



PUBLIC REVIEW DRAFT | NOVEMBER 2017

Avanti South Specific Plan Environmental Impact Report



Prepared by:

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**PUBLIC REVIEW DRAFT
ENVIRONMENTAL IMPACT REPORT**

Avanti South Specific Plan



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TABLE OF CONTENTS

Section 1.0	Executive Summary.....	1-1
1.1	Project Location	1-1
1.2	Project Summary.....	1-1
1.3	Project Objectives	1-2
1.4	Environmental Issues/Mitigation Summary.....	1-3
1.5	Summary of Project Alternatives	1-25
Section 2.0	Introduction and Purpose	2-1
2.1	Purpose of the EIR.....	2-1
2.2	Compliance with CEQA.....	2-1
2.3	Notice of Preparation/Early Consultation (Scoping).....	2-2
2.4	Format of the EIR	2-3
2.5	Responsible and Trustee Agencies.....	2-4
2.6	Incorporation by Reference	2-5
Section 3.0	Project Description	3-1
3.1	Project Location and Setting	3-1
3.2	Background and History	3-4
3.3	Project Characteristics	3-5
3.4	Project Objectives	3-22
3.5	Phasing	3-23
3.6	Agreements, Permits, and Approvals	3-23
Section 4.0	Basis of Cumulative Analysis.....	4-1
Section 5.0	Environmental Analysis.....	5-1
5.1	Aesthetics.....	5.1-1
5.2	Air Quality	5.2-1
5.3	Biological Resources.....	5.3-1
5.4	Cultural and Tribal Cultural Resources.....	5.4-1
5.5	Geology and Soils	5.5-1
5.6	Greenhouse Gas Emissions	5.6-1
5.7	Hazards and Hazardous Materials	5.7-1
5.8	Hydrology and Water Quality	5.8-1
5.9	Land Use and Planning.....	5.9-1
5.10	Noise	5.10-1
5.11	Public Services and Utilities	5.11-1
5.12	Transportation/Traffic.....	5.12-1
Section 6.0	Other CEQA Considerations.....	6-1
6.1	Long-Term Implications of the Proposed Project	6-1
6.2	Irreversible Environmental Changes That Would Be Involved In the Proposed Action Should It Be Implemented.....	6-1
6.3	Growth-Inducing Impacts.....	6-2
6.4	Energy Conservation	6-9

Section 7.0	Alternatives to the Proposed Project	7-1
7.1	“No Project/No Development” Alternative	7-3
7.2	“No Project/Existing General Plan and Zoning” Alternative	7-9
7.3	“Reduced Density” Alternative	7-16
7.4	“Environmentally Superior” Alternative	7-24
Section 8.0	Effects Found Not To Be Significant.....	8-1
Section 9.0	Organizations and Persons Consulted	9-1
Section 10.0	Bibliography	10-1

APPENDICES (under separate cover and contained on CD)

- A. Notice of Preparation
- B. NOP Comment Letters
- C. Air Quality/Greenhouse Gas Emissions Data
- D. Biological Resources Assessment
- E. Cultural Resources Assessment
- F. Preliminary Geotechnical Investigation
- G. Preliminary Hazardous Materials Assessment
- H. Hydrology Analysis
- I. Noise Data
- J. Water Supply Assessment
- K. Public Services and Utilities Correspondence
- L. Traffic Study

LIST OF EXHIBITS

Exhibit 3-1	Regional Vicinity	3-2
Exhibit 3-2	Site Vicinity	3-3
Exhibit 3-3	Land Use Plan	3-8
Exhibit 3-4	Parks and Open Space Plan	3-11
Exhibit 3-5	Circulation Plan.....	3-13
Exhibit 3-6	Non-Vehicular Circulation Plan.....	3-16
Exhibit 3-7	Water Plan	3-18
Exhibit 3-8	Sewer Plan	3-19
Exhibit 3-9	Grading and Drainage Plan	3-20
Exhibit 5.1-1	Existing Conditions Photographs	5.1-2
Exhibit 5.10-1	Sound Levels and Human Response	5.10-2
Exhibit 5.10-2	Receptor Locations	5.10-6
Exhibit 5.10-3	Noise Measurement Locations	5.10-7
Exhibit 5.10-4	Noise Mitigation Recommendations	5.10-22
Exhibit 5.10-5	Operational Noise Source and Receptor Locations.....	5.10-25
Exhibit 7-1	Reduced Density Alternative	7-17

LIST OF TABLES

Table 3-1	Land Use Summary	3-6
Table 3-2	Avanti West Land Use Summary	3-6
Table 3-3	Avanti South Land Use Summary	3-7
Table 3-4	Parks and Open Space Summary.....	3-10
Table 4-1	Cumulative Projects List	4-2
Table 5.2-1	Local Air Quality Levels.....	5.2-2
Table 5.2-2	National and California Ambient Air Quality Standards.....	5.2-7
Table 5.2-3	Antelope Valley Air Quality Management District Emissions Thresholds.....	5.2-9
Table 5.2-4	Maximum Daily Construction Emissions	5.2-13
Table 5.2-5	Long-Term Operational Air Emissions	5.2-18
Table 5.3-1	Avanti South and Avanti West Plant Species.....	5.3-2
Table 5.3-2	Avanti South and Avanti West Wildlife Species	5.3-4
Table 5.6-1	Project Greenhouse Gas Emissions	5.6-10
Table 5.6-2	City of Lancaster CAP GHG Reduction Measure Consistency Analysis.....	5.6-11
Table 5.9-1	RHNA Allocation (2014-2021).....	5.9-4
Table 5.9-2	SCAG Consistency Analysis	5.9-9
Table 5.9-3	General Plan Policy Consistency Analysis.....	5.9-12
Table 5.10-1	Noise Descriptors.....	5.10-3
Table 5.10-2	Noise Measurements.....	5.10-5
Table 5.10-3	Existing Traffic Noise Levels.....	5.10-9
Table 5.10-4	Noise Compatible Land Use Objectives.....	5.10-10
Table 5.10-5	Significance of Noise Level Increases	5.10-12
Table 5.10-6	Construction Reference Noise Levels.....	5.10-14

Table 5.10-7	Worst-Case Construction Equipment Noise Levels	5.10-15
Table 5.10-8	Unmitigated Construction Equipment Noise Level Summary (dBA Lmax).....	5.10-15
Table 5.10-9	Vibration Source Levels for Construction Equipment	5.10-17
Table 5.10-10	Construction Equipment Vibration Levels.....	5.10-18
Table 5.10-11	Future Year 2021 Off-Site Project-Related Traffic Noise Impacts	5.10-19
Table 5.10-12	Exterior Traffic Noise Levels on Project Site.....	5.10-20
Table 5.10-13	Stationary Source Noise Level Measurements.....	5.10-23
Table 5.10-14	Project Operational Noise Levels.....	5.10-24
Table 5.10-15	Daytime Operational Noise Level Contributions.....	5.10-26
Table 5.10-16	Nighttime Operational Noise Level Contributions	5.10-26
Table 5.10-17	Cumulative Development Operational Noise Level Projections	5.10-29
Table 5.11-1	Westside Union School District Facilities	5.11-2
Table 5.11-2	Antelope Valley Union High School District Facilities.....	5.11-3
Table 5.11-3	District 40 Projected Yearly Water Demand by Land Use Type (AFY)	5.11-6
Table 5.11-4	District 40 Projected Water Supplies – Normal Water Year (AFY)	5.11-7
Table 5.11-5	Summary of Projected Water Supply and Demand (AFY)	5.11-7
Table 5.11-6	Estimated Solid Waste Generation.....	5.11-30
Table 5.12-1	Study Intersections	5.12-2
Table 5.12-2	Study Roadway Segments	5.12-3
Table 5.12-3	LOS Criteria – Unsignalized Intersections.....	5.12-5
Table 5.12-4	LOS Criteria – Signalized Intersections	5.12-6
Table 5.12-5	LOS and Density Ranges – CMP Intersections	5.12-7
Table 5.12-6	LOS and Density Ranges – CMP Freeway Segments.....	5.12-7
Table 5.12-7	Existing Peak Hour LOS – Unsignalized Intersections.....	5.12-8

Table 5.12-8	Existing Peak Hour LOS – Signalized Intersections	5.12-9
Table 5.12-9	Existing Traffic Signal Warrants (Weekday).....	5.12-10
Table 5.12-10	Existing Roadway Segments LOS	5.12-10
Table 5.12-11	Existing Peak Hour LOS – CMP Intersections.....	5.12-11
Table 5.12-12	Existing Conditions Peak Hour LOS – CMP Freeway Segments	5.12-11
Table 5.12-13	Proposed Project Trip Generation.....	5.12-17
Table 5.12-14	Existing With Project Conditions Peak Hour LOS – Unsignalized Intersections	5.12-18
Table 5.12-15	Existing With Project Conditions Peak Hour LOS – Signalized Intersections.....	5.12-19
Table 5.12-16	Existing with Project Conditions Traffic Signal Warrants (Weekday)	5.12-20
Table 5.12-17	Existing With Project Conditions Roadway Segment LOS	5.12-22
Table 5.12-18	Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – Unsignalized Intersections	5.12-24
Table 5.12-19	Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS –Signalized Intersections.....	5.12-25
Table 5.12-20	Forecast Year 2021 With Cumulative Projects and With Project Conditions Traffic Signal Warrants (Weekday).....	5.12-27
Table 5.12-21	Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Roadway Segment LOS	5.12-30
Table 5.12-22	Existing With Project Conditions Peak Hour LOS – CMP Intersections	5.12-32
Table 5.12-23	Existing With Project Conditions Peak Hour LOS – CMP Freeway Segments.....	5.12-34
Table 5.12-24	Forecast Year 2021 Cumulative Without and With Project Conditions Peak Hour LOS – CMP Intersections.....	5.12-35
Table 5.12-25	Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – CMP Freeway Segments.....	5.12-36
Table 6-1	Population Estimates.....	6-5
Table 6-2	Housing Estimates	6-5
Table 6-3	Proposed Specific Plan Compared to Existing Conditions	6-7

Table 6-4	Proposed Specific Plan Compared to Lancaster General Plan 2030 Growth Forecasts.....	6-7
Table 6-5	Proposed Specific Plan Compared to SCAG Growth Forecasts	6-8
Table 6-6	Electricity Consumption in Los Angeles County 2006-2015	6-11
Table 6-7	Natural Gas Consumption in Los Angeles County 2006-2015	6-11
Table 6-8	Automotive Fuel Consumption in Los Angeles County 2006-2017	6-12
Table 6-9	Energy Consumption	6-15
Table 7-1	No Project/Existing General Plan and Zoning Alternative Development Potential	7-9
Table 7-2	Reduced Density Alternative Compared to Proposed Project	7-16
Table 7-3	Comparison of Alternatives	7-25

LIST OF ACRONYMS

%	percent
#	number
°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
µohms/cm	microohms per centimeter
§	Section
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos containing-material
ACOE	Army Corps of Engineers
ADT	average daily traffic
AF	acre-feet
AFY	acre-feet/year
AGR	Agricultural Supply
AHERA	Asbestos Hazard Emergency Response Act
aka	also known as
a.m.	ante meridiem
amsl	above mean sea level
ANSI	American National Standards Institute
APCD	Air Pollution Control Districts
APN	Assessor Parcel Number
APS	alternative planning strategy
AQMD	Air Quality Management Districts
AQMP	Air Quality Management Plan
AV	Antelope Valley
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley East Kern
AVT	average daily trips
AVTA	Antelope Valley Transit Authority
AVUHSD	Antelope Valley Union High School District

AVWB	Antelope Valley Water Bank
BACT	best available control technology
BAU	business-as-usual
bgs	below ground surface
BMPs	Best Management Practices
BOD	Biochemical Oxygen Demand
BP	before the present
BTU	British Thermal Unit
C	Commercial
CA	California
CAAQS	California Ambient Air Quality Standards
CAFE	corporate average fleet fuel economy
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CAP	Climate Action Plan
CASGEM	California Statewide Groundwater Elevation Monitoring
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Code
CCA	community choice aggregators
CCEC	California Clean Energy Committee
CCR	California Code of Regulations
CDC	Center for Disease Control and Prevention
CE	Cemetery
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CERT	Community Emergency Response Team
CESA	California Endangered Species Act
CDFW	California Department of Fish and Wildlife
CFCs	chlorofluorocarbons

cfs	cubic feet per second
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHP	California Highway Patrol
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
COD	Chemical Oxygen Demand
COG	Councils of Governments
COLD	Cold Freshwater Habitat
COMM	Commercial and Sportfishing
CPD	Commercial Planned Development
CPSC	Consumer Product Safety Commission
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRC	California Residential Code
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWIB	California Workforce Investment Board
cy	cubic yards
dBA	A-weighted decibel scale
D/C	demand to capacity
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DO	Dissolved Oxygen
DOGGR	Division of Oil, Gas, & Geothermal Resources
DOT	Department of Transportation
DPR	Department of Park and Recreation

DTSC	Department of Toxic Substances
du/ac	dwelling units/acre
DWR	Department of Water Resources
Dwy	driveway
e.g.	for example
EAC	Early Action Compact
EB	eastbound
EIR	Environmental Impact Report
EJAC	Environmental Justice Advisory Committee
EMFAC2014	Emissions Factor 2014
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
etc.	et cetera
FAR	floor area ratio
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GC	Government Code
GCJC	Green Collar Jobs Council
GHG	greenhouse gas
GPA	General Plan Amendment
GSAs	groundwater sustainability agencies
GWh	gigawatt-hours
GWP	Global Warming Potential
GWR	Ground Water Recharge
H ⁺	hydrogen ion
H ₂ O	Water Vapor
HA	Hydrologic Area

HAP	hazardous air pollutant
HCD	Housing and Community Development
HCFC	hydrochlorofluorocarbon
HCM	Highway Capacity Manual
HDR	High Density Residential
HFCs	Hydrofluorocarbons
HHMD	Health Hazardous Materials Division
HI	Hazard Index
HMP	Hazard Mitigation Plan
HMTA	Hazardous Materials Transportation Act
HOA	Homeowners Association
HU	Hydrologic Unit
HVAC	heating/ventilation and air conditioning
Hz	Hertz
i.e.	that is
ICU	Intersection Capacity Utilization
IGR	Intergovernmental Review
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IRUWMP	Integrated Regional Urban Water Management Plan
km	kilometer
kWh	kilowatt-hours
L _{dn}	Day/Night Average
L _{eq}	Equivalent Sound Level
L _{max}	Maximum Sound Level
L _{min}	Minimum Sound Level
L _n	Exceedance Level
LA	Los Angeles
LACDPW	Los Angeles County Department of Public Works
LACFD	Los Angeles County Fire Department
LACPH	Los Angeles County Public Health
LASD	Los Angeles County Sheriff's Department
LBP	lead-based paint
lbs	pounds

LCE	Lancaster Choice Energy
LCFS	Low Carbon Fuel Standard
LCID	Littlerock Creek Irrigation District
LDR	Low Density Residential
LLC	limited liability company
LOS	level of service
LRWQCB	Lahontan Regional Water Quality Control Board
LWRP	Lancaster Water Reclamation Plant
MACT	maximum available control technology
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDR	Medium Density Residential
Metro	Metropolitan Transportation Authority
mg/l	milligrams per liter
mgd	million gallons per day
MHOA	Master Homeowners Association
MOAH	Museum of Art and History
MODRAT	Modified Rational Method
MOE	Measures of Effectiveness
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
mpg	miles per gallon
mph	miles per hour
MS4s	Municipal Separate Storm Sewer Systems
msl	mean sea level
MT	metric tons
MU	Mixed Use
MUN	Municipal and Domestic Supply
MUTCD	Manual on Uniform Traffic Control Devices
MW	megawatts
MWh	megawatt-hours
N/N	nitrate-nitrogen
n/o	north of
N ₂ O	Nitrous Oxide

NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NM	Not Measured
No.	number
NO _x	nitrogen oxides
NOI	Notice of Intent
NOP	Notice of Preparation
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NTSA	National Highway Traffic and Safety Administration
NU	Non-Urban Residential
O ₃	ozone
OHV	Off highway vehicles
OHWM	ordinary high water mark
OPR	Office of Planning and Research
PA	Planning Area
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PEIR	Program Environmental Impact Report
PFCs	perfluorocarbons
pH	Potential of Hydrogen
p.m.	post meridiem
PM _{2.5}	particulate matter 2.5 microns in diameter or less
PM ₁₀	particulate matter 10 microns in diameter or less
PPD	pounds per day
ppm	parts per million

PPV	peak particle velocity
PRC	Public Resources Code
PST	Pacific Standard Time
PWCP	Phased Water Conservation Plan
PWD	Palmdale Water District
PWRP	Palmdale Water Reclamation Plant
PWS	public water supplier
QHHS	Quartz Hill High School
QHWD	Quartz Hill Water District
RCRA	Resources Conservation and Recovery Act
REC-1	Water Contact Recreation
REC-2	Noncontact Water Recreation
RH	relative humidity
RHNA	Regional Housing Needs Assessment
RMS	root mean square
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
RR	RR
RTP	Regional Transportation Plan
RTIP	Regional Transportation Improvement Program
RWQCB	Regional Water Quality Control Board
RWWTP	Rosamond Wastewater Treatment Plant
S	School
SARA	Superfund Amendment and Reauthorization Act
SB	Senate Bill
SB	southbound
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCG	Southern California Gas Company
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
sec	seconds
SEMS	Standardized Emergency Management System

SENL	single event noise levels
SF	square feet
SF ₆	Sulfur hexafluoride
SFP	School Facility Program
SGMA	Sustainable Groundwater Management Act
SHBC	State Historical Building Code
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SP	Specific Plan
SR	State Route
SRR	Semi-Rural Residential
SRRE	Source Reduction and Recycling Element
SWMP	Storm Water Management Plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TDS	Total dissolved solids
TMDL	Total Maximum Daily Load
tsf	total square footage
TTM	Tentative Tract Map
UNFCCC	United Nations Framework Convention on Climate Change
UR	Urban Residential
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity
veh	vehicle
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VTTM	Vesting Tentative Tract Map

WARM	Warm Freshwater Habitat
WB	westbound
WILD	Wildlife Habitat
WSA	Water Supply Assessment
WTP	Water Treatment Plant
yr	year
ZC	Zone Change
ZNE	Zero Net Energy

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ENVIRONMENTAL IMPACT REPORT AND APPENDICES ON CD

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SECTION 1.0

Executive Summary

1.0 EXECUTIVE SUMMARY

1.1 PROJECT LOCATION

The Avanti South Specific Plan Project (project) is located within the City of Lancaster, California. The City of Lancaster (City) is situated in the northern portion of Los Angeles County along State Route 14 (SR-14), approximately 70 miles northeast of Downtown Los Angeles, within the Antelope Valley.

The project site encompasses approximately 307.7 acres of vacant land within the southwestern portion of the City, five miles west of SR-14. The Avanti South Specific Plan (Avanti South SP or Specific Plan) is comprised of two areas, referred to herein as Avanti South (approximately 234.3 acres) and Avanti West (approximately 73.4 acres). Avanti South consists of two parcels (Assessor Parcel Numbers [APNs] 3204-008-045 and 3204-008-047) generally bounded by the proposed extension of Avenue K-8 to the north, Avenue L to the south, 70th Street West to the west, and a residential neighborhood and vacant land to the east. Avanti West consists of two parcels (APNs 3204-001-184 and 3204-001-195) generally bounded by vacant land to the north, the proposed extension of Avenue K-8 to the south, proposed extension of 75th Street West to the west, and 70th Street West to the east.

1.2 PROJECT SUMMARY

The project requests adoption of the Avanti South Specific Plan (SP 15-02) and approval of a General Plan Amendment (GPA) 16-01, Zone Change (ZC) 16-01, and TTM No. 74312 for the approximately 307.7-acre project site.

The Avanti South Specific Plan is a regulatory document and provides a means for implementing the General Plan 2030 for the site. The policies and regulations contained in the proposed Specific Plan would serve as the zoning for the property. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

The Development Plan identifies the land use designations and conceptual land use plan, identifies land use policies, and describes the mobility, drainage, water and sewer, grading, and public services plans for the Specific Plan area.

The Land Use Plan identifies a mix of land uses throughout the Specific Plan area and further describes the land uses, dwelling unit counts, commercial square footages, open space, school site, and fire station acreage within the Specific Plan. The project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses. A 12.8-acre school site and 1.3-acre fire station site are also proposed along with internal streets.

The Land Use Plan organizes the project site into planning areas that are centered on common open spaces and trail amenities. Buildout of the Specific Plan would result in the following:

- 1,700 dwelling units, including 175 age-targeted units and 256 active adult units
- 213,600 square feet of commercial uses (14 acres)
- 31.5 acres of open space/parks

- 12.8-acre school site
- 1.3-acre fire station site
- 38.4 acres of internal streets

The Specific Plan includes development regulations for the proposed residential, commercial, park, and institutional uses. Regulations address general site development for all uses within the Specific Plan area, as well as development standards specific to the land use including, but not limited to, permitted uses, lot area, lot coverage, landscaping, parking, building heights, and setbacks.

Community design, landscape, and architectural design guidelines are provided in the Specific Plan. The guidelines are intended to provide direction and be used in conjunction with the development regulations discussed above. The guidelines address a variety of areas including, but not limited to, home types, architectural styles, building orientation, massing and architectural enhancements, roofs, windows, landscaping, streetscapes, storm water facilities and parks and recreation facilities.

The General Plan Land Use Map currently designates Avanti West as NU and Avanti South as UR with a SP overlay. GPA 16-01 would amend the General Plan Land Use Map to change the land use designations for Avanti West to UR with a SP overlay and for Avanti South from UR with a SP overlay to Mixed-Use (MU) with a SP overlay and Public-School.

The City's Zoning Map identifies the zoning for Avanti South as SP and Avanti West as RR-2.5. ZC 16-01 would amend the Lancaster Zoning Map to change the zoning for Avanti West from RR-2.5 to SP 15-02 and to change the zoning for the proposed School site to School (S). The remainder of Avanti South would not require a zone change; however, it would be designated as SP 15-02 to reflect the Avanti South Specific Plan.

VTTM No. 74312 would subdivide the four existing parcels into 45 lots for financial and conveyance purposes.

1.3 PROJECT OBJECTIVES

The Avanti South Specific Plan identifies the following objectives:

- Develop a master planned community that incorporates fundamentals of great neighborhood design by balancing land uses, providing for vehicular and pedestrian mobility, and providing for the preservation/enhancement of recreation and open spaces.
- Identify opportunities for a variety of residential land uses throughout the development, with high and medium density uses located in proximity to commercial, and active adult communities located adjacent to existing single-family neighborhoods.
- Provide a range of residential, commercial, recreational, and business activities and services to the City.
- Distribute commercial uses throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation.

- Implement a circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts.
- Create a network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development.
- Provide a variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas.
- Retain the existing drainage patterns to use as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance.
- Promote the use of green building practices and sustainable development methods throughout the project.
- Implement community design and landscaping elements that complement and are responsive to the Lancaster environment.

1.4 ENVIRONMENTAL ISSUES/MITIGATION SUMMARY

The following summarizes the impacts, mitigation measures, and unavoidable significant impacts identified and analyzed in Section 5.0, *Environmental Analysis*, of this EIR. Refer to the appropriate EIR Section for detailed information.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.1 AESTHETICS			
AES-1	Short-Term Visual Character/ Quality <i>Project construction activities could temporarily degrade the visual character/ quality of the site and its surroundings.</i>	AES-1 Construction equipment staging areas shall be screened (i.e., temporary fencing with opaque material) to buffer views of construction equipment and material, when feasible. Staging locations shall be approved by the Development Services Director, and indicated on Final Grading and Building Plans.	Less Than Significant With Mitigation Incorporated.
AES-2	Long-Term Visual Character/ Quality <i>Project implementation could substantially degrade the visual character/ quality of the site and its surroundings.</i>	No mitigation measures are required.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
AES-3	<p>Scenic Resources and Vistas</p> <p><i>Project implementation could have a substantial adverse effect on a scenic vista.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
AES-4	<p>Light and Glare</p> <p><i>Project implementation would generate additional light and glare beyond existing conditions.</i></p>	<p>AES-2 All construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent residential areas. Lighting shall consist of the minimal wattage necessary to provide safety at the construction site. A construction lighting plan shall be submitted to the Development Services Director for review concurrent with Grading Permit application.</p>	Less Than Significant With Mitigation Incorporated.
Cumulative Impacts			
	<p>Short-Term Visual Character/Quality</p> <p><i>Project construction activities, combined with construction activities for other related cumulative projects, could temporarily degrade the visual character/quality of the development sites and their surroundings.</i></p>	Refer to Mitigation Measure AES-1.	Less Than Significant With Mitigation Incorporated.
	<p>Long-Term Visual Character/Quality</p> <p><i>Future development within the Specific Plan area, combined with other related cumulative projects, could substantially degrade the existing visual character/quality of the respective development sites and their surroundings.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
	<p>Scenic Resources and Vistas</p> <p><i>Future development within the Specific Plan area, combined with other related cumulative projects, could have a substantial adverse effect on a scenic vista.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
	<p>Light and Glare</p> <p><i>Future development within the Specific Plan area, combined with other related cumulative projects, could create a new source of light and/or glare, which could affect daytime and/or nighttime views in the area.</i></p>	Refer to Mitigation Measure AES-2.	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.2 AIR QUALITY			
AQ-1	<p>Short-Term (Construction) Air Emissions</p> <p><i>Short-term construction activities associated with the proposed project would not result in significant air pollutant emission impacts or expose sensitive receptors to substantial pollutant concentrations.</i></p>	<p>AQ-1 Prior to construction, the project applicant shall develop a Fugitive Dust Control Plan in compliance with AVAQMD Rule 403 to reduce PM10 and PM2.5 emissions. The Fugitive Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity as required by Rule 403. The project applicant shall provide a copy of the Fugitive Dust Control Plan approved by the AVAQMD to the City prior to the issuance of grading permits. During clearing, grading, earth-moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified by the AVAQMD, including but not limited to AVAQMD Rule 401, Visible Emissions, and Rule 403 Fugitive Dust:</p> <ul style="list-style-type: none"> • On-site vehicle speed shall be limited to 15 miles per hour; • All on-site construction roads with vehicle traffic shall be watered periodically; • Streets adjacent to the project's reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust; • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day; • All clearing, grading, earth-moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust; 	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust; • The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and • These control techniques shall be indicated on project grading plans. Compliance with this measure shall be subject to periodic site inspections by the City of Lancaster. <p>AQ-2 Prior to issuance of a Grading Permit, the project applicant shall indicate on construction plans, to the satisfaction of the Development Services Director, that all construction equipment meets EPA Tier 3 non-road compression-ignition engine standards or better.</p> <p>AQ-3 During construction activities, excessive construction equipment and vehicle exhaust emissions shall be controlled by implementing the following procedures, as specified by the AVAQMD:</p> <ul style="list-style-type: none"> • Properly and routinely maintain all construction equipment, as recommended by manufacturer manuals, to control exhaust emissions; • Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling engines; • Encourage ride sharing and use of transit transportation for construction employee commuting to the project sites; • Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment; and • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction 	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>activity during the peak-hour of vehicular traffic on adjacent roadways.</p> <p>AQ-4 Prior to ground disturbance activities, the project operator shall provide evidence to the Development Services Director that the project operator and/or construction manager has developed a "Valley Fever Training Handout", training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Development Services Director within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The evidence submitted to the Development Services Director regarding the "Valley Fever Training Handout" and Session(s) shall include the following:</p> <ul style="list-style-type: none"> • A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session. • Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever. • Training on methods that may help prevent Valley Fever infection. • A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs. 	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>The project operator also shall consult with the Los Angeles County Public Health to develop a Valley Fever Dust Management Plan that addresses the potential presence of the Coccidioides spore and mitigates for the potential for Coccidioidomycosis (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Los Angeles County Public Health for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential Coccidioides spores. Measures in the Plan shall include the following:</p> <ul style="list-style-type: none"> • Provide HEP-filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Cause contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment. • Provide communication methods, such as two-way radios, for use in enclosed cabs. • Require National Institute for Occupational Safety and Health (NIOSH)-approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process. • Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Protection Standard (8 CCR 5144). 	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Provide separate, clean eating areas with hand-washing facilities. • Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off-site. • Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor. • Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever. • Work with a medical professional, in consultation with the Los Angeles County Public Health, to develop an educational handout for on-site workers and surrounding residents within three miles of the project site, and include the following information on Valley Fever: what are the potential sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the Development Services Director. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within three miles of the project boundaries. • When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks. • Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities. 	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection. • Audit and enforce compliance with relevant Cal OSHA health and safety standards on the job site. 	
AQ-2	<p>Long-Term (Operational) Air Emissions</p> <p><i>Implementation of the proposed project would not result in significant impacts pertaining to operational air emissions.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
AQ-3	<p>Consistency with Regional Plans</p> <p><i>Implementation of the proposed project could conflict with or obstruct implementation of the applicable air quality plan.</i></p>	Refer to Mitigation Measures AQ-1 through AQ-4.	Less Than Significant With Mitigation Incorporated.
Cumulative Impacts			
	<p>Short-Term (Construction) Air Emissions</p> <p><i>Short-term construction activities associated with the proposed project and other related cumulative projects, would not result in significant air pollutant emission impacts or expose sensitive receptors to substantial pollutant concentrations.</i></p>	Refer to Mitigation Measures AQ-1 through AQ-4.	Less Than Significant With Mitigation Incorporated.
	<p>Long-Term (Operational) Air Emissions</p> <p><i>Development associated with the proposed project and other related cumulative projects would not result in significant impacts pertaining to operational air emissions.</i></p>	Refer to Mitigation Measures AQ-1 through AQ-4.	Less Than Significant With Mitigation Incorporated.
	<p>Consistency with Regional Plans</p> <p><i>Development associated with the proposed project and other related cumulative projects would not conflict with or obstruct implementation of the applicable air quality plan.</i></p>	Refer to Mitigation Measures AQ-1 through AQ-4.	Less Than Significant With Mitigation Incorporated.
5.3 BIOLOGICAL RESOURCES			
BIO-1	<p>Special Status Plant and Wildlife Species</p> <p><i>Project implementation would not have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status.</i></p>	<p>BIO-1 Prior to the issuance of any construction-related permits, the Development Services Director or his/her designee shall ensure that the Grading Plan</p>	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		includes a condition of approval requiring a qualified biologist to conduct a pre-construction presence/absence survey for burrowing owl within 14 days prior to site disturbance, with a second visit occurring within 24 hours of ground disturbance. If burrowing owls are not detected, grading may proceed without limitation. If burrowing owls are detected on the site, the owls shall be passively excluded from the site, in coordination with CDFW, following professionally-accepted protocols, such as collapsing burrows and the use of one-way doors. If proximate habitat is not available in the opinion of a qualified biologist for successful passive relocation of the species, alternative relocation efforts shall be coordinated with CDFW and the City of Lancaster. Any activity to exclude burrowing owl will need to be approved by CDFW and will occur outside of the nesting season to avoid the potential incidental take of active nests, unless the biologist demonstrates to CDFW and the City of Lancaster that the proposed exclusion of owls would not result in the take of an active nest.	
BIO-2	<p>Sensitive Natural Communities</p> <p><i>Project implementation would not have an adverse effect on riparian habitat or other sensitive natural community.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
BIO-3	<p>Jurisdictional Waters and Wetlands</p> <p><i>Project implementation would not have a substantial adverse effect on jurisdictional waters or wetlands.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
BIO-4	<p>Migratory Birds</p> <p><i>Project implementation could interfere with the movement of a native resident or migratory species.</i></p>	<p>BIO-2 Prior to the issuance of a grading permit, the Development Services Director or his/her designee shall ensure that the Grading Plan includes a condition of approval requiring all vegetation removal associated with the project to occur outside of the migratory bird nesting season (February 1 to August 31). If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct nesting bird surveys of the property no more than three days prior to the removal of any vegetation or structures with the potential to support nesting birds. If vegetation is not removed within three days of a nesting bird survey, then the surveys shall be repeated. If active</p>	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>nests are identified, then the biologist shall establish an adequate buffer depending on the species and the location of the nest (up to 200 feet for non-raptors and 500 feet for raptors), which shall be avoided until the nests are no longer active as determined by the biologist.</p>	
Cumulative Impacts			
	<p>Biological Resources</p> <p><i>Development anticipated by the project combined with cumulative development would not have adverse effects on biological resources.</i></p>	<p>Refer to Mitigation Measures BIO-1 and BIO-2.</p>	<p>Less Than Significant With Mitigation Incorporated.</p>
5.4 CULTURAL AND TRIBAL CULTURAL RESOURCES			
<p>CUL-1</p>	<p>Historical and Archaeological Resources</p> <p><i>Project implementation would not cause a substantial adverse change in the significance of a historical or archaeological resource.</i></p>	<p>CUL-1 Prior to the initiation of ground-disturbing activities, field personnel shall be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event potential historical or archeological resources are unearthed during excavation and grading activities associated with project development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery, notify the City's Development Services Director, and, with direction from the City's Development Services Director, shall retain a qualified archaeologist to evaluate the significance of the find and recommend an appropriate course of action.</p> <p>If evidence of subsurface tribal cultural resources is found, the archaeologist shall contact the Native American Heritage Commission to determine the appropriate Native American monitor for the find. The archaeologist and Native American Monitor shall collect the resource and prepare a technical report describing the results of the investigation. The test-level report shall evaluate the site including discussion of significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates.</p> <p>Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. Work within the area of</p>	<p>Less Than Significant With Mitigation Incorporated.</p>

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		discovery shall resume only after the resource has been appropriately mitigated.	
CUL-2	<p>Paleontological Resources</p> <p><i>Project implementation would not cause a substantial adverse change in the significance of a paleontological resource.</i></p>	<p>CUL-2 Prior to the initiation of any substantial excavation below the uppermost layers, field personnel shall be alerted to the possibility of fossil remains. In the event fossil remains are encountered during excavation activities associated with project development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery, notify the City's Development Services Director, and, with direction from the City's Development Services Director, shall retain a qualified paleontologist to evaluate the significance of the find and recommend an appropriate course of action. Any fossils recovered shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. Work within the area of discovery shall resume only after the resource has been appropriately mitigated.</p>	Less Than Significant With Mitigation Incorporated.
CUL-3	<p>Human Remains</p> <p><i>Project implementation would not disturb any human remains, including those interred outside of formal cemeteries.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
CUL-4	<p>Tribal Cultural Resources</p> <p><i>Project implementation would not cause a significant impact to a tribal cultural resource.</i></p>	Refer to Mitigation Measure CUL-1.	Less Than Significant With Mitigation Incorporated.
Cumulative Impacts			
	<p>Cultural and Tribal Cultural Resources</p> <p>Development anticipated by the project combined with cumulative development would not have adverse effects on cultural or tribal cultural resources.</p>	Refer to Mitigation Measure CUL-1 and CUL-2.	Less Than Significant With Mitigation Incorporated.
5.5 GEOLOGY AND SOILS			
GEO-1	<p>Strong Seismic Ground Shaking</p> <p><i>Project implementation may expose people or structures to potential substantial adverse effects due to strong seismic ground shaking and seismic-related ground failure, including liquefaction and landslides.</i></p>	<p>GEO-1 All grading and construction activities shall be conducted in conformance with the recommendations included in the geotechnical investigation for the proposed project prepared by Bruin Geotechnical Services, Inc., titled, <i>Preliminary Geotechnical Investigation Report for Royal</i></p>	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p><i>Investors Group, LLC Avanti South Project in the Vicinity of Ave. K-8 and 70th St. West, Lancaster, Los Angeles County, California (February 24, 2016), included in Appendix D of this EIR. Design, grading, and construction shall be performed in accordance with the requirements of the City of Lancaster Building Code and the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the City of Lancaster Building Official or designee prior to commencement of grading activities.</i></p>	
GEO-2	<p>Soil Erosion</p> <p><i>Project implementation would not result in substantial soil erosion or the loss of topsoil.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
GEO-3	<p>Unstable Geologic Units</p> <p>Development of the proposed project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.</p>	Refer to Mitigation Measure GEO-1.	Less Than Significant With Mitigation Incorporated.
Cumulative Impacts			
	<p>Geology and Soils</p> <p><i>Development anticipated by the project combined with other related cumulative projects, may expose people or structures to impacts associated with geology and soils.</i></p>	Refer to Mitigation Measure GEO-1.	Less Than Significant With Mitigation Incorporated.
5.6 GREENHOUSE GAS EMISSIONS			
GHG-1	<p>Greenhouse Gas Emissions</p> <p><i>Greenhouse gas emissions generated by the project could have a significant impact on global climate change.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
GHG-2	<p>Consistency with Applicable GHG Plans, Policies, or Regulations</p> <p><i>Implementation of the proposed project could conflict with an applicable greenhouse gas reduction plan, policy, or regulation.</i></p>	No mitigation measures are required.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
Cumulative Impacts			
	<p>Greenhouse Gas Emissions and Consistency</p> <p><i>Greenhouse gas emissions generated by the proposed project, combined with other related cumulative projects, could have a significant impact on global climate change.</i></p> <p><i>The proposed project, combined with other related cumulative projects, could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
5.7 HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1	<p>Hazardous Materials Use, Generation, Transport, or Disposal</p> <p><i>Project implementation could increase hazards to the public or the environment associated with the routine use, generation, transport, or disposal of hazardous materials.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
HAZ-2	<p>Accidental Release of Hazardous Materials</p> <p><i>Accidental release of hazardous materials as a result of project implementation could result in a health risk to the public and the environment.</i></p>	<p>HAZ-1 Prior to issuance of a grading permit, soil sampling shall occur in order to determine if pesticide/herbicide residues are present in the soil above Department of Toxic Substances Control regulatory thresholds for residential uses. Sampling shall be conducted by a qualified Phase II/Site Characterization specialist. The sampling shall determine if pesticide/herbicide concentrations exceed established regulatory requirements and shall identify further site characterization and remedial activities, if necessary.</p> <p>HAZ-2 Prior to issuance of a grading permit, the applicant shall retain a qualified Phase II/Site Characterization specialist to determine whether or not underground storage tanks (USTs) were present within the project site. If any evidence of historical USTs is noted, the qualified specialist shall conduct sampling to determine if any contaminants are present in soils above regulatory thresholds for residential use. Further, if any USTs remain on-site, the applicant shall obtain appropriate permits from the County of Los Angeles Health</p>	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>Hazardous Materials Division, prior to removing any existing USTs, per the Underground Storage Tank Program. The applicant shall conduct soil/groundwater testing during UST removal, as requested by the Health Hazardous Materials Division. If contamination is present above regulatory thresholds for either current or historical USTs, then the applicant shall remediate appropriately, as required by the Health Hazardous Materials Division. The Health Hazardous Materials Division can also refer the case to another regulatory agency (e.g., the Department of Toxic Substances Control, or Regional Water Quality Control Board, etc.), in which case the applicant shall comply with any specific remediation regulations identified by the respective regulatory agency.</p> <p>HAZ-3 If unknown wastes or suspect materials (including undocumented underground storage tanks [USTs]) are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:</p> <ul style="list-style-type: none"> • Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area; • Notify the City Engineer; • Secure the area as directed by the City Engineer; and • Notify the Los Angeles County Health Hazardous Materials Division. The Health Hazardous Materials Division shall advise the responsible party of further actions that shall be taken, if required. <p>HAZ-4 Prior to issuance of a grading permit, the applicant shall retain a qualified Phase II/Site Characterization specialist to determine if the proposed development area historically consisted of a potential maintenance/storage yard that supported historical agricultural production on-site. If any evidence of a maintenance/storage yard is noted, the qualified specialist shall conduct sampling to determine if any contaminates of concern are present in soils above regulatory thresholds for residential use. If contamination is present above</p>	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>regulatory thresholds, then the applicant shall remediate appropriately, as required by the Los Angeles County Health Hazardous Materials Division. The Health Hazardous Materials Division can also refer the case to another regulatory agency (e.g., the Department of Toxic Substances Control, or Regional Water Quality Control Board, etc.), in which case the applicant shall comply with any specific remediation regulations identified by the respective regulatory agency.</p> <p>HAZ-5 Prior to issuance of a grading permit, for any structures proposed within 100 feet of a past oil well, evidence of verification by the applicant that the well has been properly plugged and abandoned per current California Department of Oil, Gas, and Geothermal Resources; Department of Toxic Substances Control; and Regional Water Quality Control Board requirements shall be provided to the City Engineer. The proposed project shall also comply with all County of Los Angeles Health Hazardous Materials Division laws and regulations, which may include installation of a methane barrier to be installed for homes within 300 feet of this historic oil well. Confirmation of compliance with the Health Hazardous Materials Division regulations pertaining to historical oil wells shall be provided to the City Project Engineer prior to issuance of a building permit.</p> <p>HAZ-6 Prior to issuance of a grading permit, the applicant shall confirm that septic tanks are not present within the project site. If present, the specific location of the septic tanks shall be determined. Once located, the septic tanks shall be removed and properly disposed of at an approved landfill facility. Once the tanks are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed. Any stained soils observed underneath the septic tanks shall be sampled by a qualified Phase II/Site Characterization specialist. If contamination is present above regulatory thresholds as determined by the specialist, then the applicant shall remediate appropriately, as required by the Los Angeles County Health Hazardous Materials Division.</p>	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<p>HAZ-7 Prior to site disturbance activities, asbestos-containing materials and lead-based paints surveys shall be conducted for miscellaneous debris piles that are associated with demolition debris. The surveys shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified specialist to determine the presence or absence of asbestos containing-materials (ACMs) or lead-based paints (LBPs) in debris piles. If ACMs or LBPs are present on-site, removal shall be performed by a State certified contractor in accordance with the Antelope Valley Air Quality Management District (AVAQMD) Rule 1403 and California Code of Regulation Title 8, Section 1532.1. Contractors performing ACM/LBP removal shall provide evidence of abatement activities to the City.</p>	
HAZ-3	<p>School Sites</p> <p><i>Future development in accordance with the project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
HAZ-4	<p>Emergency Response</p> <p><i>Future development in accordance with the project could interfere with an adopted emergency response or evacuation plan.</i></p>	<p>HAZ-8 At least three business days before any off-site roadway improvements, the construction contractor shall notify the Los Angeles County Fire Department and Los Angeles County Sheriff's Department, along with the City of Lancaster Development Services Department, of construction activities that could impede movement (such as lane closures) along roadways, in order to allow for uninterrupted emergency access.</p>	Less Than Significant With Mitigation Incorporated.
Cumulative Impacts			
	<p>Hazards and Hazardous Materials</p> <p><i>Development in accordance with the project and cumulative development could result in cumulatively considerable impacts related to hazards and hazardous materials.</i></p>	Refer to Mitigation Measures HAZ-1 through HAZ-8.	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.8 HYDROLOGY AND WATER QUALITY			
HWQ-1	Water Quality – Short-Term Impacts Grading, excavation, and construction activities associated with the proposed project could impact water quality.	No mitigation measures are required.	Less Than Significant Impact.
HWQ-2	Long-Term Operational Impacts <i>Implementation of the proposed project could potentially alter the existing drainage pattern, create or contribute to runoff water that would exceed the capacity of the existing or proposed storm water drainage systems, increase sources of polluted runoff, or substantially degrade water quality.</i>	No mitigation measures are required.	Less Than Significant Impact.
HWQ-3	Groundwater Impacts <i>Implementation of the proposed project could potentially deplete groundwater supplies or interfere substantially with groundwater recharge.</i>	No mitigation measures are required.	Less Than Significant Impact.
HWQ-4	Flood Hazard <i>Implementation of the proposed project could place housing or structures 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.</i>	No mitigation measures are required.	Less Than Significant Impact.
Cumulative Impacts			
	Hydrology and Water Quality <i>Development anticipated by the proposed project combined with cumulative development would not have an adverse impact on hydrology/drainage and water quality.</i>	No mitigation measures are required.	Less Than Significant Impact.
5.9 LAND USE AND PLANNING			
LU-1	Southern California Association of Governments <i>The project would not conflict with SCAG's 2016 RTP/SCS goals and adopted growth forecasts.</i>	No mitigation measures are required.	Less Than Significant Impact.
LU-2	Lancaster General Plan 2030 <i>The project would not conflict with the Lancaster General Plan 2030 Land Use Plan or Policies.</i>	No mitigation measures are required.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
LU-3	<p>Lancaster Municipal Code</p> <p><i>The project would not conflict with the City of Lancaster Municipal Code Standards and Regulations.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
Cumulative Impacts			
	<p>Land Use and Planning</p> <p>Implementation of the proposed project, combined with other related cumulative development, would not conflict with applicable land use plans, policies or regulations.</p>	No mitigation measures are required.	Less Than Significant Impact.
5.10 NOISE			
NOI-1	<p>Short-Term Construction Noise Impacts</p> <p>Grading and construction within the area could result in significant temporary noise impacts to nearby noise sensitive receivers.</p>	<p>NOI-1 To reduce noise impacts due to construction, the project applicant must demonstrate, to the satisfaction of the Development Services Director that the project complies with the following:</p> <ul style="list-style-type: none"> • Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that construction activities shall only occur between the hours of 7:00 a.m. to 8:00 p.m. on any day with no activity allowed on Sundays. The project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion. • During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site. • The construction contractor shall locate equipment staging in areas that would create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site (i.e., to the center) during all project construction. 	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> The construction contractor shall limit haul truck deliveries to the same hours specified for construction activities (between the hours of 7:00 a.m. to 8:00 p.m. on any day with no activity allowed on Sundays). The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. 	
NOI-2	<p>Vibration Impacts</p> <p><i>Project implementation would not result in significant vibration impacts to nearby sensitive receptors.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
NOI-3	<p>Long-Term (Mobile) Noise Impacts</p> <p><i>Traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards.</i></p>	<p>NOI-2 After the plot plans and architectural drawings have been developed, and prior to the issuance of building permits, the project applicant shall demonstrate, to the satisfaction of the Development Services Director that the proposed project plans and specifications include a six-foot noise barrier for outdoor living areas (backyards) of Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28 (as recommended in the Noise Impact Analysis Report [Urban Crossroads, Avanti South Specific Plan Noise Impact Analysis, August 8, 2017]). If homes within these Planning Areas face the roadways or have no outdoor living areas (backyards) adjacent to the roadways, then the recommended exterior noise barriers shall not be required since there would be no outdoor living area of frequent human use requiring exterior noise mitigation.</p>	Less Than Significant With Mitigation Incorporated.
NOI-4	<p>Long-Term (Stationary) Noise Impacts</p> <p><i>The proposed project would not result in a significant increase in long-term stationary ambient noise levels.</i></p>	No mitigation measures are required	Less Than Significant Impact.
Cumulative Impacts			
	<p>Short-Term Construction Noise Impacts</p> <p><i>Grading and construction within the area combined with other related cumulative projects would not result in significant short-term noise impacts to nearby noise sensitive receivers, following implementation of mitigation measures.</i></p>	Refer to Mitigation Measure NOI-1.	Less Than Significant With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	<p>Vibration Impacts</p> <p><i>Project implementation combined with other related cumulative projects would not result in significant vibration impacts to nearby sensitive receptors.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>
	<p>Long-Term (Stationary) Noise Impacts</p> <p><i>The proposed project combined with other related cumulative projects would not result in a significant increase in long-term stationary ambient noise levels.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>
5.11 PUBLIC SERVICES AND UTILITIES			
PSU-1	<p>Fire Protection Services</p> <p><i>Project implementation could result in the need for additional fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>
PSU-2	<p>Police Protection Services</p> <p><i>Project implementation would not result in the need for additional police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>
PSU-3	<p>Schools</p> <p><i>Project implementation could result in the need for additional school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>
PSU-4	<p>Parks and Recreation</p> <p><i>Project implementation could result in the need for additional parks and recreational facilities and/or the increased use of existing neighborhood and regional parks such that substantial physical deterioration could occur or be accelerated. Project implementation would result in the construction of parks and recreational facilities which could have an adverse physical effect on the environment.</i></p>	<p>No mitigation measures are required.</p>	<p>Less Than Significant Impact.</p>

