. Alternatives that are remote or speculative, or alternatives whose effects cannot be reasonably predicted, need not be considered (State CEQA Guidelines, Section 15126(f)(2)). Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are not feasible, or do not avoid or substantially reduce any significant environmental effects (State CEQA Guidelines, Section 15126.6(c)).

During the scoping phase of the EIR, one public comment suggested that the EIR should explore a "Transit-oriented Alternative" for the proposed project. As described, such an alternative would be designed to focus on effective public transportation to and from the project, include parking management measures that promote walking and transit use, and consider area-wide light rail and its cumulative effect on traffic congestion.

The proposed project site is not located near any existing or proposed light rail transportation facilities. Amtrak provides rail service to and from Bakersfield and the Central Valley cities to the north, and the nearest Amtrak station is located at Truxtun Avenue and S Street, approximately 5 miles northeast of the project site.

In the vicinity of the project site, bike lanes exist along Panama Lane, Ashe Road, Stine Road, Wible Road, White Lane, and South H Street. Bicycle facilities are also planned in the future along Panama Road, Panama Lane east of Cottonwood Road, and Cottonwood Road south of Panama Lane (Kern Council of Governments 2012). Pedestrian access is provided via sidewalks, crosswalks, and proximity to residential areas.

Golden Empire Transit (GET) provides local bus service within the area and Route 62 (Greenfield/Valley Plaza) runs nearest the project site. This route provides service between Greenfield Senior Center, Golden Valley High School, Taft Highway, Panama Lane, White Lane Wal-Mart, Southwest Transit Center, and Valley Plaza. The nearest bus stop is at Golden Valley High School, at the intersection of Hosking Avenue and Arkwood Street (about 0.75 mile east of the project site).

While the proposed project is served by alternative means of transportation, the site is not within an area where rail or other transit services would be centralized to an extent that automobile use would be feasibly reduced in any significant way, particularly given the proximity and ease of access to SR99. The commenter has not provided any specific suggestions for the design or function of this suggested alternative. Therefore, this alternative has been withdrawn from further consideration due to its infeasibility.

No other alternatives were suggested or conceptualized that were considered and withdrawn for analysis in this EIR.

5.5 Analysis of Alternatives Considered

In accordance with the State CEQA Guidelines (Section 15126.6(d)), the discussion of the environmental impacts of the alternatives may be less detailed than the discussion of the impacts of the proposed project. An analysis comparing the impacts of the alternatives with those of the proposed project is provided below and summarized in Table 5-2. Impacts on agricultural resources and mineral resources were not considered, as these were scoped out in the IS/NOP. However, because Alternative 2 proposes additional dwelling units, population and housing and recreation (which were scoped out in the IS/NOP for the proposed project) are considered in the following analysis because development of residential land uses is growth-inducing and could affect population and housing and recreation.

Table 5-1. Comparison of Alternatives to the Proposed Project

Environmental Issue Area	Proposed Project Impact	Alternative 1 Impact	Alternative 2 Impact	Alternative 3 Impact	Alternative 4 Impact
Aesthetics	Less than Significant with Mitigation	Less Impact	Less Impact	Less Impact	Less Impact
Air Quality	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Biological Resources	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Cultural Resources	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Geology and Soils	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Greenhouse Gases	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Hydrology and Water Quality	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact
Land Use and Planning	Less than Significant	Less Impact	Less Impact	Greater Impact	Greater Impact
Noise	Less than Significant	Less Impact	Less Impact	Less Impact	Less Impact
Population and Housing*	Less than Significant	Less Impact	Greater Impact	Similar Impact	Similar Impact
Public Services and Utilities	Less than Significant with Mitigation	Less Impact	Greater Impact	Less Impact	Less Impact
Recreation*	Less than Significant	Less Impact	Greater Impact	Similar Impact	Similar Impact
Transportation and Traffic	Less than Significant with Mitigation	Less Impact	Similar Impact	Less Impact	Less Impact

Notes:

* Screened out as potentially significant environmental issue area for the proposed project in the IS/NOP (Appendix A). Impact statement summaries are based on the Initial Study.

5.5.1 Alternative 1. No-Project A—No Build

Alternative 1 would involve no action on the part of the City. The proposed project would not be constructed, and the project site would remain as vacant land until such a time that a development proposal is approved for this developing portion of the City.

Aesthetics and Urban Decay

Under Alternative 1, the proposed project would not be constructed and no new light sources would be installed. Like the proposed project, Alternative 1 would not contribute to urban decay or visual blight in other commercial areas of the region. Therefore, there would be fewer impacts on aesthetics and urban decay from Alternative 1 than under the proposed project because there would be no adverse impacts on existing commercial businesses.

Air Quality

Alternative 1 would not require any construction activities that would contribute to temporary air quality impacts. Additionally, Alternative 1 would not generate any new vehicle trips like those associated with the proposed project that would result in long-term mobile-source emissions. Therefore, there would be fewer impacts on air quality under Alternative 1 than under the proposed project.

Biological Resources

Alternative 1 would not result in any impacts on biological resources. The project site does not contain sensitive habitats and is not known to contain sensitive species. Certain sensitive species, such as San Joaquin kit fox and burrowing owl, may use the project site for foraging, denning, and burrowing. Raptors may also use the project site for foraging, but the lack of onsite trees precludes nesting opportunities. Alternative 1 would maintain the project site's current condition and the potential for use by some native species. Therefore, there would be fewer impacts on biological resources under Alternative 1 than under the proposed project.

Cultural Resources

Alternative 1 does not include any clearing or mass grading activities that have the potential to disturb or destroy sensitive archaeological or culturally important materials or artifacts. Therefore, there would be fewer impacts on cultural resources under Alternative 1 than under the proposed project.

Geology and Soils

Alternative 1 would not require groundbreaking activities. Topsoil exposure by these activities and the resultant potential for erosion at the project site would not occur. In addition, no patrons or employees would be exposed to existing geologic hazards. Therefore, there would be fewer impacts on geology and soils under Alternative 1 than under the proposed project.

Greenhouse Gases

Alternative 1 would not include any construction or operation activities that would result in temporary or long-term greenhouse gas (GHG) emissions. Therefore, there would be fewer impacts related to GHGs under Alternative 1 than under the proposed project.

Hazards and Hazardous Materials

Alternative 1 would not require the use of, or subject construction workers and commercial center workers and patrons to possible exposure to, construction- and operations-related chemicals. Therefore, there would be fewer impacts related to hazards and hazardous materials under Alternative 1 than under the proposed project.

Hydrology and Water Quality

Under Alternative 1, the project site would remain as vacant land, and no clearing and grading would occur. Stormwater from the project site would retain its current drainage to the existing stormwater drainage system, or percolate on site or off site. Impervious surfaces would also not be built on site under Alternative 1, reducing surface flows that could flow off site and cause erosion and flooding. Urban development would not occur, eliminating the potential for associated pollutants that could reach surface waters or percolate to the groundwater. There would be no change in current demands and impacts on groundwater resources. Therefore, there would be fewer impacts on hydrology and water quality under Alternative 1 than under the proposed project.

Land Use and Planning

Under Alternative 1, the project site would remain as vacant land, which is consistent with the land use designations adopted by the MBGP. A general plan amendment and zone change would not be required. Therefore, there would be fewer impacts on land use and planning under Alternative 1 than under the proposed project.

Noise

Under Alternative 1, existing noise levels would continue to be below standards. Alternative 1 would reduce significant noise impacts on offsite areas that would result from the proposed project. Therefore, there would be fewer impacts on noise under Alternative 1 than under the proposed project.

Public Services and Utilities

Alternative 1 would result in the project site remaining as vacant land, and therefore would not require potable water, wastewater treatment, stormwater drainage facilities, or landfill capacity. Alternative 1 would not violate solid waste regulations nor require service from law enforcement and fire departments. Accordingly, this would eliminate the potential for secondary impacts on service providers in terms of increased demand for personnel, equipment, and new facilities. Therefore, there would be fewer impacts on public services and utilities under Alternative 1 than under the proposed project.

Transportation and Traffic

Alternative 1 would not result in any new traffic to local streets. There would be no potential impacts in terms of traffic, levels of service, and need for roadway improvements as would be necessary for the proposed project. Therefore, there would be fewer impacts on transportation and traffic under Alternative 1 than under the proposed project.

Relationship to Project Objectives and Feasibility

Alternative 1 does not meet any of the project objectives.

Alternative 1 would result in the project site remaining vacant land until such a time that a development proposal is approved for this portion of the City. This is essentially an interim use of the project site. The project site is in the path of City growth and has already been entirely designated and zoned for numerous urban uses in anticipation of development and in conformance with the MBGP. There has been no indication that any group desires to purchase the project site for open space preservation. Therefore, while Alternative 1 is marginally feasible as an interim use, it is not a feasible long-term alternative.

5.5.2 Alternative 2. No-Project B—Build Per Existing Land Use Designations

Alternative 2 would not require a general plan amendment or zone change, as the project site is already designated and zoned for the proposed use of Alternative 2. Alternative 2 would require a site plan and review, as is required by the City for commercial or multi-family uses proposed within an area that is properly designated and zoned. Alternative 2 would involve development of the project site with LR-, LMR-, and HMR-zoned housing (667 total dwelling units) and GC-zoned development (a maximum of 653,400 square feet) at the maximum density or floor to area ratio allowed by the MBGP and current zoning. Alternative 2 would also result in an estimated 6,063 ADT[5] for residential uses and 82% of the proposed project's ADT for commercial uses, or approximately 21,546 ADT[6] for commercial. This would result in a total of 27,609 ADT for Alternative 2, which is slightly higher than would be generated for the proposed project.

Aesthetics and Urban Decay

Alternative 2 would likely result in less diffused lighting than that associated with the proposed project. Lighting under Alternative 2 would be mostly residential street lighting and porch, security, and internal house lighting. There would be commercial lighting as part of Alternative 2 but at a reduced intensity, as Alternative 2 would develop about 150,000 fewer square feet of commercial uses as compared with the proposed project. Therefore, there would be slightly fewer impacts associated with new sources of light and glare under Alternative 2 than under the proposed project.

Like the proposed project, Alternative 2 would result in less-than-significant impacts associated with visual blight from potential urban decay in the region, as a portion of the alternative would include development of residential uses, which do not result in urban decay. Furthermore, Alternative 2 would develop fewer commercial uses than the proposed project, which would likely be at a smaller scale and not large enough to accommodate multi-anchor tenants. Therefore, the commercial uses under this alternative would not likely compete with other regional retailers, resulting in a more neighborhood-serving commercial center with a lower potential for urban decay. Therefore, there would be fewer impacts on aesthetics and urban decay under Alternative 2 would be less than impacts associated with the proposed project.

5 CalEEMod Appendix D Table 4.13
6 Phase II of the proposed project would generate 26,275 ADT for commercial uses.

Air Quality

The types of air quality impacts under Alternative 2 would be similar to those under the proposed project, but of a slightly greater magnitude. As with the proposed project, construction and operation of building features under Alternative 2 would generate criteria pollutant emissions that could exceed the San Joaquin Valley Air Pollution Control District's (SJVAPCD) regional significance thresholds. Similar impacts from operational emissions would be expected, but there is the potential for reactive organic gas emissions from consumer products to be slightly higher under Alternative 2, compared with the proposed project, as a result of the increased number of residential land uses. Mitigation Measures MM AQ-1 and MM AQ-2, identified in Section 4.2, *Air Quality*, would likely be available to reduce regional emissions below SJVAPCD significance thresholds.

As with the proposed project, operation of Alternative 2 could expose existing sensitive receptors to increased health risks from localized particulate matter, diesel particulate matter (DPM), and carbon monoxide (CO) hot-spots. Similar to regional criteria pollutant emissions, localized particulate matter and DPM generated during operation of Alternative 2 could be slightly higher than under the proposed project. However, particulate matter 2.5 microns or less in diameter (PM2.5) and DPM dispersion modeling for the proposed project showed that impacts would be well below SJVAPCD's thresholds of significance and, as such, a similar conclusion is likely for Alternative 2. Furthermore, even though Alternative 2 would generate additional residential traffic, the increase would be minor (5%) and, as such, like the proposed project, Alternative 2 is not expected to result in CO hot-spots.

Similar to under the proposed project, receptors could be exposed to Valley Fever and odor impacts during construction of Alternative 2. Mitigation Measure MM AQ-1 (b), identified in Section 4.2, *Air Quality*, would be required to reduce Valley Fever impacts to less-than-significant levels. Odor impacts arising from construction equipment were not identified as significant for the proposed project, and would not be significant for Alternative 2 either, as both would involve similar types of construction equipment.

Biological Resources

Alternative 2 would result in impacts on biological resources similar to those under the proposed project because the same amount of land would be developed under Alternative 2 as is planned under the proposed project. Under Alternative 2, compliance with the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) would still be required. Therefore, impacts on biological resources from Alternative 2 would be similar to those associated with the proposed project.

Cultural Resources

Alternative 2 would result in ground-clearing and grading of the same area as the proposed project. Mitigation to avoid or preserve any culturally significant resources would also be implemented under Alternative 2. Therefore, impacts on cultural resources from Alternative 2 would be similar to those associated with the proposed project.

Geology and Soils

Like the proposed project, Alternative 2 would disturb the entire project site and expose topsoil. Therefore, Alternative 2 would result in the same potential for erosion at the project site during the construction period as would occur under the proposed project. There are no known geological hazards at the project site, and both the proposed project and Alternative 2 would require site plan and review by the City. Therefore, impacts on geology and soils from Alternative 2 would be similar to those associated with the proposed project.

Greenhouse Gases

Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with Alternative 2 would likely be greater than emissions estimated for the proposed project. However, implementation of Mitigation Measures MM GHG-1 and MM GHG-2 would reduce operational GHG emissions consistent with reductions estimated for the proposed project, which, when combined with anticipated reductions from state actions, would reduce GHG emissions compared with business-as-usual conditions. Accordingly, assuming comparable reductions would be achieved by project-level mitigation, impacts under Alternative 2 would be less than significant.

Hazards and Hazardous Materials

Construction of either a commercial center (proposed project) or residential and commercial structures (Alternative 2) would result in the similar use of a variety of petrochemicals—including fuels and lubricants—to operate the heavy equipment used for site preparation. Grading and construction activities would require the transport, storage, use, and disposal of hazardous materials, such as the fueling and servicing of construction equipment. Similar to operation of commercial land uses, operation of residential land uses has a very low potential for the use, storage, and disposal of substantial quantities of hazardous materials. Furthermore, Alternative 2 would be required to implement similar mitigation as the proposed project to minimize impacts from potential existing hazardous materials from previous uses. Therefore, impacts related to hazards and hazardous materials from Alternative 2 would be similar to those associated with the proposed project.

Hydrology and Water Quality

Alternative 2 would include grading of the entire project site to create the pads for residences and commercial structures as well as for parking areas and associated road improvements. Implementation of best management practices (BMPs)—such as the placement of silt-screens, sand bags, and other barriers to reduce polluted runoff—would be implemented, as with the proposed project. Therefore, the impacts associated with the grading phase of construction under Alternative 2 would be the same as those associated with the proposed project. Alternative 2 would likely employ a more traditional residential gutter drainage system for the residential uses and a stormwater detention basin for the commercial uses. Residential land uses generally have fewer impervious surfaces than equally sized commercial land uses; therefore, operation of Alternative 2 would result in fewer project-related stormwater runoff and urban pollutants that could enter the water column. Overall, impacts on hydrology and water quality from Alternative 2 would be similar to those associated with the proposed project.

Land Use and Planning

Both the proposed project and Alternative 2 would not physically divide a community or, with mitigation, conflict with a habitat conservation plan. Alternative 2 would not require a general plan amendment and zone change, unlike the proposed project, and would therefore be consistent with the land use plans and ordinances. Therefore, impacts on land use and planning under Alternative 2 would be fewer than the proposed project.

Noise

As discussed above, Alternative 2 would result in a similar amount of grading as would the proposed project, and noise from these activities would be the same under Alternative 2. However, it is anticipated that a predominantly residential development would not generate as much operational noise as a commercial development of the same size. Large delivery trucks would routinely travel to and from a commercial development, while fewer trucks would travel into a similarly sized residential area to make deliveries. Many commercial deliveries are large, require larger and noisier trucks than residential deliveries, and take time to off-load, which would not occur in a residential area. The reduced size of commercial land use under Alternative 2 would reduce intermittent noise as a result of deliveries and garbage truck traffic compared with the proposed project, because fewer trucks would visit the smaller commercial center proposed in Alternative 2. However, it is anticipated the traffic generated by Alternative 2 would be slightly higher than that of the proposed project. Overall, there would be fewer impacts on noise-sensitive users under Alternative 2 than under the proposed project.

Population and Housing

As discussed in Appendix A, the proposed project would result in less-than-significant impacts on population growth and no impacts related to displacing housing or people. Implementation of Alternative 2 would result in the construction of 667 dwelling units and 653,400 square feet of general commercial uses. It is estimated that the 667 residences would result in a population increase of 2,335 persons in the local area.[7] Therefore, Alternative 2 would result in population growth in the area and impacts would be greater than those of the proposed project. However, because the project site is already designated for these uses, the MBGP has already considered and planned for this growth. Because no existing housing occurs within the limits of the project site, similar to the proposed project, Alternative 2 would not displace housing or people.