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
PSU-5	Library Facilities <i>Project implementation would not result in significant impacts to library facilities.</i>	No mitigation measures are required.	Less Than Significant Impact.
PSU-6	Water Services <i>Project implementation would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects or have insufficient water supplies available to serve the project from existing entitlement and resources, and new or expanded entitlement is needed.</i>	No mitigation measures are required.	Less Than Significant Impact.
PSU-7	Wastewater Services <i>Project implementation would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects, or result in a determination by the wastewater treatment provider, which serves or may serve the project that does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</i>	No mitigation measures are required.	Less Than Significant Impact.
PSU-8	Solid Waste <i>Project implementation would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and comply with federal, state, and local statutes and regulations related to solid waste.</i>	No mitigation measures are required.	Less Than Significant Impact.
Cumulative Impacts			
	Public Services and Utilities <i>The project combined with cumulative projects would not create increased demand for public services, recreational facilities, and utilities and service systems that would cause significant environmental impacts.</i>	No mitigation measures are required.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.12 TRAFFIC/TRANSPORTATION			
TRA-1	<p>Project Traffic Generation</p> <p><i>Project implementation would generate traffic volumes that would conflict with an applicable circulation system performance criteria.</i></p>	<p>TRA-1 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 507 and Resolution No. 89-193, which establishes traffic impact fees. The purpose of the traffic impact fees is to collect funds to provide for street construction, including right-of-way purchase when necessary, utility relocation and installation, and other necessary items to complete the roadway construction through the City as determined by the Development Services Department. Improvements constructed by the proposed project may be eligible for a fee credit or reimbursement through the program (to be determined at the City's discretion).</p> <p>TRA-2 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 339 and Resolution No. 02-171 which establishes impact fees related to the installation and upgrade of traffic signals. The traffic signal fee is intended to provide new traffic signals and/or modify existing traffic signals throughout the City as determined by the Development Services Department. Signals installed by the proposed project may be eligible for a fee credit or reimbursement through the program (to be determined at the City's discretion).</p> <p>TRA-3 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 850 and Resolution Nos. 06-163 and 08-99, which establishes traffic impact fees for Los Angeles County, and which are applicable for projects located along certain sections of Avenue K and Avenue L. The Los Angeles County traffic impact fee is intended to mitigate the adversely impact existing local street/roadway system adjacent to the City boundaries within the County of Los Angeles.</p> <p>TRA-4 In the event that any of the intersection improvements identified in the proposed project's traffic study (Avanti South Mixed-Use Land Development Traffic Study,</p>	<p>Less Than Significant With Mitigation Incorporated.</p>

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		June 2017) prepared by Ruettggers & Schuler are not covered by one of the fee programs identified in TRA-1 through TRA-3, the applicant shall either construct the improvements or make a fair-share fee payment to the City of Lancaster based on the proposed project's percentage of traffic that would utilize the intersection in 2021, as identified in the traffic report. This payment shall be made prior to the issuance of a certificate of occupancy. Determination of construction of improvement or payment of fair-share is at the discretion of the City of Lancaster as identified in the Conditions of Approval.	
TRA-2	<p>CMP Facilities</p> <p><i>Project implementation would result in a significant increase in traffic for forecast conditions at CMP Facilities.</i></p>	No mitigation measures have been identified which would reduce impacts to less than significant levels.	Significant and Unavoidable Impact.
TRA-3	<p>Conflict with Policies, Plans, or Programs</p> <p><i>Implementation of the project would not result in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities as a result of a conflict with adopted policies, plans, or programs.</i></p>	No mitigation measures are required.	Less Than Significant Impact.
Cumulative Impacts			
	<p>Traffic/Transportation</p> <p><i>Implementation of the proposed project and other related cumulative projects, could result in cumulative traffic/transportation impacts.</i></p>	Refer to Mitigation Measure TRA-1 through TRA-4, above	Significant and Unavoidable Impact.

1.5 SUMMARY OF PROJECT ALTERNATIVES

In accordance with CEQA Guidelines Section 15126.6, this section provides a summary description of the alternatives to the Project, which could feasibly attain most of the Project's basic objectives, while avoiding or substantially lessening the Project's significant effects. The evaluation considers the comparative merits of each alternative. The analysis focuses on alternatives capable of avoiding or substantially lessening the Project's significant environmental effects, even if the alternative would impede, to some degree, the attainment of the proposed Project objectives. The following alternatives are considered in this EIR:

- "No Project/No Development" Alternative;
- "No Project/Existing General Plan and Zoning" Alternative; and
- "Reduced Density" Alternative.

Throughout Section 7.0, *Alternatives to the Proposed Project*, the alternatives' impacts are analyzed for each environmental issue area examined in Sections 5.1 through 5.12 of this EIR. Each alternative was compared to the project on an issue-by-issue basis. The following is a summary description of each of the alternatives evaluated in Section 7.0.

“NO PROJECT/NO DEVELOPMENT” ALTERNATIVE

The No Project/No Development Alternative assumes the Avanti South Specific Plan would not be adopted and the Avanti South (234.3 acres) and Avanti West (73.4 acres) sites would remain in their current conditions as undeveloped land with vegetation consisting of ornamental trees and native annuals, and would not be developed for other uses, including the proposed project. None of the low-, medium-, or high-density housing would be developed, including housing for age-targeted/active adults. Similarly, the neighborhood-serving commercial uses would not be constructed. The school and fire station sites would not be made available for construction of a new school or fire station within the project site. The 31.5 acres of open space/park facilities, including neighborhood and pocket parks, and amenity center, along with open space promenades and the equestrian and Class I multipurpose trail would not be developed. Under this alternative, a new network of residential collectors and local streets and secondary arterials, as well as the proposed drainage and water quality improvements would not be constructed and proposed landscape improvements would not be installed.

“NO PROJECT/EXISTING GENERAL PLAN AND ZONING” ALTERNATIVE

The “No Project/Existing General Plan and Zoning” Alternative proposes development of what would reasonably be expected to occur in the foreseeable future, based on the site's current General Plan land use and Zoning designations. The City of Lancaster General Plan 2030 (General Plan 2030) Land Use Map, designates Avanti South as Urban Residential (2.1-6.5 dwelling units/acre (du/ac)) with Specific Plan (SP) Overlay and Avanti West as Non-Urban Residential (0.4-2.0 dwelling units/acre). The Zoning Map of the City of Lancaster (Zoning Map) identifies the zoning for Avanti South as Specific Plan (SP) and for Avanti West as RR-2.5 (Rural Residential of 1 unit/2.5 acres).

This Alternative assumes development of Avanti South would occur consistent with the Urban Residential land use designation and SP zoning, resulting in adoption of a Specific Plan and development of up to 1,523 dwelling units. No Project/Existing General Plan and Zoning Alternative Development Potential. This Alternative assumes the Specific Plan for Avanti South would provide development regulations and design guidelines to provide for compatible and consistent development of a mix of single-family housing units along with the infrastructure necessary to serve the development, including residential collectors and local streets, as well as pedestrian improvements and landscaping. Similarly, development of Avanti West would occur consistent with the Non-Urban Residential land use designation and RR-2.5 zoning, resulting in up to 29 dwelling units. Avanti West would be developed consistent with the Lancaster Municipal Code, including the provision of the necessary infrastructure to serve the development and local streets.

Since the proposed project would result in 340 dwelling units at Avanti West and 1,360 dwelling units at Avanti South (for a total of 1,700 dwelling units), the No Project/ Existing General Plan and Zoning Alternative would result in a net decrease of 148 dwelling units within the Specific Plan area, compared to the proposed project. As there would be less dwelling units constructed, it is assumed that fewer parks/open space would be constructed and no new fire station, amenity center, or school would be built

within the Specific Plan area. Under this Alternative, the project's proposed 213,600 square feet of commercial uses would not be constructed.

"REDUCED DENSITY" ALTERNATIVE

The "Reduced Density" Alternative assumes development of the project, as proposed, apart from Planning Areas (PA) 27 and 28, which would be developed as Medium Density Residential (MDR) at an average density of 8.0 du/acre.

Under this Alternative, up to 1,511 units of low- and medium-density housing would be developed, including housing for age-targeted/active adults; no High Density Residential (HDR) development would occur. Approximately 171,980 square feet of neighborhood-serving commercial uses would be constructed within PAs 12, 26, and 29. Comparatively, the Reduced Density Alternative would result in a net decrease of 189 dwelling units and 41,620 square feet fewer commercial development within the Specific Plan area, compared to the proposed project. The school and fire station sites would continue to be made available for construction of a new school and fire station within the project site. The 31.5 acres of open space/park facilities, including neighborhood and pocket parks, and amenity center, along with open space promenades and the equestrian and Class I multipurpose trail would be developed. A new network of residential collectors and local streets and secondary arterials, as well as the proposed drainage and water quality improvements would also be constructed and proposed landscape improvements would be installed.

This Alternative would require adoption of the Avanti South Specific Plan; a General Plan Amendment to amend the General Plan Land Use Map to change the land use designations for Avanti West to UR with a SP overlay and for Avanti South from UR with a SP overlay to Mixed-Use (MU) with a SP overlay and Public-School; and a Zone Change to amend the Lancaster Zoning Map to change the zoning for Avanti West from RR-2.5 to SP 15-02 and to change the zoning for the proposed School site to School. The remainder of Avanti South would not require a zone change; however, it would be designated as SP 15-02 to reflect the Avanti South Specific Plan.

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SECTION 2.0

Introduction and Purpose

2.0 INTRODUCTION AND PURPOSE

2.1 PURPOSE OF THE EIR

The purpose of this Environmental Impact Report (EIR) is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures to avoid or lessen the project's potentially significant effects. This EIR addresses the project's environmental effects, in accordance with CEQA Guidelines §15161. As referenced in the California Environmental Quality Act (CEQA) Guidelines §15121(a), the primary purposes of this EIR are to:

- Inform decision-makers and the public generally of the significant environmental effects of a project;
- Identify possible ways to minimize the significant effects of a project; and
- Describe reasonable alternatives to a project.

The mitigation measures that are identified may be adopted as conditions of approval to minimize the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring program for the project.

The City of Lancaster (which is the lead agency and has the principal responsibility of processing and approving the project) and other public (i.e., responsible and trustee) agencies that may use this EIR in the decision-making or permit issuance process will consider the information in this EIR, along with other information that may be presented during the CEQA process. Environmental impacts are not always mitigatable to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with CEQA Guidelines §15093(b), if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency must state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. In these instances, CEQA Guidelines §15093 requires a "statement of overriding considerations" to be adopted where the Agency specifies the findings and public benefits for the project that outweigh the significant impacts.

This EIR analyzes the project's environmental effects to the degree of specificity appropriate to the proposed actions, as required by CEQA Guidelines §15146. The analysis considers the activities associated with the project to determine the short- and long-term effects associated with their implementation. This EIR discusses the project's direct and indirect impacts, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

2.2 COMPLIANCE WITH CEQA

PUBLIC REVIEW OF DRAFT EIR

In accordance with CEQA Guidelines §§ 15087 and 15105, this Draft EIR will be circulated for a 45-day public review period. The public will be invited to comment in writing on the information contained in this document. Additionally, comments on the Draft EIR will be taken orally at the Planning Commission meeting on December 18, 2017 and a transcript prepared. Persons and agencies commenting are encouraged to provide information that they believe is missing from the Draft EIR and to identify where

the information can be obtained. All comment letters received before the close of the public review period will be responded to in writing, and the comment letters, together with the responses to those comments, will be included in the Final EIR.

Comment letters should be sent to:

City of Lancaster
Community Development Division
44933 Fern Avenue
Lancaster, CA 93534
Attn: Ms. Jocelyn Swain, Principal Planner
jswain@cityoflancasterca.org
(661) 723-6182 (fax)

FINAL EIR

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR (if any), and responses to all written comments addressing concerns raised in the comments of responsible agencies, the public, and any other reviewing parties. After the Final EIR is completed, and at least ten days prior to the certification hearing, a copy of the response to comments made by public agencies on the Draft EIR will be provided to the commenting agencies.

2.3 NOTICE OF PREPARATION/ EARLY CONSULTATION (SCOPING)

In compliance with the CEQA Guidelines, the City of Lancaster provided opportunities for various agencies and the public to participate in the environmental review process. During preparation of the Draft EIR, efforts were made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments on the scope of review in this document. This included the distribution of a Notice of Preparation (NOP) to various responsible agencies, trustee agencies, and interested parties. In addition, notice of a public scoping meeting for the project was included in the NOP. The public scoping meeting was held on July 27, 2016 at the MOAH – Cedar Center for the Arts, 44851 Cedar Avenue, Lancaster, CA 93534.

Pursuant to CEQA Guidelines §15082, the City of Lancaster circulated the NOP directly to public agencies (including the State Clearinghouse Office of Planning and Research), special districts, and members of the public who had requested such notice. The NOP was distributed on July 15, 2016 with the 30-day public review period concluding on August 15, 2016.

The purpose of the NOP was to formally announce the preparation of a Draft EIR for the proposed project, and that, as the Lead Agency, the City was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The NOP provided preliminary information regarding the anticipated range of impacts to be analyzed within the EIR.

The July 27, 2016 public scoping meeting was held with the specific intent of affording interested individuals, groups, and public agencies a forum in which to orally present input directly to the Lead

Agency in an effort to assist in further refining the intended scope and focus of the EIR, as described in the NOP.

The Notice of Preparation is provided as Appendix A, *Notice of Preparation*, and the NOP comment letters are provided as Appendix B, *NOP Comment Letters*. The following summarizes the primary issues raised in the NOP comment letters and identifies the EIR section where they are addressed:

- Archaeological and historical resources, including Native American resources (refer to Section 5.4, *Cultural and Tribal Cultural Resources*).
- Need for a fire station facility for fire protection and emergency medical services; provision of adequate access, fire and life safety requirements, fire flow, street widths, driveways, fire hydrant spacing, and fire lanes; and gated access (refer to Section 5.11, *Public Services and Utilities*, and Section 5.12, *Transportation/Traffic*).
- Erosion control and watershed management; water quality; drainage and runoff (refer to Section 5.8, *Hydrology and Water Quality*).
- Rare and endangered species, vegetation, and Oak Trees (refer to Section 5.3, *Biological Resources*).
- Fire hazard areas and hazardous materials (refer to Section 5.7, *Hazards and Hazardous Materials*).
- Increased traffic (refer to Section 5.12, *Transportation/Traffic*).
- Increased congestion on schools and facilities and increased crime (refer to Section 5.11, *Public Services and Utilities*).
- Consistency with the Southern California Association of Governments 2016 RTP/SCS Goals and growth forecasts (refer to Section 5.9, *Land Use and Planning*).

2.4 FORMAT OF THE EIR

The Draft EIR is organized into the following sections:

- Section 1.0, *Executive Summary*, provides summaries of the project description, environmental impacts, and mitigation measures.
- Section 2.0, *Introduction and Purpose*, provides CEQA compliance information.
- Section 3.0, *Project Description*, provides a detailed project description indicating project location and setting, background and history; project characteristics, objectives, phasing, and associated discretionary actions required.
- Section 4.0, *Basis of Cumulative Analysis*, describes the approach and methodology for the cumulative analysis.

- Section 5.0, *Environmental Analysis*, contains a detailed environmental analysis of the existing conditions, potential project impacts, recommended mitigation measures, and possible unavoidable adverse impacts for the following environmental topic areas:
 - Aesthetics
 - Air Quality
 - Biological Resources
 - Cultural and Tribal Cultural Resources
 - Geology and Soils
 - Greenhouse Gas Emissions
 - Hazards and Hazardous Materials
 - Hydrology and Water Quality
 - Land Use and Planning
 - Noise
 - Public Services and Utilities
 - Transportation/Traffic
- Section 6.0, *Other CEQA Considerations*, discusses the long-term implications of the proposed action. Irreversible environmental changes that would be involved in the proposed action, should it be implemented, are considered. The project's growth-inducing impacts, including the potential for population growth, and energy conservation impacts are also discussed.
- Section 7.0, *Alternatives to the Proposed Action*, describes a reasonable range of alternatives to the project or its location that could avoid or substantially lessen the project's significant impacts and still feasibly attain the project's basic objectives.
- Section 8.0, *Effects Found Not To Be Significant*, provides an explanation of potential impacts that have been determined not to be significant.
- Section 9.0, *Organizations and Persons Consulted*, identifies all Federal, State, and local agencies, other organizations, and individuals consulted.
- Section 10.0, *Bibliography*, lists the information sources utilized in preparation of the EIR to support the environmental analysis and findings.
- Appendices, contains the project's technical documentation.

2.5 RESPONSIBLE AND TRUSTEE AGENCIES

Certain projects or actions undertaken by a Lead Agency require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Such other agencies are referred to as Responsible Agencies and Trustee Agencies. Pursuant to CEQA Guidelines §§ 15381 and 15386, as amended, Responsible Agencies and Trustee Agencies are respectively defined as follows:

“Responsible Agency” means a public agency, which 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, the term “responsible agency” includes all public agencies other than the Lead Agency, which have discretionary approval power over the project. (§15381)

“Trustee Agency” means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. Trustee Agencies include; the California Department of Fish and Game, the State Lands Commission; the State Department of Parks and Recreation and the University of California with regard to sites within the Natural Land and Water Reserves System. (§15386)

Responsible and Trustee Agencies and other entities that may use this EIR in their decision-making process or for informational purposes include the following, among others:

- California Department of Fish and Wildlife;
- Lahontan Regional Water Quality Control Board;
- Los Angeles County Fire Department;
- County Sanitation Districts of Los Angeles County;
- Antelope Valley Air Quality Management District; and
- Southern California Association of Governments.

2.6 INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited in accordance with CEQA Guidelines §15150, which encourages incorporation by reference as a means of reducing redundancy and the length of environmental reports. The following documents are incorporated by reference into this EIR. Information contained within these documents has been utilized for each section of this EIR. Copies of these documents are available for review or purchase at the City of Lancaster (44933 Fern Avenue, Lancaster, CA 93534) and on the City’s website ([http:// www.cityoflancasterca.org](http://www.cityoflancasterca.org)). A brief synopsis of the scope and content of these documents are provided below.

- *Lancaster General Plan 2030 (General Plan), adopted July 14, 2009.* The Lancaster General Plan is a policy document, designed for the City’s long-term outlook for future growth. The Lancaster General Plan includes the following elements: Plan for Natural Environment, Plan for Public Health and Safety, Plan for Active Living, Plan for Physical Mobility, Plan for Physical Development (Community Design subsection), Plan for Economic Development, Plan for Municipal Services and Facilities, and the Housing Element. The Housing Element was last updated on December 31, 2013. The Lancaster General Plan identifies the types of development that will be allowed, the spatial relationships among land uses, and the general pattern of future development. It presents the issues which face the City of Lancaster as well as the goals, objectives, policies, and specific actions which the City will pursue to resolve those issues. All development projects including subdivisions, public works, redevelopment projects, zoning decisions, and other various implementation tools must be consistent with the General Plan.
- *Lancaster General Plan 2030 Program Environmental Impact Report (General Plan EIR), certified July 14, 2009.* The General Plan EIR is intended to provide decision-makers and the public with information concerning the environmental effects of implementation of the General Plan. The General Plan EIR includes background data, analyzes potential environmental impacts, identifies General Plan strategies and actions that serve as mitigation, and identifies additional mitigation

measures to reduce potentially significant effects due to implementation of the General Plan. The General Plan EIR determined that implementation of the General Plan would result in various irreversible environmental changes in the area including soil erosion associated with grading and construction activities, alteration of the human environment as a consequence of the development process, increased usage of public services and utilities during and after construction, temporary and permanent commitment of energy and water resources as a result of construction, operation, and maintenance of new developments, utilization of various new raw materials for construction, and incremental increased in vehicular activity within the City. Other significant environmental effects include increased traffic and circulation impacts, depletion of groundwater resources, additional air and noise pollution emissions, and increased consumption of natural resources such as water supply.

- Lancaster General Plan 2030 Master Environmental Assessment (Environmental Assessment), dated April 2009. The Master Environmental Assessment was developed as part of the Lancaster General Plan 2030 update. The purpose of the Master Environmental Assessment is to provide existing baseline conditions within the City of Lancaster General Plan study area. Physical, environmental, cultural, social and economic conditions for the study area are identified in the Master Environmental Assessment to establish where the City is today and to help formulate goals and policies that will guide the City into the future. The Master Environmental Assessment provides the City with baseline data for EIRs and all project and policy related CEQA documents. Additionally, it provides the baseline environmental information for Initial Studies to help the City determine whether significant impacts will occur with the development of individual projects.
- Lancaster Municipal Code (Lancaster Municipal Code) codified through Ordinance No. 1029, adopted July 11, 2017. The Lancaster Municipal Code provides regulations for governmental operations, development, infrastructure, public health and safety, and business operations within the City. Title 17, Zoning, of the Municipal Code represents the City's Zoning Ordinance. The Zoning Ordinance is established to protect the public health, safety, and general welfare of the visitors to and residents of the city, to regulate the use of buildings, structures, and land for residential, commercial, industrial and institutional purposes, to regulate location, height, bulk, and area covered by buildings and structures, and to control lot size, yards, intensity of land use, signs and off-street parking.

SECTION 3.0

Project Description

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

PROJECT LOCATION

The Avanti South Specific Plan Project (project) is located within the City of Lancaster, California. The City of Lancaster (City) is situated in the northern portion of Los Angeles County along State Route 14 (SR-14), approximately 70 miles northeast of Downtown Los Angeles, within the Antelope Valley; refer to [Exhibit 3-1, Regional Vicinity](#).

The project site encompasses approximately 307.7 acres of vacant land within the southwestern portion of the City, five miles west of SR-14; refer to [Exhibit 3-2, Site Vicinity](#). The Avanti South Specific Plan (Avanti South SP or Specific Plan) is comprised of two areas, referred to herein as Avanti South (approximately 234.3 acres) and Avanti West (approximately 73.4 acres). Avanti South consists of two parcels (Assessor Parcel Numbers [APNs] 3204-008-045 and 3204-008-047) generally bounded by the proposed extension of Avenue K-8 to the north, Avenue L to the south, 70th Street West to the west, and a residential neighborhood and vacant land to the east. Avanti West consists of two parcels (APNs 3204-001-184 and 3204-001-195) generally bounded by vacant land to the north, the proposed extension of Avenue K-8 to the south, proposed extension of 75th Street West to the west, and 70th Street West to the east.

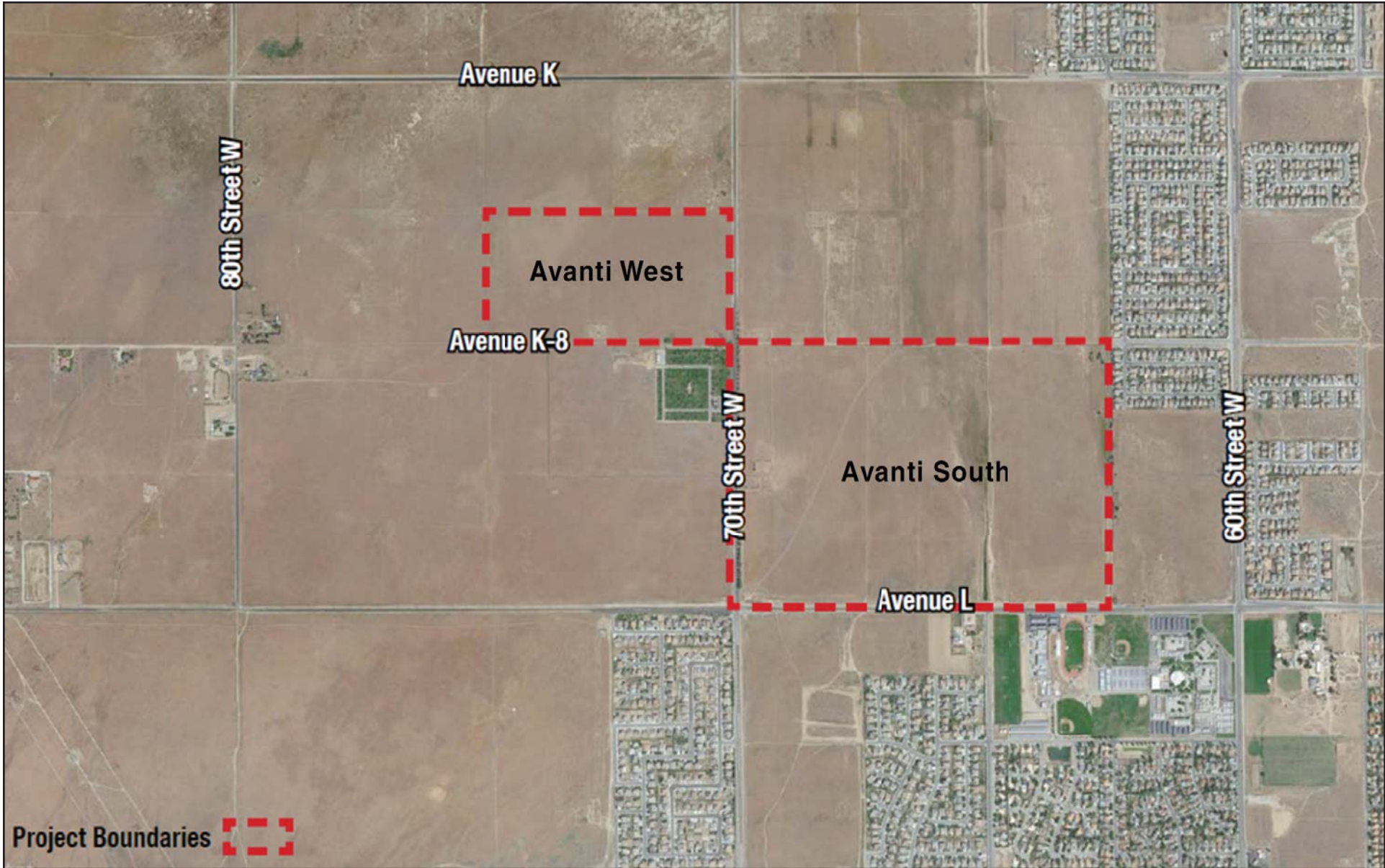
PROJECT SETTING (EXISTING CONDITIONS)

Existing On-Site Conditions

The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The site topography is relatively flat and level with a general slope down to the north/northeast. Two drainages are located within Avanti South, including one within the center of the site and one along the eastern boundary. Along the southeastern boundary of Avanti West, a portion of a drainage pond and channel are located within the project site. The remainder of the pond and channel, along with another pond are located adjacent to the project site within the boundaries of the Good Shepherd Cemetery.

General Plan and Zoning

The *City of Lancaster General Plan 2030* (General Plan 2030) Land Use Map, designates Avanti South as Urban Residential (UR) (2.1-6.5 dwelling units/acre (du/ac)) with Specific Plan (SP) Overlay and Avanti West as Non-Urban Residential (NU) (0.4-2.0 dwelling units/acre). The Zoning Map of the City of Lancaster (Zoning Map) identifies the zoning for Avanti South as Specific Plan (SP) and for Avanti West as RR-2.5 (Rural Residential, 1 unit/2.5 acres).



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

NOT TO SCALE



11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Site Vicinity

Surrounding Land Uses

Avanti South is surrounded by the following land uses:

- North: Vacant land, designated UR with SP overlay and zoned SP, is located to the north. The Avanti North Specific Plan Project proposed development of this area with single-family residential uses. This project was approved by the City Council on September 12, 2017.
- East: Single-family homes zoned R-7,000 (single-family residential, minimum lot size 7,000 square feet) back up to the northern portion of the project site. Vacant land designated Commercial (C) and UR and zoned Commercial Planned Development (CPD) and R-7,000 is located to the east of the southern portion of the project site. A Walmart has been approved, but not constructed, immediately to the east on the northwest corner of 60th Street West and Avenue L.
- South: Avenue L forms the southern boundary. Vacant land designated UR and zoned R-10,000 (single-family residential, minimum lot size 10,000 square feet), a single-family residence, and Quartz Hill High School are located to the south across Avenue L.
- West: 70th Street West forms the western boundary. Vacant land designated NU and zoned Semi-Rural Residential (SRR) and a cemetery are located to the west across 70th Street West.

Avanti West is surrounded by the following land uses:

- North: Vacant land, designated NU and C and zoned CPD and RR-2.5 (rural residential, minimum lot size 2.5 acres) is located directly adjacent to the project site.
- East: 70th Street West forms the eastern boundary. Vacant land is located across 70th Street West. The vacant land is designated UR with SP overlay and zoned SP. The Avanti North Specific Plan Project proposed development of this area with single-family residential uses. This project was approved by the City Council on September 12, 2017.
- South: A cemetery and vacant land are located to the south. The vacant land is designated NU and zoned RR-2.5; while the cemetery is designated and zoned CE (Cemetery).
- West: Vacant land designated NU and zoned RR-2.5 is located west of the project site.

3.2 BACKGROUND AND HISTORY

In 1999, a development application was submitted which covered, in part, the areas currently referred to as Avanti South and Avanti North (currently owned by CV Communities). The proposal included the construction of 1,497 single-family homes, a school site, and a park site. The City initiated the CEQA review process and issued a Notice of Preparation and Initial Study on July 7, 2000. An Administrative Draft EIR was prepared, and prior to release for public review, the project was placed on hold.

A portion of the property was sold and a new application was filed. The Lancaster Capital, LLC Environmental Impact Report (EIR) was certified and Tentative Tract Map (TTM) No. 53229 was approved by the Planning Commission on October 17, 2006. TTM No. 53229 is bounded by Avenue K to the north,

62nd Street West to the east, Avenue L to the south and 70th Street West to the west. TTM No. 53229 is still active and approved for a subdivision of 1,593 single-family lots, one 13.39-acre school lot, and one 28.05-acre park lot and encompasses the land area of both Avanti South and Avanti North. This map expires on October 17, 2017.

As stated above, the Avanti North Specific Plan Project proposed a Specific Plan and TTM No. 73507 for the development of single-family residential uses, and was approved by the City Council on September 12, 2017. The proposed Avanti South Specific Plan Project (the subject of this Draft EIR) includes a proposed Specific Plan and TTM No. 74312 that would replace any prior entitlements for the project site. A detailed description of the Project Characteristics is provided below.

3.3 PROJECT CHARACTERISTICS

The project requests adoption of the Avanti South Specific Plan (SP 15-02) and approval of a General Plan Amendment (GPA) 16-01, Zone Change (ZC) 16-01, and TTM No. 74312 for the approximately 307.7-acre project site, as further described below.

AVANTI SOUTH SPECIFIC PLAN

The Avanti South Specific Plan is a regulatory document and provides a means for implementing the General Plan 2030 for the site. The policies and regulations contained in the proposed Specific Plan would serve as the zoning for the property. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

Development Plan

The Development Plan identifies the land use designations and conceptual land use plan, identifies land use policies, and describes the mobility, drainage, water and sewer, grading, and public services plans for the Specific Plan area.

LAND USE PLAN

The Land Use Plan identifies a mix of land uses throughout the Specific Plan area and further describes the land uses, dwelling unit counts, commercial square footages, open space, school site, and fire station acreage within the Specific Plan. As indicated in [Table 3-1, Land Use Summary](#), the project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses, as described further below. A 12.8-acre school site and 1.3-acre fire station site are also proposed along with internal streets.

**Table 3-1
Land Use Summary**

Land Use	Acres		
	Avanti West	Avanti South	Total
LDR (2.1-6.5 du/ac)	57.4	35.6	93
MDR (6.6-15 du/ac)		102.4	102.4
HDR/Multifamily (15.1-30.0 du/ac)	--	14.3	14.3
Commercial	--	14.0	14.0
Open Space/Parks	5.9	25.6	31.5
School	--	12.8	12.8
Fire Station	1.3	--	1.3
Streets	8.8	29.6	38.4
Totals	73.4	234.3	307.7

Source: Avanti South Specific Plan, August 2017.
LDR = Low Density Residential; MDR = Medium Density Residential; HDR = High Density Residential; du = dwelling units; ac = acre

The Land Use Plan organizes the project site into planning areas that are centered on common open spaces and trail amenities; refer to Exhibit 3-3, *Land Use Plan*. Table 3-2, *Avanti West Land Use Summary* and Table 3-3, *Avanti South Land Use Summary*, identify the proposed development by planning area for the Avanti South Specific Plan.

**Table 3-2
Avanti West Land Use Summary**

Planning Area	Land Use	Acres	Lot Size (typical sf)	Target Density (du/ac)	Dwelling Units
PA-1	LDR	7.9	7,500	4.3	34
PA-2	LDR	7.5	5,000	6.0	48
PA-3	LDR	13.0	4,000	6.5	84
PA-4	LDR	9.6	4,000	6.5	62
PA-5	LDR	5.7	7,500	4.5	25
PA-6	LDR	9.9	5,000	6.0	64
PA-7	LDR	3.8	5,000	6.0	23
Subtotal Residential		57.4			340
Park-1	Park	1.1	--	--	
Park-2	Park	1.1	--	--	
Drainage	Open Space	1.7	--	--	
Promenades	Open Space	2.0	--	--	
Parks/Open Space Subtotal		5.9			
PA-8	Fire Station	1.3	--	--	
Streets		8.8	--	--	
TOTAL		73.4			340

Source: Avanti South Specific Plan, August 2017.
sf = square feet; du = dwelling units; ac = acre; PA = Planning Area; LDR = Low Density Residential; MDR = Medium Density Residential; HDR = High Density Residential

**Table 3-3
Avanti South Land Use Summary**

Planning Area	Land Use	Acres	Lot Size (typical sf)	Target Density (du/ac)/Intensity (FAR)	Dwelling Units/Square Feet
PA-9	LDR	8.6	5,000	6.0	51
PA-10	MDR	4.6	2,800	8.5	39
PA-11	LDR	8.3	4,500	6.5	54
PA-13	LDR	4.2	4,000	6.5	27
PA-14	MDR-Age Targeted	5.4	3,200	8.2	41
PA-15	MDR-Age Targeted	12.6	3,200	7.7	97
PA-16	MDR-Age Targeted	4.8	3,200	8.2	37
PA-17	LDR	4.7	4,000	6.5	30
PA-18	LDR	9.8	4,000	6.5	64
PA-19	MDR	7.9	4,000	7.0	55
PA-20	MDR	7.4	4,000	7.0	52
PA-22	MDR	12.6	2,800	8.5	107
PA-23	MDR	15.8	3,500	7.9	125
PA-24	MDR-Active Adult	10.8	3,200	8.2	88
PA-25	MDR-Active Adult	20.5	3,200	8.2	168
PA-28	HDR	14.3	Multi-Family Residential	22.8	325
Subtotal General Residential		98.2			929
Subtotal Age Targeted		22.8			175
Subtotal Active Adult		31.3			256
PA-12	Commercial	3.1	--	0.35	47,260
PA-26	Commercial	3.0	--	0.35	45,290
PA-27	Commercial	2.7	--	0.35	41,620
PA-29	Commercial	5.2	--	0.35	79,430
Subtotal Commercial		14.0			213,600
Park-3	Park	1.0	--		
Park-4	Park	1.0	--		
Park-5	Park	1.0	--		
Park-6	Park	1.0	--		
PA-30	Amenity Center	5.3	--		
Drainage	Open Space	6.9	--		
Promenades	Open Space	8.0	--		
Trail Easement	Open Space	1.4	--		
Subtotal Parks/Open Space		25.6			
PA-21	School	12.8	--		
Streets		29.6	--		
TOTAL		234.3			1,360 du 213,600 sf

Source: Avanti South Specific Plan, August 2017.

sf = square feet; du = dwelling units; ac = acres; FAR = floor area ratio; PA = Planning Area; LDR = Low Density Residential; MDR = Medium Density Residential; HDR = High Density Residential



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Land Use Plan

Exhibit 3-3

As indicated in [Table 3-2](#) and [Table 3-3](#), buildout of the Specific Plan would result in the following:

- 1,700 dwelling units, including 175 age-targeted units and 256 active adult units
- 213,600 square feet of commercial uses (14 acres)
- 31.5 acres of open space/parks
- 12.8-acre school site
- 1.3-acre fire station site
- 38.4 acres of internal streets

Residential Uses

The Specific Plan would allow a maximum of 1,700 residential units within three residential land use categories:

- Low Density Residential (LDR). The LDR designation would allow a range of 2.1 to 6.5 dwelling units per acre with lots ranging from 4,000 to 7,500 square feet. The Specific Plan proposes up to 566 LDR dwelling units on approximately 93 acres.
- Medium Density Residential (MDR). The MDR designation would allow a range of 6.6 to 15 dwelling units per acre of single-family and cluster homes on lots ranging from 2,800 to 4,000 square feet. The Specific Plan proposes up to 809 MDR dwelling units on approximately 102.4 acres.

This category also includes two specialty neighborhoods for age-targeted and active adults.