Public Services and Utilities

The implementation of Alternative 2 would likely result in less impervious surface area than the proposed project because residential areas typically have more landscaping areas associated with front, back, and side yards. It is estimated that the 667 residences would use approximately 484 acre-feet per year of potable water.[8] The commercial development would use approximately 309 acre-feet per year. In consideration of both the residential and commercial demands, Alternative 2 would use approximately 793 acre-feet per year. It is anticipated that Alternative 2 would result in greater need for electricity, gas, wastewater conveyance, and solid waste disposal than the proposed project. It is also likely that both Alternative 2 and the proposed project would require similar intermittent fire and police protection needs, but impacts on schools, parks, and other public facilities would be greater under Alternative 2. Therefore, there would be more impacts on public services and utilities under Alternative 2 than under the proposed project.

Recreation

As discussed in Appendix A, the proposed project would result in less-than-significant impacts on existing neighborhood and regional parks and no impacts on proposed recreational facilities. It is estimated that implementation of Alternative 2 would result in a population increase of 2,335 persons in the local

7 Estimated population calculated by multiplying 3.5 persons per dwelling by 667 dwelling units per the City of Bakersfield Water Resources Department's *Standards and Specifications for Domestic Water Systems*.

8 Estimated annual residential use was based upon the City of Bakersfield Water Resources Department's *Standards and Specifications for Domestic Water Systems*, revised June 2011. Estimated use as calculated using the following equation: 3.5 persons per dwelling unit for single-family residential, multiplied by 667 dwelling units, multiplied by 185 gallons per capita per day on average, multiplied by 365 days per year = 157,637,113 gallons per year (484 acre feet per year). The commercial use is calculated at 82% of the proposed project demands, as the 653,400 square feet of general commercial in Alternative 2 is 82% of the proposed project buildout.

area.[9] Therefore, Alternative 2 would result in population growth in the area and could potentially increase demand on existing recreation and park resources or create an increased demand for new recreation or park resources. Impacts would be greater than those for the proposed project.

Transportation and Traffic

As discussed above, Alternative 2 would result in a similar amount of grading and number of construction personnel as would the proposed project. Therefore, construction-related traffic from these activities under Alternative 2 would be similar to that under the proposed project. The length of construction would be shorter because of the reduced size as compared with the proposed project, so there would be less potential for extended impacts under Alternative 2. It is anticipated that the predominantly residential development of Alternative 2 would not generate as much delivery truck traffic as a commercial development of the same size. Large delivery trucks would routinely travel to and from a commercial development, while fewer trucks would travel into a similarly sized residential area to make deliveries. It is anticipated that the operational impacts under Alternative 2 would be similar to those under the proposed project, as Alternative 2 would generate slightly more (5%) ADT than the proposed project. However, there would likely be reduced peak hour (Saturday morning) traffic generated by the commercial development of Alternative 2, based on the reduced size of the development, and increased peak hour traffic from the residential development during the morning and evening rush hours. Therefore, it is anticipated Alternative 2 would result in similar impacts on traffic as those of the proposed project. However, impacts from cumulative growth under Alternative 2 would be significant.

Relationship to Project Objectives and Feasibility

Alternative 2 does not fulfill some of the project objectives because it does not provide a highly visible regional shopping center and multi-level hotel. Alternative 2 also does not facilitate a planned development consisting of national retailers, and is not consistent with market demands. Alternative 2 does not provide as wide a variety of commercial opportunities as the proposed project and would likely not represent a regional commercial center attraction.

Alternative 2 is feasible, as the project site is already zoned for the various land use designations required by Alternative 2. However, Alternative 2 would not provide the City with the same type of project, namely a regional retail shopping center that would best establish Bakersfield's role as the capital of the southern San Joaquin Valley and develop a distinctive identity for the Bakersfield region that differentiates it as a unique place in the southern San Joaquin Valley.

[9] Estimated population calculated by multiplying 3.5 persons per dwelling by 667 dwelling units per the City of Bakersfield Water Resources Department's *Standards and Specifications for Domestic Water Systems*.

5.5.3 Alternative 3. Reduced Development A—Phase I Buildout Only

This alternative would include the development of 400,000 square feet of leasable commercial space, 120 hotel rooms, 2,683 surface parking spaces, and related onsite improvements. It is assumed that Alternative 3 would generate approximately 60% of the ADT of the proposed project, or 40% less traffic than the proposed project. Alternative 3 is assumed to be developed on approximately half, or 42.5 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

Aesthetics and Urban Decay

Alternative 3 would result in fewer impacts associated with light and glare than those under the proposed project. Alternative 3 would be developed at a reduced square footage compared with the proposed project, and would therefore result in less intense lighting. As discussed previously, no significant impacts associated with urban decay from the proposed project have been identified in this DEIR. This DEIR acknowledges the potential impacts on local businesses from national retailers. Therefore, there would be fewer aesthetic impacts, and similar urban decay impacts, under Alternative 3 compared with the proposed project.

Air Quality

The types of air quality impacts under Alternative 3 would be similar to those under the proposed project, but of a lesser magnitude. As with the proposed project, construction and operation of building features under Alternative 3 would generate criteria pollutant emissions that could exceed the SJVAPCD's regional significance thresholds. Mitigation Measures MM AQ-1 and MM AQ-2, identified in Section 4.2, *Air Quality*, would be available to reduce regional emissions below SJVAPCD significance thresholds.

As with the proposed project, operation of Alternative 3 could expose existing sensitive receptors to increased health risks from localized particulate matter, DPM, and CO hot-spots. Similar to regional criteria pollutant emissions, localized particulate matter and DPM generated during operation of Alternative 3 would be lower than under the proposed project, because there would be a lesser extent of operational activities under Alternative 3 than under the proposed project. PM2.5 and DPM dispersion modeling for the proposed project showed that no violations of SJVAPCD's thresholds of significance would occur, and the same conclusion would be expected for Alternative 3. Furthermore, because Alternative 3 would only generate 60% of the traffic expected under the proposed project, the potential for Alternative 3 to result in CO hot-spots would be lower than that of the proposed project. Accordingly, because impacts from CO hot-spots would be less than significant under the proposed project, impacts under Alternative 3 would likewise be less than significant.

Similar to under the proposed project, receptors could be exposed to Valley Fever and odor impacts during construction of Alternative 3. Mitigation Measure MM AQ-1 (b), identified in Section 4.2, *Air Quality*, would be required to reduce Valley Fever impacts to less-than-significant levels. Odor impacts arising from construction equipment were not identified as significant for the proposed project, and would not be significant for Alternative 3 either, as both would involve similar types of construction equipment.

Biological Resources

Alternative 3 would result in fewer impacts on biological resources because only half of the site would be disturbed and developed as compared with the proposed project. Additionally, under Alternative 3, compliance with the MBHCP would still be required. Therefore, there would be fewer impacts on biological resources under Alternative 3 than under the proposed project.

Cultural Resources

Alternative 3 result in fewer impacts on cultural resources because only half of the site would be disturbed and developed as compared with the proposed project. However, mitigation to avoid or preserve any culturally significant resources would still be required under Alternative 3. Therefore, there would be fewer impacts on cultural resources under Alternative 3 than under the proposed project.

Geology and Soils

Alternative 3 would only disturb half of the project site as compared with the proposed project, but would still require mitigation related to exposure of topsoil because of groundbreaking activities, and the resultant potential for erosion. In addition, Alternative 3 would reduce the potential for patrons to be exposed to geologic hazards as compared with the proposed project, as the hotel uses are not proposed under this alternative. Therefore, there would be fewer impacts on geology and soils under Alternative 3 than under the proposed project.

Greenhouse Gases

Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with Alternative 3 would likely be lower than those estimated for the proposed project. Implementation of Mitigation Measures MM GHG-1 and MM GHG-2 would reduce operational GHG emissions consistent with reductions estimated for the proposed project, which, when combined with anticipated reductions from state actions, would reduce GHG emissions compared with business-as-usual conditions. Accordingly, because GHG impacts

would be less than significant under the proposed project, impacts under Alternative 3 would likewise be less than significant.

Hazards and Hazardous Materials

Construction of Alternative 3 would result in the use of a variety of petrochemicals—including fuels, lubricants, and solvents—to operate the heavy equipment used for site preparation. Grading and construction activities would require the similar transport, storage, use, and disposal of hazardous materials, such as the fueling and servicing of construction equipment, as the proposed project. Commercial operations have a very low potential for the use, storage, and disposal of substantial quantities of hazardous materials. However, with the construction of less commercial square footage, even fewer quantities of hazardous materials would be used, stored, and disposed of under Alternative 3 than under the proposed project. Therefore, there would be fewer impacts related to hazards and hazardous materials under Alternative 3 than under the proposed project.

Hydrology and Water Quality

Alternative 3 would include grading on a smaller site as compared with the proposed project and would still include development of the stormwater detention basin. BMPs (silt-screens, sand bags, and other barriers to reduce polluted runoff) would still be required, similar to the proposed project. Therefore, there would be fewer impacts associated with the grading phase of construction under Alternative 3 than under the proposed project. In addition, because Alternative 3 would not develop 400,000 additional square feet of commercial space, the additional 120 hotel rooms, and associated parking lots, operation of Alternative 3 would result in less project-related stormwater runoff and less urban pollutants that could enter the water column than operation of the proposed project. Overall, there would be fewer impacts on hydrology and water quality under Alternative 3 than under the proposed project.

Land Use and Planning

Alternative 3 would require a general plan amendment and zone change like the proposed project. Alternative 3's general consistency with likely future development in surrounding areas would be similar to the proposed project. However, the proposed project better facilitates the following MBGP goals and policies:

- Goal 1. Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.

- Policy 15. Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.

- Policy 22. Locate major (regional) commercial uses in proximity to existing regional centers (such as Valley Plaza and East Hills Mall) and in proximity to future regional serving commercial centers in the downtown, southwest, northwest, and northeast, as designated on the Land Use Policy Map.

- Policy 67. Develop a distinctive identity for the Bakersfield region which differentiates it as a unique place in the southern San Joaquin Valley.

Based on the proposed project's size, plans for multi-anchor commercial uses, and appealing pedestrian-friendly site plan, the proposed project would better establish Bakersfield as the capital of the southern San Joaquin Valley. The proposed project is also a better example of a major regional center, and would more effectively differentiate the Bakersfield region as a unique place than would a reduced development footprint better suited for a neighborhood commercial center. Therefore, impacts on land use and planning under Alternative 3 would be greater than impacts associated with the proposed project.

Noise

As discussed above, Alternative 3 would result in a reduced amount of grading as compared with the proposed project; therefore, noise from these activities under Alternative 3 would be reduced from those of the proposed project. Compared with the proposed project, Alternative 3 would be developed at a reduced square footage, and less traffic would be generated. Less square footage would mean fewer garbage and delivery truck trips to the project site, resulting in less ambient and intermittent traffic noise compared with the proposed project. Therefore, there would be fewer impacts on noise-sensitive uses under Alternative 3 than under the proposed project.

Public Services and Utilities

The reduced square footage of Alternative 3 would result in less need for public services and utilities than would the proposed project. Under Alternative 3, the need for police and fire protection services would be reduced compared with the proposed project, as fewer employees and patrons would be present. The need for water, electrical, and other services would also be less than under the proposed project. Overall, there would be fewer impacts on public services and utilities under Alternative 3 than under the proposed project.

Transportation and Traffic

Alternative 3 would result in less 40% less operational traffic than the proposed project. Alternative 3 would develop less commercial square footage and attract fewer customers to the site, therefore generating less traffic volume than the proposed project. The reduced size of development under Alternative 3 compared with the proposed project would lead to fewer potential impacts on emergency vehicle access, transit service, and onsite parking during construction. Overall, there would be fewer impacts on transportation and traffic under Alternative 3 than under the proposed project.

Relationship to Project Objectives and Feasibility

Alternative 3 meets all but one of the project objectives. It does not meet the objective to facilitate a planned development consisting of national retailers and related in-line tenants consistent with market demands.

By not developing the remaining 400,000 square feet of commercial space and 120 hotel rooms for Phase II of the proposed project, the applicant would not fully utilize the project site, attract the greatest number of customers, and maximize profitability. This would not be consistent with market demands.

For objectives that Alternative 3 meets, the proposed project better fulfills most of these objectives. The proposed project would better provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City and greater Kern County. The proposed project would also assemble a greater variety of retailers that would better satisfy most of the shopping needs of the surrounding existing and planned neighborhoods, and would provide a larger gathering place for residents and visitors.

Alternative 3 is feasible. Prior to construction, it would require similar approvals by the City as the proposed project. Analysis of the proposed project determined that traffic and noise impacts could not be mitigated to a level of less than significant. It is assumed that, because of its lesser size, there would be fewer impacts associated with Alternative 3 than those associated with the proposed project, but that impacts on traffic and noise could still be significant under Alternative 3.

5.5.4 Alternative 4. Reduced Development B—Commercial Phase I Only, No Hotel

Alternative 4 would include the buildout of 400,000 square feet of leasable commercial space only as proposed in Phase I of the project.

This would also include construction of 2,550 surface parking spaces and related onsite improvements. It is assumed that Alternative 4 would generate 57% of the ADT of the proposed project, or 43% less traffic than the proposed project, because of the reduction in leasable commercial space and removal of the hotel uses. Alternative 4 is assumed to be developed on approximately one quarter, or 21.25 acres, of the proposed project site, with the remainder of the site assumed to be left vacant for future development.

Aesthetics and Urban Decay

Alternative 4 would result in fewer impacts associated with light and glare than those under the proposed project. Alternative 4 would be developed at a reduced square footage compared with the proposed project, and would not include the hotel use, and would therefore result in less-intense lighting. As discussed previously, no significant impacts associated with urban decay from the proposed project have been identified in this DEIR. This DEIR acknowledges the potential impacts on local businesses from national retailers. Therefore, there would be fewer aesthetic impacts, and similar urban decay impacts, under Alternative 4 compared with the proposed project.

Air Quality

The types of air quality impacts under Alternative 4 would be similar to those under the proposed project, but of a lesser magnitude. As with the proposed project, construction and operation of building features under Alternative 4 would generate criteria pollutant emissions that could exceed the SJVAPCD's regional significance thresholds. Mitigation Measures MM AQ-1 and MM AQ-2, identified in Section 4.2, *Air Quality*, would be available to reduce regional emissions below SJVAPCD significance thresholds.

As with the proposed project, operation of Alternative 4 could expose existing sensitive receptors to increased health risks from localized particulate matter, DPM, and CO hot-spots. Similar to regional criteria pollutant emissions, localized particulate matter and DPM generated during operation of Alternative 4 would be lower than under the proposed project, because there would be a lesser extent of operational activities under Alternative 4 than under the proposed project. PM2.5 and DPM dispersion modeling for the proposed project showed that no violations of SJVAPCD's thresholds of significance would occur, and the same conclusion would be expected for Alternative 4. Furthermore, because Alternative 4 would only generate 57% of the traffic expected under the proposed project, the potential for Alternative 4 to result in CO hot-spots would be lower than that of the proposed project. Accordingly, because impacts from CO hot-spots would be less than significant under the proposed project, impacts under Alternative 4 would likewise be less than significant.

Similar to under the proposed project, receptors could be exposed to Valley Fever and odor impacts during construction of Alternative 4. Mitigation Measure

MM AQ-1 (b), identified in Section 4.2, *Air Quality*, would be required to reduce Valley Fever impacts to less-than-significant levels. Odor impacts arising from construction equipment were not identified as significant for the proposed project, and would not be significant for Alternative 4 either, as both would involve similar types of construction equipment.

Biological Resources

Alternative 4 would result in fewer impacts on biological resources because a reduced amount of land compared with the proposed project would be disturbed and developed. Additionally, under Alternative 4, compliance with the MBHCP would still be required. Therefore, there would be fewer impacts on biological resources under Alternative 4 than under the proposed project.

Cultural Resources

Alternative 4 would result in fewer impacts on cultural resources because only one quarter of the site would be disturbed and developed as compared with the proposed project. However, mitigation to avoid or preserve any culturally significant resources would still be required under Alternative 4. Therefore, there would be fewer impacts on cultural resources under Alternative 4 than under the proposed project.

Geology and Soils

Alternative 4 would only disturb one quarter of the project site as compared with the proposed project, but would still require mitigation related to exposure of topsoil because of groundbreaking activities, and the resultant potential for erosion. In addition, Alternative 4 would reduce the potential for patrons to be exposed to geologic hazards as compared with the proposed project, as the hotel uses are not proposed under this alternative. Therefore, there would be fewer impacts on geology and soils under Alternative 4 than under the proposed project.

Greenhouse Gases

Similar to criteria air pollutant emissions, construction and operational GHG emissions associated with Alternative 4 would likely be lower than those estimated for the proposed project. Implementation of Mitigation Measures MM GHG-1 and MM GHG-2 would reduce operational GHG emissions consistent with reductions estimated for the proposed project, which, when combined with anticipated reductions from state actions, would reduce GHG emissions compared with business-as-usual conditions. Accordingly, because GHG impacts

would be less than significant under the proposed project, impacts under Alternative 4 would likewise be less than significant.

Hazards and Hazardous Materials

Construction of Alternative 4 would result in the use of a variety of petrochemicals—including fuels, lubricants, and solvents—to operate the heavy equipment used for site preparation. Grading and construction activities would require the similar transport, storage, use, and disposal of hazardous materials, such as the fueling and servicing of construction equipment, as the proposed project. Commercial operations have a very low potential for the use, storage, and disposal of substantial quantities of hazardous materials. However, with the construction of less commercial square footage, even fewer quantities of hazardous materials would be used, stored, and disposed of under Alternative 4 than under proposed project. Therefore, there would be fewer impacts related to hazards and hazardous materials under Alternative 4 than under the proposed project.