- Age-Targeted/Active Adults. The Avanti South area includes five planning areas identified for age-targeted and active adult uses. The Specific Plan proposes 175 age-targeted units and 256 active adult units. The areas are planned to be gated communities with private streets and amenity areas programmed for active adult uses, including a one-acre park within the age-targeted planning areas and a 5.3-acre amenity center within the active adult planning areas to serve both the active adult and age-targeted uses.
- High Density Residential (HDR). The HDR designation would allow a range of 15.1 to 30 dwelling units per acre. The Specific Plan proposes up to 325 HDR dwelling units on approximately 14.3 acres.

Commercial Uses

The commercial designation generally includes retail, restaurant, and office uses on approximately 14 acres. The Specific Plan proposes up to 213,600 square feet of retail commercial and office uses based on an average floor area ratio (FAR) of 0.35. Commercial uses for the planning areas adjacent to the proposed active adult areas specifically allow for medical office, assisted living, convalescent care, and similar uses.

Community Facilities

The Land Use Plan designates school and fire station land uses within the project site:

- **School.** An approximately 12.8-acre school site has been identified within the Avanti South portion of the Specific Plan. The site is anticipated to accommodate an elementary school with potential shared park uses. The school site would be offered to the Westside Union School District. If it is determined by the school district that the site is not needed, the school site would revert to an underlying LDR land use.
- **Fire Station.** An approximately 1.3-acre fire station site has been identified within the Avanti West portion of the Specific Plan.

Parks and Recreation

The Land Use Plan designates approximately 31.5 acres of park uses within the Specific Plan; refer to the Parks and Open Space discussion, below.

PARKS AND OPEN SPACE PLAN

The parks and open space plan proposes an interlinked system of parks connected by multipurpose trails with promenades and linear parks; refer to Table 3-4, Parks and Open Space Summary, and Exhibit 3-4, Parks and Open Space Plan.

**Table 3-4
Parks and Open Space Summary**

Park and Open Space Areas	Ownership	Acres	Preliminary Programming
Avanti West			
Park 1	Private	1.1	Medium playground, picnic, putting green, seating
Park 2	Private	1.1	Large Playground, picnic areas, court games, seating, arbor/ pergola
Drainage Facility	Private	1.7	Multipurpose Trail, interpretive signage
Promenades	Private	2.0	Multipurpose Trail, seating, fitness course
Subtotal Avanti West		5.9	
Avanti South			
Park 3	Private	1.0	Tot lot, gazebo, fitness stations, seating
Park 4	Private	1.0	Passive area, seating, dog park
Park 5 (Age Targeted)	Private	1.0	Lawn bowling, horseshoe pits, picnic, fitness stations, seating
Park 6	Private	1.0	Playground, seating, arbor, court games, dog park
Amenity Center (Active Adult)	Private	5.3	Clubhouse, restrooms, pickleball, community garden, pool/spa, putting green, arbor, seating
Drainage Facility	Private	6.9	Multipurpose Trail, western edge
Promenades	Private	8.0	Multipurpose Trail, seating, fitness course
Equestrian Trail Easement (70th Street)	Private	1.4	12' Equestrian and 12' Class I Trail
Subtotal Avanti South		25.6	
TOTAL		31.5	

Source: Avanti South Specific Plan, August 2017.



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Parks and Open Space Plan

Exhibit 3-4

Parks

Neighborhood Parks. Neighborhood parks provide both passive and recreational opportunities with facilities such as playgrounds, basketball courts, and picnic areas. The Specific Plan proposes five private neighborhood parks located throughout the project area and two private recreation areas within the gated adult community. The parks are anticipated to include parkland and improvements such as shade trees, pathways, open play areas, playgrounds, play courts, shade structures, water features, seating, seat walls, shaded picnic tables, barbecues, a dog park, and ornamental landscaping. The parks would be owned and maintained by the Homeowners Association (HOA).

Pocket Parks. Private pocket parks or amenity areas may be incorporated into each residential planning area, as illustrated on Exhibit 3-4. The pocket parks would be designed as part of the subdivision process for each planning area and subject to design review.

Amenity Center. A private recreation center would be provided for residents of the active adult community. The 5.3-acre facility would be centrally located and is anticipated to include a recreational pool and clubhouse, spa, sun decks, shade structures, landscaping/meadow gathering space, restrooms, community garden, and off-street parking. Indoor uses may include a multi-purpose room for community events, activity meeting rooms, a fitness center, locker rooms, and administrative spaces. Design of the center would be part of site plan and design review for the active adult community.

Open Space. In addition to parkland, open space areas would be incorporated throughout the project area. Promenade areas (widened and enhanced medians) would be provided in some of the project streets. The promenades would be 60 feet wide and include a multipurpose trail, seating, landscaping, and fitness course stations.

An Equestrian/Class I trail would be located on 70th Street. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City's planned equestrian and Class I multipurpose trail.

Drainage facilities totaling 8.6 acres would serve drainage, water quality, and trail functions. The edge of the facilities would incorporate a multipurpose trail and interpretive signage.

MOBILITY PLAN

Approximately 38.3 acres of land would be dedicated to the roadway network to serve the proposed project; refer to Exhibit 3-5, Circulation Plan. In addition, a network of multi-use trails, bikeways, and multi-purpose pathways would be developed to provide additional mobility options. Proposed roadway cross sections are provided within the Specific Plan and described below.



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Circulation Plan

Exhibit 3-5

Vehicular Circulation and Street Hierarchy

Primary Arterials

Avenue L. Avenue L is an east-west running primary arterial with a 100-foot right-of-way. The proposed cross section would include one travel lane in each direction with a 14-foot striped median and a 14-foot parkway with 6-foot meandering sidewalk on the project frontage.

70th Street West. 70th Street West is a north-south running primary arterial with a 115-foot right-of-way. The proposed cross section would include one travel lane in each direction with a 14-foot raised median and parkway that would be bordered by a 12-foot equestrian trail and 8-foot Class I Bicycle Trail on its eastern edge.

Secondary Arterials

Avenue K-8. Avenue K-8 is proposed to be extended through the project area, connecting Avanti South with Avanti West, as well as individual planning areas; refer to [Exhibit 3-5](#). The extension of Avenue K-8 would connect the extension of 65th Street West with 70th Street West and 75th Street West. The extension of Avenue K-8 would be a two-lane secondary arterial (84-foot right-of-way). The proposed cross section would include one travel lane in each direction with a variable width landscaped parkway and meandering sidewalk, 8-foot parking lane, and 7-foot striped Class II bike lane in each direction of travel. The road would be designed to slow traffic through the use of a roundabout design at two locations.

75th Street West. 75th Street West is proposed along the western edge of the project area providing access to planning areas within Avanti West. The roadway would be a two-lane secondary arterial (84-foot right-of-way). The proposed cross section would include one travel lane in each direction with a 16-foot landscaped parkway and meandering sidewalk, 8-foot parking lane, and 7-foot striped Class II bike lane in each direction of travel.

65th Street West. 65th Street West is proposed to be extended through the project area, providing access to planning areas and connecting the extension of Avenue K-8 on the north and Avenue L on the south at its ultimate full-section width as a two-lane secondary arterial (114-foot right-of-way). The proposed cross section would include one travel lane in each direction separated by a 30-foot landscaped median with a 16-foot landscaped parkway and meandering sidewalk, 8-foot parking lane, and 7-foot striped Class II bike lane in each direction of travel. The road would be designed to slow traffic through the use of a roundabout design at five locations.

Residential Collectors with Promenade

Promenade Residential Collectors are proposed as two-lane roadways to include a 60-foot raised median with a 12-foot multi-use trail (130-foot right-of-way). The proposed cross section would include a 16-foot landscaped parkway and meandering sidewalk and 8-foot parking lane in each direction of travel.

Local Streets

Local streets are proposed to be 36 feet wide curb to curb with one travel lane in each direction within a 60-foot right-of-way. The proposed cross section would include a 7-foot wide landscaped parkway, a 5-foot wide sidewalk, and 8-foot parking lane in each direction.

Local One-Way

Local one-way streets are proposed to be 20 feet wide curb to curb with one lane of travel within a 40-foot right-of-way. The proposed cross section would include a 5-foot landscaped parkway and a 5-foot sidewalk in both directions, and 8-foot parking in one direction of travel.

Alleys

Alley loaded residential products would be allowed within the Specific Plan. They would serve as private roadways providing access to rear-loaded homes and include a 20-foot wide paved surface.

Gates

Gated entries are permitted within the Specific Plan and may occur on collector roads and residential local roads. If provided, gates would be required to include adequate stacking distance and an adequate turn-around area before the gate and meet Los Angeles County Fire Department standards.

Traffic Calming

The Specific Plan allows for and encourages traffic calming principals and concepts including, but not limited to, bulb-outs, connection of streets and trails, street trees, on-street parking, short blocks, intersections with smaller turning radii, planting strips and trees in planted medians and in curbside buffer areas, maintained and raised crosswalks and medians, and multiple access routes for emergency vehicles.

Additionally, the Specific Plan proposes several potential roundabout locations along the 65th Street West extension at Avenue K-8, Street O, Street P and Street R intersections and the intersection of the Avenue K-8 extension and 70th Street West.

Non-Vehicular Circulation

The Specific Plan incorporates a network of on- and off-street non-motorized circulation elements to promote access and walkability throughout the project site. The system provides for bicycles, pedestrians, and equestrians; refer to [Exhibit 3-6, *Non-Vehicular Circulation Plan*](#). Multi-use trails located along the promenades would connect parks within the project site. An 8- to 12-foot wide multi-purpose trail is proposed on the inside edge of the drainage facility. A 12-foot wide equestrian trail is proposed on the east side of 70th Street West between Avenue L and the Avenue K-8 extension.

The Specific Plan provides for Class I (off-street) and Class II (on-street) bike lanes. A 12-foot wide Class I bike lane is proposed on the east side of 70th Street between Avenue L and the Avenue K-8 extension. Striped 7-foot wide Class II bike lanes are also proposed in both directions of travel on 75th Street, Avenue K-8, 65th Street, and Avenue L.



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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11/17 | JN 153750

Non-Vehicular Circulation Plan

Public Transportation

The project proposes a bus turn-out on Avenue L at 65th Street West.

INFRASTRUCTURE AND PUBLIC SERVICES

The Specific Plan would require a variety of public facilities and services to support and serve the anticipated development.

Water

The project would be required to construct 12-inch water lines to serve the project area, extended from the existing water mains to the backbone roads of Avanti South. Connections through the off-site Avanti North Specific Plan area would be provided by that development. Water from these backbone mains would be extended into individual planning areas as they develop; refer to [Exhibit 3-7, *Water Plan*](#).

Wastewater

The closest backbone sewer lines to the project site are located in Avenue L to the south and a 36-inch trunk sewer in Avenue J to the north. Wastewater generated from the project would be conveyed through a conventional gravity system of pipes located within the new street right-of-ways and conveyed via a proposed 12- to 18-inch sewer in 65th Street West through the Avanti North Specific Plan project to the existing 36-inch Sanitation District trunk line in Avenue J for conveyance to the wastewater treatment plant; refer to [Exhibit 3-8, *Sewer Plan*](#).

Grading and Drainage

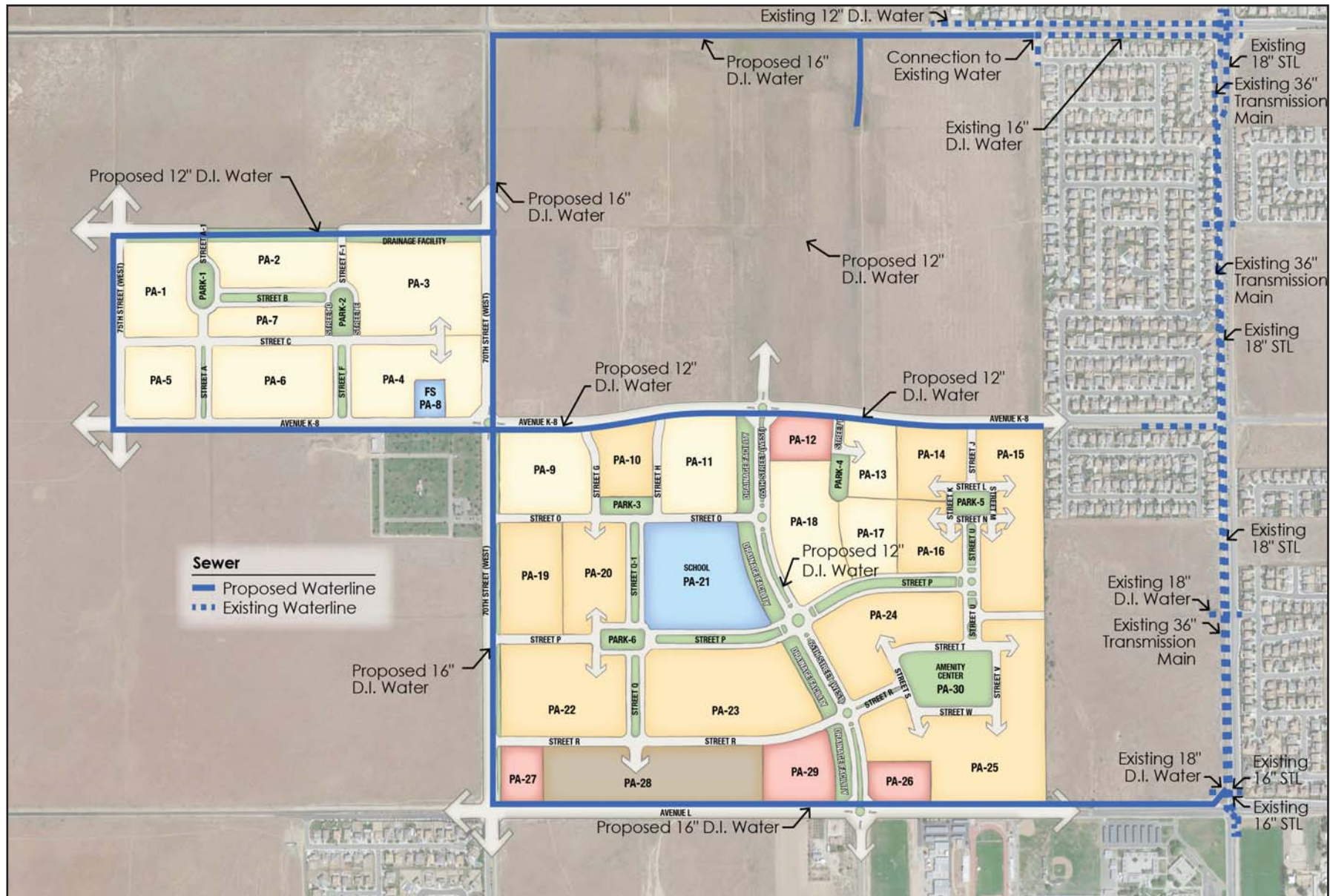
Grading

Earthwork volumes for the overall Specific Plan, including the major streets, basins, and uncompacted fill in the planning areas is estimated to consist of approximately 206,296 cubic yards (cy) of cut and 205,582 cy of fill for Avanti South and approximately 50,008 cy of cut and 49,370 cy of fill for Avanti West.

Rough grading is anticipated to be done prior to or during development of individual planning areas to create building sites and commercial pads. Earthwork estimates have been prepared for each planning area based on similar projects. More detailed grading estimates would be included as part of the Vesting Tentative Tract Map (VTTM). The project is estimated to balance on-site without import or export of soil; refer to [Exhibit 3-9, *Grading and Drainage Plan*](#).

Regional Drainage

There are currently two 72-inch storm drains in 65th Street West, south of Avenue L. These two storm drains presently cross Avenue L and outlet onto Avanti South. As part of the project, the two storm drains would be extended north through Avanti South and off-site through the Avanti North Specific Plan project and would ultimately connect to existing storm drains at approximately Avenue J-12. The project's storm drain would be designed to convey off-site storm run-off through the project site; refer to [Exhibit 3-9](#). The Avanti North Specific Plan project would be responsible for construction of its segment of the regional storm drain.



Source: Kimley-Horn, Avanti South Specific Plan, August 2017.

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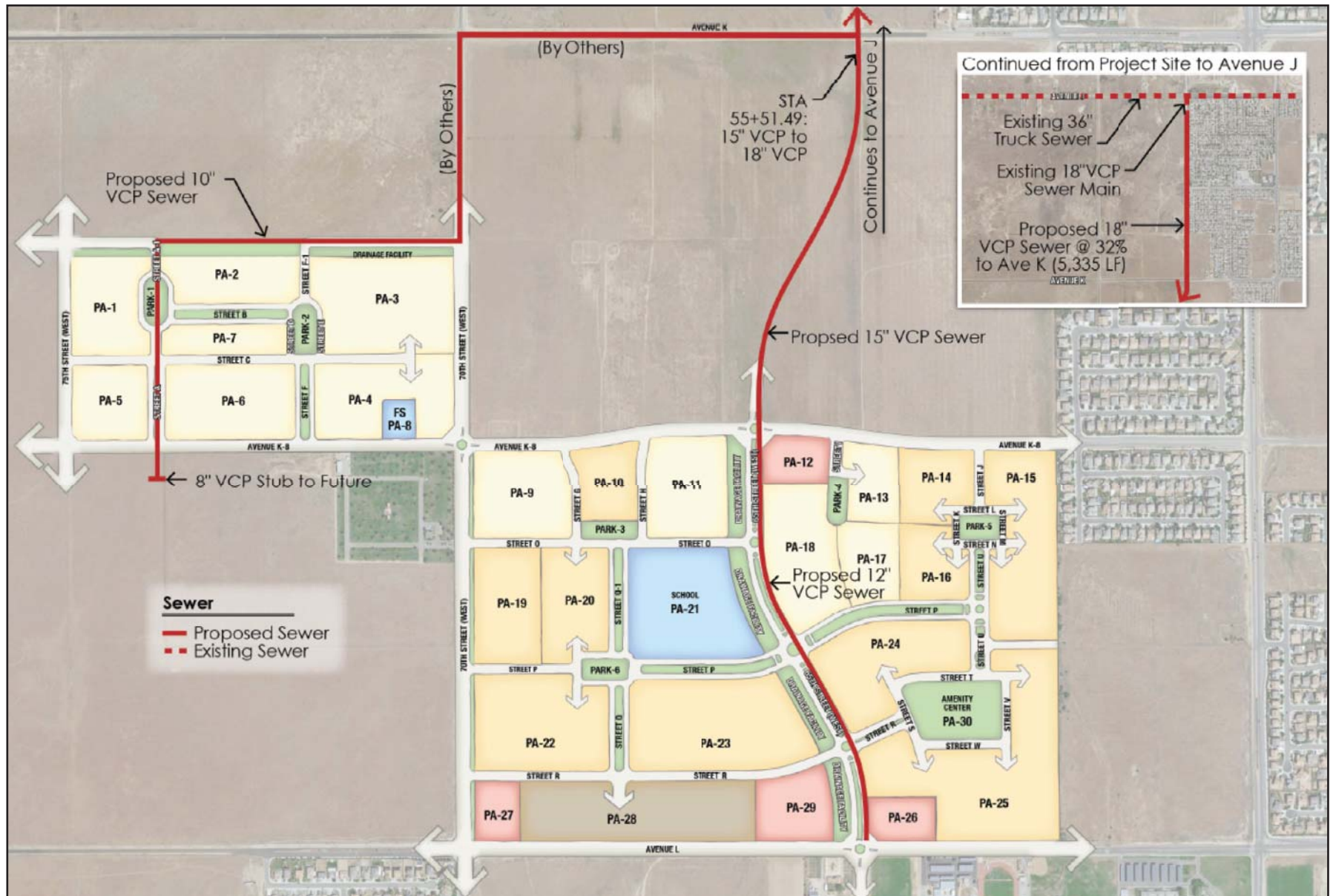


11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Water Plan

Exhibit 3-7



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Sewer Plan

Exhibit 3-8



Source: Kimley-Horn, *Avanti South Specific Plan*, August 2017.

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11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Grading and Drainage Plan

Exhibit 3-9

Backbone Drainage

Avanti West

Avanti West has a small off-site tributary area to the south. Off-site runoff would be conveyed via Avenue K-8, on Avanti West's southern edge. On-site drainage would be conveyed via surface flow and internal storm drains (ranging from 24 to 60 inches in size) to a retention basin located at the northeast corner of Avanti West, north of Planning Area 3.

The retention basin would be designed to accommodate the developed condition runoff volume from Avanti West. The final basin size and configuration may vary from the estimated size shown on [Exhibit 3-9](#), depending upon percolation rates and the final engineering design.

Avanti South

Avanti South would include four linear detention basins along the west side of 65th Street West to accommodate the increase in runoff due to development. The site would be designed to convey site drainage to these basins via surface drainage and a system of storm drains (ranging from 24 to 54 inches in size) within the site. The four detention basins would function independently and outlet into the proposed 72-inch storm drains in 65th Street West. In addition, existing off-site flows from Avenue L would be conveyed through the site to the proposed storm drain in Avenue K-8. The on-site drainage, storm drains, and basins would be designed using the City's hydrology and drainage criteria including accommodating the system flows to 85 percent of the pre-developed run-off quantities. Final basin size may vary from the estimated size shown on [Exhibit 3-9](#) dependent upon percolation rates and the final engineering design.

In-Tract Drainage

Drainage facilities within individual planning areas would be determined and constructed as part of the development of the planning area.

Development Regulations

The Specific Plan includes development regulations for the proposed residential, commercial, park, and institutional uses. Regulations address general site development for all uses within the Specific Plan area, as well as development standards specific to the land use including, but not limited to, permitted uses, lot area, lot coverage, landscaping, parking, building heights, and setbacks.

Design Guidelines

Community design, landscape, and architectural design guidelines are provided in the Specific Plan. The guidelines are intended to provide direction and be used in conjunction with the development regulations discussed above. The guidelines address a variety of areas including, but not limited to, home types, architectural styles, building orientation, massing and architectural enhancements, roofs, windows, landscaping, streetscapes, storm water facilities and parks and recreation facilities.

GENERAL PLAN AMENDMENT 16-01

As stated, the General Plan Land Use Map currently designates Avanti West as NU and Avanti South as UR with a SP overlay. GPA 16-01 would amend the General Plan Land Use Map to change the land use designations for Avanti West to UR with a SP overlay and for Avanti South from UR with a SP overlay to Mixed-Use (MU) with a SP overlay and Public-School.

ZONE CHANGE 16-01

As stated, the City's Zoning Map identifies the zoning for Avanti South as SP and Avanti West as RR-2.5. ZC 16-01 would amend the Lancaster Zoning Map to change the zoning for Avanti West from RR-2.5 to SP 15-02 and to change the zoning for the proposed School site to School (S). The remainder of Avanti South would not require a zone change; however, it would be designated as SP 15-02 to reflect the Avanti South Specific Plan.

VESTING TENTATIVE TRACT MAP NO. 74312

VTTM No. 74312 would subdivide the four existing parcels into 45 lots for financial and conveyance purposes.

3.4 PROJECT OBJECTIVES

The Avanti South Specific Plan identifies the following objectives:

- Develop a master planned community that incorporates fundamentals of great neighborhood design by balancing land uses, providing for vehicular and pedestrian mobility, and providing for the preservation/enhancement of recreation and open spaces.
- Identify opportunities for a variety of residential land uses throughout the development, with high and medium density uses located in proximity to commercial, and active adult communities located adjacent to existing single-family neighborhoods.
- Provide a range of residential, commercial, recreational, and business activities and services to the City.
- Distribute commercial uses throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation.
- Implement a circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts.
- Create a network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development.

- Provide a variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas.
- Retain the existing drainage patterns to use as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance.
- Promote the use of green building practices and sustainable development methods throughout the project.
- Implement community design and landscaping elements that complement and are responsive to the Lancaster environment.

3.5 PHASING

Development of the proposed Specific Plan, including recordation of final subdivision map(s), and design review may be progressively implemented in stages, provided that vehicular access, public facilities, and infrastructure are constructed to adequately service the development, or as needed for public health and safety. For analysis purposes, a buildout year of 2021 is used.

3.6 AGREEMENTS, PERMITS, AND APPROVALS

The City of Lancaster, as the Lead Agency, has discretionary authority over the proposed project that includes, but is not limited to, the following:

- Specific Plan No 15-02. Recommendation by the City Planning Commission and adoption of the proposed Avanti South Specific Plan by the City Council is required for the proposed project.
- Environmental Review. A certified Environmental Impact Report (EIR) is required by CEQA, as described in Section 1.0, Introduction and Purpose. This EIR would be certified by the City Planning Commission. Additional environmental review for future uses is not anticipated, but would be evaluated on a case-by-case basis.
- General Plan Amendment No. 16-01. Recommendation by the City Planning Commission and approval by the City Council to change the General Plan land use designation of Avanti West to UR with a SP overlay and change the General Plan land use designation of Avanti South to MU with a SP overlay.
- Zone Change 16-01. Recommendation by the City Planning Commission and approval by the City Council to change the zoning of Avanti West from RR-2.5 to SP 15-02 on the Lancaster Zoning Map and to change the zoning of the proposed school site in Avanti South to School.
- Development Agreement. Approval of a Development Agreement by the City Council.
- Vesting Tentative Tract Map No. 74312. Approval by the City Planning Commission to subdivide the four existing parcels into 45 lots for financial and conveyance purposes. The approval would not be effective until the effective date of the GPA, ZC, and SP.

- Site Plan Review. Individual site plans within the project area would be subject to review of plans and approval by the City.
- Conditional Use Permits. Development of certain uses may require approval of a conditional use permit by the City Planning Commission.
- Tentative Parcel Maps. Individual tentative parcel maps may also be processed at a future time for smaller parcels with particular development characteristics or needs.
- Grading Permits. Future grading for development within the project area would be subject to the review of grading plans and issuance of grading permits by the City.
- Building Permits. Future construction of structures within the project area would be subject to the review of architectural plans and approval of building permits by the City.

SECTION 4.0

Basis of Cumulative Analysis

4.0 BASIS OF CUMULATIVE ANALYSIS

CEQA Guidelines § 15355 provides the following definition of cumulative impacts:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

Pursuant to CEQA Guidelines § 15130(a), a project’s cumulative impacts must be discussed when they are “cumulatively considerable,” as defined in CEQA Guidelines § 15065(a)(3). Section 5.0, *Environmental Analysis*, of this EIR assesses the cumulative impacts for each applicable environmental issue, and does so to a degree that reflects each impact’s severity and likelihood of occurrence.

As indicated above, a cumulative impact involves two or more individual effects. Per CEQA Guidelines § 15130(b), the discussion of cumulative impacts is guided by the standards of practicality and reasonableness, and should include the following elements:

1. *Either:*
 - A. *A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or*
 - B. *A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.*
2. *When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*
3. *Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*
4. *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*
5. *A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project’s contribution to any significant cumulative effects.*

The related projects and other possible development in the area determined as having the potential to interact with the proposed project, to the extent that a significant cumulative effect may occur, are outlined in Table 4-1, Cumulative Projects List. The cumulative projects list provided in Table 4-1 was derived based on data provided by the City of Lancaster. The status of the identified projects is current as of the date of the Notice of Preparation.

The geographic areas, and hence the cumulative projects, considered for the cumulative impact analyses vary according to environmental issue area and were determined based upon the project's scope and the anticipated area in which the project could contribute to an incremental increase in cumulatively considerable impacts (as discussed throughout Section 5.0). The implementation of each project represented in Table 4-1 was determined to be reasonably foreseeable by the City.

**Table 4-1
Cumulative Projects List**

Case No.	Project Description	Acreage	Location	Status
CUP 06-08/ TPM 72535	395,355 sf commercial shopping center with off-site alcohol sales for Target and drug store	40.26	Southeast corner of Avenue L and 60th Street West	Expires 5/19/16
CUP 06-09/ TPM 68150	366,376 sf commercial shopping center, including a 217,652 sf Walmart with incidental off-site alcohol sales	40	Northwest corner of Avenue L and 60th Street West	Expires 9/11/2016
CUP 14-13	Expansion of Blessed Junipero Serra Parish (church and associated facilities totally 62,612 sf)	17	Northwest corner of 60th Street West and Avenue M	Expires 5/18/17*
SPR 14-05	11,200 sf commercial building	1.94	East side of 60th Street West, north of Ave L-8	Expires 2/8/18*
TTM 60034	106 single-family residences on 7,000 sf lots	27	Southeast corner of 60th Street West and Avenue J-8	38 homes constructed, 68 remaining
TTM 61542	22 single-family residences on 7,000 sf lots	4.3	296 feet west of 56th Street West, south side of Avenue J-12	8 homes constructed, 14 remaining
TTM 44439	23 single-family residences on 10,000 sf lots	8	Southwest corner of Avenue L-12 and 70th Street West	23 homes remaining
TTM 53642	161 single-family residences on 7,000 sf lots	40	Northeast corner of Avenue K-8 and 60th Street West	Expires 4/19/16
TTM 60057	302 single-family residences on 10,000 sf lots	120	Southeast corner of Avenue L-8 and 80th Street West	Expires 6/21/16
TTM 60885	49 single-family residences on 7,000 sf lots	12.51	West side of 60th Street West, approximately 290 feet south of Ave J-8	Expires 7/18/16 (one extension remaining)
TTM 61040	58 single-family residences on 7,000 sf lots	15.1	Northeast corner of future 55th Street West and future Ave K-14	Expires 6/20/16
TTM 61041	40 single-family residences on 10,000 sf lots	15.1	Northeast corner of 55th Street West and Avenue L	Expires 6/20/16
TTM 61600	33 single-family residences on 7,000 sf lots	7.5	640 feet east of 60th Street West, south side of Avenue K-12	Expires 6/20/16
TTM 61677	58 single-family residences on 7,000 sf lots	15	Southwest corner of 57th Street West and Avenue K	Expires 8/15/16 (one extension remaining)

**Table 4-1 [continued]
Cumulative Projects List**

Case No.	Project Description	Acreage	Location	Status
TTM 61678	58 single-family residences on 7,000 sf lots	15.14	Southeast corner of Avenue K and future 57th Street West	Expires 9/18/16 (one extension remaining)
TTM 61734	19 single-family residences on 7,000 sf lots	5	663 feet north of Avenue J-12, 658 west of 60th Street West	Expires 7/18/16 (one extension remaining)
TTM 61920	108 single-family residences on 10,000 and 15,000 sf lots	40	Northeast corner of future 55th Street West and Avenue K	Expires 7/18/16
TTM 61989	56 single-family residences on 10,000 sf lots	20.25	Southwest corner of 67th Street West and Avenue I	Expires 12/19/16 (one extension remaining)
TTM 62403	204 single-family residences on 10,000 sf lots	64.22	Southeast corner of 80th Street West and Avenue L	Expires 12/19/15
TTM 62409	37 single-family residences on 7,000 sf lots	10	Northeast corner of Avenue K and 65th Street West	Expires 12/19/16 (one extension remaining)
TTM 66062	111 single-family residences on 10,000 sf lots	56.4	Southeast corner of future 85th Street West and future Ave L-8	Expires 1/17/16
TTM 66680/ TPM 69747/ TPM 70303	238 single-family residences on 7,000, 10,000, and 15,000 sf lots	72.9	Southwest corner of 52nd Street West and Avenue K-8	Expires 8/18/16
TTM 66802	110 single-family residences on 10,000 sf lots	40.3	Northeast corner of 70th Street West and Avenue L-8	Expires 4/16/16
TTM 67494	19 single-family residences on 15,000 sf lots	9.55	Northeast corner of Avenue L and 52nd Street West	Expires 4/21/17
TTM 72565	36 single-family residences on 7,000 sf lots	10	Southwest corner of 65th Street West and Avenue J-8	Expires 5/19/16
TTM 72534	Residential Planned Development for 118 lots and a park	20	Southeast corner of 67th Street West and Avenue J-8	Under Review
TTM 71210	Residential Planned Development for 171 lots and two park sites	40.4	Southeast corner of 55th Street West and Avenue K	Under Review
SP 15-01	Specific Plan for a residential planned development of 753 single-family lots with two neighborhood parks and open space	237.3	Bounded by 62nd Street West, 70th Street West, Avenue K, and Avenue K-8	Under Review**
CUP 14-10	150 MW Photovoltaic Facility	1,191	Generally Bounded by Avenue K, the California Aqueduct, 80th Street West, and 107th Street West	135 MW of the 150 MW under construction***
* Under Construction				
** Approved 9/12/17 by City Council				
*** 135 MW operational; remaining 15 MW under construction				
Source: City of Lancaster, April 25, 2016.				

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SECTION 5.0

Environmental Analysis

5.0 ENVIRONMENTAL ANALYSIS

The following subsections of the EIR contain a detailed environmental analysis of the existing conditions, project impacts (including direct and indirect, short-term, long-term, and cumulative impacts), recommended mitigation measures and unavoidable significant impacts. This Section analyzes those environmental issue areas where potentially significant impacts may occur, as stated in Appendix A, Notice of Preparation.

The EIR examines environmental factors outlined in Appendix G of the CEQA Guidelines, *Environmental Checklist Form*, as follows:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Biological Resources
- 5.4 Cultural and Tribal Cultural Resources
- 5.5 Geology and Soils
- 5.6 Greenhouse Gas Emissions
- 5.7 Hazards and Hazardous Materials
- 5.8 Hydrology and Water Quality
- 5.9 Land Use and Planning
- 5.10 Noise
- 5.11 Public Services and Utilities
- 5.12 Transportation/Traffic

As indicated in the Notice of Preparation (refer to Appendix A, Notice of Preparation) no significant impacts upon agriculture and forestry resources and mineral resources are anticipated. As a result, these issue areas are addressed in Section 8.0, Effects Found Not To Be Significant.

Each potentially significant environmental issue area is addressed in a separate section of the EIR and is organized into seven subsections, as follows:

- “Environmental Setting” describes the physical conditions that exist at the present time and that may influence or affect the issue under investigation.
- “Regulatory Setting” lists and discusses the laws, ordinances, regulations, and standards that apply to the project.
- “Impact Thresholds and Significance Criteria” provides the thresholds that are the basis of conclusions of significance, which are primarily the criteria in Appendix G of the CEQA Guidelines (14 California Code of Regulations §§ 15000 – 15387).

Primary sources used in identifying the criteria include the *CEQA Guidelines*; local, State, Federal, or other standards applicable to an impact category; and officially established significance thresholds. “... An ironclad definition of significant effect is not possible because the significance of any activity may vary with the setting” (*CEQA Guidelines* Section 15064[b]). Principally, “... a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and

objects of historic and aesthetic significance” constitutes a significant impact (*CEQA Guidelines* Section 15382).

- “Impacts and Mitigation Measures” describes potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented. Evidence, based on factual and scientific data, is presented to show the cause and effect relationship between the proposed project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant; all of the potential direct and reasonably foreseeable indirect effects are considered.

Impacts are generally classified as potentially significant impacts, less than significant impacts, or no impact. The “Level of Significance After Mitigation” identifies the impacts that would remain after the application of mitigation measures, and whether the remaining impacts are or are not considered significant. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as “unavoidable significant impacts.”

“Mitigation Measures” are measures that would be required of the project to avoid a significant adverse impact; to minimize a significant adverse impact; to rectify a significant adverse impact by restoration; to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations; or to compensate for the impact by replacing or providing substitute resources or environment.

- “Cumulative Impacts” describes potential environmental changes to the existing physical conditions that may occur as a result of the proposed project together with all other reasonably foreseeable, planned, and approved future projects producing related or cumulative impacts.
- “Significant Unavoidable Impacts” describes impacts that would be significant and cannot be feasibly mitigated to less than significant, and thus would be unavoidable. To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable environmental impacts in determining whether to approve the project. If the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered “acceptable” (*CEQA Guidelines* Section 15093[a]).

Section 5.1

Aesthetics

5.1 AESTHETICS

This section assesses the potential for aesthetics/light and glare impacts using accepted methods of evaluating visual quality, as well as identifying the type and degree of change the proposed project would likely have on the character of a landscape. The analysis in this section is based, in part, on information provided by the project applicant.

5.1.1 ENVIRONMENTAL SETTING

VISUAL CHARACTER/QUALITY

The City of Lancaster is located within the central portion of the Antelope Valley, in northern Los Angeles County, California. The Antelope Valley is bounded by the Tehachapi Mountains to the northwest, and the foothills of the San Gabriel Mountains to the southwest. The area is located on the edge of the Mojave Desert, and is characterized by a desert-like landscape.

The project site is approximately 307.7 acres and is generally situated in a suburban area near the urban fringe in the southwestern portion of the City. The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals, and is comprised of two areas, referred to herein as Avanti South (approximately 234.3 acres) and Avanti West (approximately 73.4 acres). Topography on the project site is relatively flat and level with a general slope down to the north/northeast. The elevation on the project site is approximately 2,449 feet above mean sea level (msl) at the southwest corner of the site.

The surrounding area is relatively flat and consists of residential, institutional, cemetery, and vacant land uses; refer to [Exhibit 5.1-1, Existing Conditions Photographs](#). Long-range views of the Tehachapi Mountains to the northwest, and short-range views of the San Gabriel Mountains to the south and Sierra Pelona Mountains to the southwest of the project site are afforded in the area. Expansive views of open space and vacant desert land are also provided throughout the project area.

As noted above, the surrounding area is characterized by a mix of residential, institutional, cemetery, and vacant land uses.

Avanti South is surrounded by the following land uses:

- **North:** The proposed extension of Avenue K-8 forms the northern site boundary. Vacant land is located further north of the proposed Avenue K-8 extension.
- **East:** Single-family residential uses, and vacant land border the site to the east.
- **South:** Avenue L forms the southern project site boundary. Quartz Hill High School, single-family residential uses, and vacant land are located directly to the south of Avenue L and the project site.
- **West:** 70th Street West forms the western boundary. Good Shepherd Catholic Cemetery, and vacant land are located to the west of 70th Street West and the project site boundary.



View of residential uses to the northeast of Avanti West.



View of Avanti West looking southwest toward Portal Ridge.



View of single-family residential uses to the southwest of Avanti South.



View of Good Shepherd Cemetery located along 70th Street West.

Avanti West is surrounded by the following land uses:

- North: Vacant land is located directly adjacent to the project site.
- East: 70th Street West forms the eastern site boundary. Vacant land is located across 70th Street West.
- South: Good Shepherd Catholic Cemetery and vacant land border the project site to the south.
- West: Vacant land is located immediately west of the project site.

Scenic Highways, Vistas, and Resources

No designated or eligible State scenic highways are present in or near the City of Lancaster.¹ The nearest officially designated State scenic highway is State Route (SR-2) (Angeles Crest Scenic Highway), located on the north side of the San Gabriel Mountains, approximately 9.75 miles to the south of the City. However, 60th Street West is designated as a “Scenic Route” between Avenue K and Avenue M in the *City of Lancaster General Plan 2030* (General Plan 2030). Specifically, southbound 60th Street West provides views of Portal Ridge to the west/southwest, and the San Gabriel Mountains to the south of the project site.

The project site is undeveloped with vegetation consisting of ornamental trees and native annuals. As such, there are no scenic or substantial natural features on-site. According to the General Plan 2030, important scenic resources in and around Lancaster include: long-range views of the San Gabriel Mountains and desert expanses, and local views of the surrounding buttes and Quartz Hill. The project site is within the viewshed of the San Gabriel Mountains to the south, and Portal Ridge to the southwest. Public views of these scenic resources are currently afforded to motorists, bicyclists, and pedestrians traveling south along 60th Street West in the project vicinity.

LIGHT AND GLARE

Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting and landscape lighting). Light introduction can be a nuisance to adjacent residential areas, diminish the view of the clear night sky, and if uncontrolled, can cause disturbances. Uses such as residences and hotels are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces, such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into a light source. Daytime glare generation is

¹ http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/, accessed on September 21, 2016.

common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

Currently, there are no lighting sources within the boundaries of the project site. However, the surrounding area contains lighting typical of developed suburban areas. Primary sources of light and glare in the area include motor vehicle headlights, streetlights, parking lot and exterior security lighting, and interior building lighting.

5.1.2 REGULATORY SETTING

LOCAL

Lancaster General Plan

The General Plan 2030 Plan for the Natural Environment Element contains objectives, policies, and actions to preserve scenic resources within the City, including scenic corridors. According to the Plan for the Natural Environment, the City of Lancaster's major visual resources include local views of the surrounding buttes, Quartz Hill, and long distance panoramas of the San Gabriel Mountains and desert expanses. The applicable General Plan 2030 objectives, policies, and actions for aesthetics/light and glare related to the project are as follows:

- Objective 3.8 Preserve and enhance important views within the City, and significant visual features which are visible from the City of Lancaster.
- Policy 3.8.1 Preserve views of surrounding ridgelines, slope areas and hilltops, as well as other scenic vistas (see also Policy 19.2.5).
- Action 3.8.1(a) Encourage the creation of vistas and view corridors of community or neighborhood value during the development review process, through the siting of buildings to avoid blocking views and view corridors.

The Plan for Physical Development Element also contains the following policy with regard to aesthetics that would apply to the proposed project:

- Policy 19.2.5 Create a network of attractive paths and corridors that encourage a variety of modes of transportation within the city (see also Policy 3.8.1).

Lancaster Municipal Code

Lancaster Municipal Code Section 17.08.140, Outdoor Lighting, regulates outdoor lighting and establishes project design standards. More specifically, Section 17.08.140 states:

The intent of this requirement is to properly illuminate the site without producing an adverse impact on neighboring property. Exterior lighting of the building and site shall be provided, maintained and utilized during the hours of darkness in accordance with the following requirements:

A. *Outdoor lighting in general.*

1. *Lighting shall be part of the architectural concept. Fixtures, standards, and all exposed accessories shall be compatible with the building design.*
2. *Lighting shall be placed to provide adequate illumination for security and safety.*
3. *Lighting used to illuminate the premises shall be directed away from adjacent properties.*
4. *Lighting shall be designed and located in a manner that prevents glare onto adjacent properties.*

5.1.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, aesthetic/light and glare impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.1.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM VISUAL CHARACTER/QUALITY

AES-1 *Project construction activities could temporarily degrade the visual character/quality of the site and its surroundings.*

Impact Analysis: Short-term construction-related activities associated with the proposed project would temporarily alter the existing visual character of the project site and surrounding area. The visual impact associated with construction activities would involve graded surfaces, construction materials, equipment, and truck traffic. Soil would be stockpiled and equipment for grading activities would be staged at various locations. In addition, temporary structures could be located on-site during various stages of construction. Materials storage areas and/or construction debris piles may be visible at staging areas. Exposed trenches, roadway bedding, spoils/debris piles, and steel plates would be visible during construction of proposed street and utility infrastructure improvements. These construction activities

and equipment could temporarily degrade the existing visual character and quality of the project area during the construction phase.