Hydrology and Water Quality

Alternative 4 would include grading on a smaller site as compared with the proposed project and would still include development of the stormwater detention basin. BMPs (silt-screens, sand bags, and other barriers to reduce polluted runoff) would be implemented, as with the proposed project. Therefore, there would be fewer impacts associated with the grading phase of construction under Alternative 4 than under the proposed project. Because Alternative 4 would not develop 400,000 additional square feet of commercial space, the 240 hotel rooms, and associated parking spaces, operation of Alternative 4 would result in less project-related stormwater runoff and less urban pollutants that could enter the water column than operation of the proposed project. Overall, there would be fewer impacts on hydrology and water quality under Alternative 4 than under the proposed project.

Land Use and Planning

Alternative 4 would require a general plan amendment and zone change like the proposed project. Alternative 4's general consistency with likely future development in surrounding areas would be similar to the proposed project. However, the proposed project better facilitates the following MBGP goals and policies:

- Goal 1. Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.

- Policy 15. Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.

- Policy 22. Locate major (regional) commercial uses in proximity to existing regional centers (such as Valley Plaza and East Hills Mall) and in proximity to future regional serving commercial centers in the downtown, southwest, northwest, and northeast, as designated on the Land Use Policy Map.

- Policy 67. Develop a distinctive identity for the Bakersfield region which differentiates it as a unique place in the southern San Joaquin Valley.

Based on the proposed project's size, plans for multi-anchor commercial uses, and appealing pedestrian-friendly site plan, the proposed project would better establish Bakersfield as the capital of the southern San Joaquin Valley. The proposed project is also a better example of a major regional center, and would more effectively differentiate the Bakersfield region as a unique place than would a reduced development footprint better suited for a neighborhood commercial center. Therefore, impacts on land use and planning under Alternative 4 would be greater than impacts associated with the proposed project.

Noise

As discussed above, Alternative 4 would result in a reduced amount of grading as compared with the proposed project; therefore, noise from these activities under Alternative 4 would be reduced from those of the proposed project. Compared with the proposed project, Alternative 4 would be developed at a reduced commercial square footage and would not include the development of the hotel; therefore, less traffic would be generated. Less square footage and no hotel uses would mean fewer garbage and delivery truck trips to the project site, resulting in less ambient and intermittent traffic noise compared with the proposed project. Therefore, there would be fewer impacts on noise-sensitive uses under Alternative 4 than under the proposed project.

Public Services and Utilities

The reduced commercial square footage and elimination of hotel uses of Alternative 4 would result in less need for public services and utilities than would the proposed project. Under Alternative 4, the need for police and fire protection services would be reduced compared with the proposed project, as fewer employees and patrons would be present. The need for water, electrical, and other services would also be less than under the proposed project. Overall, there would be fewer impacts on public services and utilities under Alternative 4 than under the proposed project.

Transportation and Traffic

Alternative 4 would result in 43% less operational traffic than the proposed project. Alternative 4 would develop less commercial square footage, eliminate the hotel uses, and attract fewer customers to the site, therefore generating less traffic volume than the proposed project. The reduced size of development under Alternative 4 compared with the proposed project would lead to fewer potential impacts on emergency vehicle access, transit service, and onsite parking during construction. Overall, there would be fewer impacts on transportation and traffic under Alternative 4 than under the proposed project.

Relationship to Project Objectives and Feasibility

Alternative 4 meets all but two of the project objectives. It does not meet the objective to facilitate a planned development consisting of an anchor store, national retailers, and related in-line tenants consistent with market demands. It also would not provide a multi-level hotel to accommodate regional travelers coming to the site and the greater Bakersfield area.

By not developing the remaining 400,000 square feet of commercial space and the hotel uses of the proposed project, the applicant would not fully utilize the project site, attract the greatest number of customers, and maximize profitability. This would not be consistent with market demands.

For objectives that Alternative 4 meets, the proposed project better fulfills most of these objectives. The proposed project would better provide an accessible regional retail shopping center that meets the growing demands of the residents and planned communities in the City and greater Kern County. The proposed project would also assemble a greater variety of retailers that would better satisfy most of the shopping needs of the surrounding existing and planned neighborhoods, and would provide a larger gathering place for residents and visitors.

Alternative 4 is feasible. Prior to construction, it would require similar approvals by the City as the proposed project. Analysis of the proposed project determined that traffic and noise impacts could not be mitigated to a level of less than significant. It is assumed that, because of its lesser size, there would be fewer impacts associated with Alternative 4 than those associated with the proposed project, but that impacts on traffic and noise could still be significant under Alternative 4.

5.6 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed project. Alternative 1 (No-Project A—No Build) would be environmentally superior to the proposed project because it would minimize or avoid physical

environmental impacts. However, the State CEQA Guidelines require that, if a no-project alternative is found to be environmentally superior, "the EIR shall also identify an environmentally superior alternative among the other alternatives" (State CEQA Guidelines, Section 15126.6(c)).

In terms of the physical effects on the environment, the environmentally superior alternative (other than a no-project alternative) is Alternative 4 (Reduced Development B—Commercial Phase I Only, No Hotel). However, Alternative 4 fails to fully meet the project objectives as discussed above.

Chapter 6

Consequences of Project Implementation

6.1 Effects Found not to Be Significant

6.1.1 Introduction

Pursuant to Section 15128 of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) shall contain a statement as to the reasons that various possible significant impacts were determined not to be significant and were therefore not discussed in detail in the EIR. Therefore, this section summarizes the analysis contained in the Initial Study (IS)/Notice of Preparation (NOP), dated November 5, 2014, which is contained in Appendix A of this EIR. The NOP was prepared to identify the potentially significant effects of the proposed project and was circulated for public review between November 5, 2014, and December 4, 2014. In the course of that evaluation, certain effects were found to have no impact or result in less-than-significant impacts because the proposed project's characteristics would not create such impacts. Therefore, this section provides a brief description of effects found not to be significant or found to be less than significant in the IS/NOP. In addition to those issues found to be less than significant in the IS/NOP, a number of impacts have been found to be less than significant during the more detailed analysis contained in the various topical sections of this EIR (Sections 4.1 through 4.12).

6.1.2 Aesthetics

Scenic Vista

The project site is within an area that is relatively flat, does not contain any significant landforms, and is currently vacant land. It is bordered by existing residential development to the west and east, and State Route (SR) 99 borders the western portion of the project site. Land to the north and south of the project site is vacant and undeveloped. This area is not regarded or designated as visually important or "scenic" in the Metropolitan Bakersfield General Plan (MBGP) (City of Bakersfield/County of Kern 2002) and is not within a Class I or II Visual Resources Area or Viewsheds and Slope Protection Area (City of Bakersfield 2008). Additionally, development of the project would not block or preclude views to any area containing important or what would be considered visually

appealing landforms. Therefore, no scenic vistas would be affected by the development of the project, and impacts are considered less than significant.

Scenic Resources

The project site consists of vacant land. No rock outcroppings are located on site. The project site is not adjacent to or near any state highway that is designated or eligible to be listed on the California Department of Transportation (Caltrans) State Scenic Highway System (Caltrans 2014). The State Scenic Highway System designates highways depending on the quantity of natural landscape that can be seen by travelers, the scenic quality of the landscape from a given segment of roadway, and the extent to which development intrudes upon the traveler's enjoyment of the view. The project site is not within or adjacent to any such landscape. The nearest eligible State Scenic Highway in Kern County is the SR 14 extension north from Mojave to SR 395, which is about 60 miles from Bakersfield and is obscured from view by the Piute Mountains. SR 58 east from where it meets SR 14 is also an eligible State Scenic Highway in Kern County and is also about 60 miles from Bakersfield and has the same obstructions (Caltrans 2014). Therefore, impacts associated with a state scenic highway are considered less than significant.

6.1.3 Agricultural and Forestry Resources

Important Farmland

The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance under the California Department of Conservation Division of Land Resource Protection's Farmland Mapping and Monitoring Program (California Department of Conservation 2014a). The project site is currently vacant land that may have been historically farmed, but now has land use designations of Low-Density Residential (LR), Low Medium-Density Residential (LMR), and High Medium-Density Residential (HMR) and is zoned One Family Dwelling (R-1). No impact would occur.

Williamson Act Contracts or Agricultural Zoning

The entire site is currently zoned R-1 by the City of Bakersfield, which is a residential zone designation. As part of the proposed project, a zone change from R-1 to Regional Commercial/Planned Commercial Development Zone (C-2/PCD) is being sought. Therefore, the project would not conflict with existing zoning for agricultural use. No impact would occur.

The Williamson Act applies to parcels consisting of at least 20 acres of Prime Farmland or at least 40 acres of land not designated as Prime Farmland. The purpose of the act is to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Williamson Act enables local governments to enter into contracts with private

landowners for the purpose of restricting specific parcels of land for use as agricultural or related open space. The proposed project site is 85 acres in size and does not contain any land currently under a Williamson Act Land Use Contract (California Department of Conservation 2014a). Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and there would be no impact. No impact would occur.

Conversion of Forest Land to Non-Forest Use

The project site is currently zoned R-1 for residential uses. No land zoned as forest land or timberland exists within the proposed project boundaries. The proposed project would not conflict with existing zoning for forest land or timberland. No impact would occur.

Conflicts with Forest Land Zoning

No land zoned as forest land or timberland exists within the proposed project boundaries. Approval of the proposed project would not result in the loss of forest land or conversion of forest land to other uses. No impact would occur.

Pressures to Convert Farmland to Non-Agricultural Use

The proposed project area is not within an agricultural or forest area. Therefore, implementation of the project would not result in changes that would cause the conversion of farmland to non-agricultural use or conversion of forest land to nonforest use. No impacts would occur.

6.1.4 Air Quality

Objectionable Odors

The generation of odors is generally associated with certain types of industrial and agricultural activities, as well as dairy facilities. No industrial activities are proposed for the project site. The nearest dairy facility is approximately 2.5 miles northwest of the project site. Therefore, because the project itself would not produce offensive odors, no impacts would occur.

6.1.5 Biological Resources

Riparian Habitat or Other Sensitive Natural Community

The project site is not crossed by a natural stream or river, either perennial or intermittent, based on the U.S. Geological Survey Gosford Quadrangle (USGS 2012). The project site is not within or adjacent to the Kern River or any other riparian (i.e., riverside) habitat. Furthermore, the project site is highly degraded and nearly clear of any vegetative cover, and no sensitive habitat communities or

special-status plant species are expected to occur in the project area. Therefore, the proposed project would not have a substantial impact on any riparian habitat or other sensitive natural community, and impacts would be less than significant.

Federally Protected Wetlands

No areas meeting the regulatory definition of Waters of the U.S. (jurisdictional waters) or State jurisdictional waters were identified in the immediate area of the project site. No wetlands or waterways potentially under the jurisdiction of either the U.S. Army Corps of Engineers or California Department of Fish and Wildlife are present within, or adjacent to, the proposed project site or the surrounding area (Appendix B). Therefore, the proposed project would not have a substantial adverse effect on federally protected wetlands. No impacts would occur.

6.1.6 Geology and Soils

Risk of Rupture of a Known Earthquake Fault

According to the California Department of Conservation, the project site is not within a delineated Alquist-Priolo Earthquake fault zone (California Department of Conservation 2014b). The nearest Fault Rupture Hazard Zones are approximately 7 miles east of the project site and are associated with the White Wolf Fault. The last major earthquake on this fault occurred in 1952 and caused extensive damage in the Bakersfield area (Krazan & Associates, Inc. 2008). Because the project site is not within a delineated Alquist-Priolo Earthquake fault zone, rupture of a known earthquake fault would not occur as a result of implementation of the project. No impacts would occur.

Strong Seismic Ground Shaking

The project site is not within a delineated Alquist-Priolo Earthquake fault zone, and there is no evidence that would indicate that an active fault or other geologic hazard exists on the site that would preclude the implementation of the proposed project (Krazan & Associates, Inc. 2008). The Bakersfield area has historically experienced a low to moderate degree of seismicity. The most recent earthquake significant to the project area was the seismic event that occurred on July 21, 1952 on the White Wolf Fault and measured a magnitude 7.7. Damage to Bakersfield from the main shock was slight; however, aftershocks generated just east of Bakersfield caused a great deal of damage to older buildings. Given that the proposed project is required to comply with all California Building Code requirements for commercial structures, which include the latest measures to help withstand severe ground shaking, impacts would be less than significant. Therefore, the proposed project would not expose people or structures to substantial adverse effects involving strong seismic ground shaking. Impacts are considered to be less than significant.

Liquefaction

Soil liquefaction is a state of soil particle suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs in soils such as sand in which the strength is purely friction, and under vibratory conditions such as those induced by a seismic event.

The predominant soils within the project site consist of loose to dense silty sand, sandy silt, sandy clayey silt, and sand/silty sand. Groundwater from seepage from the Kern Island Canal was observed at approximately 43 feet below existing grade during exploratory drilling as part of the Geologic Hazards Investigation. The historical high groundwater depth was determined to be approximately 37 feet below site grade. The potential for soil liquefaction during a seismic event was also evaluated as part of the Geologic Hazards Investigation, and it was determined that soils below 35 feet have only a slight potential for liquefaction under seismic shaking because of the loose to medium dense, saturated sandy soils located below 35 feet. Furthermore, according to the MBGP Safety/Public Safety Element, outside specific portions of the Lamont quadrangle between about Brundage Land and DiGiorgio Road, soil liquefaction risk is low. The proposed project site is outside this liquefaction hazard area, and impacts are considered to be less than significant.

Landslides

Because of the generally flat-lying nature of the site and surrounding areas, landslides would not occur on the project site. Therefore, the proposed project would not expose people or structures to substantial adverse effects involving landslides. No impacts would occur.

Septic Tanks or Alternative Wastewater Disposal Systems

The proposed project would not use septic tanks or other systems to dispose of wastewater generated by the project. The project would be served by domestic sewer systems installed as part of the project, the flows from which would be treated at one of the City's wastewater treatment plants. No impacts would occur.

6.1.7 Hazards and Hazardous Materials

Hazardous Emissions

There are no schools with 0.25 mile of the proposed project site. The closest schools are Granite Pointe Elementary School, which is 0.3 mile west of the site along Berkshire Road; Horizon Elementary School, which is 0.5 mile east of the site along Hosking Avenue; Golden Valley High School, which is also 0.5 mile east along Hosking Avenue; and Ollivier Middle School, which is 0.5 mile east of the project site along Berkshire Road. Therefore, the proposed project would

not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No impacts would occur.

Airports

The proposed project is not within an airport land use plan or within 2 miles of a public use airport. The closest airports to the project site are Bakersfield Municipal Airport, approximately 3 miles to the northeast; Meadows Field Airport, approximately 7 miles to the north; and Minter Field Airport, approximately 17.5 miles to the northwest. Therefore, the project is a sufficient distance from these areas and would not have the potential to expose people to associated safety hazards. Additionally, the project site is not within any area subject to the land use restrictions of the County of Kern 2011 Airport Land Use Compatibility Plan, which considers all of Kern County (County of Kern 2011). Therefore, the project would not result in a safety hazard from airports for people residing or working in the project area. No impacts would occur.

Wildland Fires

The project is not adjacent to a wildland area. The project site consists of vacant land. The site is surrounded by existing and proposed development. The proposed land use is not considered susceptible to wildland fires, and no areas containing flammable brush, grass, or trees exist close to the project site. Therefore, wildland fires do not have the potential to affect the site. No impacts would occur.

6.1.8 Hydrology and Water Quality

Flood Hazard Delineation Map

The project site is not within either a 100-year or 500-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA) (FEMA 2014). Therefore, high risk of flood (from topographic or drainage characteristics, distance from major rivers, or other factors) would not occur on the site. No impacts would occur.

Floodflows

As discussed above, the project site is not within either a 100-year or 500-year flood hazard area as mapped by FEMA (FEMA 2014). No impacts would occur.

Seiche, Tsunami, Mudflows

The project site is not near any significantly sized enclosed body of water or coastal area and is, therefore, not susceptible to a seiche or tsunami. The site is

also not at the foot of any significant topographical feature with the potential for mudflow. No impacts would occur.

6.1.9 Land Use and Planning

Division of an Established Community

The project site is in south Bakersfield, which is characterized by urban housing developments and shopping centers. The project site currently consists of vacant land. The project site is adjacent to vacant land to the north and south and residential development to the west and east. As such, the proposed project would not divide an established community. Therefore, impacts would be less than significant.

6.1.10 Mineral Resources

Mineral Resources of Regional Importance

The principal mineral resources extracted within the Metropolitan Bakersfield area are oil, natural gas, sand, and gravel. Areas used for sand and gravel extraction are concentrated primarily along the floodplain and alluvial fan of the Kern River, which is an important resource for construction, development, and other improvements. Because of the project's location away from any alluvial fans and the Kern River, it is unlikely that the project site would contain sand and gravel that would be considered a valuable commodity; therefore, there would be no impact on aggregate resources. In addition, the region is a major oil-producing area, with substantial oil and gas fields existing within the Metropolitan Bakersfield area. However, there are no oil derricks or oil transmission pipelines on the project site and, according to an oil, gas, and geothermal map of the area developed by the California Department of Conservation, the project site is not within any oil field (California Department of Conservation 2001). Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impacts would occur.