Construction staging and parking areas would occur within the boundaries of the Specific Plan area. Views of the construction activities and staging area on the project site could be visible from the residential uses to the north/east, and southwest, as well as pedestrians, motorists, and bicyclists traveling along 60th Street West, 70th Street West, and West Avenue L. However, with implementation of Mitigation Measure AES-1, equipment staging areas would provide appropriate screening (i.e., temporary fencing with opaque material) and would reduce views toward construction staging areas, to the extent feasible. In addition, the project would be required to comply with Antelope Valley Air Quality Management District (AVAQMD) Rule 401, Visible Emissions, and Rule 403, Fugitive Dust, to control visible fugitive dust on the project site. Moreover, development areas would vary such that areas of temporary construction-related visual impacts would change depending upon the location of development within the Specific Plan area. Notwithstanding, compliance with Mitigation Measure AES-1 and AVAQMD Rules 401 and 403 would reduce potential construction-related visual impacts to less than significant levels.

Mitigation Measures:

AES-1 Construction equipment staging areas shall be screened (i.e., temporary fencing with opaque material) to buffer views of construction equipment and material, when feasible. Staging locations shall be approved by the Development Services Director, and indicated on Final Grading and Building Plans.

Level of Significance: Less Than Significant With Mitigation Incorporated.

LONG-TERM VISUAL CHARACTER/QUALITY

AES-2 ***Project implementation could substantially degrade the visual character/quality of the site and its surroundings.***

Impact Analysis: The visual analysis of a project must consider its visual quality and compatibility in consideration of the area's visual sensitivity. The following analysis examines the proposed project for compatibility with the character of the surrounding land uses, in consideration of the following visual elements:

- Architectural features (e.g., repetition of design elements: materials, texture, colors, form, type of construction, details, and building systems);
- Scale and Height (e.g., size/height relationships between adjacent buildings, and between buildings and adjacent open spaces); and
- Property setbacks (e.g., setbacks providing distance and/or a visual buffer between the project site and receptors).

As discussed above in Section 5.1.1, *Environmental Setting*, the project site is generally located within a suburban area near the urban fringe in the southwestern portion of the City. The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The visual character of the surrounding area is characterized by expanses of flat vacant land to the north and west, and single-

family residential development to the north, east, and south. Quartz Hill High School is located to the south, and the Sierra Pelona Mountains (including Portal Ridge) located to the southwest of the project site provide aesthetic value to the area.

Development of the proposed project would introduce a varied mix of residential, commercial, civic/institutional, open space, and recreational uses to the project area, which would alter the visual character of the project site and its surroundings. Specifically, the project proposes 1,375 single-family residential lots, 325 multifamily units, 14 acres of commercial uses, over 31 acres of parks and open space, a recreational trail network, 12.8-acre elementary school site, and 1.3-acre fire station site. As such, increased development as a result of the proposed project would change the character of the project site and surrounding area.

RESIDENTIAL DEVELOPMENT

The Specific Plan would include a maximum of 1,700 market-rate residential units (low density, medium density, and high density units) in 24 planning areas, with proposed residential land use designations allowing for densities ranging from 2.1 (low density residential [LDR]) to 30.0 (high density residential [HDR]) dwelling units per acre (du/ac) over the 307.7-acre site. The current General Plan 2030 Urban Residential (UR) land use designation for Avanti South allows for densities of 2.1 to 6.5 du/ac, and the Non-Urban Residential (NU) land use designation for Avanti West allows for densities from 0.4 to 2.0 du/ac. The project site is situated along the urban fringe of the City, where residential land use designations transition from UR to NU west of the project site. Development of the project site has been anticipated by the General Plan.

The Specific Plan anticipates 226 low density residential dwelling units would be constructed in the northern portion of Avanti South, and 340 low density residential dwelling units would be constructed on Avanti West. Although the Specific Plan's LDR designation would allow for increased densities (up to 6.5 du/ac) within Avanti West when compared to the existing NU land use designation (up to 2.0 du/ac), the new single-family residential units, at a maximum density of 6.5 du/ac, would be similar in character and density to those in the project area (i.e., the residential neighborhoods along 60th Street West to the north/east, and along 70th Street West to the south/southwest of the project site) and residential densities planned in the surrounding area.

In addition to the LDR land use designation, the Specific Plan proposes a medium density residential (MDR) land use designation with a maximum density of 15.0 du/ac and, as stated above, a HDR land use designation with a maximum density of 30.0 du/ac. The proposed densities would allow for residential development greater in scale and character when compared to the existing and planned residential densities within the area.

MDR units are proposed throughout Avanti South within 10 planning areas (PA) and generally range in densities from 7.0 to 8.5 du/ac, which would be slightly greater than the maximum density of 6.5 du/ac allowed by the current UR designation. It is noted that a unit transfer, as allowed by the proposed Specific Plan, would allow development up to the maximum MDR density of 15.0 du/ac. A unit transfer would allow the number of units within each planning area to be transferred to another area as part of a Tentative Tract map and design review process, if the total number of units would not exceed the unit maximum for the Specific Plan, or the upper end of the density range for an individual planning area. Almost 60 percent of the residential units planned for Avanti South would be within the MDR land use designation. The larger concentration of MDR units (with maximum heights of 35 feet) would significantly

alter the visual character of the site; however, the Specific Plan includes design guidelines for MDR neighborhoods to ensure compatibility and to address intensity, scale, and massing associated with the MDR units. Massing and architectural enhancements include requirements for facades that are visible from streets, trails, outdoor gathering spaces, parks and open spaces, and parking areas be articulated to improve the design quality. Setbacks would also provide separation between buildings and adjacent uses. Implementation of the proposed Development Regulations and Design Guidelines would reduce potential visual character and quality impacts associated with development of the site and increased densities allowed by the MDR designation.

The Specific Plan proposes 325 high density residential units within Avanti South (PA-28) at a target density of 22.8 du/ac and a maximum height of 72 feet. As discussed above, a unit transfer would allow for development up to the maximum HDR density of 30.0 du/ac as part of a Tentative Tract map and design review process; however, the overall unit count for the Specific Plan area would not be exceeded. The HDR designation and proposed development would introduce residential densities and building heights to the project site that would be significantly different in scale and character when compared to the existing and planned residential densities and building heights within the area.

The high density residential units would be located along West Avenue L. An existing single-family residential neighborhood of one to two stories is located south of Avenue L and west of 70th Street West. South of West Avenue L, vacant land and Quartz Hill High School are located to the south and southeast of the project site, respectively. Similar to the MDR neighborhoods, the Specific Plan includes Design Regulations and Design Guidelines for the HDR neighborhood to ensure compatibility and to address intensity, scale, and massing associated with the HDR units. Massing and architectural enhancements include requirements for facades that are visible from streets, trails, outdoor gathering spaces, parks and open spaces, and parking areas be articulated to improve the design quality. Setbacks would also provide separation between buildings and adjacent uses. Further, West Avenue L is a primary arterial with a 100-foot right-of-way and would include a parkway and six-foot meandering sidewalk along the project frontage. The proposed HDR neighborhood would not be directly adjacent to any existing residential neighborhoods. Within the Specific Plan area, Design Regulation and Design Guidelines would be implemented to provide for a physical and visual transition between the HDR neighborhood and proposed MDR neighborhoods to the north. The HDR neighborhood would alter the visual character along West Avenue L; however, with implementation of the proposed Development Regulations and Design Guidelines, including landscaping guidelines, the visual character and quality of the site and its surroundings would not be substantially degraded. Potential visual character and quality impacts associated with development of the site and increased residential densities and heights proposed by the Specific Plan would be less than significant.

COMMERCIAL DEVELOPMENT

Avanti South would include approximately 213,600 square feet of commercial development, mostly concentrated along West Avenue L (i.e., 166,340 square feet of commercial development along West Avenue L, and 47,260 square feet of commercial development along proposed Avenue K-8). Commercial uses would generally include retail, restaurant, and office uses. In addition, commercial uses for Planning Areas 26 and 29 would specifically allow for medical office, assisted living, convalescent care, and similar uses. The maximum building height for commercial uses would be 50 feet, which would be substantially higher than the existing development in the surrounding area (one to two stories in height). As such, commercial development along West Avenue L in the Specific Plan area would alter the existing visual character and quality of the surrounding area.

The Specific Plan provides commercial development standards and design guidelines, which includes designing and orienting structures to minimize visual impacts and providing landscaping of not less than 15 feet wide along any property line to the extent it abuts a street. Pedestrian design features would incorporate landscaping, plazas or courtyards, and building features that emphasize the pedestrian realm and human-scale detailing. Massing, setbacks, and building orientation, along with implementation of design features and architectural details would provide visual interest and enhance the overall development and visual character. Although the visual character of the site and surrounding area would be altered, implementation of the proposed Development Regulations and Design Guidelines would reduce potential visual character and quality impacts associated with development of the site and the introduction of commercial uses and increased building heights to a less than significant level.

INSTITUTIONAL/CIVIC DEVELOPMENT

An approximately 12.8-acre school site has been identified within the Avanti South portion of the Specific Plan, and an approximately 1.3-acre fire station site has been identified within the Avanti West portion of the Specific Plan. The proposed school and fire station would be required to comply with the Development Regulations and Design Guidelines to ensure no visual degradation would occur as a result of the construction of these uses.

OPEN SPACE/RECREATIONAL USES

The Specific Plan would provide a mix of residential, commercial, civic/institutional, open space, and recreational opportunities organized and connected by walkable open spaces. The project proposes an interlinked system of parks connected by multipurpose trails (including an equestrian trail on 70th Street West) with promenades and linear parks. Approximately 31.5 acres of park uses/open space would be dispersed throughout the Specific Plan area. A variety of housing choices have been organized around open space features and principles of neighborhood crafting using parks, paseos, and recreation as the community's outdoor rooms. The incorporation of ample recreational/open space uses in the Specific Plan area would help lessen the appearance of hardscape and developed areas of the project site, and provide outdoor recreational and walking connections to and from the various uses throughout the project site. The project's open space and recreational uses would act as a visual buffer between viewers and the built out residential, commercial, and civic/institutional uses in the Specific Plan area.

STREETScape, WALKABILITY, AND LANDSCAPING

The overall streetscape design goal in the Specific Plan is to create a healthy, efficient, and walkable community that promotes sustainable landscaping practices, strong pedestrian, bicycle and regional equestrian connections, and an exceptional quality of life. Streetscapes would be designed to enhance the vistas throughout the community (in compliance with General Plan 2030 Objective 3.8, Policy 3.8.1, and Action 3.8.1(a)), while creating parkways for residents and visitors. Streetscape design along 70th Street West, 65th Street West, and residential collector streets would include landscaped medians and sidewalks to enhance the pedestrian experience, walkability, and aesthetic appeal of the project site and surrounding area (in compliance with General Plan 2030 Policy 19.2.5). Landscape design would further enhance the overall sense of place within the Specific Plan area, and would reflect the local setting and community character while using native and drought-tolerant species.

DEVELOPMENT REGULATIONS

Proposed Specific Plan Section 3.0, *Development Regulations*, establishes a set of regulations, standards guidelines, processes for development, and a list of permitted uses within the Specific Plan area. The Development Regulations are specifically intended to provide the most appropriate use of the land, create a harmonious relationship among land uses, and protect the health, safety and welfare of the community. The Development Regulations include site development criteria (e.g., gross acreage, grading, development intensity, utilities, building height, parking, signage, etc.) for all development within the Specific Plan area, as well as development standards for specific uses (e.g., residential, commercial, park/recreation, etc.). Development within the Specific Plan area would be required to comply with the Development Regulations, which would ensure orderly development and help minimize the visual impacts associated with the increased densities/intensities and heights to the surrounding area to the furthest extent possible.

DESIGN GUIDELINES

Proposed Specific Plan Section 4.0, *Design Guidelines*, provides design concepts and establishes design policies and guidelines for development within the Specific Plan area. The project is envisioned as a community with a variety of architectural styles where architectural massing, roof forms, detailing, walls and landscape are integrated to reflect regional and climate-appropriate styles. Various residential architectural styles for all new residential development would be provided in the Specific Plan area. The architectural styles for residential development would consist of Monterey, California Ranch, Spanish Eclectic, Craftsman/Bungalow, Italianate/Tuscan, and/or Cottage/Traditional. Low density neighborhoods would be required to utilize a variety of these architectural themes, while medium density and high density residential neighborhoods would only use one architectural theme of compatible architectural styles and character.

The adjoining single-family residential neighborhoods to the north/east and southwest of Avanti South include varied architectural styles similar to the proposed project. Facades visible from adjoining neighbors, businesses, motorists and bicyclists on roadways, etc., would be articulated to improve the design quality of residential development. Publicly visible facades would include many elements/treatments, including: change in colors, textures, materials, or masonry patterns; stylized and/or recessed face, windows, or doors; upper floor step-back; trees or other prominent and decorative landscaping features; and change in plane, among others. In addition, the project would include a variety of high-quality, durable colors that would create interesting and attractive building designs and avoid monotony for surrounding viewers.

CONCLUSION

Overall, the proposed project would be required to comply with the Development Regulations and generally comply with the Design Guidelines contained in the Specific Plan, which would ensure consistent and orderly development of the project site. As discussed above, the Specific Plan would allow for commercial and residential development along West Avenue L with permitted building heights of 50 to 72 feet, and planned residential densities up to 22.8 du/ac, with the potential for a unit transfer that would allow up to 30 du/ac. Further, the majority of Avanti South would be developed with medium density residential uses with planned densities of 7.7 du/ac with the potential for a unit transfer that would allow up to 15.0 du/ac. As such, the proposed development densities would be greater than what is currently allowed within the project site. Development of the currently undeveloped site would alter

the visual character and quality of the project site. However, the project site has been identified for development by the General Plan. The proposed Specific Plan establishes the regulatory framework, including Development Regulations and Design Guidelines for a compatible mixed use development that would provide for a variety of residential housing types, neighborhood serving commercial uses, and a variety of park and recreation amenities. As demonstrated above, implementation of the Avanti South Specific Plan would not substantially degrade the visual character and quality of the project site and surrounding area. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

SCENIC RESOURCES AND VISTAS

AES-3 *Project implementation could have a substantial adverse effect on a scenic vista.*

Impact Analysis: As previously noted, the project site is located within the viewshed of Portal Ridge (identified as a visual resource in the General Plan 2030), and the San Gabriel Mountains to the south. Public views in the project vicinity that also include views of Portal Ridge and the San Gabriel Mountains are currently afforded to motorists, bicyclist, and pedestrians traveling southbound on 60th Street West.

Implementation of the proposed project would result in the ultimate buildout of the project site with a mix of residential, commercial, civic/institutional (school and fire station), and park land uses. According to the Specific Plan Development Regulations, low density and medium density residential structures would be allowed to extend to a maximum of 35 feet in height, high density residential structures would be a maximum of 55 to 72 feet in height, and commercial structures would be allowed to extend to a maximum of 50 feet in height. Due to the increased building heights associated with the project, new development within the Specific Plan area could partially obstruct views of Portal Ridge for motorists, bicyclists, and pedestrians traveling south on 60th Street West. However, due to site distance from these travelers to the project site (approximately 1,330 feet, or 0.25-mile), views of Portal Ridge would only be nominally obstructed. Based on the existing ridgeline elevations of approximately 3,600 feet amsl, compared to the 2,449 feet amsl at the project site, views of the hills and ridgelines of these visual resources from 60th Street West would largely remain unaltered (in compliance with General Plan 2030 Objective 3.8 and Policy 3.8.1). Further, as stated in the Specific Plan Design Guidelines, streetscapes in the Specific Plan area would be designed to enhance the vistas surrounding the community. Therefore, the proposed project would not have a substantially adverse impact on a scenic vista and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LIGHT AND GLARE

AES-4 *Project implementation would generate additional light and glare beyond existing conditions.*

Impact Analysis:

SHORT-TERM CONSTRUCTION IMPACTS

Construction activities are anticipated to occur primarily during the daytime hours. Light and glare during daytime construction activities would not impact surrounding uses. Construction activities would generally comply with the City's Noise Ordinance, which allows construction to occur between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday. In the event that construction would require nighttime lighting (for security purposes) in the evening hours, the project applicant would be required to comply with Mitigation Measure AES-2. Mitigation Measure AES-2 requires all construction-related nighttime security lighting, if necessary, to be oriented downward and away from adjacent residential areas and would consist of the minimal wattage necessary to provide safety at the construction site. Impacts in this regard would be less than significant with implementation of Mitigation Measure AES-2.

LONG-TERM OPERATIONAL IMPACTS

Currently, the lighting conditions are concentrated in the developed portion of the City. No lighting is present on-site. The project would result in the future development of residential, commercial, civic/institutional, and park land uses within the project site. In addition, the proposed school site could include lighted recreational fields. Future development would result in increased lighting at the project site, where lighting does not currently exist. These new lighting sources would generally appear similar in character to the existing developed uses to the north/east, south, and southwest. The future site-specific uses within the project area would introduce new sources of light including street lighting, security lighting, parking lot lighting, lighting associated with the interior of structures, and recreational/park lighting that could potentially affect neighboring uses.

Proposed Specific Plan Section 4.7, *Exterior Lighting* (Lighting Regulations), provides lighting regulations for new development in the Specific Plan area. Future development within the Specific Plan area would be required to minimize uncontrolled nighttime light and glare, light trespass, and night sky pollution with low brightness lighting fixtures utilizing warm, color corrected light sources and appropriate beam cut-off. In addition, lighting fixtures would be required to illuminate downward to minimize light pollution impacts. Up-lighting, spot-lighting, and decorative color lighting may be appropriate for prominent buildings and features, but would be required to not adversely impact neighboring properties with sensitive uses (i.e., residential uses or open space areas). All proposed lighting within the Specific Plan area would also be required to adhere to Lancaster Municipal Code Section 17.08.140, which regulates lighting such that sites are properly illuminated without producing an adverse impact on neighboring property.

The proposed project may introduce limited sources of glare in the Specific Plan area, including reflective building materials such as glass windows. However, the proposed Specific Plan Design Guidelines do not encourage the use of reflective materials that would generate substantial amounts of glare. Moreover, the use of walls, fences, and landscaping would help block potential glare affecting nearby residents, motorists, bicyclists, etc. Following compliance with the Specific Plan Lighting Regulations and Lancaster

Municipal Code Section 17.08.140, the proposed project would result in a less than significant impact with respect to light and glare.

Mitigation Measures:

AES-2 All construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent residential areas. Lighting shall consist of the minimal wattage necessary to provide safety at the construction site. A construction lighting plan shall be submitted to the Development Services Director for review concurrent with Grading Permit application.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.1.5 CUMULATIVE IMPACTS

SHORT-TERM VISUAL CHARACTER/QUALITY

Project construction activities, combined with construction activities for other related cumulative projects, could temporarily degrade the visual character/quality of the development sites and their surroundings.

Impact Analysis: Development within the project site and surrounding area could occur at the same time. The closest cumulative development projects to the project site include a Specific Plan for a residential planned development of 753 single-family lots with two neighborhood parks and open space adjoining the project site to the north, a new Target shopping center located at the southeast corner of Avenue L and 60th Street West, and a Walmart located at the northwest corner of Avenue L and 60th Street West. Construction activities associated with the proposed project and these cumulative projects could be viewed at the same time. However, with implementation of Mitigation Measure AES-1, future development within the project site would be required to utilize temporary fencing to buffer views of construction equipment and material to reduce the negative visual impacts associated with grading and construction. Thus, with implementation of recommended mitigation, the proposed project would not significantly contribute to the cumulative degradation of character/quality during construction.

Mitigation Measures: Refer to Mitigation Measure AES-1.

Level of Significance: Less Than Significant With Mitigation Incorporated.

LONG-TERM VISUAL CHARACTER/QUALITY

Future development within the Specific Plan area, combined with other related cumulative projects, could substantially degrade the existing visual character/quality of the respective development sites and their surroundings.

Impact Analysis: The closest cumulative development projects to the project site include a Specific Plan for a residential planned development of 753 single-family lots with two neighborhood parks and open space adjoining the project site to the north, a new Target shopping center located at the southeast corner of Avenue L and 60th Street West, and a Walmart located at the northwest corner of Avenue L and 60th Street West. As a result, intensification of development in the surrounding area would also occur.

Future development within the project site and in the surrounding area would result in intensification of development compared to the existing vacant land. Namely, future commercial and residential development along West Avenue L would change the visual character and quality of the surrounding area due to a visual contrast in new high intense development compared to the existing low-density development in the project vicinity. Although development of vacant land would occur, this area of the City has been anticipated for development. Individual development projects would be reviewed for consistency with the City's Municipal Code and would undergo design review to ensure the character and quality of development is consistent with the surrounding area. The proposed Avanti South Specific Plan would implement Development Regulations and Design Guidelines to ensure a compatible mixed-use development that considers the visual character and quality of the site and surrounding area. As the proposed project would not substantially degrade the visual character and quality of the site and surrounding area, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

SCENIC RESOURCES AND VISTAS

Future development within the Specific Plan area, combined with other related cumulative projects, could have a substantial adverse effect on a scenic vista.

Impact Analysis: As stated above, the nearest cumulative development projects to the project site include a Specific Plan adjoining the project site to the north, Target shopping center located at the southeast corner of Avenue L and 60th Street West, and a Walmart located at the northwest corner of Avenue L and 60th Street West. These cumulative projects would be required to comply with the City's development standards and design guidelines, including maximum height and density limitations. The City would review each cumulative development on a case-by-case basis to determine impacts to scenic vistas and resources.

Future development within the project site and the surrounding area would result in intensification of development, compared to the existing vacant land. However, as discussed in Impact Statement AES-3, despite the intensification of development at the project site, existing views of Portal Ridge and the San Gabriel Mountains from 60th Street West would remain. In addition, the proposed Specific Plan Design Guidelines promote streetscape design that enhances the vistas surrounding the community. Thus, as the proposed project would not contribute to impacts to scenic vistas and/or resources, and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LIGHT AND GLARE

Future development within the Specific Plan area, combined with other related cumulative projects, could create a new source of light and/or glare, which could affect daytime and/or nighttime views in the area.

Impact Analysis:

SHORT-TERM CONSTRUCTION IMPACTS

Cumulative construction projects could occur at the same time as the proposed project, which may result in short-term construction lighting impacts in the area. However, proposed project construction activities are anticipated to occur primarily during the daytime hours. In the event that construction would require nighttime lighting (for security purposes) in the evening hours (e.g., 5:00 p.m. to 8:00 p.m.), the project applicant would be required to comply with Mitigation Measure AES-2. Mitigation Measure AES-2 requires all construction-related nighttime security lighting, if necessary, to be oriented downward and away from adjacent residential areas and would consist of the minimal wattage necessary to provide safety at the construction site. Therefore, the project would not cumulatively contribute to a short-term lighting impact with implementation of Mitigation Measure AES-2. A less than significant cumulatively considerable impact would occur in this regard.

LONG-TERM OPERATIONAL IMPACTS

Cumulative development in the project area could result in an increase in lighting compared to existing conditions. However, the cumulative development projects in the surrounding area would be required to comply with the City's Lighting Standards, which would ensure that lighting impacts do not occur at adjacent properties. New light sources in the Specific Plan area may include new street lights, security lights, interior lights, and recreational/park lighting that could create light spillover and glare impacts on surrounding land uses. However, future development projects in the Specific Plan area would be required to comply with the Specific Plan Lighting Regulations, and the City's Lighting Standards which would ensure that light spill impacts do not occur at adjacent properties. Therefore, the project would not cumulatively contribute to significant impacts from the creation of new lighting in the general area. A less than significant impact would occur in this regard.

Mitigation Measures: Refer to Mitigation Measure AES-2.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.1.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Aesthetic impacts associated with project implementation would be less than significant with incorporation of the mitigation measures. No significant unavoidable aesthetic impacts would occur.

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Section 5.2

Air Quality

5.2 AIR QUALITY

This section addresses the air emissions generated by the construction and operation of the proposed project, and the potential impacts to air quality. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the Antelope Valley Management District's (AVAQMD) *Air Quality Management Plan*. The analysis of project-generated air emissions focuses on whether the proposed project would cause an exceedance of an ambient air quality standard or AVAQMD significance threshold. Information in this section is based on the *Revised Air Quality and Greenhouse Gas Emissions Impact Analysis for Avanti South Housing Development* (Air Quality and Greenhouse Gas Assessment) prepared by MS Hatch Consulting, Inc., (August 15, 2017) and included in Appendix C, Air Quality/Greenhouse Gas Emissions Data.

5.2.1 ENVIRONMENTAL SETTING

MOJAVE DESERT AIR BASIN

The State of California is divided geographically into 15 different air basins. The City of Lancaster (City) is located within the Mojave Desert Air Basin (MDAB), which includes the desert portions of Los Angeles and San Bernardino Counties, the eastern desert portion of Kern County, and the northeastern desert portion of Riverside County. The MDAB primarily contains pollutants from other air basins, dust raised by construction, travel on unpaved roads, and paved roads with silty debris.

The MDAB consists of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains throughout the MDAB rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These winds result from the proximity of the MDAB to the coastal and central regions of the State and the Sierra Nevada Mountains to the north. Additionally, air masses are pushed onshore in southern California by differential heating and are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California Valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered to the northwest by the Tehachapi Mountains, separated from the Sierra Nevada Mountains to the north by the Tehachapi Pass, and bordered to the south by the San Gabriel Mountains.

CLIMATE

During the summer, a Pacific Subtropical High cell that is located off the coast inhibits cloud formation and encourages daytime solar heating in the MDAB. Desert moisture primarily arrives from infrequent warm, moist, and unstable air masses from the south. However, the Antelope Valley portion of the MDAB does not receive the extensive ocean breezes found in the South Coast Air Basin. Instead, an uplifting of wind masses occurs where warm moist air from Pacific Ocean storms is lifted upward by the San Gabriel Mountains and Sierra Palona. This uplifting creates heavier precipitation in the Los Angeles basin, and less precipitation with greater temperature variation throughout the year in the MDAB.

Summers in Lancaster are relatively hot and winters are relatively cold. There is a low average rainfall, with occasional summer thunderstorms, with larger storms occurring from late fall to spring. The annual average precipitation in Lancaster is 7.36 inches. Rainfall occurs most frequently in February, with an average rainfall of 1.77 inches. The temperature in Lancaster ranges from 36 to 98 degrees Fahrenheit

(°F), with an average temperature of 62.1°F.¹ Milder temperatures with occasional storms or thundershowers occur in spring and fall.

LOCAL AMBIENT AIR QUALITY

The monitoring stations in the State are operated by the California Air Resources Board (CARB), local Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD), by private contractors, and by the National Park Service (NPS). These entities operate more than 250 air monitoring stations in California. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest monitoring station to the project site is the Lancaster – Division Street Monitoring Station, located at 43301 Division Street. Air quality data from 2014 to 2016 for the Lancaster – Division Street Monitoring Station is provided in Table 5.2-1, *Local Air Quality Levels*. The following air quality information briefly describes the various types of pollutants monitored at the local stations.

**Table 5.2-1
Local Air Quality Levels**

Pollutant	Primary Standard		Year	Maximum Concentration ¹	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO) ² (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2014	1.54 ppm	0/0
			2015	1.49	0/0
			2016	2.57	0/0
Ozone (O ₃) ² (1-Hour)	0.09 ppm for 1 hour	N/A	2014	0.101 ppm	3/0
			2015	0.132	26/1
			2016	0.108	3/0
Ozone (O ₃) ² (8-Hour)	0.070 ppm for 8 hours	0.070 ppm for 8 hours	2014	0.088 ppm	36/35
			2015	0.103	82/80
			2016	0.091	65/60
Nitrogen Dioxide (NO _x) ²	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2014	0.052 ppm	0/0
			2015	0.042	0/0
			2016	0.049	0/0
Particulate Matter (PM ₁₀) ^{2,3,4}	50 µg/m ³ for 24 hours	150 µg/m ³ for 24 hours	2014	131.5 µg/m ³	NA/0
			2015	123.8	NA/0
			2016	145.0	NA/0
Fine Particulate Matter (PM _{2.5}) ^{2,4}	No Separate State Standard	35 µg/m ³ for 24 hours	2014	42.0 µg/m ³	NA/1
			2015	10.4	NA/0
			2016	64.8	NA/2
ppm = parts per million		PM ₁₀ = particulate matter 10 microns in diameter or less			
µg/m ³ = micrograms per cubic meter		PM _{2.5} = particulate matter 2.5 microns in diameter or less			
NM = Not Measured		NA = Not Applicable			
Notes:					
1. Maximum concentration is measured over the same period as the California Standard.					
2. Measurements taken at the Lancaster – Division Street Monitoring Station, located at 43301 Division Street, Lancaster, California.					
3. PM ₁₀ exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.					
4. PM ₁₀ and PM _{2.5} exceedances are derived from the number of samples exceeded, not days.					
Source: California Air Resources Board, <i>ADAM Air Quality Data Statistics</i> , https://www.arb.ca.gov/adam/ , accessed on July 3, 2017.					

¹ U.S. Climate Data, *Climate Lancaster – California*, <http://www.usclimatedata.com/climate/lancaster/california/united-states/usca0591>, accessed July 3, 2017.

Ozone (O₃). O₃ occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_x) and sunlight to form; therefore, VOCs and NO_x are ozone precursors. VOCs and NO_x are emitted from various sources throughout the City. Significant O₃ formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High O₃ concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While ozone in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone (in the troposphere) can adversely affect the human respiratory system and other tissues. Ozone is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of ozone. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions.

CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide. Exposure to high levels of carbon monoxide can slow reflexes and cause drowsiness, and result in death in confined spaces at very high concentrations.

Nitrogen Dioxide (NO_x). NO_x are a family of highly reactive gases that are a primary precursor to the formation of ground-level O₃, and react in the atmosphere to form acid rain. NO₂ (often used interchangeably with NO_x) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO₂ occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO₂ can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO₂ concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM₁₀). Coarse particulate matter (PM₁₀) refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM₁₀ arises from sources such

as road dust, diesel soot, combustion products, construction operations, and dust storms. PM₁₀ scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

Fine Particulate Matter (PM_{2.5}). Due to recent increased concerns over health impacts related to fine particulate matter (PM_{2.5} [particulate matter 2.5 microns in diameter or less]), both State and Federal PM_{2.5} standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new PM_{2.5} standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide (SO₂). SO₂ is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with SO_x and lead. Exposure of a few minutes to low levels of SO₂ can result in airway constriction in some asthmatics.

Toxic Air Contaminants (TACs). Toxic Air Contaminants (TACs) (also referred to as hazardous air pollutants [HAPs]), are pollutants that result in an increase in mortality, a serious illness, or pose a present or potential hazard to human health. Health effects of TACs may include cancer, birth defects, and immune system and neurological damage.

TACs can be separated into carcinogens and noncarcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Noncarcinogenic TACs differ in that there is a safe level in which it is generally assumed that no negative health impacts would occur. These levels are determined on a pollutant-by-pollutant basis.

TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, the EPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT or BACT) to limit emissions.

AIRBORNE FUNGUS

Coccidioidomycosis, more commonly known as "Valley Fever," is primarily a disease of the lungs caused by the spores of the *Coccidioides immitis* fungus. The spores are found in soils, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever symptoms occur within two to three weeks of exposure. Approximately 60 percent 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 include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop on the skin. One important fact to mention is that these symptoms are not unique to Valley Fever and may be caused by other illnesses as well. Identifying and confirming this disease require specific laboratory tests such as: (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample; (2) growing a culture of *Coccidioides immitis* from a tissue specimen, sputum, or body fluid; (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids; and (4) administering the Valley Fever Skin Test (called coccidioidin or spherulin), which indicate prior exposure to the fungus.

Valley Fever is not contagious, and therefore, cannot be passed on from person to person. Most of those who are infected would recover without treatment within six months and would have a life-long immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. The type of medication used and the duration of drug therapy are determined by the severity of disease and response to the therapy. The medications used include ketoconazole, itraconazole and fluconazole in chronic, mild-to-moderate disease, and amphotericin B, given intravenously or inserted into the spinal fluid, for rapidly progressive disease. Although these treatments are often helpful, evidence of disease may persist and years of treatment may be required.

The usual course of Valley Fever in healthy people is complete recovery within six months. In most cases, the body's immune response is effective and no specific course of treatment is necessary. About five percent of cases of Valley Fever result in pneumonia (infection of the lungs), while another five percent of patients develop lung cavities after their initial infection with Valley Fever. These cavities occur most often in older adults, usually without symptoms, and about 50 percent of them disappear within two years. Occasionally, these cavities rupture, causing chest pain and difficulty breathing, and require surgical repair. Only one to two percent of those exposed who seek medical attention would develop a disease that disseminates (spreads) to other parts of the body other than the lungs.

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. While there are no racial or gender differences in susceptibility to primary infection with coccidioidomycosis, differences in risk of disseminated infection do appear to exist. Men have a higher rate of dissemination than do women and several studies have shown that the rate of dissemination in African Americans and Filipinos is several times higher than in the rest of the U.S. population. Native Americans, Hispanics, and Asians may also have a higher rate of dissemination than the general population, but these population differences are not well defined.

The *Coccidioides immitis* fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, and soil disturbing activities. This type of fungus is endemic to the southwestern United States and is common in the Antelope Valley. The project site is located in an area designated as suspected endemic for Valley Fever by the Center for Disease Control and Prevention (CDC).² Annual morbidity reports for 2011 through 2015 from Los Angeles County Public Health (LACPH) indicate that the Antelope

² Centers for Disease Control and Prevention, *Sources of Valley Fever (Coccidioidomycosis)*, <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/causes.html>, accessed July 18, 2017.

Valley area of Los Angeles County has the highest incident rates for Valley Fever within the County, with the highest reported case rate greater than 25 per 100,000 population.³

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (or sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. According to the AVAQMD, residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following types of people are most likely to be adversely affected by air pollution, as identified by CARB: children under 14; elderly over 65; athletes; and people with cardiovascular and chronic respiratory diseases. Sensitive receptors located within the project area include single-family residences and Quartz Hill High School.

5.2.2 REGULATORY SETTING

FEDERAL

U.S. Environmental Protection Agency

The Environmental Protection Agency (EPA) is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established Federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for “criteria” pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare; refer to Table 5.2-2, National and California Ambient Air Quality Standards.

STATE

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 5.2-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS.

³ Los Angeles County Department of Public Health, *Increased Coccidioidomycosis (“Valley Fever”) in Los Angeles County*, <http://rx.ph.lacounty.gov/RxCocci0717#cocciref1>, accessed July 18, 2017.

**Table 5.2-2
National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California ¹		Federal ²	
		Standard ³	Attainment Status	Standards ⁴	Attainment Status
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Nonattainment	NA ⁵	NA ⁵
	8 Hours	0.07 ppm (137 µg/m ³)	Nonattainment	0.070 ppm (137 µg/m ³)	Nonattainment/Severe
Particulate Matter (PM ₁₀)	24 Hours	50 µg/m ³	Nonattainment	150 µg/m ³	Maintenance/Serious
	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	NA ⁶	Maintenance/Serious
Fine Particulate Matter (PM _{2.5})	24 Hours	No Separate State Standard		35 µg/m ³	Attainment/Unclassified
	Annual Arithmetic Mean	12 µg/m ³	Attainment/Unclassified	12 µg/m ³	Attainment/Unclassified
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Attainment	35 ppm (40 mg/m ³)	Attainment
	8 Hours	9 ppm (10 mg/m ³)	Attainment	9 ppm (10 mg/m ³)	Attainment
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	Attainment	0.100 ppm	NA
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	NA	0.053 ppm (100 µg/m ³)	Attainment
Lead (Pb)	30 days average	1.5 µg/m ³	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 µg/m ³	No Designation/Classification
	Rolling 3-Month Average	N/A	N/A	0.15 µg/m ³	No Designation/Classification
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	Attainment	75 ppb	NA
	3 Hours	N/A	NA	N/A	Unclassified
	24 Hours	0.04 ppm (105 µg/m ³)	Attainment	0.14 ppm (365 µg/m ³)	Unclassified
	Annual Arithmetic Mean	N/A	NA	0.30 ppm (for certain areas)	Unclassified
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 µg/m ³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)	Unclassified		

µg/m³ = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable.

1 – California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM₁₀ and visibility-reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, CARB identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.

2 – National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

3 – Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 – National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

5 – The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.

6 – The Environmental Protection Agency revoked the annual PM₁₀ standard in 2006 (effective December 16, 2006).

Sources: California Air Resources Board, *Area Designations Maps*, <https://www.arb.ca.gov/degis/adm/adm.htm>, accessed July 3, 2017; and United States Environmental Protection Agency, *Green Book*, <https://www.epa.gov/green-book>, accessed July 3, 2017.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

State Air Toxics Program

Toxic air contaminants are another group of pollutants of concern in southern California. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to toxic air contaminants can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the *Health and Safety Code* (*Health and Safety Code* Section 39660 et seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (*Health and Safety Code* Section 44300 et seq.). CARB, working in conjunction with the State Office of Environmental Health Hazard Assessment, identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through use of best available control technology (BACT) for toxics. The program is administered by CARB. Air quality control agencies, including the AVAQMD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

REGIONAL

Antelope Valley Air Quality Management District

Air districts have the primary responsibility to control air pollution from all sources other than those directly emitted from motor vehicles, which are the responsibility of the CARB and the EPA. Air districts adopt and enforce rules and regulations to achieve State and Federal ambient air quality standards and enforce applicable State and Federal law.

The AVAQMD adopted its own *2008 Federal 8-Hour Ozone Attainment Plan* (2008 Attainment Plan) on May 20, 2008. The document sets forth a comprehensive program that would lead the area into compliance with federal and state air quality standards. The 2008 Attainment Plan includes the latest planning assumptions regarding population, vehicle, and industrial activity and addresses all existing and forecasted ozone precursor-producing activities within the Antelope Valley through the year 2020. In August 2016, the AVAQMD adopted the *California Environmental Quality Act and Federal Conformity Guidelines* (CEQA and Federal Conformity Guidelines) to provide direction on the preferred analysis approach in preparing environmental analysis or document review. The guidelines characterize the topography and climate of the Basin, defines cumulative impacts, and provide emission thresholds for construction and operation. The CEQA and Federal Conformity Guidelines establish significance thresholds for projects. Any project is significant if it triggers or exceeds the most appropriate evaluation

criteria. The evaluation criteria are: (1) generates total emissions (direct and indirect) in excess of the thresholds given in Table 5.2-3, Antelope Valley Air Quality Management District Emissions Thresholds; (2) generates a violation of any ambient air quality standard when added to the local background; (3) does not conform with the applicable attainment or maintenance plan(s); and (4) exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1. For purposes of this air quality analysis, the emissions comparison (Criteria Number 1) would be utilized, as it is most applicable to the proposed project.

**Table 5.2-3
Antelope Valley Air Quality Management District Emissions Thresholds**

Criteria Pollutant	Annual Threshold (Tons/year)	Daily Thresholds (lbs/day)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO _x)	25	137
Volatile Organic Compounds (VOCs)	25	137
Oxides of Sulfur (SO _x)	25	137
Particulate Matter (PM ₁₀)	15	82
Particulate Matter (PM _{2.5})	15	65
Source: Antelope Valley Air Quality Management District, <i>California Environmental Quality Act and Federal Conformity Guidelines</i> , August 2016.		

LOCAL

Lancaster General Plan

The Plan for the Natural Environment addresses natural and human-induced environments and includes the following goals, objectives, and policies related to the improvement of air quality and the reduction of air pollution:

- Objective 3.3 Preserve acceptable air quality by striving to attain and maintain national, state and local air quality standards.
- Policy 3.3.1 Minimize the amount of vehicular miles traveled.
- Policy 3.3.2 Facilitate the development and use of public transportation and travel modes such as bicycle riding and walking.
- Policy 3.3.3 Minimize air pollutant emissions generated by new and existing development.
- Action 3.3.3(a) Through the environmental review process, evaluate proposed land uses which could contribute significantly to air quality degradation (heavy manufacturing, e.g.), and require mitigation measures to reduce their emissions.
- Policy 3.3.4 Protect sensitive uses such as homes, schools and medical facilities, from the impacts of air pollution.

- Action 3.3.4(a) Through the development review process, ensure that potential stationary air pollution sources that conflict with residential areas and other sensitive receptors are mitigated.
- Policy 3.3.5 Cooperate with the AVAQMD and other agencies to protect air quality in the Antelope Valley.
- Action 3.3.5(d) Consult with the AVAQMD in reviewing the air quality analysis in the environmental impact reports, developing ordinances, and obtaining smog episode information.

5.2.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

THRESHOLDS OF SIGNIFICANCE

AVAQMD Thresholds

Under CEQA, the AVAQMD is a responsible agency on air quality within its jurisdiction or impacting its jurisdiction. Under the FCAA, the AVAQMD has adopted federal attainment plans for O₃ and PM₁₀. The AVAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan. The AVAQMD has adopted a federal attainment plan for ozone pursuant to the FCAA.

For purposes of this air quality analysis, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors, and outdoor and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, actions that violate State standards developed by the CARB or criteria developed by the AVAQMD, including thresholds for criteria pollutants, are considered significant impacts.

AVAQMD's CEQA and Federal Conformity Guidelines also provides significance thresholds to assess the impact of project related air pollutant emissions. [Table 5.2-3](#) provides the significance thresholds set forth by the AVAQMD. A project that generates total emissions (direct and indirect) in excess of the thresholds given in [Table 5.2-3](#) is considered significant.

Conformity Impacts

According to AVAQMD's CEQA and Federal Conformity Guidelines, a project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable AVAQMD rules and regulations, complies with all proposed control measures that are not adopted from applicable plans, and is consistent with the growth forecasts in the applicable plan(s). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast (i.e., General Plan 2030).