Mineral Resources of Local Importance

The proposed project is not within a locally important mineral resource recovery site delineated on the MBGP or any relevant specific plans, or other land use plans. No impact would occur.

6.1.11 Noise

Aviation Noise

The proposed project is not within an airport land use plan nor within 2 miles of a public use airport. The proposed project is also outside of the area subject to the land use restrictions of the adopted County of Kern 2011 Airport Land Use Compatibility Plan (County of Kern 2011).

6.1.12 Population/Housing

Population Growth

The proposed project would not directly induce growth from the proposed new commercial businesses. Infrastructure and public services have already extended beyond the project site to the east and south to accommodate new residential and commercial development. The project would provide employment opportunities in the area; however, the proposed commercial and retail uses would not require a specialized labor force and are likely to draw employees from the existing population. Impacts are considered less than significant.

Displacement of Housing

No existing housing occurs within the project footprint. The City-proposed State Route 99/Hosking Avenue Interchange project would utilize this area and is southwest of and adjacent to the proposed project. This interchange project would result in improvements to the intersection of SR 99 and Hosking Avenue that would allow access onto and off of the highway from Hosking Avenue in all directions. In June 2009, the SR 99 interchange project completed preparation of environmental documentation in compliance with CEQA, which found no significant effect on population and housing. Therefore, the project would not displace substantial numbers of existing housing. No impacts would occur.

Displacement of Persons

As discussed above, the project would not displace substantial numbers of existing housing, as no existing housing occurs within the project footprint. Therefore, the project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. No impacts would occur.

6.1.13 Public Services

Schools

The proposed project would not affect schools. The project is a commercial center that would not generate any additional school children in the project area or the subsequent need for schools. The project would provide employment opportunities in the area; however, the proposed commercial and retail uses would not require a specialized labor force and are likely to draw employees from the existing population. Therefore, the project is unlikely to attract into the area a substantial number of new workers with children that would require school services. Therefore, impacts would be less than significant.

Parks

The project area is within the boundaries of the City's Recreation and Parks District, which identifies 59 parks within the City. The MBGP defines four types of parks: mini-parks with a size standard of 2.5 acres; neighborhood parks of at least 10 acres; community parks with 20 usable acres; and regional parks that may range in size from 20 to 1,000 acres, developed as a part of service to residential developments within a given radius. The nearest existing park to the center of the project site is the Granite Point Park in a residential development, approximately 1.1 miles to the northwest of the project site. Because the proposed project would not likely increase the residential population of the Metropolitan Bakersfield area, the project would not subsequently increase the demand for and use of existing parks. Therefore, impacts would be less than significant.

Other Public Facilities

Because the project is a commercial development and would not cause a residential growth-inducing effect, it is unlikely that it would have a potentially significant impact on other public facilities, such as libraries. Projects that induce growth, such as residential developments, are most likely to affect other public or government facilities. Therefore, impacts would be less than significant.

6.1.14 Recreation

Physical Deterioration of Recreation Facilities

An increased use of recreational facilities is generally spurred by population growth within a defined area. The project would not likely result in an increase in population, and would not increase demand on existing recreation and park resources or create an increased demand for new recreation or park resources. Therefore, impacts would be less than significant.

Construction or Expansion of Recreational Facilities

The proposed project does not include the creation or expansion of recreational facilities that could have an impact on the environment. No impacts would occur.

6.1.15 Transportation/Traffic

Air Traffic Patterns

The proposed project is not within an airport land use plan or within 2 miles of a public use airport. The closest airports to the project location are Bakersfield Municipal Airport, approximately 3 miles to the northeast; Meadows Field Airport, approximately 7 miles to the north; and Minter Field Airport, approximately 17.5 miles to the northwest. No impacts would occur.

6.2 Significant Environmental Effects that Cannot Be Avoided

Section 15126.2(b) of the State CEQA Guidelines requires the EIR to describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The potential environmental effects of the project as well as the proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

After analysis and environmental review, as provided in this EIR, it was determined that impacts for traffic would be significant and unavoidable for the project, even with the incorporation of reasonable mitigation measures, which would attempt to reduce impacts to the greatest extent feasible.

Table 6-1 provides a summary of the unavoidable significant project-level impacts of the project.

Table 6-1. Summary of Significant and Unavoidable Project-Level Impacts of the SR-99/Hosking Commercial Center Project

Resource	Project Impacts
Traffic	The project would degrade operations at intersection of South H Street/Panama Lane and roadway segment of Panama Lane between Wible Road and SR 99.

SR = State Route

6.3 Significant Cumulative Impacts

According to Section 15355 of the State CEQA Guidelines, the term "cumulative impacts" refers to "two or more individual effects that, when considered together, are considerable or compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor but, when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This EIR has considered the potential cumulative effects of the project. Even with the incorporation of mitigation, the project's incremental contributions to the following significant cumulative impacts are considered cumulatively considerable and unavoidable:

- Traffic

Table 6-2 provides a summary of the significant and unavoidable cumulative contributions of the project.

Table 6-2. Summary of Significant and Unavoidable Cumulative Impacts of the SR-99/Hosking Commercial Center Project

Resource	Cumulative Impacts
Traffic	The project would also result in cumulatively considerable contributions to significant cumulative traffic impacts at one unsignalized intersection, eleven signalized intersections, and two roadway segments. Mitigation is proposed for one unsignalized intersection, seven signalized intersections, and one roadway segment. However, even after mitigation is incorporated, impacts would remain significant and unavoidable.

6.4 Significant Irreversible Changes

Pursuant to Section 15126.2(c) of the California Environmental Quality Act Guidelines, an Environmental Impact Report must consider any significant irreversible environmental changes that would be caused by the proposed project, should it be implemented. Section 15126.2(c) reads as follows:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project.

> Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The proposed project would require the use of nonrenewable resources—such as metal alloys and aggregate resources—for its physical construction. In addition, small amounts of fuel would be used during the construction phase. However, the proposed project would not use an uncommon amount of raw materials compared with the amount used by other projects of similar scope and magnitude. The retail operations of the proposed project would require the use of nonrenewable resources, primarily fuel consumed by suppliers and customers. The amount of fuel consumption would not be uncommon compared with other similar projects.

The proposed project would not significantly increase the consumption of nonrenewable resources and would not significantly commit future generations to the unnecessary exploitation of nonrenewable resources. While various natural resources such as construction materials and energy resources would be used for the proposed project, the use of these resources, relative to other similar urban development projects in the region, would not result in substantial resource depletion.

6.5 Growth-Inducing Impacts

6.5.1 Introduction

The State CEQA Guidelines require an EIR to discuss how a proposed project could directly or indirectly foster economic or population growth—or the construction of additional housing—in the surrounding environment. This discussion must also include any ways in which the proposed project would remove obstacles to population growth or trigger the construction of new community service facilities that could cause significant impacts (State CEQA Guidelines § 15126.2).

The analysis presented below focuses on whether the proposed project would stimulate growth in the surrounding area. A growth-inducing impact reflects changes to the existing physical environment that would occur as a result of the proposed project. As discussed throughout this Draft EIR (DEIR), approval of the proposed project would enable a commercial site on 80 acres to be developed with commercial uses that include two anchor buildings, national retailers, a cinema, and 11 restaurants (Figure 2-4).

6.5.2 Removal of Obstacles to Growth

The proposed project would not have a growth-inducing effect on surrounding areas. The number of new development proposals in locations extending south from the City of Bakersfield center toward the project site is substantial. The proposed project lies in the path of growth and does not represent "leapfrog"

development. Planning for growth on the project site represents a reasonable extension of urban land uses in metropolitan Bakersfield.

The project site has already been planned for development, having general plan designations of Low Density Residential (LR), Low-Medium Density Residential (LMR), and High-Medium Density Residential (HMR), and zoning designations of One-Family Dwelling (R-1). Therefore, the proposed project is already accounted for in the Metropolitan Bakersfield General Plan (MBGP) and growth projections for the area. The proposed project seeks to change the current residential designation and zoning to General Commercial (GC) and Regional Commercial Zone/Planned Commercial Development Zone (C-2/PCD), respectively. The commercial site is being planned within an area that is identified as an "Intensified Activity Center" described within the MBGP (City of Bakersfield/County of Kern 2002). The "centers" concept provides for a land use pattern consisting of several concentrated mixed-use commercial and high-density residential centers surrounded by medium-density residential uses. This concept encourages people to live and work in the same area, and thus serves to minimize sprawl and reduce traffic, travel time, infrastructure costs, and air pollution. The proposed project is consistent with this MBGP principal. Unlike residential use (a previously planned use for portions of the site), the proposed project would not directly induce growth by supplying residences. The proposed project also would not indirectly induce growth by providing jobs requiring specialized skills that cannot be filled by the current labor pool. Instead, the proposed project is growth-accommodating in that it would provide needed services to already-planned residential growth areas in the region.