CEQA Significance Criteria

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, air quality impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations;
- Conflict with or obstruct implementation of the applicable air quality plan;
- Create objectionable odors affecting a substantial number of people; refer to Section 8.0, *Effects Found Not To Be Significant*; or
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.2.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM (CONSTRUCTION) AIR EMISSIONS

AQ-1 *Short-term construction activities associated with the proposed project would not result in significant air pollutant emission impacts or expose sensitive receptors to substantial pollutant concentrations.*

Impact Analysis: Short-term air quality impacts are predicted to occur during grading and construction operations associated with implementation of the proposed project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

Construction activities are expected to begin in 2018, and the Specific Plan area would be built-out over a 15-year period. Construction is expected to occur in five phases, excluding demolition, as the existing site consists of vacant land. Phase 1, site preparation, is expected to begin in April 2018 and continue through September 2018. Phase 2, grading, is expected to begin in September 2018 and continue through March 2019. Phase 3, building construction, which will overlap with Phases 4 and 5, is expected to begin

in March 2019 and come to completion in March 2026. Phase 4, architectural coating, is expected to begin in March 2019 and continue through May 2026. Phase 5, paving, is also expected to begin in March 2019 and be completed March 2026.

Project construction would require rubber tired dozers, and tractors/loaders/backhoes during site preparation; excavators, graders, rubber tired dozers, scrapers, and tractors/loaders/backhoes during grading; forklifts, generator sets, tractors/loaders/backhoes, welders, and a crane during building construction; pavers, paving equipment, and rollers during paving; and air compressors during architectural coating. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Refer to [Appendix C](#) for the CalEEMod outputs and results. [Table 5.2-4, Maximum Daily Construction Emissions](#), presents the anticipated daily short-term construction emissions.

FUGITIVE DUST EMISSIONS

Fugitive dust (PM₁₀ and PM_{2.5}) from grading and construction is expected to be short-term and would cease following completion of construction activities. Most of this material is composed of inert silicates, which are less harmful to health than the complex organic particulates released from combustion sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_x and SO_x combining with ammonia. The greatest amount of fugitive dust generated is expected to occur during site grading and excavation. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular concern is the amount of PM₁₀ generated as a part of fugitive dust emissions.

CalEEMod was used to calculate PM₁₀ and PM_{2.5} fugitive dust emissions as part of the site earthwork activities; refer to [Table 5.2-4](#). Maximum particulate matter emissions would occur during the initial stages of construction, when grading activities would occur. Mitigation Measure AQ-1 requires that construction activities comply with AVAQMD Rules 401 and 403, such that excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures. With adherence to Mitigation Measure AQ-1, the maximum mitigated particulate matter concentrations would not exceed the AVAQMD's daily emissions thresholds for PM₁₀ or PM_{2.5}.

ROG EMISSIONS

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates reactive organic gases (ROG) emissions, which are O₃ precursors. As shown in [Table 5.2-4](#), ROG emissions would be below the applicable thresholds and impacts remain at less than significant levels.

**Table 5.2-4
Maximum Daily Construction Emissions**

Year	Daily Pollutant Emissions (lbs/day) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2018						
Unmitigated Emissions	5.08	52.35	24.54	0.04	21.01	12.60
Mitigated Emissions	1.05	19.15	24.04	0.04	19.08	10.90
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2019						
Unmitigated Emissions	37.34	148.66	193.15	0.47	28.76	16.25
Mitigated Emissions	31.21	124.51	197.07	0.47	25.33	13.33
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2020						
Unmitigated Emissions	35.04	136.52	179.19	0.46	13.91	6.99
Mitigated Emissions	29.90	119.78	183.97	0.46	13.01	6.27
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2021						
Unmitigated Emissions	33.11	125.00	166.98	0.45	13.32	6.42
Mitigated Emissions	28.65	113.39	172.28	0.45	12.87	6.13
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2022						
Unmitigated Emissions	31.51	113.88	158.19	0.45	12.71	5.84
Mitigated Emissions	27.68	107.27	163.98	0.45	12.69	5.96
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2023						
Unmitigated Emissions	30.18	104.78	150.25	0.44	12.25	5.41
Mitigated Emissions	26.95	103.89	156.45	0.44	12.67	5.94
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2024						
Unmitigated Emissions	28.91	90.34	142.66	0.43	11.91	5.08
Mitigated Emissions	26.08	93.11	149.05	0.43	12.63	5.91
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2025						
Unmitigated Emissions	28.03	86.57	134.79	0.42	11.66	4.85
Mitigated Emissions	25.49	92.11	141.25	0.42	12.62	5.90
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
2026						
Unmitigated Emissions	27.24	82.72	129.43	0.41	11.41	4.61
Mitigated Emissions	25.03	91.41	136.08	0.41	12.62	5.90
AVAQMD Construction Thresholds ²	137	137	548	137	82	65
Mitigated Emissions Exceed Thresholds?	No	No	No	No	No	No
VOC = volatile organic compounds; NO _x = nitrogen oxides; CO = carbon monoxide; SO _x = sulfur oxides; PM ₁₀ = particulate matter smaller than 10 microns; PM _{2.5} = particulate matter smaller than 2.5 microns Notes: 1. Based on CalEEMod modeling results in the <i>Air Quality and Greenhouse Gas Assessment</i> (refer to Appendix C). 2. Regional daily construction thresholds are based on the AVAQMD significance thresholds. Refer to Appendix C, Air Quality/Greenhouse Gas Emissions Data , for assumptions used in this analysis.						

CONSTRUCTION EXHAUST EMISSIONS

Exhaust emissions would be generated by the operation of vehicles and equipment on the construction site, such as tractors, dozers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower carbon monoxide and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_x, SO_x, and particulates per hour of activity. The transportation of machinery, equipment, and materials to and from the project site, as well as construction worker trips, would also generate vehicle emissions during construction. As shown in [Table 5.2-4](#), 2018 unmitigated NO_x emissions would exceed the AVAQMD's daily emissions thresholds. Therefore, as discussed in the Air Quality and Greenhouse Gas Assessment, the project applicant would be required to utilize EPA Tier 3 non-road compression-ignition engine standards or better for all construction equipment used at the project site (refer to Mitigation Measure AQ-2). In addition, the project would be required to comply with Mitigation Measure AQ-3, which requires best management practices to control excessive construction equipment and vehicle exhaust emissions through proper equipment maintenance, reducing idling times, and promoting ride sharing and alternative transportation options for construction workers. As presented in [Table 5.2-4](#), NO_x emissions would be below AVAQMD thresholds with implementation of Mitigation Measures AQ-2 and AQ-3. Therefore, impacts are less than significant in this regard.

VALLEY FEVER

Nearby sensitive receptors as well as workers at the project site could be exposed to Valley Fever from fugitive dust generated during construction. There is the potential that cocci spores would be stirred up during excavation, grading, and earth-moving activities, exposing construction workers and nearby sensitive receptors to these spores and thereby to the potential of contracting Valley Fever. However, implementation of Mitigation Measure AQ-1 (which requires the project operator to implement dust control measures in compliance with AVAQMD Rules 401 and 403 emissions during construction), and implementation of Mitigation Measure AQ-4, which would provide personal protective respiratory equipment to construction workers and provide information to all construction personnel and visitors about Valley Fever, the risk of exposure to Valley Fever would be minimized to a less than significant level. With the implementation of Mitigation Measures AQ-1 and AQ-4, dust from construction of the proposed project would be limited, and would not expose nearby sensitive receptors to the Valley Fever fungus. Impacts would be less than significant in this regard.

Mitigation Measures:

AQ-1 Prior to construction, the project applicant shall develop a Fugitive Dust Control Plan in compliance with AVAQMD Rule 403 to reduce PM₁₀ and PM_{2.5} emissions. The Fugitive Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity as required by Rule 403. The project applicant shall provide a copy of the Fugitive Dust Control Plan approved by the AVAQMD to the City prior to the issuance of grading permits. During clearing, grading, earth-moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified by the AVAQMD, including but not limited to AVAQMD Rule 401, Visible Emissions, and Rule 403 Fugitive Dust:

- On-site vehicle speed shall be limited to 15 miles per hour;
- All on-site construction roads with vehicle traffic shall be watered periodically;
- Streets adjacent to the project's reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust;
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day;
- All clearing, grading, earth-moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust;
- All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust;
- The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and
- These control techniques shall be indicated on project grading plans. Compliance with this measure shall be subject to periodic site inspections by the City of Lancaster.

AQ-2 Prior to issuance of a Grading Permit, the project applicant shall indicate on construction plans, to the satisfaction of the Development Services Director, that all construction equipment meets EPA Tier 3 non-road compression-ignition engine standards or better.

AQ-3 During construction activities, excessive construction equipment and vehicle exhaust emissions shall be controlled by implementing the following procedures, as specified by the AVAQMD:

- Properly and routinely maintain all construction equipment, as recommended by manufacturer manuals, to control exhaust emissions;
- Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling engines;
- Encourage ride sharing and use of transit transportation for construction employee commuting to the project sites;
- Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment; and
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak-hour of vehicular traffic on adjacent roadways.

AQ-4 Prior to ground disturbance activities, the project operator shall provide evidence to the Development Services Director that the project operator and/or construction manager has developed a "Valley Fever Training Handout", training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Development Services Director within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The evidence submitted to the Development Services Director regarding the "Valley Fever Training Handout" and Session(s) shall include the following:

- A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session.
- Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever.
- Training on methods that may help prevent Valley Fever infection.
- A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs.

The project operator also shall consult with the Los Angeles County Public Health to develop a Valley Fever Dust Management Plan that addresses the potential presence of the Coccidioides spore and mitigates for the potential for Coccidioidomycosis (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Los Angeles County Public Health for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential Coccidioides spores. Measures in the Plan shall include the following:

- Provide HEP-filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Cause contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment.
- Provide communication methods, such as two-way radios, for use in enclosed cabs.
- Require National Institute for Occupational Safety and Health (NIOSH)-approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process.

- Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Protection Standard (8 CCR 5144).
- Provide separate, clean eating areas with hand-washing facilities.
- Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off-site.
- Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever.
- Work with a medical professional, in consultation with the Los Angeles County Public Health, to develop an educational handout for on-site workers and surrounding residents within three miles of the project site, and include the following information on Valley Fever: what are the potential sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the Development Services Director. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within three miles of the project boundaries.
- When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks.
- Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities.
- Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection.
- Audit and enforce compliance with relevant Cal OSHA health and safety standards on the job site.

Level of Significance: Less Than Significant With Mitigation Incorporated.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

AQ-2 **Implementation of the proposed project would not result in significant impacts pertaining to operational air emissions.**

Impact Analysis: Operational emissions associated with the project include ROG, NO_x, CO, SO₂, PM₁₀ and PM_{2.5}. These emissions originate from area, energy, and mobiles sources.

MOBILE SOURCE EMISSIONS

Mobile source emissions are emissions from vehicle trips that are generated by the operation of a project. Mobile source emissions include tailpipe and evaporative emissions. The net project-related vehicle emissions associated with the residential and non-residential land uses have been estimated using CalEEMod. This model predicts ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from motor vehicle traffic associated with new or modified land uses. Table 5.2-5, Long-Term Operational Air Emissions, presents the anticipated net mobile source emissions.

**Table 5.2-5
Long-Term Operational Air Emissions**

Source ²	Estimated Annual Average Emissions (pounds/day) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources	91.36	19.20	147.48	0.12	2.20	2.20
Energy Sources	1.29	11.08	4.93	0.07	0.89	0.89
Mobile Sources	34.34	86.77	390.79	1.48	68.21	21.07
Waste	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Total Proposed Emissions	126.99	117.05	543.20	1.67	71.30	24.16
<i>AVAQMD Threshold</i>	137	137	548	137	82	65
Is Threshold Exceeded? (Significant Impact)	No	No	No	No	No	No

Notes:
1 – Based on CalEEMod modeling results in the *Air Quality and Greenhouse Gas Assessment* (refer to Appendix C), worst-case seasonal emissions for area and mobile emissions have been modeled.
Refer to Appendix C, Air Quality/Greenhouse Gas Emissions Data, for assumptions used in this analysis.

AREA SOURCE EMISSIONS

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, and landscaping. As shown in Table 5.2-5, area source emissions from the proposed project would not exceed AVAQMD thresholds for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

ENERGY SOURCE EMISSIONS

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As

shown in [Table 5.2-5](#), energy source emissions from the proposed project would not exceed AVAQMD thresholds for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

TOTAL OPERATIONAL EMISSIONS

As shown in [Table 5.2-5](#), the emissions generated by mobile, area, and energy sources associated with implementation of the proposed project would not exceed established AVAQMD thresholds for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. A less than significant impact would occur in this regard.

LOCALIZED CO HOTSPOTS

Carbon monoxide (CO) emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels (e.g., adversely affect residents, school children, hospital patients, the elderly, etc.). To identify CO hotspots, the AVAQMD follows the South Coast Air Quality Management District's (SCAQMD) criterion, which requires a CO microscale hotspot analysis when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations.

There has been a decline in CO emissions even though vehicle miles traveled (VMT) on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

Lancaster is located in the MDAB, which is designated as an attainment area for State and Federal CO standards. As such, a comparative analysis is provided in lieu of performing CO Hotspot emissions modeling. A detailed carbon monoxide analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the South Coast Air Basin, and would likely experience the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. In comparison, the project would generate approximately 20,550 daily trips at project buildout. As a CO hotspot was not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any locations within the City of Lancaster due to the volume of traffic that would occur as a result of future development associated with the proposed project. Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

CONSISTENCY WITH REGIONAL PLANS

AQ-3 *Implementation of the proposed project could conflict with or obstruct implementation of the applicable air quality plan.*

Impact Analysis: A potentially significant impact to air quality would occur if the project would conflict with or obstruct implementation of the applicable Air Quality Plan. Therefore, it is necessary to assess the project's consistency with the 2008 Attainment Plan as well as the General Plan 2030 and growth forecasts. The purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus, if it would interfere with the region's ability to comply with Federal and State air quality standards. It is important to note that even if a project is found consistent it could still have a significant impact on air quality under CEQA. Consistency with plans means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards.

The AVAQMD CEQA and Federal Conformity Guidelines notes the following with respect to conformity impacts:

According to AVAQMD CEQA and Federal Conformity Guidelines a project is consistent with applicable air quality plans if it complies with all applicable AVAQMD rules and regulations, complies with all proposed control measures that are not adopted from applicable plans, and is consistent with the growth forecasts in the applicable plan(s). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast.

Although the proposed project requires a General Plan Amendment (GPA) and zone change, the potential growth from implementation of the project would not affect SCAG's nor the 2008 Attainment Plan's buildout projections for the City. As discussed in [Section 6.0, *Other CEQA Considerations*](#), buildout of the City (including the proposed Specific Plan) anticipates approximately 24 percent less residential development (12,875 fewer dwelling units), and approximately 20 percent less population growth (35,523 fewer persons) than SCAG'S 2035 population growth projections. As such, the proposed project would not exceed the housing and population growth forecasts for the City. Further, as discussed above, the project's short-term construction and long-term operational emissions would be below the AVAQMD's thresholds with implementation of Mitigation Measures AQ-1 through AQ-4, and the project would be required to comply with all AVAQMD rules and regulations to improve air quality. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. A less than significant impact would occur in this regard.

Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-4.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.2.5 CUMULATIVE IMPACTS

According to the AVAQMD CEQA & Federal Conformity Guidelines, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. If a project impact is individually less than significant, the impacts of the surrounding

past, present and future projects must be taken into account. The AVAQMD relies on SCAQMD guidelines to determine cumulative impacts, which states that the thresholds of significance for cumulative impacts are the same as those for the project related impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable.

SHORT-TERM (CONSTRUCTION) AIR EMISSIONS

Short-term construction activities associated with the proposed project and other related cumulative projects, would not result in significant air pollutant emission impacts or expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis: With implementation of Mitigation Measures AQ-1 through AQ-4, short-term construction emissions would be below AVAQMD emissions thresholds and result in a less than significant impact. Per AVAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (e.g., AVAQMD Rules 401 and 403 compliance, the implementation of all feasible mitigation measures, etc.) would also be imposed on other construction projects in the City, which would include each of the related projects listed in [Table 4-1](#). Therefore, as cumulative projects would be required to reduce their emissions per AVAQMD rules and mandates, and the proposed project's construction emissions would be below AVAQMD thresholds, cumulative construction emissions would not contribute to an exceedance of the Federal or California AAQS. Thus, it can be reasonably inferred that the project-related construction activities, in combination with those from other projects in the area, would not deteriorate the local air quality and would not result in cumulative construction-related impacts.

Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-4.

Level of Significance: Less Than Significant With Mitigation Incorporated.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

Development associated with the proposed project and other related cumulative projects would not result in significant impacts pertaining to operational air emissions.

Impact Analysis: As discussed above, the proposed project would not result in long-term air quality impacts, as the project's long-term operational emissions would be below the AVAQMD's daily emissions thresholds. Additionally, adherence to AVAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. In addition, emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute to a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with the implementation of the proposed project would be less than significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1 through AQ-4.

Level of Significance: Less Than Significant With Mitigation Incorporated.

CONSISTENCY WITH REGIONAL PLANS

Development associated with the proposed project and other related cumulative projects would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis: As noted above, the AVAQMD considers any project with a significant air quality impact to also have a significant cumulative air quality impact. As discussed above, the proposed project would not result in any air quality violations with implementation of Mitigation Measure AQ-1 through AQ-4, and would not conflict with the growth projections for the City. Project impacts were determined to be less than significant with regard to consistency with regional air quality plans. Therefore, the proposed project would not have a cumulatively considerable impact in this regard. A less than significant impact would occur.

Mitigation Measures: Refer to Mitigation Measure AQ-1 through AQ-4.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.2.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts to air quality associated with project implementation would be less than significant with incorporation of the mitigation measures. No significant unavoidable impacts to air quality would occur.

Section 5.3

Biological Resources

5.3 BIOLOGICAL RESOURCES

This section describes the biological resources on the project site and surrounding area, and the potential adverse impacts associated with project implementation. An analysis of compliance with applicable Federal, State, and local laws and policies regarding biological resources have also been conducted. This section is primarily based upon the following biological resources studies prepared by Mark Hagan, Wildlife Biologist, and included in Appendix D, Biological Resources Assessment:

- *Biological Resource Assessment of Avanti Project, Lancaster, California* (May 5, 2014);
- *Update to Biological Resource Assessment of Avanti Project, Lancaster, California* (December 20, 2015);
- *Biological Resource Assessment of APNs 3204-001-184 and 195, Lancaster, California* (March 2, 2016); and
- *Biological Resource Update for Avanti Project, November 2016* (November 28, 2016).

5.3.1 ENVIRONMENTAL SETTING

SITE CONDITIONS

The site topography is relatively flat and level with a general slope down to the north/northeast. The project site is currently undeveloped and has been highly disturbed and degraded. Old construction, yard, and household debris, as well as heavy equipment tracks were observed along the northern boundary of Avanti South during the April 2014 survey. An irrigation system with exposed and open concrete pipes were also observed. Off highway vehicles (OHV) were observed driving within and around the site and using two large holding ponds located within Avanti South. Dog owners exercising their dogs, hikers, and joggers were also observed within and around the area. During the December 2015 survey, vegetation and contouring associated with both drainages were observed. The drainage work resulted in a dirt road oriented north-south along a portion of the southeastern boundary. Heavy sheep (*Ovis* sp.) grazing was observed in an area of the northwest portion of the site.

The May 2014 and December 2015 Biological Resource Assessments involved a smaller portion of the Avanti West site. At the time of the assessments, there were no indications of disturbances within this portion of the site with the exception of historical agricultural and grazing uses. Vegetation removal and heavy vehicle activity associated with the pond and channel within and adjacent to the site was observed in 2015. The March 2016 Biological Resource Assessment included the entire Avanti West site. Household debris and scattered windblown litter was observed within the site. Similar to Avanti South, OHV tracks were observed, along with dumping. An irrigation system with exposed and open concrete pipes were also observed. The November 2016 Biological Resource Update described the project site as highly disturbed and degraded and identified manmade drainages and two small manmade drainage basins within the project site.

VEGETATION

Avanti South

Forty-seven plant species were observed within Avanti South; refer to Table 5.3-1, Avanti South and Avanti West Plant Species. The site was nearly devoid of any shrubs with the exception of the southeast portion,

which was dominated by rabbit brush (*Ericameria nauseosa*). Some ornamental trees were present within and along the eastern and western boundaries of the site. Native annuals were observed primarily within the southeast corner of Avanti South. Red stemmed filaree (*Erodium cicutarium*) and Russian thistle (*Salsola t*) were the dominant annual species throughout the site. No sensitive plants were observed within the site.

Avanti West

Twenty-four plant species were observed within Avanti West; refer to [Table 5.3-1](#). The site was devoid of any shrubs and trees. Similar to Avanti South, red stemmed filaree and Russian thistle were the dominant annual species throughout the site and no sensitive plants were observed within the site.

**Table 5.3-1
Avanti South and Avanti West Plant Species**

Common Name	Scientific Name
Avanti South	
Black locust	<i>Robinia pseudoacacia</i>
Alder	<i>Alnus sp.</i>
Ornamental tree - unknown	
Salt cedar	<i>Tamarix sp.</i>
Basin sagebrush	<i>Artemisia tridentata</i>
Four-wing saltbrush	<i>Atriplex canescens</i>
California buckwheat	<i>Eriogonum fasciculatum</i>
Rabbit brush	<i>Chrysothamnus nauseosis</i>
Blazing star	<i>Mentzelia sp.</i>
Apricot mallow	<i>Sphaeralcea ambigua</i>
Slender keel fruit	<i>Tropidocarpum gracile</i>
Goldfields	<i>Lasthenia californica</i>
Broadleaf gilia	<i>Gilia latiflora</i>
Dune primrose	<i>Oenothera deltoids</i>
Lupine	<i>Lupinus sp.</i>
Brown-eyed primrose	<i>Camissonia claviformis</i>
Common sunflower	<i>Helianthus annuus</i>
Turkey mullein	<i>Eremocarpus setigerus</i>
Fremont pincushion	<i>Chaenactis fremontii</i>
Comb-bur	<i>Pectocarya sp.</i>
Crested Onion	<i>Allium fimbriatum mohavense</i>
California poppy	<i>Eschscholtzia californica</i>
Fiddleneck	<i>Amsinckia tessellata</i>
Red stemmed filaree	<i>Erodium cicutarium</i>
Schismus	<i>Schismus sp.</i>
Cattails	<i>Typha sp.</i>
Horseweed	<i>Canyza honariensis</i>
Rumex	<i>Rumex sp.</i>
Willow	<i>Salix sp.</i>
Desert straw	<i>Stephanomeria pauciflora</i>
Common sandaster	<i>Corythogyne felaginifolia</i>
Manroot	<i>Marah fabaceus</i>
Annual rabbit foot grass	<i>Polypogon monspeliensis</i>
Cheatgrass	<i>Bromus tectorum</i>

Table 5.3-1 [continued]
Avanti South and Avanti West Plant Species

Common Name	Scientific Name
Bermuda grass	<i>Cynodon dactylon</i>
Ripgut grass	<i>Bromus diandrus</i>
Squirrel-tail grass	<i>Hordeum jubatum</i>
Tumble mustard	<i>Sisymbrium altissimum</i>
Russian thistle	<i>Salsola iberica</i>
Jimson weed	<i>Datura meteloides</i>
Bamboo	Family: <i>Poaceae</i>
Shepards purse	<i>Capsella bursa-pastoris</i>
Rattail fescue	<i>Vulpia myuros</i>
Mule fat	<i>Baccharis salicifolia</i>
Pineapple weed	<i>Matricaria discoidea</i>
Juncus	<i>Juncus sp.</i>
Common plantain	<i>Plantago major</i>
Avanti West	
American elm	<i>Ulmus Americana</i>
Salt cedar	<i>Tamarix sp.</i>
Willow	<i>Salix sp.</i>
Mule fat	<i>Baccharis salicifolia</i>
Rabbit brush	<i>Chrysothamnus nauseosis</i>
Turkey mullein	<i>Eremocarpus setigerus</i>
Slender keel fruit	<i>Tropidocarpum gracile</i>
Goldfields	<i>Lasthenia californica</i>
Brown-eyed susan	<i>Rudbeckia hirta</i>
Jimson weed	<i>Datura meteloides</i>
Cattails	<i>Typha sp.</i>
Horseweed	<i>Canyza honariensis</i>
Fiddleneck	<i>Amsinckia tessellate</i>
Horehound	<i>Marrubium vulgare</i>
Red stemmed filaree	<i>Erodium cicutarium</i>
Nevada blue grass	<i>Poa secunda</i>
Squirrel-tail grass	<i>Hordeum jubatum</i>
Ripgut grass	<i>Bromus diandrus</i>
Cheatgrass	<i>Bromus tectorum</i>
Schismus	<i>Schismus sp.</i>
Tumble mustard	<i>Sisymbrium altissimum</i>
Mustard sp.	<i>Brassicaceae</i>
Annual burweed	<i>Franseria acanthicarpa</i>
Russian thistle	<i>Salsola iberica</i>
Sources: <i>Biological Resource Assessment of Avanti Project</i> , Lancaster, California, May 5, 2014. <i>Biological Resource Assessment of APNs 3204-001-184 and 195, Lancaster, California</i> , March 2, 2016.	

WILDLIFE

Avanti South

Thirty-four wildlife species, or their sign, were observed within Avanti South; refer to [Table 5.3-2, Avanti South and Avanti West Wildlife Species](#). No desert tortoises (*Gopherus agassizii*) or Mohave ground

squirrels (*Xerospermophilus mohavensis*) or their signs were observed during the field survey. Based on the results of the site assessment, the irrigation lines and ground squirrel burrows were determined to have the potential to provide nesting opportunities for burrowing owl (*Athene cunicularia*). One inactive potential burrowing owl cover site was observed just within the western boundary of the site; however, no burrowing owls were observed.

Avanti West

Twenty-five wildlife species, or their sign, were observed within Avanti West; refer to [Table 5.3-2](#). No desert tortoises, Mohave ground squirrels, or burrowing owls or their signs were observed within the site.

Table 5.3-2
Avanti South and Avanti West Wildlife Species

Common Name	Scientific Name
Avanti South	
Rodents	<i>Order: Rodentia</i>
Pocket gopher	<i>Thomomys bottae</i>
California ground squirrel	<i>Citellus beecheyi</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Coyote	<i>Canis latrans</i>
Domestic dog	<i>Canis familiaris</i>
Domestic cat	<i>Felis catus</i>
Sheep	<i>Ovis sp.</i>
Domestic goat	<i>Capra hircus</i>
Side blotched lizard	<i>Uta stansburiana</i>
Mojave rattlesnake	<i>Crotalus scutulatus</i>
Mallard	<i>Anas platyrhynchos</i>
American kestrel	<i>Falco sparverius</i>
California quail	<i>Callipepla californica</i>
Killdeer	<i>Charadrius vociferous</i>
Tree swallow	<i>Tachycineta bicolor</i>
Common raven	<i>Corvus corax</i>
Cactus Wren	<i>Campylorhynchus brunneicapillus</i>
Black phoebe	<i>Sayornis nigricans</i>
Western kingbird	<i>Tyrannus verticalis</i>
Horned lark	<i>Eremophila alpestris</i>
European starling	<i>Sturnus vulgaris</i>
Yellow rumped warbler	<i>Setophaga coronata</i>
Western meadowlark	<i>Sturnella neglecta</i>
Harvester ants	<i>Order: Hymenoptera</i>
Ants 2 spp.	<i>Order: Hymenoptera</i>
Black widow spider	<i>Latrodectus mactans</i>
Bees, small	<i>Order: Hymenoptera</i>
Honey bee	<i>Order: Hymenoptera</i>
Darkling beetle	<i>Coelocnemis californicus</i>
Wolf spider	<i>Order: Araneida</i>
Ladybird beetle	<i>Hippodamia convergens</i>
Butterfly, white	<i>Order: Lepidoptera</i>
Painted lady	<i>Vanessa cardui</i>

**Table 5.3-2 [continued]
Avanti South and Avanti West Wildlife Species**

Common Name	Scientific Name
Avanti West	
Rodents	<i>Order: Rodentia</i>
Pocket gopher	<i>Thomomys bottae</i>
Kangaroo rat	<i>Dipodomys sp.</i>
Desert cottontail	<i>Sylvilagus auduboni</i>
Coyote	<i>Canis latrans</i>
Desert kit fox (very old sign)	<i>Vulpes macrotis</i>
Sheep	<i>Ovis sp.</i>
Horse	<i>Equus sp.</i>
Side blotched lizard	<i>Uta stansburiana</i>
American kestrel	<i>Falco sparverius</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Mourning dove	<i>Zenaida macroura</i>
Common raven	<i>Corvus corax</i>
Black phoebe	<i>Sayornis nigricans</i>
Say's phoebe	<i>Sayornis saya</i>
Horned lark	<i>Eremophila alpestris</i>
Song sparrow	<i>Melospiza melodia</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
House finch	<i>Carpodacus mexicanus</i>
White crowned sparrow	<i>Zonotrichia leucophrys</i>
Harvester ants	<i>Order: Hymenoptera</i>
Ants, black, small	<i>Order: Hymenoptera</i>
Pgymy blue butterfly	<i>Order: Lepidoptera</i>
Beetle, gray/orange	<i>Orde: Coleoptera</i>
Darkling beetle	<i>Coelocnemis californicus</i>
Sources: <i>Biological Resource Assessment of Avanti Project</i> , Lancaster, California, May 5, 2014. <i>Biological Resource Assessment of APNs 3204-001-184 and 195, Lancaster, California</i> , March 2, 2016.	

SENSITIVE BIOLOGICAL RESOURCES

Special status plant and wildlife species are those designated by federal, State, local, or scientific organizations as needing protection because of rarity or threats to their existence. Special status plant and wildlife species include those listed as threatened, endangered, or proposed for listing; candidates for listing; and species of concern to the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW).

The California Natural Diversity Database (CNDDDB) was queried for reported locations of listed and sensitive plant and wildlife species as well as sensitive natural plant communities within the area. A review of ebird.org was also completed. The biological resources assessments evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities at the time of the surveys have the potential to provide suitable habitat(s) for sensitive plant and wildlife species.

According to the database review, other than prairie falcon (*Falco mexicanus*) and loggerhead shrike (*Lanius ludovicianus*), no other sensitive species were noted as occurring within three miles of the project site.

Special Status Wildlife Species

The project site and surrounding area is located within the geographic range of the desert tortoise. Desert tortoise is listed as a threatened species by the USFWS and CDFW. However, no suitable cover or habitat for desert tortoise occurs within the project site. Further, no burrows and/or sign which would indicate presence of desert tortoise, was observed.

The Mohave ground squirrel is a State listed threatened species. The project site is located west of the geographic range of the Mohave ground squirrel and suitable habitat to support the Mohave ground squirrel does not occur within the project site. Further, no burrows, which would indicate presence of Mohave ground squirrel, was observed.

Burrowing owls are considered a species of special concern by CDFW. Burrowing owls do not currently occupy the project site; however, open irrigation lines and old dens present onsite have the potential to provide suitable burrowing owl cover sites. In addition, one inactive potential burrowing owl cover site was observed just within the western boundary of the site.

Prairie falcon and loggerhead shrike, CDFW species of special concern, were previously observed on the project site and both of these species can be observed throughout the region. Based on site conditions, it is unlikely that either of these species use the project site regularly for foraging and the project site does not provide suitable nesting opportunities for these species. Given the condition of the site and lack of native habitat components, (e.g., heavy sheep grazing, and use as an area to run domestic dogs) no sensitive species are expected to regularly use the project site. Further, the project site no longer retains the components of an agricultural field that would be suitable for species that depend on that type of habitat.

No other state or federally listed threatened or endangered species are expected to occur within the project site.

Special Status Plant Species

Based on the project site's disturbed condition, no sensitive plant species were observed and are not expected to occur on the project site.

NESTING BIRDS

No active nests or birds displaying nesting behaviors were observed during the biological resource assessments. However, trees and vegetation located within the project site have the potential to provide suitable nesting opportunities for avian species.

WILDLIFE CORRIDORS

Previous site disturbance has removed natural plant communities, and as a result, the project site does not support any migratory corridors and linkages. No wildlife corridors are considered to be present on the project site. Further, the project site is not located within any identified wildlife corridors.

JURISDICTIONAL AREAS

Manmade drainages and two small manmade drainage basins are located within the project site. These features have been severely impacted by regular maintenance activities. The channels do not lead into any permanent or ephemeral desert washes off-site. United States Army Corps of Engineers (USACE) and State Water Resources Control Board (SWRCB) documents indicate the Antelope Valley watershed has been determined to be non-jurisdictional. USACE completed a non-jurisdictional determination for the Antelope Valley watershed in 2013 which stated "... the Antelope Valley Watershed, excluding Lake Palmdale and tributaries to Lake Palmdale are non-jurisdictional waters of the United States ...". The SWRCB letter dated January 18, 2005, indicates the Amargosa Creek was not subject to permitting requirements per the National Pollutant Discharge Elimination System (NPDES) and did not intend to regulate storm sewer systems under Porter-Cologne Water Quality Control Act. Review of the Del Sur and West Lancaster USGS topographical quadrangles indicated no blue line streams were present within the project site. Further, there were no indications that the channels on site are natural ephemeral streams, but are drainage from Quartz Hill High School and residential properties off of Avenue L. The small drainage basins are run off from the cemetery. The drainage channels and basins were built in the uplands specifically to channel irrigation and residential run off and not natural flow. Based on the above information, these onsite drainage channels and basins will likely not fall under the regulatory authority of the USACE and Regional Water Quality Control Board (RWQCB).

CDFW governs any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators. As a result, coordination with CDFW will be required to determine if the drainage channels and basins would qualify as jurisdictional streambed under the regulatory authority of CDFW.

HABITAT ASSESSMENT METHODOLOGY

Literature Review

A literature review and record search was conducted in November 2016 for sensitive biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special status plant and wildlife species and their proximity to the project site were determined through a query of the CNDDDB and review of ebird.org.

Field Investigation

Between 2014 and 2016, a line transect survey of the entire project site was conducted to inventory plant and wildlife species occurring within the project site. All observations of plant and animal species were recorded in field notes. Field guides were used to aid in the identification of plant and animal species. Observations of animal tracks, scat, and burrows were also utilized to determine the presence of wildlife species inhabiting the project area. Photographs of the site were also taken.

5.3.2 REGULATORY SETTING

Threatened and endangered species are listed by USFWS and CDFW. In California, three agencies generally regulate activities within inland streams, wetlands, and riparian areas: USACE, CDFW, and RWQCB. The USACE Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. The CDFW regulates activities under CDFW Code Sections 1600-1607. The RWQCB regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Act.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (50 CFR 17) is intended to protect plants and wildlife that have been identified as being at risk of extinction and classified as either threatened or endangered. FESA also regulates the “taking” of any endangered fish or wildlife species, per Section 9 of the Act. A responsible agency or individual landowners are required to submit to a formal consultation with the USFWS to assess potential impacts to listed species as the result of a development project, pursuant to FESA Sections 7 and 10. The USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified.

Federal Clean Water Act

SECTION 404

The USACE maintains regulatory authority over the discharge of dredged or fill material into the waters of the United States, pursuant to Section 404 of the CWA. The USACE and United States Environmental Protection Agency (EPA) defines “fill material” as any “material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States.” Fill material may include sand, rock, clay, construction debris, wood chips, or other similar “materials used to create any structure or infrastructure in the waters of the United States.” The term “waters of the United States” includes the following:

- All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
- Wetlands;
- All waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of water mentioned above;
- All tributaries of waters mentioned above;
- Territorial seas; and,
- All wetlands adjacent to the waters mentioned above.

In the absence of wetlands, the USACE's jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM), which is defined as *"...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR 328.3(e))."*

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are jointly defined by the USACE and EPA as *"those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b))."*

SECTION 401

The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions). Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed Federally permitted activity that may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by the ACOE, pursuant to Section 404 of the CWA. The RWQCB is required to provide "certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards," pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards, of which are given as objectives in each of the RWQCB's Basin Plans.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the State is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

STATE

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and wildlife species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The State gives the CDFW the responsibility to assess development projects for their potential to impact listed species and their habitats. State listed special-status species are also addressed through the issuance of a 2081 permit (Memorandum of Understanding).

California Fish and Game Code

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFW. The Fish and Game Commission and/or the CDFW are responsible for issuing permits for the take

or possession of protected species. The following sections of the Code address the protected species: Section 3511 (birds); Section 4700 (mammals); Section 5050 (reptiles and amphibians); and, Section 5515 (fish).

California Department of Fish and Game Lake and Streambed Alteration Agreements

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to *California Fish and Game Code* Sections 1600-1607; however, on January 1, 2004, legislation went into effect that repealed Fish and Game Code Sections 1600-1607 and instead, added *Fish and Game Code* Sections 1600-1616. This action eliminated the separation between private/public notifications (previously 1601/1603). Section 1602 of the *Fish and Game Code* requires any person, state, or local governmental agency, or public utility to notify the CDFW before commencing any activity that would result in one or more of the following:

- Substantially obstruct or divert the natural flow of a river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or,
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes within the State of California. While the jurisdictional limits are similar to the limits defined by ACOE regulations, CDFW jurisdiction includes riparian habitat supported by a river, stream, or lake with or without the presence or absence of saturated soil conditions or hydric soils. CDFW jurisdiction generally includes to the top of bank of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Any project that occurs within or in the vicinity of a river, stream, lake, or their tributaries typically requires notification of the CDFW, including rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

Migratory Bird Treaty Act of 1918

The Federal Migratory Bird Treaty Act (MBTA) was originally drafted to end the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, nests, eggs, or other avian products. The USFWS is responsible for enforcing the MBTA.

California Environmental Quality Act

In addition to specific Federal and State statutes for the protection of threatened and endangered species, *California Environmental Quality Act (CEQA) Guidelines* Section 15380(b) provides that a species not listed on the Federal or State list of protected species may be considered rare or endangered if it can be shown that the species meets certain specified criteria. Modeled after definitions in the FESA and the section of the *California Fish and Game Code* dealing with rare or endangered plants and wildlife, these criteria are given in *CEQA Guidelines* Section 15380(b). The effect of Section 15380(b) is to require public agencies to undertake reviews to determine if projects would result in significant effects on species not listed by either

the USFWS or CDFW (i.e., candidate species). Through this process, agencies are provided with the authority to protect additional species from the potential impacts of a project until the appropriate government agencies have an opportunity to designate the species as protected, if deemed appropriate.

LOCAL

Lancaster General Plan

Lancaster General Plan's Plan for the Natural Environment addresses natural and human-induced environments, including biological resources. Objectives, policies, and specific actions are intended to preserve and protect important biological resources in the area. The following policies and specific actions applicable to the proposed project:

- Policy 3.4-4 Ensure that development proposals, including City sponsored projects, are analyzed for short- and long-term impacts to biological resources and that appropriate mitigation measures are implemented.

- Action 3.4.4(a) Regularly monitor and review developments proposed within or adjacent to the City's sphere of influence but outside of the City limits. The purpose of this review will be to assess potential impacts on local biological resources, and to recommend measures that the appropriate agency can implement to mitigate the impacts.

- Action 3.4.4(c) In accordance with the provisions of the Lancaster Municipal Code, assess the required City Biological Impact Fee on all development projects on vacant land to address cumulative biological impacts.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.66, Biological Impact Fee, establishes a biological impact fee to mitigate long-term incremental impacts of new development on biological resources on a regional basis. The fee is based upon expected regional effects from new development and fees necessary to contribute to the City's "fair share" to mitigate impacts on a regional basis. The fee applies to all new development of vacant land including land subdivisions, new development approvals, and requests for extension.

5.3.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, biological resources impacts resulting from the project's implementation may be considered significant if they would result in the following:

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

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

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; refer to Section 8.0, *Effects Found Not To Be Significant*; or
- Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; refer to Section 8.0.

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.3.4 IMPACTS AND MITIGATION MEASURES

SPECIAL STATUS PLANT AND WILDLIFE SPECIES

BIO-1 *Project implementation would not have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status.*

Impact Analysis: Based on the Biological Resources Assessments prepared for the project, no special-status plant species occur within the project site. Thus, no impacts to special status plant species would occur with implementation of the proposed project.

Sensitive wildlife species were not specifically observed on the project site during the surveys, and the plant communities on-site do not have the potential to provide suitable habitat for any of the sensitive wildlife species known to occur in the general area. Specifically, no suitable habitat for desert tortoise or Mohave ground squirrels was present within the project site. Further, based on a lack of evidence observed during the surveys and an absence of suitable habitat, these species are not expected to occur in the project area and no impacts are expected to occur to these species.

Although no burrowing owls were observed within the project site, open irrigation lines and California ground squirrel burrows provide potential burrowing owl cover sites. Thus, project implementation could potentially impact burrowing owls that disperse/migrate into the project site prior to construction activities, resulting in a significant impact. The project would be required to comply with Mitigation Measure BIO-1, which requires preconstruction surveys for burrowing owls to occur within 14 days prior to site disturbance. If burrowing owls are determined to be present on-site, passive relocation of the

species would be required. Compliance with Mitigation Measure BIO-1 would reduce potential impacts to burrowing owls to less than significant.

Prairie falcon and loggerhead shrike were previously observed on the project site. However, based on current site conditions and the lack of suitable foraging habitat, it is unlikely that prairie falcons or loggerhead shrikes use the project site regularly for foraging and would not be expected to use it for nesting. Thus, impacts would be less than significant to these species.

Mitigation Measures:

BIO-1 Prior to the issuance of any construction-related permits, the Development Services Director or his/her designee shall ensure that the Grading Plan includes a condition of approval requiring a qualified biologist to conduct a pre-construction presence/absence survey for burrowing owl within 14 days prior to site disturbance, with a second visit occurring within 24 hours of ground disturbance. If burrowing owls are not detected, grading may proceed without limitation. If burrowing owls are detected on the site, the owls shall be passively excluded from the site, in coordination with CDFW, following professionally-accepted protocols, such as collapsing burrows and the use of one-way doors. If proximate habitat is not available in the opinion of a qualified biologist for successful passive relocation of the species, alternative relocation efforts shall be coordinated with CDFW and the City of Lancaster. Any activity to exclude burrowing owl will need to be approved by CDFW and will occur outside of the nesting season to avoid the potential incidental take of active nests, unless the biologist demonstrates to CDFW and the City of Lancaster that the proposed exclusion of owls would not result in the take of an active nest.

Level of Significance: Less Than Significant With Mitigation Incorporated.

SENSITIVE NATURAL COMMUNITIES

BIO-2 ***Project implementation would not have an adverse effect on riparian habitat or other sensitive natural community.***

Impact Analysis: As concluded in the Biological Resource Assessments, there is no riparian habitat, or other sensitive natural community present on the project site. Additionally, there is no designated or proposed critical habitat within the project boundaries. Therefore, implementation of the proposed project would result in no impact in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

JURISDICTIONAL WATERS AND WETLANDS

BIO-3 *Project implementation would not have a substantial adverse effect on jurisdictional waters or wetlands.*

Impact Analysis: The Biological Resource Update (November 2016) did not identify any drainages or isolated wetland features within the project site that would be considered jurisdictional by the USACE or RWQCB. As stated, the drainage channels and basins within the project site were built in the uplands specifically to channel irrigation and residential run off and not natural flow. Therefore, the proposed project would not result in any impacts to USACE or RWQCB jurisdictional waters or wetlands.

However, CDFW may take jurisdiction over the onsite drainage channels and basins. Coordination with CDFW will be required to determine if the drainage channels and basins would qualify as jurisdictional streambed under the regulatory authority of CDFW. If it is determined that CDFW will assert jurisdiction over the onsite drainage channels and basins, a CDFW Section 1602 Streambed Alteration Agreement will need to be prepared.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

MIGRATORY BIRDS

BIO-4 *Project implementation could interfere with the movement of a native resident or migratory species.*

Impact Analysis: Removal of mature trees or vegetation that has the potential to provide suitable nesting opportunities for avian species would be subject to the conditions prescribed of the MBTA that ensure the protection of avian species during the nesting season.

The trees and vegetation within the project site have the potential to provide suitable nesting opportunities for avian species. Disturbing or destroying active nests is a violation of the MBTA. Nesting activity typically occurs between February 1 and August 31. The removal of vegetation during the breeding season is considered a potentially significant impact. Therefore, the project would be required to comply with Mitigation Measure BIO-2, which would be accomplished in one of two ways. First, efforts would be made to schedule all vegetation removal activities outside of the nesting season (typically February 1 to August 31) to avoid potential impacts to nesting birds. This would ensure that no active nests would be disturbed and that vegetation removal could proceed rapidly. Second, if initial vegetation removal occurs during the nesting season, all suitable habitat would be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer would be delineated, flagged, and avoided until the nesting cycle is complete, as determined by a biologist. With implementation of Mitigation Measure BIO-2, impacts to migratory birds would be reduced to less than significant levels.

Mitigation Measures:

BIO-2 Prior to the issuance of a grading permit, the Development Services Director or his/her designee shall ensure that the Grading Plan includes a condition of approval requiring all vegetation removal associated with the project to occur outside of the migratory bird nesting season (February 1 to August 31). If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct nesting bird surveys of the property no more than three days prior to the removal of any vegetation or structures with the potential to support nesting birds. If vegetation is not removed within three days of a nesting bird survey, then the surveys shall be repeated. If active nests are identified, then the biologist shall establish an adequate buffer depending on the species and the location of the nest (up to 200 feet for non-raptors and 500 feet for raptors), which shall be avoided until the nests are no longer active as determined by the biologist.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.3.5 CUMULATIVE IMPACTS

BIOLOGICAL RESOURCES

Development anticipated by the project combined with cumulative development would not have adverse effects on biological resources.

Impact Analysis: No special-status plant species were observed on the project site. Thus, the project would not contribute to a cumulative impact to special-status plant species.

Sensitive wildlife species were not specifically observed on the project site during the surveys, and the plant communities on-site do not have the potential to provide suitable habitat for any of the sensitive wildlife species known to occur in the general area. Thus, development of the site would not cumulatively contribute to a loss of habitat supportive of sensitive wildlife species.

Burrowing owl is known to occur within Lancaster and within the general vicinity of the project site. Although no burrowing owls were observed within the project site, fallow open irrigation lines and California ground squirrel burrows within the project site have the potential to provide burrowing owl cover sites. Thus, project implementation could potentially impact burrowing owls that disperse/migrate into the project site prior to construction activities, resulting in a significant impact. The project, along with development of land providing potential burrowing owl cover sites associated with the cumulative projects, could result in a cumulatively considerable impact to borrowing owl. As stated above, the project would be required to comply with Mitigation Measure BIO-1, which requires preconstruction surveys and establishes the appropriate protocol in the event burrowing owl are located within the site. With implementation of the identified mitigation, the project's potential impact to burrowing owl would be less than significant and the project would not be cumulatively considerable.

Manmade drainages and two small manmade drainage basins are located within the project site. These features have been severely impacted by regular maintenance activities. The drainage channels and basins were built in the uplands specifically to channel irrigation and residential run off and not natural flow. These onsite features were likely created and maintained by adjacent anthropogenic disturbances

and developments. The drainage channels and basins do not have significant hydrologic connection into any downstream or upstream natural riparian/desert dry wash habitats. As a result, implementation of the proposed project will not have a cumulative effect to riparian habitats in the region. If it is determined that the onsite drainage channels and basins would qualify as jurisdictional streambed under the regulatory authority of CDFW, compensatory mitigation would likely be required to offset any loss of CDFW streambed. Further, any proposed project in the vicinity of this project will require mitigation on an individual basis for impacts to riparian/desert dry wash habitats. Therefore, cumulative impacts are expected to be minimal as project-level impacts will already be mitigated to the extent possible.

The project would involve the removal of mature trees or vegetation that has the potential to provide suitable nesting opportunities for avian species. Disturbing or destroying active nests is a violation of the MBTA. The project, along with development of other sites within the area resulting in the removal of trees or vegetation suitable for nesting, could result in a cumulatively considerable impact to avian species. As stated, the project would be required to comply with Mitigation Measure BIO-2, which would ensure vegetation removal occurs outside of the migratory bird nesting season or that surveys are conducted to determine the presence of active nests and, if present, a buffer be established. With implementation of the identified mitigation, the project's potential impact to nesting birds would be less than significant and the project would not be cumulatively considerable.

Therefore, project implementation would not result in cumulatively considerable impacts to biological resources. Notwithstanding, as with the proposed project, all future cumulative development would undergo environmental review on a project-by-project basis, in order to evaluate potential impacts to biological resources and ensure compliance with the established regulatory framework. Cumulative impacts to biological resources within the City of Lancaster would be mitigated on a project-by-project basis.

Mitigation Measures: Refer to Mitigation Measures BIO-1 and BIO-2.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.3.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts to biological resources associated with project implementation would be less than significant with incorporation of the mitigation measures. No significant unavoidable impacts to biological resources would occur.

Section 5.4

Cultural and Tribal Cultural Resources

5.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

The purpose of this section is to determine if cultural resources (including prehistoric, historic, and paleontological resources) occur within and around the project site and to assess the significance of such resources. This section is primarily based upon the *Cultural Resources Assessment Avanti South Project, City of Lancaster, Los Angeles County, California* (Cultural Resources Assessment), prepared by BCR Consulting LLC (November 22, 2016) and included in Appendix E, Cultural Resources Assessment. Confidential information has been redacted from Appendix E for purposes of public review.

5.4.1 ENVIRONMENTAL SETTING

NATURAL SETTING

The project site is located in the southwestern portion of the Mojave Desert. Sediments within the project site boundaries have been derived from several geologic units, including:

- Holocene slope wash composed of loose sand and rubble debris from downslope movement of Holocene surficial materials;
- Holocene modern alluvium containing unconsolidated fluvial gravel, sand and silt; and
- Younger alluvial fan deposits (Holocene to Late Pleistocene) consisting of consolidated, dark-yellowish-brown, silty, fine sand with clay and calcium carbonate.

The project site elevation ranges from approximately 2,392 to 2,444 feet above mean sea level (AMSL). Field observations conducted as part of the Cultural Resources Assessment confirmed the project site is currently undeveloped and has experienced severe disturbance associated with agricultural activities, installation of water distribution facilities, and utility and road installations.

CULTURAL SETTING

Prehistory

The prehistoric cultural setting of the Mojave Desert has been organized into many chronological frameworks, although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for the Mojave are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the Mojave and their territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and capricious geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, Mojave chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact re-use or re-sharpening, as well as researchers' mistaken diagnosis, and other factors.

Paleoindian (12,000 to 10,000 years before the present [BP]) and Lake Mojave (10,000 to 7,000 BP) Periods. Climatic warming characterizes the transition from the Paleoindian Period to the Lake Mojave Period. This transition also marks the end of Pleistocene Epoch and ushers in the Holocene. The Paleoindian Period has been loosely defined by isolated fluted (such as Clovis) projectile points, dated by

their association with similar artifacts discovered in-situ in the Great Plains. Some fluted bifaces have been associated with fossil remains of Rancholabrean mammals approximately dated to ca. 13,300-10,800 BP near China Lake in the northern Mojave Desert. The Lake Mojave Period has been associated with cultural adaptations to moist conditions, and resource allocation pointing to more lacustrine environments than previously. Artifacts that characterize this period include stemmed points, flake and core scrapers, choppers, hammerstones, and crescentics. Projectile points associated with the period include the Silver Lake and Lake Mojave styles. Lake Mojave sites commonly occur on shorelines of Pleistocene lakes and streams, where geological surfaces of that epoch have been identified.

Pinto Period (7,000 to 4,000 BP). The Pinto Period has been largely characterized by desiccation of the Mojave. As formerly rich lacustrine environments began to disappear, the artifact record reveals more sporadic occupation of the Mojave, indicating occupants' recession to the more hospitable fringes. Pinto Period sites are rare, and are characterized by surface manifestations that usually lack significant in-situ remains. Artifacts from this era include Pinto projectile points and a flake industry similar to the Lake Mojave tool complex, though use of Pinto projectile points as an index artifact for the era has been disputed. Milling stones have also occasionally been associated with sites of this period.

Gypsum Period (4,000 to 1,500 BP). A temporary return to moister conditions during the Gypsum Period is postulated to have encouraged technological diversification afforded by the relative abundance of resources. Lacustrine environments reappear and begin to be exploited during this era. Concurrently a more diverse artifact assemblage reflects intensified reliance on plant resources. The new artifacts include milling stones, mortars, pestles, and a proliferation of Humboldt Concave Base, Gypsum Cave, Elko Eared, and Elko Corner-notched dart points. Other artifacts include leaf-shaped projectile points, rectangular-based knives, drills, large scraper planes, choppers, hammer stones, shaft straighteners, incised stone pendants, and drilled slate tubes. The bow and arrow appears around 2,000 BP, evidenced by the presence of a smaller type of projectile point, the Rose Spring point.

Saratoga Springs Period (1,500 to 800 BP). During the Saratoga Springs Period regional cultural diversifications of Gypsum Period developments are evident within the Mojave. Basketmaker III (Anasazi) pottery appears during this period, and has been associated with turquoise mining in the eastern Mojave Desert. Influences from Patayan/Yuman assemblages are apparent in the southern Mojave, and include buff and brown wares often associated with Cottonwood and Desert Side-notched projectile points. Obsidian becomes more commonly used throughout the Mojave and characteristic artifacts of the period include milling stones, mortars, pestles, ceramics, and ornamental and ritual objects. More structured settlement patterns are evidenced by the presence of large villages, and three types of identifiable archaeological sites (major habitation, temporary camps, and processing stations) emerge. Diversity of resource exploitation continues to expand, indicating a much more generalized, somewhat less mobile subsistence strategy.

Shoshonean Period (800 BP to Contact). The Shoshonean period is the first to benefit from contact-era ethnography, as well as be subject to its inherent biases. Interviews of living informants allowed anthropologists to match artifact assemblages and particular traditions with linguistic groups, and plot them geographically. During the Shoshonean Period, continued diversification of site assemblages and reduced Anasazi influence both coincide with the expansion of Numic (Uta-Aztecan language family) speakers across the Great Basin, Takic (Uta-Aztecan language family) speakers into southern California, and the Hopi across the Southwest. Hunting and gathering continued to diversify, and the diagnostic arrow points include desert side-notch and cottonwood triangular. Ceramics continue to proliferate, though are more common in the southern Mojave during this period. Trade routes have become well

established across the Mojave, particularly the Mojave Trail, which transported goods and news across the desert via the Mojave River, to the west of the study area. Trade in the western Mojave was more closely related to coastal groups than others.

Ethnography

The Ute-Aztec “Serrano” people occupied the western Mojave Desert periphery. The generic term “Serrano” was applied to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. The Vanyume, an obscure Takic population, was found along the Mojave River at the time of Spanish contact. The Kitanemuk lived to the north and west, while the Tataviam lived to the west. The Serrano lived mainly to the south. All may have used the western Mojave area seasonally. Historical records are unclear concerning precise territory and village locations. It is doubtful that any group, except the Vanyume, actually lived in the region for several seasons yearly.

History

Historic-era California is generally divided into three periods: the Spanish or Mission period (1769 to 1821), the Mexican or Rancho period (1821 to 1848), and the American period (1848 to present).

Spanish Period. The first European to pass through the study area is thought to be a Spaniard called Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who had been commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena. This is the first recorded group crossing of the Mojave Desert and, according to Father Garces’ journal, they camped at the headwaters of the Mojave River, one night less than a day’s march from the mountains. Today, this is estimated to have been approximately 11 miles southeast of Victorville. Garces was followed by Alta California Governor Pedro Fages, who briefly explored the western Mojave region in 1772. Searching for San Diego Presidio deserters, had traveled north through Riverside to San Bernardino, crossed over the mountains into the Mojave Desert, and then journeyed westward to the San Joaquin Valley.

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes.

American Period. The American Period, 1848-Present, began with the Treaty of Guadalupe Hidalgo. The Gold Rush had attracted huge numbers of American settlers and in 1850, California was accepted into the Union. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849-1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranches through foreclosure. A series of disastrous floods in 1861-1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day.

Local Sequence. Lancaster grew up around the Southern Pacific Railroad, which entered the area in 1876. The railroad brought speculators that used artesian wells to found an early local agricultural and horticultural economy. A newspaper was established in 1884, and grammar schools and a local post office soon followed. Parcels within the new town were originally settled near today's I Street and Sierra Highway. Although farming was initially successful, it was also subject to the caprices of desert rainfall that varied dramatically and caused a downturn during the early 20th century. Continued well drilling managed to revive local agriculture and by the teens and 1920s local mining and the continued influence of the railroad resulted in a local economic resurgence. Municipal advancements included paved streets in 1916, the formation of a local Los Angeles County Waterworks district in 1919, a fire department in 1921, and electric service brought by Southern California Edison in 1923. Although the economy slowed again during the depression and World War II, the founding of the Muroc Lake Bombing and Gunnery Range (now Edwards Air Force Base) in 1933 compensated somewhat for the losses, and mining and alfalfa farming remained locally viable. The post war years brought an economic boom to Lancaster, which was locally punctuated by the opening of the first local ready-mix plant, the Antelope Valley Freeway plan, and eventually resulted in the local population expanding to 40,609 by 1970. Lancaster incorporated in 1977 and has since developed into a bedroom community, in addition to remaining a hub for farming, mining, and transportation.

RESEARCH DESIGN

The pedestrian cultural resources survey was intended to locate and document previously recorded and new cultural resources, including archaeological sites, features, isolates, and historic buildings, that exceed 45 years in age within defined project site boundaries. The project site was examined using systematic pedestrian field survey methods. The study is intended to determine whether cultural resources are located within the project site boundaries, whether any cultural resources are significant pursuant to the above-referenced regulations and standards, and to develop specific mitigation measures that will address potential impacts to existing or potential resources. Tasks pursued to achieve that end include:

- Cultural resources records search to review any studies conducted and the resulting cultural resources recorded within a one-mile radius of the project site boundaries.
- Additional research through various local and regional resources.
- Systematic pedestrian survey of the project site.
- Evaluation of California Register of Historical Resources (California Register) eligibility for any cultural resources discovered.
- Development of recommendations for cultural resources documented within the project boundaries, following CEQA guidelines.
- Completion of Department of Park and Recreation (DPR) 523 forms for any discovered cultural resources.
- Sacred Lands File Search through the NAHC (results were negative).
- Communication with potentially interested Native American tribes and individuals to request information related to project sensitivity for Tribal Cultural Resources.

- Vertebrate paleontology resources report through Dr. Samuel McLeod of the Los Angeles County Natural History Museum.

METHODOLOGY

Records Search

On January 22, 2016, a records search was conducted through the South Central Coastal Information Center (SCCIC). This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within one mile of the project site. Additional resources reviewed included the National Register of Historic Places (National Register), the California Register, and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures. Limited research was also conducted for the project site through local repositories and internet resources.

A search of the Natural History Museum of Los Angeles County's paleontology collection records was requested by BCR Consulting.

Upon BCR Consulting's request, a search of the Sacred Lands File was conducted through the State of California's Native American Heritage Commission (NAHC).

Field Survey

An intensive-level cultural resources field survey of the project site was conducted on January 27 and 28, 2016. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across the site. Preparation for the field survey involved a thorough review of modern and historic aerial photos and topographic maps, and field checks and updates for previously identified cultural resources. Digital photographs were taken at various points within the project site. These included overviews as well as detail photographs of all cultural resources. Cultural resources were recorded per the California Office of Historic Preservation Instructions for Recording Historical Resources in the field using detailed note taking for entry on Department of Parks and Recreation (DPR) Forms; hand-held Global Positioning Systems for mapping purposes; and digital photography of all cultural resources.

Native American Consultation

As stated above, communication was initiated by BCR Consulting with potentially interested Native American tribes and individuals to request information related to the project site's sensitivity for Tribal Resources. The City of Lancaster also requested the NAHC provide Native American Tribal Contact Lists pursuant to SB 18 and AB 52. The City contacted each of the tribes identified on the list, and those that had previously requested to be notified, advising them of the proposed project.

RESULTS

Records Search

Data from the SCCIC revealed that 37 previous cultural resource studies have taken place, and 11 cultural resources have been recorded within one mile of the project site. Of the 37 previous studies, two have assessed portions of the project site, and no cultural resources have been previously recorded within the site's boundaries.

NAHC reported the sacred lands record search identified no Native American cultural resources within the project area.

The Natural History Museum of Los Angeles County determined they do not have any vertebrate fossil localities that lie directly within the project site boundaries; however, they do have localities nearby from the same sedimentary units that occur in the project area. The surface deposits in the project site are composed of Quaternary Alluvium beneath soil, derived as alluvial fan deposits from the Portal ridge hills to the south. Although these types of sedimentary deposits frequently do not contain significant vertebrate fossils, at least in the uppermost layers, the closest vertebrate fossil locality from these deposits was located east-northeast of the project site, near Avenue I, approximately four feet below the surface. The next closest fossil vertebrate locality from these deposits occurred northeast of the project site, near Avenue F, at a depth of three feet.

Field Survey

During the field survey, BCR Consulting archaeologists recorded one historic-period water retention basin and one prehistoric isolated find (a metate fragment) located within the project site boundaries, which have been recorded and mapped on DPR 523. The project site has been graded flat for previous cultivation, and for more recent weed abatement. Very little native setting remains. Vegetation observed included mixed grasses and tamarisk that afford approximately 40 percent surface visibility and sediments include silty sand with very few rocks. There were no topographic or artificial constraints to access of the project site. Some modern construction debris and other garbage have been dumped near roads.

RIG-1601-H-1. This resource is a ca. 1953 earthen retention basin measuring approximately 300 by 150 feet. It was fed by a former well located adjacent to the basin to the east (no longer present), and irrigated alfalfa fields to the north and east. The basin is in fair condition. Some concrete debris and modern trash are noted in the area, but no diagnostic machinery or materials can be associated. The basin floor is covered with seasonal grasses and surrounded by mixed grasses and tamarisk. Sediments include silty sand.

RIG-1601-I-1. This resource is an isolated granitic metate fragment, measuring approximately 21 by 15 by 5 centimeters. The area is highly disturbed by historic-period farming, aeolian deflation, and sheet washing. Vegetation includes seasonal grasses that afford approximately 60 percent visibility. Sediments include silty sand with very few rocks.

Native American Consultation

Two responses were received in response to BCR's correspondence to Native American Tribes. The San Manuel Band of Mission Indians advised they did not have specific information about significant tribal cultural resources at the project location and requested a copy of the records search results. This information was provided and no further correspondence from the Tribe was received by BCR. Correspondence from the Fernandeno Tataviam Band of Mission Indians indicated that they find the project to be of risk to cultural and tribal resources and that they would like to consult with the Lead Agency unless the applicant preferred to enter into a private agreement with the Tribe. No further correspondence was received by BCR.

The City received one request for consultation from the San Manuel Band of Mission Indians. The request noted that the project area exists within Serrano ancestral territory and is therefore of interest to the Tribe.

5.4.2 REGULATORY SETTING

Numerous laws and regulations require Federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (i.e., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, the California Environmental Quality Act (CEQA), and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary Federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance. The applicable regulations are discussed below.

FEDERAL

National Historic Preservation Act of 1966

Enacted in 1966 and amended in 2000, the NHPA declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the Federal, State and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP or National Register), established the position of State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage and created the Advisory Council on Historic Preservation (ACHP).

SECTION 106 PROCESS

Through regulations associated with the NHPA, an impact to a cultural resource would be considered significant if government action will affect a resource listed in or eligible for listing in the National Register. The NHPA codifies a list of cultural resources found to be significant within the context of national history, as determined by a technical process of evaluation. Resources that have not yet been placed on the National Register, and are yet to be evaluated, are afforded protection under the Act until shown to be not significant.

Section 106 of the NHPA and its implementing regulations (36 Code of Federal Regulations Part 800) note that for a cultural resource to be determined eligible for listing in the National Register, the resource must meet specific criteria associated with historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing on the National Register are applied within an analysis when there is some question as to the significance of a cultural resource. The criteria for evaluation are defined as the quality of significance in American history, architecture, archaeology, engineering, and culture. This quality must be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: It is associated with the lives of persons significant in our past; or
- Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Criterion (D) is usually reserved for archaeological resources. Eligible cultural resources must meet at least one of the above criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

The Section 106 evaluation process does not apply to projects undertaken under City environmental compliance jurisdiction; however, should the undertaking require funding, permits or other administrative actions issued or overseen by a federal agency, analysis of potential impacts to cultural resources following the Section 106 process will likely be necessary. The Section 106 process typically excludes cultural resources created less than 50 years ago unless the resource is considered highly significant from the local perspective. Finally, the Section 106 process allows local concerns to be voiced and the Section 106 process must consider aspects of local significance before a significance judgment is rendered.

Secretary of the Interior's Standards for the Treatment of Historic Properties

Evolving from the *Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards* that were developed in 1976, the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* were published in 1995 and codified as 36 CFR 67. Neither technical nor prescriptive, these standards are "intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources." "Preservation" acknowledges a resource as a document of its history over time, and emphasizes stabilization, maintenance, and repair of existing historic fabric. "Rehabilitation" not only incorporates the retention of features that convey historic character but also accommodates alterations and additions to facilitate continuing or new uses. "Restoration" involves the retention and replacement of features from a specific period of significance. "Reconstruction," the least used treatment, provides a basis for recreating a missing resource. These standards have been adopted, or are used informally, by many agencies at all levels of government to review projects that affect historic resources.

STATE

California Environmental Quality Act

As defined in Section 21083.2 of CEQA, a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is high probability that it meets any of the following criteria:

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

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the State *CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the State *CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is unique archaeological resource. The State *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State *CEQA Guidelines* Section 15-64.5(c)(4)).

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria.

California Points of Historical Interest

California Points of Historical Interest (Points) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a landmark and a “point.” If a point is subsequently granted status as a landmark, the point designation will be retired.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- The first, last, only or most significant of its type within the local geographic region (city or county);
- Associated with an individual or group having a profound influence on the history of the local area; or

- A prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

State Historical Building Code

Created in 1975, the State Historical Building Code (SHBC) provides regulations and standards for the preservation, restoration, rehabilitation, or relocation of historic buildings, structures, and properties that have been determined by an appropriate local or State governmental jurisdiction to be significant in the history, architecture, or culture of an area. Rather than being prescriptive, the SHBC constitutes a set of performance criteria. The SHBC is designed to help facilitate restoration or change of occupancy in such a way as to preserve original or restored elements and features of a resource; to encourage energy conservation and a cost-effective approach to preservation; and to provide for reasonable safety from earthquake, fire, or other hazards for occupants and users of such “buildings, structures and properties.” The SHBC also serves as a guide for providing reasonable availability, access, and usability by the physically disabled.

California Health and Safety Code (Section 7050.5)

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, those persons believed to be most likely descended from the deceased Native American must be notified. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the NAHC. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Senate Bill 18

California Senate Bill (SB) 18 states that prior to a local (city or county) government’s adoption of any general plan or specific plan, or amendment to general and specific plans, or a designation of open space land proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American tribes for the purpose of preserving or mitigating impacts to Cultural Places.

A Cultural Place is defined in the PRC sections 5097.9 and 5097.995 as:

1. Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9), or
2. Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5097.995).

The intent of SB 18 is to establish meaningful consultation between tribal governments and local governments (“government-to-government”) at the earliest possible point in the planning process so that cultural places can be identified and preserved and to determine necessary levels of confidentiality regarding Cultural Place locations and uses. According to the Government Code (GC) Section 65352.4, “consultation” is defined as:

The meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties’ cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American Tribes shall be conducted in a way that is mutually respectful of each party’s sovereignty. Consultation shall also recognize the tribes’ potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

Assembly Bill 52

On September 25, 2014 Governor Brown signed Assembly Bill 52 (AB 52). In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

- (1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
- (2) Establish a new category of resources in CEQA called “tribal cultural resources” that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
- (3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
- (4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.
- (5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and

roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision making body of the lead agency.

- (6) Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
- (7) Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
- (8) Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
- (9) Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

LOCAL

Lancaster General Plan

Lancaster General Plan's Plan for Active Living focuses on the components of the community's shelter, culture, and lifestyle. Objectives, policies, and specific actions are identified to protect significant cultural resources in the area. The following policies and specific actions are applicable to the proposed project:

- Policy 12.1.1 Preserve features and sites of significant historical and cultural value consistent with their intrinsic and scientific values.
- Action 12.1.1(1) As part of the CEQA review process, require site-specific historical, archaeological, and/or paleontological studies when there exists a possibility that significant environmental impacts might result or when there is a lack of sufficient documentation on which to determine potential impacts.
- Action 12.1.1(b) Include a condition of approval on all development projects that addresses State and Federal regulations with respect to the disposition of cultural resources.
- Action 12.1.1(c) Process requests for inclusion in state and federal historic registers those historic and prehistoric sites and features which meet state or federal criteria.

5.4.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The purpose of this analysis is to identify any potential cultural resources within or adjacent to the project site, and to assist the Lead Agency in determining whether such resources meet the official definitions of "historical resources," as provided in the Public Resource Code, in particular CEQA.

SIGNIFICANCE GUIDELINES

Historical Resources

Impacts to a significant cultural resource that affect characteristics that would qualify it for the NRHP or that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration “in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register” (CEQA Guidelines Section 15064.5[b][2][A]).

Archaeological Resources

A significant prehistoric archaeological impact will occur if grading and construction activities will result in a substantial adverse change to archaeological resources determined to be “unique” or “historic.” “Unique” resources are defined in Public Resources Code Section 21083.2; “historic” resources are defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15126.4.

Public Resources Code Section 21083.2(g) states:

As used in this section, “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;*
2. *Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or*
3. *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Paleontological Resources

An impact on paleontological materials would be considered a significant impact if the project results in the direct or indirect destruction of a unique or important paleontological resource or site. The following criteria are used to determine whether a resource is unique or important:

- The past record of fossil recovery from the geologic unit(s);
- The recorded fossil localities in the project site;
- Observation of fossil material on-site; and
- The type of fossil materials previously recovered from the geologic unit (vertebrate, invertebrate, etc.).

Tribal Cultural Resources

AB 52 established a new category of resources in CEQA called Tribal Cultural Resources. (Public Resources Code Section 21074.) “Tribal cultural resources” are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also created a process for consultation with California Native American Tribes in the CEQA process. Tribal Governments can request consultation with a lead agency and give input into potential impacts to tribal cultural resources before the agency decides what kind of environmental assessment is appropriate for a proposed project. The Public Resources Code now requires avoiding damage to tribal cultural resources, if feasible. If not, lead agencies must mitigate impacts to Tribal Cultural Resources to the extent feasible.

CEQA SIGNIFICANCE CRITERIA

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, cultural and tribal cultural resources impacts resulting from the project’s implementation may be considered significant if they would result in the following:

Cultural Resources

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

Tribal Cultural Resources

A project may cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.4.4 IMPACTS AND MITIGATION MEASURES

HISTORICAL AND ARCHAEOLOGICAL RESOURCES

CUL -1 *Project implementation would not cause a substantial adverse change in the significance of a historical or archaeological resource.*

Impact Analysis: During the field survey, one historic-period water retention basin (RIG-1601-H-1) and one isolated find (a prehistoric metate fragment) (RIG 1601-I-1) were identified. Isolated finds are not considered significant resources under CEQA. As a result, the isolated find is not considered a “historical resource” under CEQA and does not require further evaluation. CEQA does require the evaluation and recordation of historic and archaeological resources (non-isolates).

Although the project site is associated with local farming that took place during the mid-20th century, there is nothing to suggest a clear association with any important events (California Register Criterion 1), or important persons (California Register Criterion 2). This type of water retention basin is ubiquitous throughout the region and as such does not embody distinctive characteristics of a type, period, region, or method of construction, represent the work of a master, or possess high artistic values (California Register Criterion 3). Substantial research regarding the project site was conducted as part of the Cultural Resources Assessment, and the data potential is considered exhausted (California Register Criterion 4). Although the complex does retain a measure of integrity of location and perhaps design, removal of the original well and water distribution components have considerably diminished the integrity of setting, materials, workmanship, feeling, and association. Because of the failure to meet any of the above criteria combined with diminished integrity, the Cultural Resources Assessment determined that RIG-1601-H-1 is not potentially eligible for the California Register, and therefore is not a historical resource under CEQA. Thus, significant impacts to known historical or archaeological resources would not occur with project implementation.

Although the Cultural Resources Assessment has not indicated sensitivity for cultural resources within the project boundaries, ground disturbing activities have the potential to reveal buried deposits not observed on the surface during previous surveys. Mitigation Measure CUL-1 requires that prior to the initiation of ground-disturbing activities, field personnel be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event that field personnel encounter buried cultural materials, work in the immediate vicinity of the find shall cease and a qualified archaeologist shall be retained to assess the

significance of the find. The qualified archaeologist shall have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any cultural resources present meet eligibility requirements for listing on the California Register or the National Register, plans for the treatment, evaluation, and mitigation of impacts to the find would be developed. Prehistoric or historic cultural materials that may be encountered during ground-disturbing activities include:

- Historic artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- Historic structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;
- Prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- Groundstone artifacts, including mortars, pestles, and grinding slabs; and
- Dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks.

Compliance with Mitigation Measure CUL-1 would ensure that potential impacts to currently unknown and undiscovered historical and/or archaeological resources would be reduced to less than significant.

Mitigation Measures:

CUL-1 Prior to the initiation of ground-disturbing activities, field personnel shall be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event potential historical or archeological resources are unearthed during excavation and grading activities associated with project development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery, notify the City's Development Services Director, and, with direction from the City's Development Services Director, shall retain a qualified archaeologist to evaluate the significance of the find and recommend an appropriate course of action.

If evidence of subsurface tribal cultural resources is found, the archaeologist shall contact the Native American Heritage Commission to determine the appropriate Native American monitor for the find. The archaeologist and Native American Monitor shall collect the resource and prepare a technical report describing the results of the investigation. The test-level report shall evaluate the site including discussion of significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates.

Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. Work within the area of discovery shall resume only after the resource has been appropriately mitigated.

Level of Significance: Less Than Significant With Mitigation Incorporated.

PALEONTOLOGICAL RESOURCES

CUL -2 *Project implementation would not cause a substantial adverse change in the significance of a paleontological resource.*

Impact Analysis: As stated above, no vertebrate fossil localities have been identified within the project site and surface deposits within the site frequently do not contain significant vertebrate fossils in the uppermost layers. However, vertebrate fossils from the same surface deposits have been identified within the northern portion of the City at approximately three and four feet below the surface. Thus, deeper excavations that extend down into older deposits, could potentially uncover significant fossil vertebrate remains. Mitigation Measure CUL-2 requires that prior to the initiation of any substantial excavation below the uppermost layers, field personnel be alerted to the possibility of fossil remains. In the event that field personnel encounter fossil remains, work in the immediate vicinity of the find should cease and a qualified paleontologist should be retained to properly recover any fossil remains. Sediment samples would also be collected from the finer-grained deposits in the project site and processed to determine their small fossil potential. Any fossils recovered would be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. Compliance with Mitigation Measure CUL-2 would ensure that potential impacts to paleontological resources would be reduced to less than significant.

Any substantial excavations in the project site below the uppermost layers would be monitored to quickly and professionally recover any fossil remains discovered while not impeding development. Sediment samples should also be collected from the finer-grained deposits in the proposed project area and processed to determine their small fossil potential. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

Mitigation Measures:

CUL-2 Prior to the initiation of any substantial excavation below the uppermost layers, field personnel shall be alerted to the possibility of fossil remains. In the event fossil remains are encountered during excavation activities associated with project development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery, notify the City's Development Services Director, and, with direction from the City's Development Services Director, shall retain a qualified paleontologist to evaluate the significance of the find and recommend an appropriate course of action. Any fossils recovered shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. Work within the area of discovery shall resume only after the resource has been appropriately mitigated.

Level of Significance: Less Than Significant With Mitigation Incorporated.

HUMAN REMAINS

CUL-3 *Project implementation would not disturb any human remains, including those interred outside of formal cemeteries.*

Impact Analysis: No conditions exist that suggest human remains are likely to be found within the project site. Avanti West is located adjacent to the Good Shepherd Cemetery; however, the project site has never been associated with cemetery operations. In the event human remains are encountered during site disturbance, compliance with the State of California Public Resources Health and Safety Code Sections 7050.5 through 7055 would be required. These sections describe the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the NAHC and consultation with the individual identified by the NAHC to be the “most likely descendant.” If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overly adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, potential impacts to human remains would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

TRIBAL CULTURAL RESOURCES

CUL-4 *Project implementation would not cause a significant impact to a tribal cultural resource.*

Impact Analysis: Pursuant to the AB 52 consultation process, the City of Lancaster initiated the tribal consultation process for the proposed project on March 10, 2017. Correspondence was sent to the following tribes: Kern Valley Indian Council; Gabrieleno Band of Mission Indians – Kizh Nation; San Fernando Band of Mission Indians; Serrano Nation of Mission Indians; San Manuel Band of Mission Indians; Tabatulabals of Kern Valley; Fernandeno Tataviam Band of Mission Indians; Morongo Band of Mission Indians; and Colorado River Indian Tribe. As part of this process, the City provided the opportunity for the Tribes to consult with the City regarding the proposed project. As stated above, the City received one request for consultation from the San Manuel Band of Mission Indians.

Based on the Cultural Resources Assessment and the responses from the Native American tribes as part of the cultural resources report, the City has determined that no significant tribal cultural resources are known to exist on the project site. However, as discussed above, the San Manuel Band of Mission Indians has requested consultation to address potential concerns. The City and/or the applicant shall meet with the tribe to identify any concerns and work to satisfactorily address these concerns consistent with SB 18 and AB 52. The specific details shall be included as part of the conditions of approval for the project. The City of Lancaster has complied with AB 52 in regard to Native American Consultation. Although no tribal cultural resources are known to be present within the project site, there is the potential for unknown

resources to be discovered on-site during site disturbance activities associated with project implementation. Future development would be subject to compliance with Mitigation Measure CUL-1, which outlines the procedural requirements, in the event resources are unearthed during excavation and grading activities. Thus, impacts would be less than significant in this regard.

Mitigation Measures: Refer to Mitigation Measure CUL-1.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.4.5 CUMULATIVE IMPACTS

CULTURAL AND TRIBAL CULTURAL RESOURCES

Development anticipated by the project combined with cumulative development would not have adverse effects on cultural or tribal cultural resources.

Impact Analysis: The project site does not contain any historical structures. Further, the project site does not contain any known historical/archaeological artifacts, fossil remains, or tribal cultural resources. There is the potential for unknown resources to be discovered as part of project grading and excavation activities. With implementation of mitigation measures, impacts to unknown cultural or tribal cultural resources would be less than significant.

Due to the location of the cumulative projects and the higher sensitivity for cultural resources to occur within the undeveloped areas of Lancaster, there is the potential that unknown historical/archeological and paleontological resources could occur at one or more of the cumulative project sites. The potential destruction of unknown historical/archaeological resources associated with ground disturbance activities at the project site and cumulative project sites could be cumulatively considerable, due to the collective loss of historical/archaeological artifacts and knowledge regarding the culture of the people who lived at the respective sites. Additionally, the destruction of paleontological resources could be cumulatively considerable, as fossils provide biological information of ancient life, which would no longer be available for study.

However, individual projects would be evaluated on a project-by-project basis to determine the extent of potential impacts to historical/archeological and paleontological resources. Further, each project would be required to comply with AB 52 for the purposes of identifying potential tribal cultural resources. With adherence to State and Federal statutes, as well as project-specific mitigation measures, cumulative impacts to historical/archaeological, paleontological, and tribal cultural resources would be reduced to less than significant levels. With implementation of Mitigation Measures CUL-1 and CUL-2, the project would not cumulatively contribute to substantial historical/archaeological and paleontological resource impacts. A less than significant impact would occur in this regard.

Mitigation Measures: Refer to Mitigation Measure CUL-1 and CUL-2.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.4.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts to cultural and tribal cultural resources associated with project implementation would be less than significant with incorporation of the mitigation measures. No significant unavoidable impacts to cultural or tribal cultural resources would occur.

Section 5.5

Geology and Soils

5.5 GEOLOGY AND SOILS

This section evaluates the geologic and seismic conditions within the City of Lancaster and evaluates the potential for geologic hazard impacts associated with implementation of the proposed project. Information in this section is based on the *Preliminary Geotechnical Investigation Report for Royal Investors Group, LLC Avanti South Project in the Vicinity of Ave. K-8 and 70th St. West, Lancaster, Los Angeles County, California* (Geotechnical Investigation) prepared by Bruin Geotechnical Services, Inc., (February 24, 2016) and included in [Appendix D, Geotechnical Investigation](#).

5.5.1 ENVIRONMENTAL SETTING

METHODOLOGY

In order to identify existing geologic and soil conditions and assess potential impacts associated with development of the proposed project, Bruin Geotechnical Services, Inc. (Bruin) conducted a Geotechnical Investigation. The scope of the investigation included background review, site reconnaissance, subsurface exploration program including soil borings, laboratory tests, seismic hazards assessment and geotechnical analysis; refer to [Appendix D](#).

SITE DESCRIPTION AND TOPOGRAPHY

The project site is located in the Mojave Desert region of the Antelope Valley and comprises a gently sloping property situated at an elevation of approximately 2,400 feet above mean sea level (amsl). Formerly used for agricultural purposes, the project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The site topography is relatively flat and level with a general slope down to the north/northeast. Two drainages are located within Avanti South, including one within the center of the site and one along the eastern boundary. Along the southeastern boundary of Avanti West, a portion of a drainage pond and channel are located within the project site. The remainder of the pond and channel, along with another pond are located adjacent to the project site within the boundaries of the Good Shepherd Cemetery.

LOCAL GEOLOGY AND SUBSURFACE SOIL CONDITIONS

The project site is underlain by alluvial deposits associated with deposition of sediments in the Antelope Valley. Regional geologic mapping indicates that the alluvial deposits underlying the project area consist primarily of sand, silt, and gravel sediments. California Geological Survey (CGS) maps indicate that the alluvial deposits are of late-Pleistocene age, are unconsolidated, uplifted, and slightly dissected. These coarse materials are further described as having moderately developed soils with distinct soil horizons and clay accumulations. According to the Geotechnical Investigation, the subgrade soils encountered in the on-site borings were generally comprised of fine- to coarse-grained sand and silty sand with varying amounts of gravel and minor amounts of clay.

GROUNDWATER

According to the City of Lancaster's General Plan 2030, the site is located within the Antelope Valley Groundwater Basin. The general plan reports the depth to groundwater at 100 feet or more below the ground surface in the general site vicinity. The historic high groundwater level in the immediate site

vicinity indicate that groundwater levels at the site are more than 100 feet below ground surface (bgs). Groundwater was not encountered in the borings (advanced to depths of up to approximately 30 feet) conducted as part of the Geotechnical Investigation.

GEOLOGIC HAZARDS

Faulting and Seismicity

According to the CGS, a fault is defined as a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. Most faults are the result of repeated displacements over a long period of time. An inactive fault is a fault that has not experienced earthquake activity within the last three million years. In comparison, an active fault is one that has experienced earthquake activity in the past 11,000 years. A fault that has moved within the last two to three million years, but has not been proven by direct evidence to have moved within the last 11,000 years, is considered potentially active.

The Alquist-Priolo Earthquake Fault Zoning Act, Public Resources Code Sections 2621-2624, Division 2, Chapter 7.5 regulates development near active faults in order to mitigate the hazard of surface fault-rupture. Under the Act, the State Geologist is required to delineate "special study zones" along known active faults in California. The Act also requires that, prior to approval of a project, a geologic study be conducted to define and delineate any hazards from surface rupture. A geologist registered by the State of California, within or retained by the lead agency for the project, must prepare this geologic report. A 50-foot setback from any known trace of an active fault is required.

The project site is not located within the Alquist-Priolo special study zone, and no known active faults are shown on current geologic maps for the site. The San Andreas Fault zone is the largest active fault rift zone, which is several miles wide, and passes through the Antelope Valley, extending from the Gulf of Mexico through the western portion of the State of California to a point at Cape Mendocino in northern California. Seismic studies show a major break along the San Andreas Fault could be responsible for an event of approximately 8.4 on the Richter scale. The active San Andreas Fault Zone is located approximately 4.0 miles southwest of the site. Given the proximity of the project site to these and numerous other active and potentially active faults, the project site would likely be subject to earthquake ground motions in the future.

Seismic-Induced Landslides

The project site is not located within an area mapped as having the potential for seismic-induced landsliding, as shown in the Earthquake Zones of Required Investigation Map for the Del Sur and Lancaster West Quadrangles.

Liquefaction, Seismic Settlement, and Lateral Spreading

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction more often occurs in earthquake-prone areas underlain by young (i.e., Holocene age) alluvium where the groundwater table is higher than 50 feet below ground surface.