The project proponent may decide to pursue an annexation of an approximate 29.5-acre area in the southern portion of the project site into the Greenfield County Water District (GCWD) service boundary. The project proponent and GCWD have entered into agreements initiating the annexation process and appointing GCWD as agent to extract groundwater, but that process is on hold pending the selection of the final water supplier and certification of this DEIR. The proposed project has the potential to result in an increased water supply to a portion of the project site, which would induce additional growth. However, water supply to the commercial site would provide needed services to already-planned residential growth areas in the region and does not include residential uses. The proposed project would not have a growth-inducing effect on surrounding areas.

The project site would not foster "leapfrog" development and has already been planned for urban development. In addition, the proposed general plan amendment and zone change would result in a proposed land use that would not directly or indirectly induce growth (unlike the current residential land use and zoning designations on portions of the project site). The proposed project would provide water supply for needed services to already-planned residential growth areas in the region. Therefore, the proposed project would not foster new planned growth and would not be considered growth-inducing for its removal of obstacles to growth.

6.5.3 Economic Growth

The proposed project would serve the existing and planned local neighborhoods and would not require a large or diverse labor force. Specifically, the proposed project would provide primarily retail and hospitality uses. Therefore, the proposed project would not require a skilled labor force to relocate to the area. The existing available labor force in the region would be able to accommodate the additional jobs projected. As discussed in Chapter 2, *Project Description and Environmental Setting*, the proposed project is intended to achieve some primary land use goals and policies of the MBGP. Some of the main land use goals in the MBGP encourage the City of Bakersfield to "accommodate new development, which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley [Goal 1]," and "accommodate new development, which provides a full mix of uses to support its population [Goal 2]." Therefore, the proposed project would not represent a significant growth-inducing impact from economic growth.

Chapter 7
Response to Comments

To be provided in Final EIR

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Chapter 8
Organizations and Persons Consulted

8.1 State

California Air Resources Board

California Highway Patrol

California Department of Transportation, District #6

California Department of Transportation, Planning Department

California Department of Conservation

California Department of Fish and Wildlife - Fish & Game Region #4

California Department of Housing and Community Development

California Department of Toxic Substances Control

California Department of Water Resources

California Office of Historic Preservation

Central Valley Regional Water Quality Control Board #5F

Native American Heritage Commission

State of California's Governor's Office, Office of Planning and Research, State Clearinghouse

8.2 Regional and Local

City of Bakersfield Fire Department

City of Bakersfield Police Department

City of Bakersfield Public Works Department

Greenfield County Water District

Pacific Gas & Electric Company

Regional Water Quality Control Board, Region 5 (Fresno)

San Joaquin Valley Air Pollution Control District

8.3 Native American Tribes

Mr. Dave Singleton, Native American Heritage Commission

Mr. Colin Rambo, Tejon Indian Tribe

Rueben Barrios, Sr., Santa Rosa Rancheria Tachi-Yokut Tribe

Neil Peyron, Tule River Indian Tribe

Julie Turner, Kern Valley Indian Council

Kenneth Woodrow, Wuksache Indian Tribe/Eshom Valley Band

Robert Robinson, Kern Valley Indian Council

Lalo Franco, Santa Rosa Rancheria Tachi-Yokut Tribe

Chapter 9
List of Preparers

9.1 City of Bakersfield

Jacquelyn R. Kitchen	Planning Director, QA/QC
Martin Ortiz	Principal Planner, QA/QC
Cecelia Griego	Associate Planner, Project Manager

9.2 ICF International

Charlie Richmond, AICP, LEED AP ND	Project Manager, QA/ QC
Chad Beckstrom, AICP	Project Director, QA/QC
Tanya Jones	Deputy Project Manager; Executive Summary, Introduction, Project Description, Alternatives
Aaron Brownwood	Aesthetics and Urban Decay, Transportation and Traffic
Matt McFalls	Air Quality, Greenhouse Gas Emissions
Laura Yoon	Air Quality, Greenhouse Gas Emissions
Shannon Hatcher	Air Quality, Greenhouse Gas Emissions, QA/QC
Russell Sweet	Biology
Mark Robinson	Cultural Resources
Gary Clendenin	Geology and Soils, Hazardous Materials, QA/QC
Mario Barrera	Geology and Soils, Hazardous Materials
Meghan Heintz	Hydrology, Water Quality, SB 610 Water Supply
Alexa LaPlante	Hydrology, Water Quality, SB 610 Water Supply Assessment, QA/QC
Malia Bassett	Land Use and Planning, General Support
Jonathan Higginson, INCE	Noise
Liane Chen	Public Services & Utilities, Growth Inducing Impacts, Significant Irreversible Changes, Effects Found Not to be Significant
Saadia Byram	Editor
Ken Cherry	Editor
John Mathias	Editor
Jenelle Mountain-Castro	Publications Specialist

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Chapter 10
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Chapter 11
Acronyms and Abbreviations

°F	degrees Fahrenheit
AB	Assembly Bill
ADT	average daily traffic
AERMOD	American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model
AEWSD	Arvin-Edison Water Storage District
APN	Assessor's Parcel Number
ARB	Air Resources Board
AST	aboveground storage tank
basin plan	water quality control plan
BAU	business-as-usual
BFD-ESD	City of Bakersfield Fire Department Environmental Services Division
bgs	below ground surface
BMPs	best management practices
BP	before present
BPS	best performance standards
BDPW	Bakersfield Department of Public Works
BFD	Bakersfield Fire Department
BPD	Bakersfield Police Department
BTU	British thermal unit
C-0	Professional and Administrative Office
C-1	Neighborhood Commercial
C-2	Regional Commercial
C-2/PCD	Regional Commercial/Planned Commercial Development
C_2H_3Cl	vinyl chloride
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service Company
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	climate action plan
CASGEM	California Statewide Groundwater Elevation Monitoring
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act

CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
City	City of Bakersfield
City Water Resources Department	City of Bakersfield Water Resources Department
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Equivalent Noise Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
County EMS	Kern County Emergency Medical Services
County Waste Management Department	Kern County Waste Management Department
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CVP	Central Valley Project
CWA	Clean Water Act
cy	cubic yards
dB	decibel
dBA	A-weighted decibels
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report
DOGGR	California Department of Oil, Gas, and Geothermal Resources
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EMT	emergency medical technician
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ETo	reference evapotranspiration
FAR	floor area ratio
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FR	Federal Register
GAFO	general merchandise, apparel, furnishing, and other specialty products
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GC	General Commercial
GET	Golden Empire Transit
GCWD	Greenfield County Water District
GHG	greenhouse gas
GPA	general plan amendment
gpd	gallons per day

gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GWP	global warming potential
H_2S	hydrogen sulfide
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plan
HMR	High-Medium Density Residential
HVAC	heating, venting, and air conditioning
ICF	ICF International
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/NOP	Initial Study/Notice of Preparation
ITE	Institute of Transportation Engineers
KCEHSD	Kern County Environmental Health Services Department
KCFD	Kern County Fire Department
KDWD	Kern Delta Water District
KernCOG	Kern Council of Governments
KRT	Kern Regional Transit System
kWh/yr	kilowatt-hours per year
L_{50}	level exceeded 50 percent of the hour
LAFCO	Local Agency Formation Commission
LCFS	Low Carbon Fuel Standard
L_{eq}	equivalent sound level
L_{max}	maximum noise level
L_{min}	minimum sound level
LMR	Low-Medium Density Residential
LOS	level of service
LR	Low Density Residential
L_{xx}	percentile-exceeded sound level
MBGP	Metropolitan Bakersfield General Plan
MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MS4	Municipal Separate Storm Sewer Systems
MS4 Permit	General Permit for Municipal Separate Storm Sewer Systems
MWD	Metropolitan Water District of Southern California
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSR	New Source Review
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration

Pb	lead
PCD	Planned Commercial Development
PEA	Preliminary Endangerment Assessment
PFC	perfluorinated carbon
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PM	particulate matter
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
project	SR 99/Hosking Commercial Center Project
R-1	One-Family Dwelling
R-1/PUD	One-Family Dwelling/Planned Unit Development
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RTIF	Regional Transportation Impact Fee
RTIP	Regional Transportation Improvement Program
RTP/SCS	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
Sheriff's Office	Kern County Sheriff's Office
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SO_4	sulfates
SO_X	sulfur oxides
SR	State Route
SSJVIC	Southern San Joaquin Archeological Information Center
SUSMP	Standard Urban Storm Water Mitigation Plan
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
Valley	San Joaquin Valley
V/C	volume to capacity
VERA	Voluntary Emissions Reduction Agreement
VOC	volatile organic compounds
Water Well Program	Water Well and Small Water System Programs

WSA	Water Supply Assessment
ZC	zone change
$\mu g/m^3$	micrograms per cubic meter

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