The project site is not located in an area designated as potentially liquefiable by the State of California. Based on the relative density of the subsurface soils and depth to groundwater (more than 100 feet), the Geotechnical Investigation concluded that the project site is not subject to liquefaction.

Potential hazards associated with liquefaction include lateral spreading and slow slides, foundation bearing failure, and ground surface settlement. As stated above, the upper 50 feet of the native soils are not likely to liquefy. Thus, the Geotechnical Investigation concluded that the project site would not be subject to these hazards.

Differential Settlement

Differential soil settlement occurs when supporting soils are not uniform in density or classification and seismic shaking causes one type of soil to settle more than the other. When unaccounted for in design, such settlement can result in damage to structures, pavement and subsurface utilities. Based on the subsurface data obtained during the Geotechnical Investigation, the on-site soils are relatively uniform, consisting of predominantly medium dense soils that would not be prone to differential settlement under earthquake loading conditions.

Subsidence

Subsidence is characterized as a sinking of the ground surface relative to surrounding areas, and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Historic subsidence has not been reported in the project vicinity.

Compressible/Collapsible Soils

Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. Consolidation testing performed as part of the Geotechnical Investigation indicated that soils in the upper one to five feet at the project site possess a potential for hydro-collapse.

Soil Expansion

Expansive soils are clay-rich soils that can undergo a significant increase in volume with increased water content and a significant decrease in volume with a decrease in water content. Significant changes in moisture content within moderately to highly expansive soil can produce cracking differential heave, and other adverse impacts to structures constructed on these soils. Regional geologic maps and the exploratory borings conducted during the Geotechnical Investigation indicate that sandy soils, which are generally low in expansion potential, are present at the project site. Laboratory testing indicated that the soils encountered at the boring locations were sandy and non-expansive. Accordingly, expansive soils are not anticipated to be present at the project site.

Soil Erosion

Soil erosion is most prevalent in unconsolidated alluvium and surficial soils, which are prone to downcutting, sheetflow, and slumping and bank failure during and after heavy rainstorms. Strong wind

forces can also produce varying amounts of soil erosion of unconsolidated surficial soils. The project site is relatively flat and does not possess conditions necessarily conducive to soil erosion.

5.5.2 REGULATORY SETTING

FEDERAL

Federal Soil Protection Act

The purpose of the Federal Soil Protection Act is to protect or restore the functions of the soil on a permanent sustainable basis. Protection and restoration activities include prevention of harmful soil changes, rehabilitation of the soil of contaminated sites and of water contaminated by such sites, and precautions against negative soil impacts. If impacts are made on the soil, disruptions of its natural functions as an archive of natural and cultural history shall be avoided, as far as practicable. In addition, the requirements of the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) through the National Pollution Discharge Elimination System (NPDES) provide guidance for protection of geologic and soil resources.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on top of the traces of active faults. Although the Act addresses the hazards associated with surface fault rupture, it does not address other earthquake-related hazards, such as seismically induced ground shaking or landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to publish appropriate maps that depict these zones. The maps are then distributed to all affected cities, counties, and State agencies for their use in planning and controlling development.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses earthquake hazards other than surface fault rupture, including liquefaction and seismically induced landslides. Seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. The CGS prepares and provides local governments with seismic hazard zones maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. The seismic hazard zones are referred to as “zones of required investigation” because site-specific geological investigations are required for construction projects located within these areas. Before a project can be permitted, a geologic investigation, evaluation, and written report must be prepared by a licensed geologist to demonstrate that proposed buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy must be set back from the fault (generally 50 feet). In addition, sellers (and their agents) of real property within a mapped Seismic Hazard Zone must disclose that the property lies within such a zone at the time of sale.

California Building Code

California building standards are published in the California Code of Regulations, Title 24, known as the California Building Code (CBC). The 2016 CBC applies to all applications for building permits. The 2016 CBC contains administrative regulations for the California Building Standards Commission and for all State agencies that implement or enforce building standards. Local agencies must ensure that development complies with the guidelines contained in the 2016 CBC. Cities and counties have the ability to adopt additional building standards beyond the 2016 CBC.

LOCAL

Lancaster General Plan

The primary goal of the City of Lancaster General Plan Public Health and Safety is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The Public Health and Safety Element specifically addresses geology and seismicity, flooding and drainage, noise, air installation land use compatibility, hazardous materials, crime prevention and protection services, fire prevention and suppression services, disaster preparedness, and emergency medical facilities. The type and location of hazards are identified, as well as policies and programs to minimize impacts. Additionally, the Plan for the Natural Environment evaluates the natural and human-induced environments within the City. Policies and actions pertaining to soils are included in this element. The following policies and specific actions are applicable to the proposed project:

- Policy 3.5.2 Since certain soils in the Lancaster study area have exhibited shrink-swell behavior and a potential for fissuring, and subsidence may exist in other areas, minimize the potential for damage resulting from the occurrence of soils movement.
- Action 3.5.2(a) As part of the environmental review process, require the applicant to prepare geotechnical/soils studies evaluating the shrink-swell potential of soils and the potential for fissuring or subsidence. If necessary, require implementation of appropriate mitigation measures.
- Policy 4.1.1 Manage potential seismic hazards resulting from fault rupture and strong ground motion to facilitate rapid physical and economic recovery following an earthquake through the identification and recognition of potentially hazardous conditions and implementation of effective standards for seismic design of structures.
- Action 4.1.1(b) Require that all new developments comply with the most recent California Building Code seismic design standards and such other supplemental design criteria.
- Action 4.1.1(c) Implement the provisions of Title 24 of the State Building Code pertaining to siting, seismic design, and review of Critical, Sensitive, and High-Occupancy structures.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.08, Building Code, is the presiding building code that applies in the City of Lancaster for purposes of regulating the erection, construction, enlargement, alteration, repair,

moving, removal, demolition, conversions, occupancy, height, area maintenance of all structures and certain equipment therein. The Building Code also provides penalties for violations.

Section 15.08.010, California Building Code provisions adopted by reference, adopts by reference volumes 1 and 2 of the 2016 California Building Code, including Appendix C; Appendix F; Appendix G; Appendix H; Appendix I; and Appendix J; incorporating by adoption the 2015 edition of the International Building Code with necessary California amendments, all published by the International Conference of Building Officials, as the Lancaster Building Code.

Municipal Code Section 8.16.030, Disturbing Surface of Land or Causing Wind Erosion Prohibited, prohibits the disturbance of land, depositing of soil on land, or any act that contributes to dust erosion or wind erosion of the land. Further, no person should cause or aggravate an existing dust or wind erosion condition.

5.5.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, geology and soils resources impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; refer to Section 8.0, *Effects Found Not To Be Significant*.
 - Strong seismic ground shaking.
 - Seismic-related ground failure, including liquefaction.
 - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2004), creating substantial risks to life or property; refer to Section 8.0, *Effects Found Not To Be Significant*; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; refer to Section 8.0, *Effects Found Not To Be Significant*.

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.5.4 IMPACTS AND MITIGATION MEASURES

STRONG SEISMIC GROUND SHAKING

GEO -1 *Project implementation may expose people or structures to potential substantial adverse effects due to strong seismic ground shaking and seismic-related ground failure, including liquefaction and landslides.*

Impact Analysis: The project site is currently vacant. Project implementation would result in development of the site with a mix of residential, commercial, open space/parks, school, and fire station uses.

STRONG GROUND SHAKING

Given the highly seismic character of the southern California region and proximity to active and potentially active faults, the project site would likely be subject to significant earthquake ground motion. Thus, potential impacts associated with strong seismic ground shaking at the project site are considered significant. The intensity of ground shaking within the project area would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the project area.

According to the Geotechnical Investigation, the proposed project is feasible from a geotechnical standpoint, provided that grading and construction are performed in compliance with the recommendations identified in the Geotechnical Investigation. In addition to compliance with the Geotechnical Investigation, the project would be required to comply with Lancaster Municipal Code Title 15, Chapter 15.08, *Building Code*, which would reduce the potential for risk of loss during a strong seismic ground shaking event.

Implementation of Mitigation Measure GEO-1 requires the project comply with the recommendations of the project Geotechnical Investigation, including any updates, to address seismic parameters and project-specific conditions. Potential adverse effects to people and new structures from strong, seismically-induced, vibratory ground motion would be sufficiently mitigated through proper seismic design, conformance with the Lancaster Municipal Code Title 15, Chapter 15.08, *Building Code*, and Mitigation Measure GEO-1. Potential adverse effects to people and new structures involving strong, seismically-induced, vibratory ground motion would be reduced to less than significant levels.

Seismic-Related Ground Failure

The project site is not located in an area designated as potentially liquefiable by the State. Based on the relative density of the subsurface soils and depth to groundwater (more than 100 feet), the Geotechnical Investigation concluded that the project site was not susceptible to liquefaction and liquefaction-related

seismic hazards. The project would be designed and constructed in accordance with the latest applicable seismic safety guidelines in accordance with the Municipal Code Chapter 15.08 and would be required to comply with the Geotechnical Investigation recommendations (GEO-1). As such, implementation of the project would result in a less than significant impact associated with seismic-related ground failure, including liquefaction.

LANDSLIDES

As stated above, the project site is not located within an area mapped by the State as having the potential for seismic-induced landsliding. The project site is relatively flat and the potential for landslides impacting the site is remote. Further, the project would not result in the creation of any new slopes onsite. Thus, no impact would occur in this regard.

Mitigation Measures:

GEO-1 All grading and construction activities shall be conducted in conformance with the recommendations included in the geotechnical investigation for the proposed project prepared by Bruin Geotechnical Services, Inc., titled, *Preliminary Geotechnical Investigation Report for Royal Investors Group, LLC Avanti South Project in the Vicinity of Ave. K-8 and 70th St. West, Lancaster, Los Angeles County, California* (February 24, 2016), included in Appendix D of this EIR. Design, grading, and construction shall be performed in accordance with the requirements of the City of Lancaster Building Code and the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the City of Lancaster Building Official or designee prior to commencement of grading activities.

Level of Significance: Less Than Significant With Mitigation Incorporated.

SOIL EROSION

GEO-2 *Project implementation would not result in substantial soil erosion or the loss of topsoil.*

Impact Analysis: The project site is currently disturbed, vacant land, dominated by non-native vegetation and bare land. Grading and earthwork activities associated with project construction activities would expose soils to potential short-term erosion by wind and water. The project would be required to comply with all requirements set forth in the National Pollutant Discharge Elimination System (NPDES) permit for construction activities, as enforced by the Lahontan Regional Water Quality Control Board (RWQCB) in order to prevent construction pollutants from impacting receiving waters, including implementation of typical Best Management Practices (BMPs) identified in the Storm Water Pollution Prevention Plan (SWPPP); refer to Section 5.8, Hydrology and Water Quality. Additionally, erosion and loss of topsoil as a result of wind (fugitive dust) would be minimized with implementation of Mitigation Measure AQ-1 and compliance with Lancaster Municipal Code Section 8.16.030; refer to Section 5.2, Air Quality. With implementation of Mitigation Measure AQ-1 and compliance with NPDES requirements and the Lancaster Municipal Code, erosion is not expected to be a significant impact to development and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

UNSTABLE GEOLOGIC UNITS

GEO-3 *Development of the proposed project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.*

Impact Analysis: The project site is relatively flat and there are no documented landslides within or adjacent to the project area. Potential hazards associated with liquefaction include lateral spreading and slow slides, foundation bearing failure, and ground surface settlement. The Geotechnical Investigation concluded that the project site would not be subject to these hazards. Further, historic subsidence has not been reported in the project vicinity.

According to the Geotechnical Investigation, soils in the upper one to five feet at the project site possess a potential for hydro-collapse. The Geotechnical Investigation recommends excavation and re-compaction to a depth of approximately five feet as part of the site development to mitigate the collapsible soil condition, with placement of two feet or more of compacted fill under proposed building foundations. Mitigation Measure GEO-1 requires the proposed project to comply with the recommendations of the project Geotechnical Investigation. Further, the project would be required to adhere to CBC standards in compliance with the Lancaster Municipal Code. Thus, with implementation of Mitigation Measure GEO-1 and compliance with the Lancaster Municipal Code, potential impacts associated with an unstable geologic unit would be reduced to less than significant.

Refer to Impact Statement GEO-1 regarding seismically-induced hazards.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.5.5 CUMULATIVE IMPACTS

GEOLOGY AND SOILS

Development anticipated by the project combined with other related cumulative projects, may expose people or structures to impacts associated with geology and soils.

Impact Analysis: Due to the location and proximity of the project and cumulative projects sites, it is anticipated that the project site and cumulative projects sites would generally experience similar ground shaking associated with seismic activity. However, development of the proposed project and cumulative projects would be required to comply with the Lancaster Municipal Code and any site-specific geotechnical requirements in order to reduce potential impacts associated with strong seismic ground shaking. The proposed project would result in a less than significant impact due to strong seismic ground shaking with implementation of recommended mitigation and compliance with the Lancaster Municipal Code. Therefore, the project would not contribute to cumulative impacts and impacts in this regard are not cumulatively considerable.

Portions of the City and surrounding areas may contain soils that have erosion potential. Construction of the cumulative projects could facilitate soil erosion and loss of topsoil. Grading activities leave soils exposed to rainfall and wind conditions that result in erosion. The geotechnical characteristics of each cumulative project site would be evaluated on a project-by-project basis, and appropriate mitigation measures would be required, as necessary, in addition to Federal and State requirements for mitigating erosion. Therefore, as the cumulative projects are required to implement project specific mitigation measures, cumulative soil erosion and loss of topsoil impacts would be less than significant.

The short-term effects of soil erosion during rough grading are not considered significant, given that the project site is essentially flat and would be required to comply with all requirements set forth in the NPDES permit for construction activities, as enforced by the Lahontan RWQCB. Additionally, erosion and loss of topsoil as a result of wind (fugitive dust) would be minimized with implementation of Mitigation Measure AQ-1. Thus, the project would not contribute to cumulative impacts and impacts would not be cumulatively considerable.

The project site is not located on a geologic unit that is unstable; however, soils in the upper one to five feet at the project site possess a potential for hydro-collapse. The geotechnical characteristics of each cumulative project site would be evaluated on a project-by-project basis, and appropriate mitigation measures would be required, as necessary to reduce potential impacts to a less than significant level. The proposed project would be required to conform to applicable City criteria, adhere to standard engineering practices, and incorporate standard practices of the CBC. Additionally, Mitigation Measure GEO-1 would require the project to incorporate all engineering recommendations contained within the Geotechnical Investigation to reduce impacts associated with the project site's geologic and soil conditions. Therefore, the project would not contribute to cumulative impacts and impacts would not be cumulatively considerable.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts associated with the project site's geology and soils would be less than significant with incorporation of the identified mitigation measures. No significant unavoidable impacts associated with geology and soils would occur.

Section 5.6

Greenhouse Gas Emissions

5.6 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the proposed project and analyzes project compliance with applicable regulations. Consideration of the project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is included in this section. Information in this section is based on the *Revised Air Quality and Greenhouse Gas Emissions Impact Analysis for Avant South Housing Development* (Air Quality and Greenhouse Gas Assessment) prepared by MS Hatch Consulting, Inc., (August 15, 2017) and included in [Appendix C, Air Quality/Greenhouse Gas Emissions Data](#).

5.6.1 ENVIRONMENTAL SETTING

SCOPE OF ANALYSIS FOR CLIMATE CHANGE

The study area for climate change and the analysis of GHG emissions is broad as climate change is influenced by world-wide emissions and their global effects. However, the study area is also limited by the CEQA Guidelines [Section 15064(d)], which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact which may be caused by the project.

The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from human activities that have grown more than 70 percent between 1970 and 2004. The State of California is leading the nation in managing GHG emissions. Accordingly, the impact analysis for this project relies on guidelines, analyses, policy, and plans for reducing GHG emissions established by the California Air Resources Board (CARB).

This analysis also cites and relies on local air quality management district recommendations from the Antelope Valley Air Quality Management District (AVAQMD) for CEQA assessments of GHG emissions.

GLOBAL CLIMATE CHANGE – GREENHOUSE GASES

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."¹ The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short wave radiation emitted by the Sun is absorbed by the Earth; the Earth then emits a portion of this absorbed energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit it into space and back toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO₂). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation. Typical GHGs include the following:²

¹ The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

² All Global Warming Potentials are given as 100 year GWP. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change.

- Water Vapor (H_2O). Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- Carbon Dioxide (CO_2). Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO_2 emissions from fossil fuel combustion increased by 3.4 percent between 1990 and 2015.³ Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.
- Methane (CH_4). Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 25.
- Nitrous Oxide (N_2O). Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 298.
- Hydrofluorocarbons (HFCs). HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing⁴ is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 124 for HFC-152a to 14,800 for HFC-23.⁵
- Perfluorocarbons (PFCs). PFCs are compounds produced as a by-product of various industrial processes associated with aluminum production and the manufacturing of semiconductors. Like HFCs, PFCs generally have long atmospheric lifetimes and high Global Warming Potentials ranging between approximately 7,390 and 10,300.⁶
- Sulfur hexafluoride (SF_6). Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 22,800. However, its global warming contribution is not as high as the GWP

³ U.S. Environmental Protection Agency, *Draft Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2015*, April 2017.

⁴ Foam blowing refers to foam expansion agents (i.e., spray foam) typically used in building insulation.

⁵ Intergovernmental Panel on Climate Change, *Climate Change 2007: Working Group I: The Physical Science Basis, 2.10.2, Direct Global Warming Potentials*, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed on July 5, 2017.

⁶ Ibid.

would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).⁷

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O₃) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- Hydrochlorofluorocarbons (HCFCs). HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The GWPs of HCFCs range from 77 for HCFC-123 to 2,310 for HCFC-142b.⁸
- 1,1,1 trichloroethane. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 160 times that of carbon dioxide.⁹
- Chlorofluorocarbons (CFCs). CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency's (EPA) Final Rule (57 FR 3374) for the phase out of O₃ depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with GWPs ranging from 4,750 for CFC 11 to 14,400 for CFC 13.¹⁰

5.6.2 REGULATORY SETTING

FEDERAL

The Federal government is extensively engaged in international climate change activities in areas such as science, mitigation, and environmental monitoring. The EPA actively participates in multilateral and bilateral activities by establishing partnerships and providing leadership and technical expertise. Multilaterally, the United States is a strong supporter of activities under the United Nations Framework Convention on Climate Change (UNFCCC) and the IPCC.

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus around the evidence that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

In December 2007, Congress passed the first increase in corporate average fleet fuel economy (CAFE) standards. The new CAFE standards represent an increase to 35 miles per gallon (mpg) by 2020. In March 2009, the Obama Administration announced that for the 2011 model year, the standard for cars will be 30.2 mpg; and standard for trucks would be 24.1 mpg. Additionally, in May 2009 President Barack Obama announced plans for a national fuel-economy and GHG emissions standard that would significantly increase mileage requirements for cars and trucks by 2016. The new requirements represent an average standard of 39 mpg for cars and 30 mpg for trucks by 2016.

Currently, the EPA is moving forward with two key climate change regulatory proposals, one to establish a mandatory GHG reporting system and one to address the 2007 Supreme Court decision in *Massachusetts v. EPA* (Supreme Court Case 05-1120) regarding the EPA's obligation to make an endangerment finding under Section 202(a) of the FCAA with respect to GHGs. *Massachusetts v. EPA* was argued before the United States Supreme Court on November 29, 2006. Under the FCAA, the EPA is now obligated to issue rules regulating global warming pollution from all major sources. In April 2009, the EPA concluded that GHGs are a danger to public health and welfare, establishing the basis for GHG regulation.

STATE

Various statewide and local initiatives to reduce the State's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order (EO) S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. EO S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006 which proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-13-08. EO S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08. EO S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, EO S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. EO S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. EO S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon Senate Bill (SB) 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. The First Update to the Assembly Bill (AB) 32 Climate Change Scoping Plan (First Update) was adopted by the CARB in 2014 and defined the State's climate change priorities for the next five years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012. The First Update recommended the need for a 2030 mid-term GHG target to establish a continuum of action to reduce emissions. In April 2015, Governor Brown issued EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. To develop a clear plan of action to achieve the State's goals, the EO called on CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. In Summer 2016, the Legislature affirmed the importance of addressing climate change through passage of Senate Bill 32 (Pavley, Chapter 249, Statutes of 2016), which codified into statute the target of 40 percent below 1990 levels by 2030 contained in the Governor's EO.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger

vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.”

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council (GCJC) under the California Workforce Investment Board (CWIB). The GCJC will develop a comprehensive approach to address California’s emerging workforce needs associated with the emerging green economy. This bill will ignite the development of job training programs in the clean and green technology sectors.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor’s Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in CEQA Guidelines Section 15064.7 that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO’s SCS or APS for consistency with its assigned targets.

Senate Bills 1078 and 107. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

Senate Bill 32 (SB 32). Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies that California will implement to reduce CO₂eq¹¹ emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MT CO₂eq under a business-as-usual (BAU)¹² scenario. This is a reduction of 42 million MT CO₂eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32. On February 10, 2014, CARB released the draft proposed first update. The appendices to the report, including the environmental analysis will be released at a later date. In January 2017, CARB issued the proposed 2017 Scoping Plan update to reflect the 2030 target set by EO B-30-15 and codified by SB 32. The draft Scoping Plan was developed with input by the Environmental Justice Advisory Committee (EJAC) and other stakeholders. The update to the AB 32 Climate Change Scoping Plan

¹¹ Carbon Dioxide Equivalent (CO₂eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

¹² "Business-as-Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

to reflect the 2030 target (2030 Target Scoping Plan) will serve as the framework to define the State's climate change priorities for the next 14 years and beyond.

LOCAL

City of Lancaster Climate Action Plan

The City of Lancaster adopted their Climate Action Plan (CAP) in March 2017. The CAP documents the City's GHG emissions inventories and the progress the City has made through its alternative energy and sustainability programs. The CAP also identifies projects that would enhance the City's ability to further reduce GHG emissions. A focused working group made up of City staff worked to develop projects which would enhance the community, improve government operations, and ultimately reduce GHG emissions. A total of 61 projects across eight sectors were identified: traffic, energy, municipal operations, water, waste, built environment, community, and land use. Additionally, the CAP evaluates four different future scenarios and the proposed measures were quantified for each scenario based upon the project descriptions, action items, and indicators. These scenarios all assume that Lancaster Choice Energy (LCE) has a different amount of alternative energy in their portfolio by 2050. These scenarios all result in varying amounts of GHG reductions. Under all scenarios, the City meets the 2020 target by a wide margin and makes substantial progress towards achieving the post-2020 reduction targets.

5.6.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance.

Lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change (CEQA Guidelines Section 15064.7(c)). CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects.

ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

According to the *AVAQMD California Environmental Quality Act and Federal Conformity Guidelines*, the annual emissions threshold for GHG emissions is 100,000 metric tons of CO₂ equivalent per year (MTCO₂eq/yr). A project is considered significant if it triggers or exceeds this annual threshold.

CEQA SIGNIFICANCE CRITERIA

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, GHG impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.6.4 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS

GHG -1 *Greenhouse gas emissions generated by the project could have a significant impact on global climate change.*

Impact Analysis:

DIRECT PROJECT-RELATED GREENHOUSE GAS EMISSIONS

Implementation of the Specific Plan is expected to result in increased GHG emissions, largely due to increased vehicle miles traveled (VMT), as well as from construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with future developments include CO₂, N₂O, and CH₄.

Direct project-related GHG emissions typically include emissions from construction and operational activities. Construction of the project would result in direct emissions of CO₂, N₂O, and CH₄ from the operation of construction equipment. Transportation of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. Direct operational-related GHG emissions for the proposed project would include emissions from area and mobile sources. Table 5.6-1, *Project Greenhouse Gas Emissions*, presents the estimated CO₂, N₂O, and CH₄ emissions.

The California Emissions Estimator Model (CalEEMod) computer model outputs contained within Appendix C, *Air Quality/Greenhouse Gas Emissions Data*, were used to calculate mobile source, area source, and construction related GHG emissions. Operational GHG estimations are based on energy emissions from natural gas usage, electricity consumption, water demand, wastewater generation, solid waste generation, and automobile emissions. CalEEMod relies upon construction phasing and project specific land use data to calculate emissions; refer to Appendix C.

- *Construction Emissions*. As seen in Table 5.6-1, construction of the proposed project would result in approximately 36,115 MTCO₂eq from construction activities, which would result in an average of 5,159.29 MTCO₂eq/yr over the project’s approximate seven-year construction period.

- **Area Source.** Area source emissions were calculated using CalEEMod and project-specific land use data. As noted in Table 5.6-1, the proposed project would result in 862.92 MTCO₂eq/yr of area source GHG emissions.
- **Mobile Source.** The CalEEMod model relies upon trip data within the *Avanti South Mixed-Use Land Development Traffic Study*, (Traffic Impact Analysis) and project specific land use data to calculate mobile source emissions. The proposed project would result in 20,550 daily trips, which equates to approximately 21,116.19 MTCO₂eq/yr of mobile source-generated GHG emissions; refer to Table 5.6-1.

**Table 5.6-1
Project Greenhouse Gas Emissions**

Source	CO ₂	CH ₄		N ₂ O		Total Metric Tons of CO ₂ eq ³
	Metric Tons/year ¹	Metric Tons/year ¹	Metric Tons of CO ₂ eq ²	Metric Tons/year ¹	Metric Tons of CO ₂ eq ²	
PROPOSED GHG EMISSIONS						
Direct Emissions						
• Construction	36,038	2.96	74.10	0.00	0.00	36,115
• Area Source	855.86	0.04	1.00	0.02	6.00	862.92
• Mobile Source	21,097.16	0.73	18.30	0.00	0.00	21,116.19
<i>Total Unmitigated Direct Emissions³</i>	23,154.29	0.87	21.80	0.02	6.00	58,094
Indirect Emissions						
• Energy	6,834.24	0.23	5.80	0.08	23.80	6,864.15
• Solid Waste	477.29	28.21	705.00	0.00	0.00	1,210.50
• Water Demand	1,032.60	4.43	111.00	0.11	32.80	1,180.94
<i>Total Unmitigated Indirect Emissions³</i>	8,344.13	32.87	821.80	0.19	56.60	9,255.59
Total Project-Related Emissions³	67,349.76 MTCO₂eq/year					
Notes:						
1. Emissions calculated using the CalEEMod computer model; refer to the Air Quality and Greenhouse Gas Assessment in <u>Appendix C</u> .						
2. Carbon dioxide equivalent values calculated using the EPA Website, <i>Greenhouse Gas Equivalencies Calculator</i> , https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator , accessed July 2017.						
3. Totals may be slightly off due to rounding.						
Refer to <u>Appendix C, Air Quality/Greenhouse Gas Emissions Data</u> , for detailed model input/output data.						

INDIRECT PROJECT-RELATED GREENHOUSE GAS EMISSIONS

- **Energy Consumption.** Energy consumption emissions were calculated using the CalEEMod model and project-specific land use data. Electricity would be provided to the project site via Southern California Edison. The project would indirectly result in 6,864.15 MTCO₂eq/yr of GHG emissions due to energy consumption; refer to Table 5.6-1.
- **Solid Waste.** GHG emissions from solid waste associated with project operations would result in 1,210.50 MTCO₂eq/yr; refer to Table 5.6-1.
- **Water Demand.** Los Angeles County Waterworks District 40 would be the purveyor of water to the project site. GHG emissions from indirect energy consumption associated with water supply would result in 1,180.94 MTCO₂eq/yr.

Conclusion

As shown in [Table 5.6-1](#), the total amount of project-related GHG emissions from direct and indirect sources combined would total 67,349.76 MTCO₂eq/yr, which is below the 100,000 MTCO₂eq/yr AVAQM threshold. Therefore, the proposed project would result in a less than significant impact with regards to GHG emissions.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

GHG-2 *Implementation of the proposed project could conflict with an applicable greenhouse gas reduction plan, policy, or regulation.*

Impact Analysis: The City of Lancaster adopted a Climate Action Plan (CAP) in March 2017. The CAP documents the City's GHG emissions inventories and the progress the City has made through its alternative energy and sustainability programs. The CAP outlines how the City would meet the State GHG reduction targets for 2020 and make substantial progress towards achieving the post-2020 targets. Project consistency with the applicable CAP measures is analyzed in [Table 5.6-2, City of Lancaster CAP GHG Reduction Measure Consistency Analysis](#). As depicted in [Table 5.6-2](#), the proposed project would be consistent with the City's CAP.

**Table 5.6-2
City of Lancaster CAP GHG Reduction Measure Consistency Analysis**

Measure Code	Measure	Determination of Consistency
Transportation		
4.1.2a: Roundabouts	Install roundabouts at appropriate locations to ensure the efficient flow of traffic.	<u>Consistent:</u> As discussed in Section 3.0, Project Description , the Specific Plan includes a Mobility Plan which identifies the proposed vehicular circulation and street hierarchy, including proposed cross sections, to serve the development. Traffic calming measures are also proposed throughout the site including roundabouts to slow traffic and eliminate the idling time typical of signalized intersections. Thus, the project would be consistent with CAP Measure Code 4.1.2a.
4.1.2b: Bike Lanes	Installation of Class I, Class II, and Class III bike lanes to provide safe cycling facilities for residents.	<u>Consistent:</u> The Specific Plan incorporates a network of bikeways to serve the proposed project; refer to Exhibit 3-5, Circulation Plan . As discussed in Section 5.9, Land Use and Planning and Section 5.12, Traffic/Transportation , the Specific Plan would provide for a Class I Bike Lane and Equestrian Trail on the east side of 70th Street, between Avenue L and the proposed Avenue K-8 extension, consistent with the Proposed Class I (off-street) bike path identified in the <i>Lancaster Master Plan of Trails and Bikeways</i> . In addition, consistent with the <i>Lancaster Master Plan of Trails and Bikeways</i> , Class II (on-street) Bike Lanes would be provided along 75th Street West, Avenue K-8, Avenue L and 65th Street West, within and/or immediately adjacent to the project site. Thus, the project would be consistent with CAP Measure Code 4.1.2b.

Table 5.6-2 [continued]
City of Lancaster CAP GHG Reduction Measure Consistency Analysis

Measure Code	Measure	Determination of Consistency
4.1.2c: Pedestrian Amenities	Provide pedestrian amenities throughout the City to encourage walking instead of driving.	<u>Consistent</u> : The Specific Plan proposes a network of pedestrian facilities, including multi-use trails and multi-purpose pathways, to serve the proposed project; refer to <u>Exhibit 3-5</u> . Sidewalks and traffic calming measures would also be incorporated to improve pedestrian accessibility and safety throughout the project site and surrounding areas. Thus, the project would be consistent with CAP Measure Code 4.1.2c.
4.1.2e: Roadway Right Sizing	Implement road right-sizing where determined to be appropriate in order to ensure a comprehensive roadway network.	<u>Consistent</u> : The Specific Plan includes a Mobility Plan, which identifies the project's proposed network of vehicular, pedestrian, and bicycle facilities. The project's vehicular, pedestrian, and bicycle facilities would be subject to compliance with the City's design standards, including those identified in the City's <i>Master Plan of Trails and Bikeways</i> and <i>Complete Streets Master Plan</i> . Thus, the project would be consistent with CAP Measure Code 4.1.2e.
Water Introduction		
4.4.1a: Recycled Water Line Expansion	Expand the recycled water line to increase the use of recycled water at City parks, schools and major commerce centers.	<u>Consistent</u> : The Specific Plan incorporates Design Guidelines which stipulate that the project shall be irrigated with reclaimed or recycled water wherever possible. Thus, the project would be consistent with CAP Measure Code 4.4.1a.
4.4.2b: Booster Pumps/Pipe Refurbishment	Encouraging the installation of low pressure water efficient irrigation systems and pipe refurbishment programs aimed at improving water efficiency.	<u>Consistent</u> : The Specific Plan incorporates Design Guidelines which stipulate that all planting areas would be irrigated with a high efficiency automatic irrigation system. Thus, the project would be consistent with CAP Measure Code 4.4.1b.
Built Environment		
4.6.1a: Zero Net Energy Housing	Establish innovative business models encouraging the development of zero net energy housing and develop a zero net energy affordable housing project.	<u>Consistent</u> : In compliance with the City's Zero Net Energy Ordinance, the Specific Plan includes the provisions for rooftop solar, electric vehicle charging stations, and small scale wind turbines. Thus, the project would be consistent with CAP Measure Code 4.6.1a.
Community		
4.7.2d: Local Shopping/Vendor Programs	Develop or participate in programs to encourage residents to shop locally and make more environmentally conscious purchasing decisions.	<u>Consistent</u> : As indicated in <u>Table 3-1, Land Use Summary</u> , approximately 14.0 acres of Avanti South would involve commercial uses to serve the community and further the City's goal of creating new shopping opportunities to encourage residents to shop locally. Thus, the project would be consistent with CAP Measure Code 4.7.2d.

Table 5.6-2 [continued]
City of Lancaster CAP GHG Reduction Measure Consistency Analysis

Measure Code	Measure	Determination of Consistency
4.7.3a: Xeriscaping	Develop a program to provide assistance to members of the public with respect to xeriscaping their properties.	<u>Consistent</u> : The Specific Plan incorporates Design Guidelines which stipulate that turf areas are limited and are not planted on the following conditions: 1) slopes exceeding 10 percent; 2) planting areas less than four feet wide; and 3) street medians and other areas where foot traffic is not expected, among others. Additionally, use of turf would be limited to an aggregate area no greater than 25 percent of the total planted area within each parcel or lot within individual residential lots and other landscaped areas. The Specific Plan identifies a plant palette which incorporates native drought-tolerant trees, shrubs, and groundcover. Thus, the project would be consistent with CAP Measure Code 4.7.3a.
4.7.4c: Conservation Habitat Acquisition	Acquire additional conservation habitat to preserve the unique biological resources of the Antelope Valley and to offset the creation of greenhouse gases.	<u>Consistent</u> : Lancaster Municipal Code Chapter 15.66, Biological Impact Fee, establishes a fee to mitigate biological impacts on a regional basis. As discussed in <u>Section 8.0</u> , the project would be required to pay the applicable fee to mitigate regional impacts to biological resources. Payment of this fee would contribute to the acquisition of additional conservation habitat to preserve the unique biological resources of the Antelope Valley and consequently offset the creation of greenhouse gases. Thus, the project would be consistent with CAP Measure Code 4.7.3c.
Land Use		
4.8.1d: Infill Development Opportunities	Provide incentives to encourage developers to build on infill sites.	<u>Consistent</u> : The project site consists of two sites (Avanti West and Avanti South), both of which are undeveloped and located along the urban edge of the City. Although the project would affect vacant land, the land uses proposed would be consistent with surrounding existing single-family residential, school, and commercial uses, as well as large areas of undeveloped land primarily designated for future urban residential and non-urban residential uses. Thus, the project would be consistent with CAP Measure Code 4.8.1d.
Source: City of Lancaster, <i>Climate Action Plan</i> , March 2017.		

The City of Lancaster has also adopted the Zero Net Energy (ZNE) Home Ordinance. The ZNE Ordinance mandates all builders to install a solar system equal to two watts per square foot for each home built, beginning in 2017. Developers would have three options available to comply with the City's ZNE requirement: a solar component, mitigation fees in lieu of a solar component, or a combination of both. All three options are designed to benefit the homeowner and the Avanti South SP includes the provisions for rooftop solar, electric vehicle charging stations, and small scale wind turbines. Thus, the Avanti South SP would comply with the City's ZNE Ordinance.

The AVAQMD California Environmental Quality Act and Federal Conformity Guidelines have established a GHG emissions threshold of 100,000 MTCO₂eq/yr in congruence with AB 32. As discussed above, the proposed project would result in 67,349.76 MTCO₂eq/yr, which is below the AVAQMD's 100,000 MTCO₂eq/yr threshold. As such, the project would be consistent with the reductions goals set forth in AB 32 and the AVAQMD California Environmental Quality Act and Federal Conformity Guidelines. Further, the proposed project would include the construction and operation of residences, commercial buildings, a fire station, and school that would be required to comply with the most recent California Building Code (CBC). The CBC includes Title 24, Part 6 of the California Code of Regulations (California Energy Code), also known as the Energy Efficiency Standards for Residential and Nonresidential Buildings. The California Energy Code requires new construction to incorporate energy efficiency technologies and methods to reduce energy consumption throughout the State. The CALGreen Code (Title 24, Part 11) was incorporated into the CBC in 2010 to add further energy-efficiency building standards. As such, the project's energy consumption would be reduced through design features and operational programs in compliance with the CBC (including the California Energy Code and CALGreen Code) that would ensure compliance with or exceed the CBC's energy efficiency requirements, while also reducing GHG emissions. Therefore, the project would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.6.5 CUMULATIVE IMPACTS

GREENHOUSE GAS EMISSIONS AND CONSISTENCY

Greenhouse gas emissions generated by the proposed project, combined with other related cumulative projects, could have a significant impact on global climate change.

The proposed project, combined with other related cumulative projects, could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis: It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.¹³ GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.¹⁴ The additive effect of the project's GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the project, as well as other cumulative projects listed in [Table 4-1](#) would be subject to all applicable regulatory requirements (e.g., California Energy Code, CALGreen Code, etc.), which would further reduce GHG emissions. As stated above, the project would not result in a less than significant impact regarding GHG emissions, as the project would result in GHG emission totaling 67,349.76 MTCO₂eq/yr, which is below the 100,000 MTCO₂eq/yr AVAQMD threshold.

¹³ California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008.

¹⁴ Ibid.

As such, project-related GHG impacts were determined to be less than significant. Therefore, the project's cumulative GHG emissions would be considered less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.6.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts to greenhouse gas emissions associated with project implementation would be less than significant. No significant unavoidable impacts to greenhouse gas emissions would occur.

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Section 5.7

Hazards and Hazardous Materials

5.7 HAZARDS AND HAZARDOUS MATERIALS

This section identifies the potential for the proposed project to expose the public to hazards, hazardous materials, or risk of upset that may be related to existing conditions or new hazards created as a result of the project. Where significant impacts are identified, mitigation measures are provided to reduce these impacts to the extent feasible. This section is based on the *Avanti South Specific Plan Preliminary Hazardous Materials Assessment* (Preliminary Hazardous Materials Assessment), prepared by Michael Baker International (Michael Baker), dated October 3, 2016 and included in Appendix G, Preliminary Hazardous Materials Assessment.

For the purpose of this analysis, the term “hazardous material” refers to both hazardous substances and hazardous waste. A material is defined as “hazardous” if it appears on a list of hazardous materials prepared by a Federal, tribal, State, or local regulatory agency, or if it possesses characteristics defined as “hazardous” by such an agency. A “hazardous waste” is a solid waste that exhibits toxic or hazardous characteristics (i.e., ignitability, corrosivity, reactivity, and/or toxicity).

5.7.1 ENVIRONMENTAL SETTING

The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The site topography is relatively flat and level with a general slope down to the north/northeast. Two drainages are located within Avanti South, including one within the center of the site and one along the eastern boundary. Along the southeastern boundary of Avanti West, a portion of a drainage pond and channel are located within the project site. The remainder of the pond and channel, along with another pond are located adjacent to the project site within the boundaries of the Good Shepherd Cemetery.

Avanti South is surrounded by the following uses:

- North: Vacant land is located to the north.
- East: Single-family homes and vacant land are located to the east.
- South: Avenue L bounds Avanti South to the south. Vacant land, a single-family residence, and Quartz Hill High School are located further south across Avenue L.
- West: 70th Street West bounds Avanti South to the west. Vacant land and the Good Shepherd Catholic Cemetery are located to the west across 70th Street West.

Avanti West is surrounded by the following uses:

- North: Vacant land is located to the north.
- East: 70th Street West bounds Avanti West to the east. Vacant land is located further east across 70th Street West.
- South: The Good Shepherd Catholic Cemetery and vacant land are present to the south.
- West: Vacant land is located to the west.

HISTORICAL ON-SITE OPERATIONS

Based on the Preliminary Hazardous Materials Assessment, the project site was historically used for agricultural production from the 1930s until 1989. During this time, multiple structures, agricultural-related irrigation ponds, and water wells were noted on-site. It is anticipated that many of these structures were associated with on-site maintenance and storage of agricultural production equipment and materials. Other structures on-site appear to have been residential structures. By 1994, all on-site structures were demolished. Further, in 1959, an oil exploration well was dug along, and to the south of, Avenue K and to the east of 65th Street West, which is anticipated to be located on-site.

Residual Pesticide Concerns

The project site has been historically utilized for agricultural purposes (from the 1930s until the late 1980s). Therefore, a combination of several commonly-used pesticides (i.e., Dichlorodiphenyl-dichloroethane [DDD], dichlorodiphenyltrichloroethane [DDT], Dichlorodiphenyldichloroethylene [DDE]), which are now banned, may have been used throughout the project site. The historical use of agricultural pesticides may have resulted in pesticide residues of certain persistence in soil at concentrations that are considered to be hazardous based on established Federal regulatory levels. The primary concern with historical pesticide residues is human health risk from inadvertent ingestion of contaminated soil, particularly by children. The presence of moderately elevated pesticide residuals in soil presents potential health and marketplace concerns. Thus, as the project site was historically used for agricultural production, the project site may contain pesticide residues in the soil.

Historical Underground Storage Tanks

The project site appears to have historically supported on-site maintenance and storage of agricultural production equipment and materials. According to the Preliminary Hazardous Materials Assessment, although no records searched indicate an underground storage tank (UST) at the project site, one unmarked metal pipe was noted on-site during the August 24, 2016 site inspection. The primary concern with pipes that extend into the ground surface is the potential for the pipe to act as a ventilation apparatus for an UST. If any USTs remain on-site as a result of historical uses, they would present an environmental concern to soils and groundwater at the project site.

Historical Maintenance Activities

The project site appears to have historically supported on-site maintenance and storage of agricultural production equipment and materials. According to the Preliminary Hazardous Materials Assessment, although no records searched indicate handling, transport, or storage of hazardous materials or petroleum products/wastes, it is anticipated that petroleum products/wastes were used/stored in this area of the project site, which presents an environmental concern to on-site soils.

Past Oil Exploration Activities

Based on available records maintained by the Division of Oil, Gas & Geothermal Resources (DOGGR), one oil exploration well was dug by Comco to approximately 2,130 feet and fresh water was encountered. No oil or gas was noted. This exploratory well was plugged with a 30-inch plug at the surface, as witnessed by DOGGR staff. The well was left in its present condition and then transferred to the property owner, Mr. Forrest Godde, whom wished to convert it into a fresh water well in December 1959. By January 8,

1960, the property owner received a report of well abandonment stating that the requirements of DOGGR were fulfilled at this time.

Past Rural Residential Uses

Residential septic systems are possible receivers of household waste and can be the source for soil and groundwater contamination. Active and abandoned residential structures not connected to the City sewer are likely to have septic systems. The project site was previously developed with residential and agricultural uses and may have supported septic systems. Based on the Preliminary Hazardous Materials Assessment, evidence of these past structures are still visible on-site and it is unknown if these potential septic systems remain.

EXISTING ON-SITE DEBRIS PILES

The majority of the project site consists of predominantly flat, disturbed vacant land. Miscellaneous debris is present on-site (i.e., stockpiled concrete, demolition materials, stockpiled wood, and stockpiled automobile tires). According to the Preliminary Hazardous Materials Assessment, no hazardous materials, staining, or odors were noted within areas of miscellaneous debris and these miscellaneous debris piles did not appear to be associated with hazardous materials, with the exception of those piles that may be demolition debris. It is noted that these demolition debris piles may have also been illegally dumped on-site from an off-site source. Particularly, the concern with demolition debris is potential lead-based paints (LBPs) and asbestos-containing materials (ACMs) to be present in on-site debris and underlying soils.

Asbestos is a strong, incombustible, and corrosion-resistant material that was used in many commercial products beginning before the 1940s and continuing until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. ACMs are building materials containing more than one percent asbestos. According to the Preliminary Hazardous Materials Assessment, prior to demolition activities on-site, past buildings appear to have been built prior to 1978. Therefore, the potential for ACMs to be found in demolition debris piles at the project site is considered likely, which may have impacted nearby and underlying soils.

Until 1978, when the U.S. Consumer Product Safety Commission (CPSC) phased out the sale and distribution of residential paint containing lead, many homes were treated with paint containing some amount of lead. It is estimated that over 80 percent of all housing built prior to 1978 contains some lead based paints (LBP). The mere presence of lead in paint may not cause a material to be considered hazardous. In fact, if in good condition (no flaking or peeling), most intact LBP is not considered to be a hazardous material. In poor condition, LBPs can create a potential health hazard for building occupants, especially children. According to the Preliminary Hazardous Materials Assessment, prior to demolition activities on-site, previous buildings appear to have been built prior to 1978. Therefore, the potential for LBPs to be found in demolition debris piles at the project site is considered likely, which may have impacted nearby and underlying soils.

CORTESE DATABASE

Government Code Section 65962.5 requires the Department of Toxic Substances (DTSC) and the State Water Resources Control Board (SWRCB) to compile and update a regulatory sites listing (per the Code Section's criteria). Additionally, the State Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic

contaminants and are subject to water analysis pursuant to Health and Safety Code Section 116395. Government Code Section 65962.5 requires the local enforcement agency, as designated pursuant to CCR Title 14 Section 18051 to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste. According to the Preliminary Hazardous Materials Assessment, no regulatory properties are reported within the boundaries of the project site.

EMERGENCY RESPONSE

The City has a fully-equipped and maintained Emergency Operations Center located at City Hall (44933 Fern Avenue) and an alternate Emergency Operations Center located at the City Maintenance Yard at 615 West Avenue H. Activation of the center can be ordered by the City Manager, the Deputy City Manager, the Assistant to the City Manager, the Parks, Recreation and Arts Director, or the Housing and Neighborhood Services/Redevelopment Director, based on who is the acting Director of Emergency Services/Emergency Operations Center Director, or who is acting on behalf of the acting EOC Director, or an appointed representative. The City also implements a volunteer Community Emergency Response Team (CERT). The Lancaster CERT is part of the larger Antelope Valley CERT (AVCERT) that serves Lancaster, Palmdale, Quartz Hill, Lake Los Angeles, Acton, Agua Dulce, and the nearby lakes and valleys areas. Lancaster maintains a Search and Rescue Team through its CERT program, in addition to the services provided by the Los Angeles County Search & Rescue (Los Angeles County Sheriff). These volunteers assist public safety agencies in rescue activities if requested. Different branches of the Operations section have the ability to supervise search and rescue activities, based on the type of event.

Currently, the project site is comprised of vacant land. Thus, no emergency response to the project site is necessary. However, it is noted that the project site can be easily accessed via 70th Street West, Avenue L, and Avenue K-8.

AIRPORT

The nearest airport to the project site is the General William J. Fox Airfield, located approximately 4.5 miles to the north and Palmdale Regional Airport, greater than 6.5 miles to the east. The project site is not located within the airport influence areas for either airport.¹ The nearest private airstrip (Bohunk's Airpark) is located approximately 1.7-miles northwest of the project site and is no longer an active airfield.

WILDLAND FIRES

According to the California Department of Forestry and Fire Protection, the project site is not located within the vicinity of a "Very High Fire Hazard Severity Zone."² However, the Lancaster area contains various natural and man-made materials that are susceptible to damage or destruction by fire. Most of the desert scrub vegetation throughout the area has a fairly low level of combustion due to the type and spacing of plants.

The interrelationship between urban and undeveloped areas is also important in determining overall fire danger. Since the desert plant communities have fairly low combustibility, it is unlikely that a major firestorm would proceed through the valley floor and threaten urbanized areas. Some increased risk may

¹ Los Angeles County, Department of Regional Planning, Airport Land Use Commission (ALUC), *Airports and Airport Influence Areas*, dated June 2012.

² California Department of Forestry and Fire Protection, *Fire hazard Severity Zones in SRA*, adopted on November 7, 2007, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php, accessed April 25, 2016.

be found where urban or rural development is adjacent to Joshua Tree Woodlands, or during times of high wind conditions where grass has grown and dried during the hot summer temperatures.

Extreme wind conditions and wildfires have resulted in the loss of life and property in the Lancaster area. Generally, winds in the Antelope Valley are from the south and southwest with an average speed of 13 miles an hour. However, Santa Ana wind conditions are a reversal of the normal winds and occur in late summer and early fall. These warm, dry winds flow from the higher desert elevations and travel through mountain passes and canyons. As a result, wind velocities can reach 90 to 100 miles an hour in the mouths of canyons and dissipate as they spread across the valley floor. The Santa Ana winds generally coincide with dry periods, worsen already dry vegetation and make the Antelope Valley especially susceptible to fires. Once a fire has begun, these high winds aggravate existing fires, not only by spreading the fire quicker, but also by blowing hot embers to nearby locations and homes, causing spot fires.

5.7.2 REGULATORY SETTING

FEDERAL AND STATE

According to the U.S. Environmental Protection Agency (EPA), a “hazardous” waste is defined as one “which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed” (U.S. Public Health and Welfare Code Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the Federal and State levels. Compliance with Federal and State hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards, which include the following, among others:

- Resources Conservation and Recovery Act (RCRA) – hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – cleanup of contamination;
- Superfund Amendment and Reauthorization Act (SARA) – cleanup of contamination; and
- Hazardous Materials Transportation Act (HMTA) – safe transport of hazardous materials.

These laws provide the “cradle to grave” regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed of. The primary responsibility for implementing RCRA is assigned to the EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

The EPA and the Department of Toxic Substances Control (DTSC) have developed and continue to update lists of hazardous wastes subject to regulation. In addition to the EPA and DTSC, the Regional Water Quality Control Board (RWQCB), Lahonton Region (Region 6), is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. Other State agencies involved in hazardous materials management include the Office of Emergency Services, California Department of Transportation (Caltrans), California Highway Patrol (CHP), and California Department of Resources Recycling and Recovery (CalRecycle). California hazardous materials management laws include the following, among others:

- Hazardous Materials Management Act – business plan reporting;
- Hazardous Substance Act – cleanup of contamination;
- Hazardous Waste Control Act – hazardous waste management; and
- Safe Drinking Water and Toxic Enforcement Act of 1986 – releases of and exposure to carcinogenic chemicals.

Department of Toxic Substances Control

The responsibility for implementation of RCRA was given to California Environmental Protection Agency's (CalEPA's) DTSC in August 1992. The DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by EPA, are called "non-RCRA hazardous wastes."

The DTSC also regulates proposed school sites, for those schools that receive State funding for acquisition or construction. The DTSC's School Property Evaluation and Cleanup Division is responsible for assessing, investigating, and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who would occupy the new school.

School districts conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. Outreach activities integrated into the process allow a more active role for stakeholders in the selection process for school sites. Through the environmental review process, DTSC ensures protection of children, staff, and the environment from the potential effects of exposure to hazardous materials.

State Water Resources Control Board

Brownfields are underutilized properties where reuse is hindered by the actual or suspected presence of pollution or contamination. The goals of the SWRCB Brownfield Program are to:

- Expedite and facilitate site cleanups and closures for Brownfield sites to support reuse of those sites;
- Preserve open space and greenfields;
- Protect groundwater and surface water resources, safeguard public health, and promote environmental justice; and
- Streamline site assessment, clean up, monitoring, and closure requirements and procedures within the various SWRCB site cleanup programs.

Site cleanup responsibilities for brownfields primarily reside within four main programs at the SWRCB: the Underground Storage Tank Program; Site Cleanup Program; Department of Defense Program; and the Land Disposal Program. These SWRCB cleanup programs are charged with ensuring sites are remediated to protect California's surface and groundwater and return it to beneficial use.

Accidental Release Prevention Law

The State's Accidental Release Prevention Law provides for consistency with Federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the Clean Air Act) regarding accidental chemical releases and allows local oversight of both the State and Federal programs. State and Federal laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the Federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program. The Accidental Release Prevention Law is implemented by the Certified Unified Program Agencies (CUPAs) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an offsite consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA, which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Transportation of Hazardous Materials/Wastes

Transportation of hazardous materials/wastes is regulated by California Code of Regulations (CCR) Title 26. The U.S. Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). CHP and Caltrans enforce Federal and State regulations and respond to hazardous materials transportation emergencies. Emergency responses are coordinated as necessary between Federal, State, and local governmental authorities and private persons through a State-mandated Emergency Management Plan.

Department of Conservation

The Department of Conservation's Division of Oil, Gas, & Geothermal Resources (DOGGR) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells. The regulatory program emphasizes the wise development of oil, natural gas, and geothermal resources in the state through sound engineering practices that protect the environment, prevent pollution, and ensure public safety. DOGGR requirements for well abandonment are contained in Title 14, Natural Resources, of the California Code of Regulations. These requirements state that the removal of all tanks, pipelines, debris, and other well-related facilities and equipment must be removed and disposed of in accordance with DTSC and RWQCB requirements.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle.

REGIONAL

Lahontan Regional Water Quality Control Board

The Lahontan RWQCB is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. The UST program protects public health and safety and the environment from releases of petroleum and other hazardous substances from UST systems. The program is administered by the State Water Board and consists of four program elements: leak prevention, cleanup, enforcement, and tank tester licensing. The RWQCB oversees the cleanup element of the UST program.

LOCAL

Los Angeles County Fire Department

In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program within the Department of Health Services. Originally, the Program focused on the inspection of businesses that generate hazardous waste, but has since expanded to include hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July 1, 1991, the Program was transferred to the Los Angeles County Fire Department (LACFD) and its name changed to the Health Hazardous Materials Division (HHMD).

The HHMD's mission is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. The Hazardous Materials Specialists are environmental health professionals dedicated to preventing pollution by serving both the public and business communities in Los Angeles County.

The Los Angeles County Fire Department is the designated CUPA serving the City of Lancaster.

Lancaster General Plan

The Plan for Public Health and Safety contains an evaluation of natural and manmade conditions which may pose certain levels of health and safety hazards to life and property within Lancaster, along with a comprehensive program to mitigate those hazards to acceptable levels. Inherent in this plan is a determination of "acceptable risk." Acceptable risk is based on a determination of how safe is safe enough, balancing the cost of hazard mitigation with its benefits. The Plan for Public Health and Safety identifies constraints to urban and rural development which must be considered as part of overall and site-specific development strategies. This plan also addresses existing hazards faced by Lancaster residents and businesses, and provides a program to mitigate those hazards. The following policies apply to the proposed project:

- Policy 4.5-1 Ensure that activities within the City of Lancaster transport, use, store, and dispose of hazardous materials in a responsible manner which protects the public health and safety.

Action 4.5.1(a) Implement the goals and policies of the Los Angeles County Certified Unified Program Agency; Health Hazardous Materials Division by:

- Ensuring the availability of safe and legal options for the management of hazardous waste generated within the City.
- Reviewing all proposals for hazardous waste facility projects within the City for consistency with the adopted Los Angeles County Hazardous Waste Management Plan;
- Ensuring that the requirements of the California Environmental Quality Act, as amended, are enforced for siting, operating and closing a hazardous waste facility, as set forth in state law.
- Ensuring that sites for specified hazardous waste facilities are located as close to the areas of generation as possible and that residual repository facilities are located in more distant areas as far as possible from urbanized, populated, and congested areas.
- Reviewing annually and updating accordingly the City of Lancaster Hazardous Waste Facilities Ordinance No. 560 for compliance with Assembly Bill 2948 (Tanner), and any subsequent pertinent legislation.
- Reviewing legislation as approved by the legislature for its application to the City and implementing it as required by law.

Action 4.5.1(b) Coordinate with Los Angeles County to ensure that commercial and industrial activities comply with all federal, state, county, and local laws regulating hazardous materials and wastes.

Action 4.5.1(c) Any business that uses, generates, processes, stores, treats, emits, or discharges a hazardous material shall submit a Hazardous Materials Business Plan, including a Hazardous Waste Contingency Plan to Los Angeles County as required by law.

Policy 4.7.2 Ensure that the design of new development minimizes the potential for fire.

Action 4.7.2(a) Require the use of fire resistant roofs in residential developments.

Action 4.7.2(b) In conjunction with the Los Angeles County Fire Department review the adequacy of ordinances requiring fire sprinklers, and continue with the practice of requiring fire sprinklers in residential structures as required by the Los Angeles County Fire Code.

Lancaster Hazard Mitigation Plan

The *2013 City of Lancaster Hazard Mitigation Plan* (Hazard Mitigation Plan) provides a list of activities designed to assist the City in reducing risk and preventing losses from future hazard events. The strategies address multi-hazard issues, as well as hazard specific activities for windstorms, earthquakes, fires, flooding, landslide, and terrorism.

Lancaster Emergency Operations Plan

The *Emergency Operations Plan* (EOP) addresses the City's planned response and recovery to emergencies associated with natural disasters and technological incidents. It provides an overview of operational

concepts, identifies components of the City's emergency management organization within the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS), and describes the overall responsibilities of the Federal, State and County entities and the City for protecting life and property and assuring the overall well-being of the population.

5.7.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, hazardous materials impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Create a significant hazard to the public or the environment through the routing transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment; refer to Section 8.0, *Effects Found Not To Be Significant*;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area; refer to Section 8.0, *Effects Found Not To Be Significant*;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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; refer to Section 8.0, *Effects Found Not To Be Significant*.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.7.4 IMPACTS AND MITIGATION MEASURES

HAZARDOUS MATERIALS USE, GENERATION, TRANSPORT, OR DISPOSAL

HAZ-1 *Project implementation could increase hazards to the public or the environment associated with the routine use, generation, transport, or disposal of hazardous materials.*

Impact Analysis: The proposed construction of residential and park/open space uses would not involve the routine transport, use, or disposal of substantial quantities of hazardous materials. Although herbicides, pesticides, and fertilizers would be utilized on-site for landscape maintenance, they would only be utilized periodically and in small quantities. Future commercial uses may store, handle, and/or transport hazardous materials. However, these future uses would be required to procure business plans and adhere to strict procedures enforced by the City and HHMD. Any business that handles a hazardous material and/or hazardous waste of quantities at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas is a hazardous materials handler and must report Owner/Operator, Business Activities, Inventory, Site Map, and Emergency Response and Contingency Plan and Employee Training Plan information in the California Environmental Reporting System (CERS). Thus, through implementation of the existing Federal, State, and local standards and regulations, routine use and/or accidental conditions involving hazardous materials as a result of the proposed project would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

HAZ-2 *Accidental release of hazardous materials as a result of project implementation could result in a health risk to the public and the environment.*

Impact Analysis: One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substances into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. Human exposure to contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure.

As discussed in HAZ-1, for operations of the proposed project, any business that handles a hazardous material and/or hazardous waste of quantities at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas is a hazardous materials handler and must report Owner/Operator, Business Activities, Inventory, Site Map, and Emergency Response and Contingency Plan and Employee Training Plan information in the CERS. Thus, through implementation of the existing Federal, State, and local standards and regulations, accidental conditions involving hazardous materials during operations of the project would be less than significant. However, construction activities could expose construction workers to accidental conditions

as a result of existing potential contamination in on-site soils and/or groundwater. The following analysis considers potential disturbance of potential hazardous materials on-site during construction.

HISTORICAL ON-SITE OPERATIONS

Residual Pesticide Concerns

As the project site was historically used for agricultural production, the project site may contain pesticide residues in the soil. Mitigation Measure HAZ-1 would require soil sampling prior to issuance of a grading permit in order to determine if pesticide/herbicide residues are present in the soil above DTSC regulatory thresholds for residential uses. Sampling would be required to be conducted by a qualified Phase II/Site Characterization specialist. The sampling would determine if pesticide/herbicide concentrations exceed established regulatory requirements and would be required to identify further site characterization and remedial activities, if necessary. Upon compliance with Mitigation Measure HAZ-1, impacts associated with residual pesticides would be reduced to less than significant levels.

Historical Underground Storage Tanks

According to the Preliminary Hazardous Materials Assessment, although records searched did not indicate a UST at the project site, one unmarked metal pipe was noted on-site during the August 24, 2016 site inspection. The primary concern with pipes that extend into the ground surface is the potential for the pipe to act as a ventilation apparatus for an UST. Should any USTs remain on-site as a result of historical uses, these USTs present an environmental concern to soils and groundwater at the project site.

Mitigation Measure HAZ-2 would require the applicant to retain a qualified Phase II/Site Characterization specialist to determine whether or not USTs are present within the project site prior to issuance of a grading permit. If evidence of historical USTs are noted, the qualified specialist would be required to conduct sampling to determine if any contaminants are present in soils above regulatory thresholds for residential use. Further, if any USTs remain on-site, the applicant would be required to obtain appropriate permits from the HHMD, prior to removing any existing USTs, per the Underground Storage Tank Program. The applicant would also be required to conduct soil/groundwater testing during UST removal. If contamination is present above regulatory thresholds for either current or historical USTs, the applicant would be required to remediate appropriately. The HHMD can also refer the case to another regulatory agency (e.g., DTSC or RWQCB, etc.), in which case the applicant would also be required to comply with any specific remediation regulations identified by the respective regulatory agency.

Although implementation of Mitigation Measure HAZ-2 would reduce potential impacts from USTs at the project site, accidental conditions may arise during construction within the project site. If unknown wastes or suspect materials are discovered (including undocumented USTs) during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to implement Mitigation Measure HAZ-3. The contractor would be required to immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area; notify the City Engineer of the City of Lancaster; secure the area as directed by the City Engineer; and notify the HHMD. The HHMD would then be required by law to advise the responsible party of further actions that would be required to be taken, if necessary. Upon compliance with Mitigation Measures HAZ-2 and HAZ-3, impacts regarding potential on-site USTs would be reduced to less than significant levels.

Historical Maintenance Activities

According to the Preliminary Hazardous Materials Assessment, it is anticipated that petroleum products/wastes were used/stored at the project site, which presents an environmental concern to on-site soils. Mitigation Measure HAZ-4 would require the applicant to retain a qualified Phase II/Site Characterization specialist to determine if the proposed development area historically consisted of a potential maintenance/storage yard that supported historical agricultural production on-site. Should any evidence of a maintenance/storage yard be noted, the qualified specialist would be required to conduct sampling to determine if any contaminants are present in soils above regulatory thresholds for residential use. If contamination is present above regulatory thresholds, then the applicant would be required to remediate appropriately. The HHMD can also refer the case to another regulatory agency (e.g., DTSC or RWQCB, etc.), in which case the applicant would also be required to comply with any specific remediation regulations identified by the respective regulatory agency. Upon compliance with Mitigation Measure HAZ-4, impacts associated with historical maintenance activities would be reduced to less than significant levels.

Past Oil Exploration Activities

Based on available records maintained by DOGGR, one oil exploration well was dug by Comco to approximately 2,130 feet and fresh water was encountered. No oil or gas was noted. This exploratory well was plugged with a 30-inch plug at the surface, as witnessed by DOGGR staff. The well was left in its present condition and then transferred to the property owner, Mr. Forrest Godde, whom wished to convert it into a fresh water well in December 1959. By January 8, 1960, the property owner received a report of well abandonment stating that the requirements of DOGGR were fulfilled at this time.

Materials involved in the installation of oil wells produce solid waste drill cuttings that contain hazardous materials, which could pose a threat to human health. It is acknowledged that DOGGR may compare a well abandonment with current abandonment standards and has authority to order the re-abandonment of any well that is hazardous or that poses a danger to health, the environment or natural resources. DOGGR requirements for well abandonment are contained in Title 14, Natural Resources, of the California Code of Regulations. These requirements state that the removal of all tanks, pipelines, debris, and other well-related facilities and equipment must be removed and disposed of in accordance with DTSC and RWQCB requirements.

For the existing closed and abandoned oil well, the concern is constructing new development over improperly abandoned wells. For any structures proposed within 100 feet of an oil well, evidence of verification by the applicant that the well has been properly plugged and abandoned per DOGGR, DTSC, and RWQCB requirements would be required to be provided to the City Engineer (Mitigation Measure HAZ-5). Further, the HHMD, as the CUPA, may require a methane barrier to be installed for homes within 300 feet of this historic oil well. Upon compliance with Mitigation Measure HAZ-5, impacts associated with past oil exploration activities would be reduced to less than significant levels.

Past Rural Residential Uses

Residential septic systems are possible receivers of household waste and can be a source for soil and groundwater contamination. Active and abandoned residential structures not connected to the city sewer are likely to have septic systems. The project site was previously developed with residential and agricultural uses and may have supported septic systems. Based on the Preliminary Hazardous Materials

Assessment, evidence of these past structures are still visible on-site and it is unknown if these septic systems remain.

Implementation of Mitigation Measure HAZ-6 would require the applicant to confirm that septic tanks are not present within the project site. If present, the specific location of the septic tanks would be required to be determined. Once located, the septic tanks would be removed and properly disposed of at an approved landfill facility. Once the tanks are removed, a visual inspection of the areas beneath and around the removed tanks would be required to be performed. Any stained soils observed underneath the septic tanks would be sampled by a qualified Phase II/Site Characterization specialist. If contamination is present above regulatory thresholds as determined by the specialist, then the applicant would be required to remediate appropriately, as required by the HHMD. Upon compliance with the recommended Mitigation Measure HAZ-6, impacts associated with potential residential septic systems would be reduced to less than significant levels.

EXISTING ON-SITE DEBRIS PILES

The majority of the project site consists of predominantly flat, disturbed vacant land. Miscellaneous debris is present on-site (i.e., stockpiled concrete, demolition materials, stockpiled wood, and stockpiled automobile tires). According to the Preliminary Hazardous Materials Assessment, no hazardous materials, staining, or odors were noted within areas of miscellaneous debris and these miscellaneous debris piles did not appear to be associated with hazardous materials, with the exception of those piles that may be demolition debris. It is noted that these demolition debris piles may have also been illegally dumped on-site from an off-site source. Particularly, the concern with demolition debris is potential LBPs and ACMs to be present in the debris and underlying soils.

According to the Preliminary Hazardous Materials Assessment, prior to demolition activities on-site, past buildings appear to have been built prior to 1978. Therefore, the potential for ACMs and LBPs to be found in demolition debris piles at the project site is considered likely, which may have impacted nearby and underlying soils. With implementation of the recommended Mitigation Measure HAZ-7, future development within the project site would be required to conduct ACMs and LBPs surveys for miscellaneous debris piles (associated with demolition debris) prior to site disturbance activities. The surveys would be required to be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal/OSHA certified specialist to determine the presence or absence of ACMs or LBPs in debris piles. If ACMs or LBPs are present on-site, removal would be required to be performed by a State certified contractor in accordance with the Antelope Valley Air Quality Management District (AVAQMD) Rule 1403 and California Code of Regulation Title 8, Section 1532.1. Contractors performing ACM/LBP removal would be required to provide evidence of abatement activities to the City. With compliance with Mitigation Measure HAZ-7, impacts associated with on-site debris piles would be reduced to less than significant levels.

Mitigation Measures:

HAZ-1 Prior to issuance of a grading permit, soil sampling shall occur in order to determine if pesticide/herbicide residues are present in the soil above Department of Toxic Substances Control regulatory thresholds for residential uses. Sampling shall be conducted by a qualified Phase II/Site Characterization specialist. The sampling shall determine if pesticide/herbicide concentrations exceed established regulatory requirements and shall identify further site characterization and remedial activities, if necessary.

- HAZ-2 Prior to issuance of a grading permit, the applicant shall retain a qualified Phase II/Site Characterization specialist to determine whether or not underground storage tanks (USTs) were present within the project site. If any evidence of historical USTs is noted, the qualified specialist shall conduct sampling to determine if any contaminants are present in soils above regulatory thresholds for residential use. Further, if any USTs remain on-site, the applicant shall obtain appropriate permits from the County of Los Angeles Health Hazardous Materials Division, prior to removing any existing USTs, per the Underground Storage Tank Program. The applicant shall conduct soil/groundwater testing during UST removal, as requested by the Health Hazardous Materials Division. If contamination is present above regulatory thresholds for either current or historical USTs, then the applicant shall remediate appropriately, as required by the Health Hazardous Materials Division. The Health Hazardous Materials Division can also refer the case to another regulatory agency (e.g., the Department of Toxic Substances Control, or Regional Water Quality Control Board, etc.), in which case the applicant shall comply with any specific remediation regulations identified by the respective regulatory agency.
- HAZ-3 If unknown wastes or suspect materials (including undocumented underground storage tanks [USTs]) are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:
- Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area;
 - Notify the City Engineer;
 - Secure the area as directed by the City Engineer; and
 - Notify the Los Angeles County Health Hazardous Materials Division. The Health Hazardous Materials Division shall advise the responsible party of further actions that shall be taken, if required.
- HAZ-4 Prior to issuance of a grading permit, the applicant shall retain a qualified Phase II/Site Characterization specialist to determine if the proposed development area historically consisted of a potential maintenance/storage yard that supported historical agricultural production on-site. If any evidence of a maintenance/storage yard is noted, the qualified specialist shall conduct sampling to determine if any contaminants of concern are present in soils above regulatory thresholds for residential use. If contamination is present above regulatory thresholds, then the applicant shall remediate appropriately, as required by the Los Angeles County Health Hazardous Materials Division. The Health Hazardous Materials Division can also refer the case to another regulatory agency (e.g., the Department of Toxic Substances Control, or Regional Water Quality Control Board, etc.), in which case the applicant shall comply with any specific remediation regulations identified by the respective regulatory agency.
- HAZ-5 Prior to issuance of a grading permit, for any structures proposed within 100 feet of a past oil well, evidence of verification by the applicant that the well has been properly plugged and abandoned per current California Department of Oil, Gas, and Geothermal Resources; Department of Toxic Substances Control; and Regional Water Quality Control Board requirements shall be provided to the City Engineer. The proposed project shall also comply with all County of Los Angeles Health Hazardous Materials Division laws and regulations, which may include installation of a methane barrier to be installed for homes within 300 feet

of this historic oil well. Confirmation of compliance with the Health Hazardous Materials Division regulations pertaining to historical oil wells shall be provided to the City Project Engineer prior to issuance of a building permit.

HAZ-6 Prior to issuance of a grading permit, the applicant shall confirm that septic tanks are not present within the project site. If present, the specific location of the septic tanks shall be determined. Once located, the septic tanks shall be removed and properly disposed of at an approved landfill facility. Once the tanks are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed. Any stained soils observed underneath the septic tanks shall be sampled by a qualified Phase II/Site Characterization specialist. If contamination is present above regulatory thresholds as determined by the specialist, then the applicant shall remediate appropriately, as required by the Los Angeles County Health Hazardous Materials Division.

HAZ-7 Prior to site disturbance activities, asbestos-containing materials and lead-based paints surveys shall be conducted for miscellaneous debris piles that are associated with demolition debris. The surveys shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified specialist to determine the presence or absence of asbestos containing-materials (ACMs) or lead-based paints (LBPs) in debris piles. If ACMs or LBPs are present on-site, removal shall be performed by a State certified contractor in accordance with the Antelope Valley Air Quality Management District (AVAQMD) Rule 1403 and California Code of Regulation Title 8, Section 1532.1. Contractors performing ACM/LBP removal shall provide evidence of abatement activities to the City.

Level of Significance: Less Than Significant With Mitigation Incorporated.

SCHOOL SITES

HAZ-3 *Future development in accordance with the project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.*

Impact Analysis: One existing school is situated within 0.25-mile of the project site (Quartz Hill High School located to the south of Avanti South). Development of the project would also result in construction of a new school within Avanti South. The project would construct new commercial uses, which could result in the handling of minor amounts of hazardous materials, substances, or wastes near these existing and proposed school facilities. As discussed in Impact Statement HAZ-1, future commercial uses that store, handle, and/or transport hazardous materials would be required to procure business plans and adhere to strict procedures enforced by HHMD. With compliance with HHMD regulations pertaining to the storing/handling of hazardous materials, future on-site commercial uses would not result in significant impacts pertaining to the handling of hazardous materials near a school facility.

Development of the future school on-site would be required to adhere to an environmental review and cleanup process under the DTSC's oversight. The DTSC's School Property Evaluation and Cleanup Division would be responsible for assessing, investigating, and cleaning up the proposed school site. The Division would ensure that the school site is free of contamination or, if the property is identified to be contaminated, that it is cleaned up to a level that protects the students and staff who would occupy the

new school. Through this environmental review process, the DTSC would ensure the protection of children, staff, and the environment from the potential effects of exposure to hazardous materials as a result of development of the new school facility at the project site.

A less than significant impact would occur in this regard following compliance with applicable Federal, State, and local regulations.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

EMERGENCY RESPONSE

HAZ-4 *Future development in accordance with the project could interfere with an adopted emergency response or evacuation plan.*

Impact Analysis:

OFF-SITE EMERGENCY/EVACUATION ROADWAYS

The project site would continue to be accessed via 70th Street West, Avenue L, and Avenue K-8. Project implementation could affect access along these streets during construction, as short-term, temporary lane closures could occur. However, during these lane closures, access would remain open and accessible at all times. The applicants would be required to provide three sets of alternate route (detour) plans with a tentative schedule of planned closures prior to the beginning of construction. Further, implementation of Mitigation Measure HAZ-8 would ensure that these activities would not impede emergency access. Implementation of Mitigation Measure HAZ-8 would reduce potential impacts in this regard to less than significant levels.

ON-SITE EMERGENCY ROADWAYS

The proposed on-site roadways would be required to comply with the Los Angeles County Sheriff's Department access standards, LACFD's emergency access standards (e.g., roadway widths and fire truck access routes), and all other City emergency service standards. The proposed Specific Plan's Circulation Plan would also include planning for traffic calming devices that are designed for emergency vehicles, allowing for multiple access routes and interconnected streets and alleys. All road widths and circulation, as well as the placement of fire hydrants and installation of automatic sprinkler systems, would be designed with the guidance of the LACFD. A road system that allows unhindered emergency fire access and maneuvering would also be provided. Specifically, the project would require all public and private roads to be all-weather surfaces with a minimum width of 20 feet, unobstructed. Cul-de-sacs and turnouts would be designed to LACFD standards. For private roads, there would be ongoing and legally binding provisions to maintain the roads to LACFD standards. As part of the Specific Plan's Development Plan, structure numbers and street signs would be required to be lighted to County standards so that emergency vehicles including sheriff and ambulances can locate residences in the event of any emergency. All fire hydrants would be installed in accordance with LACFD requirements. Further, the project's water system would be designed to maintain a minimum fire flow required by LACFD.

The City would coordinate with the LACFD as part of the subdivision tentative map and building permit stages, for each site plan for future development on a project-by-project basis, which would ensure that adequate emergency access is provided. As part of these processes, the LACFD would recommend specific ingress/egress and roadway dimensions for appropriate emergency access/circulation and compliance with applicable code and ordinance requirements. Gated communities are permitted within Avanti South subject to site plan/architectural review of the location, design, and rationale for such gating. Details of gate design must be included in the site plan submittal for any project which includes a gate, and must include adequate stacking distance to avoid backups onto surrounding collectors, adequate turn-around provisions, and adequate emergency access provisions. Therefore, upon compliance with the City's development review process and the Municipal Code, impacts related to emergency response would be reduced to less than significant levels.

Mitigation Measures:

HAZ-8 At least three business days before any off-site roadway improvements, the construction contractor shall notify the Los Angeles County Fire Department and Los Angeles County Sheriff's Department, along with the City of Lancaster Development Services Department, of construction activities that could impede movement (such as lane closures) along roadways, in order to allow for uninterrupted emergency access.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.7.5 CUMULATIVE IMPACTS

HAZARDS AND HAZARDOUS MATERIALS

Development in accordance with the project and cumulative development could result in cumulatively considerable impacts related to hazards and hazardous materials.

Impact Analysis:

HAZARDOUS MATERIALS USE, GENERATION, TRANSPORT, OR DISPOSAL

Cumulative development involving commercial or industrial uses may use, generate, transport, or dispose of hazardous materials. However, any business that handles a hazardous material and/or hazardous waste of quantities at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas is a hazardous materials handler and must report Owner/Operator, Business Activities, Inventory, Site Map, and Emergency Response and Contingency Plan and Employee Training Plan information in the CERS. Further, the handling, transport, and disposal of these substances are regulated by the DTSC, CalEPA, Cal/OSHA, and HHMD. Thus, with compliance with existing Federal, State, and local laws and regulations, cumulative impacts pertaining to the use, generation, transport, or disposal of hazardous materials would be less than significant.

Implementation of the proposed project would result in the development of new commercial uses on-site. As discussed in Impact Statement HAZ-1, future commercial uses that would store, handle, and/or transport hazardous materials would be required to procure business plans and adhere to strict

procedures enforced by the HHMD. As such, the project's impacts would be less than significant in this regard and project impacts would not be cumulatively considerable.

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

As cumulative development occurs, there would be an increase in the potential for accidental releases of hazardous materials, particularly with commercial and industrial uses. The conditional use permit provision of the City's Zoning Ordinance allows the City to review each application separately and place conditions on individual projects to ensure that each project is compatible with the General Plan and the Zoning Ordinance, and that it does not adversely affect neighboring land uses. Compliance with the City's Municipal Code as well as other Federal, State, and local laws and regulations pertaining to required remediation as a result of releases of hazardous materials would minimize potential cumulative impacts in this regard.

As discussed previously, with implementation of Mitigation Measures HAZ-1 through HAZ-7, short-term construction impacts from on-site hazardous materials would be reduced to less than significant levels. Further, operations of the proposed project would result in less than significant impacts pertaining to risk associated with accidental releases. As such, the project's impacts would be reduced to less than significant levels and project impacts would not be cumulatively considerable.

SCHOOL SITES

Future development could involve the emission or handling of hazardous materials within 0.25-mile of a school site. However, future commercial or industrial uses that store, handle, and/or transport hazardous materials would be required to procure business plans and adhere to strict procedures enforced by HHMD. With compliance with HHMD regulations pertaining to the storing/handling of hazardous materials, future commercial or industrial uses would not result in significant impacts pertaining to the handling of hazardous materials near a school facility. Further, any future school sites would also be required to adhere to the DTSC's environmental review and cleanup process. With compliance with existing Federal, State, and local laws and regulations, future emissions or handling of hazardous materials near school sites would be reduced to less than significant levels.

As discussed in Impact Statement HAZ-3, development of the proposed project would result in less than significant impacts in this regard. Thus, the proposed project would not result in significant cumulatively considerable impacts.

EMERGENCY RESPONSE

Future development in the project vicinity would include the Avanti North SP, as well as CUP 06-08 (a future Target and drug store) and CUP 06-09 (a future Walmart project). Construction of these future projects could occur at the same time as the proposed project. Cumulative impacts to emergency access during construction could result. However, all future development would be required to comply with the Los Angeles County Sheriff's Department access standards, LACFD's emergency access standards (e.g., roadway widths and fire truck access routes), and all other City emergency service standards. Further, should lane closures be required by the proposed project, access would remain open and accessible at all times during these lane closures. The applicants would be required to provide three sets of alternate route (detour) plans with a tentative schedule of planned closures prior to the beginning of construction (as part of the LCFD's requirements), which would consider potential closures of other developments as

well. Thus, development of the proposed project would result in less than significant cumulatively considerable impacts pertaining to emergency response with compliance with the City's development process and implementation of Mitigation Measure HAZ-8.

Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-8.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.7.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant impacts related to hazards and hazardous materials have been identified following implementation of Mitigation Measures HAZ-1 through HAZ-8 and compliance with the applicable Federal, State, and local regulatory requirements.

Section 5.8

Hydrology and Water Quality

5.8 HYDROLOGY AND WATER QUALITY

This section analyzes potential project impacts on the existing drainage patterns, surface hydrology, and flood control facilities and water quality conditions in the project area. This section is primarily based upon the *Hydrology, Hydraulics, and LID Report* (Hydrology Analysis), prepared by Kimley-Horn Associates (July 17, 2017) and included in Appendix H, Hydrology Analysis.

5.8.1 ENVIRONMENTAL SETTING

EXISTING DRAINAGE CONDITIONS

The project site is located within the Portal Ridge Watershed. According to the 2017 Hydrology Analysis, this portion of the Portal Ridge Watershed was updated in 2005 by the Hydrology Study prepared for Tentative Tract Map (TTM) 53229 by CCL Engineering (2005 Hydrology Study); refer to Section 3.2, Background and History. The 2005 Hydrology Study analyzed the off-site storm water runoff that would affect the project site, as well as the on-site conditions for TTM 53229.

The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The site topography is relatively flat and level with a general slope down to the north/northeast. The off-site runoff is concentrated at 65th Street West and the easterly boundary of the site. Two 72-inch storm drains exist in 65th Street West, south of Avenue L, that outlet to a graded ditch within an easement with a graded swale daylighting several hundred feet north of Avenue L. There are two existing 84-inch storm drains in 65th Street West, north of the project site, from Avenue J-12 northerly to Avenue J. According to the 2005 Hydrology Study, 435 cubic feet per second (cfs) is conveyed through the existing 72-inch storm drains at 65th Street West that cross under Avenue L. Off-site runoff (218 cfs) enters Avanti South at the southeast corner of the site (Avenue L and the alignment of 62nd Street West). It is noted that the approved Walmart project (located east of the project site) is conditioned to install a storm drain in Avenue L to convey the 218 cfs to outlet at the southeast corner of the project site.

Based on the Modified Rational Method (MODRAT) outlined in the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual, using the HydroCalc software, the on-site 50-year pre-development peak runoff flow (Q) for Avanti South (240-acre parcel) is 26.95 cfs. Including the off-site flow, the total peak runoff flow is 679.95 cfs. For Avanti West (80-acre parcel), the predevelopment peak runoff flow is 9.13 cfs.

FLOODPLAIN MAPPING

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Los Angeles County, California and Incorporated Area Panel 415 of 2350, Map Number 06037C0415F, dated September 26, 2008 shows that the project lies within Zone X and Zone X shaded. Zone X and Zone X shaded are determined to be areas of 0.2 percent annual chance flood; areas of one percent chance flood with average depths of less than one foot, or with drainage areas less than one square mile.

EXISTING STORM WATER QUALITY CONDITIONS

Nonpoint Source Pollutants

A net effect of urbanization can be to increase pollutant export over naturally occurring conditions. The impact of the higher export affects the adjacent streams and the downstream receiving waters. However, an important consideration in evaluating storm water quality is to assess whether the beneficial use to the receiving waters is impaired. Nonpoint source pollutants have been characterized by the following major categories to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements; however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. Standard water quality categories of typical urbanization impacts are:

- *Suspended Solids/Sediment.* Suspended solids/sediment consist of soils or other surficial materials that are eroded and then transported or deposited by wind, water, or gravity. Excessive sedimentation can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms' survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth. Sediments in runoff also transport other pollutants that adhere to them, including trace metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and phosphorus. The largest source of suspended solids/sediment is typically erosion from disturbed soils.
- *Nutrients.* Nutrients include the macro-nutrients nitrogen and phosphorus. They commonly exist in the form of mineral salts dissolved or suspended in water and as particulate organic matter transported by storm water. Excessive discharge of nutrients to water bodies and streams can cause eutrophication, including excessive aquatic algae and plant growth, loss of dissolved oxygen, release of toxins in sediment, and significant swings in hydrogen ion concentration (pH). Primary sources of nutrients in urban runoff are fertilizers, trash and debris, and eroded soils. Urban areas with improperly managed landscapes can be substantial sources.
- *Metals.* This category includes certain metals that can be toxic to aquatic life if concentrations become high enough to stress natural processes. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and are also raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Copper and zinc are typically associated with building materials, including galvanized metal and ornamental copper, and automotive products, including tires and brake pads. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns regarding the potential for release of metals to the environment have already led to restricted metal usage in certain applications, for example lead additives in gasoline. The primary source of metals in urban storm water is typically commercially available metal products and automobiles.
- *Microbial Pathogens (Bacteria and Viruses).* This includes bacteria and viruses, which are ubiquitous microorganisms that thrive under a range of environmental conditions. Water containing excessive pathogenic bacteria and viruses can create a harmful environment for humans and aquatic life. The source of pathogenic bacteria and viruses is typically the transport of animal or human fecal wastes from the watershed, but pathogenic organisms do occur in the natural environment.

- **Oil and Grease.** Oil and grease are characterized as high-molecular weight organic compounds. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality. Introduction of these pollutants to water bodies may occur due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids.
- **Toxic Organic Compounds.** These include organic compounds (pesticides, solvents, hydrocarbons), which at toxic concentrations constitute a hazard to humans and aquatic organisms. Storm water encountering organic compounds can transport excessive levels organics to receiving waters. Dirt, grease, and grime retained in cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life. Sources of organic compounds include landscape maintenance areas, vehicle maintenance areas, waste handling areas, and potentially most other urban areas.
- **Trash and Debris.** This category includes trash, such as paper, plastic, and various waste materials, that can typically be found throughout the urban landscape, and debris which includes waste products of natural origin which are not naturally discharged to water bodies such as landscaping waste, woody debris, etc. The presence of trash and debris may have a significant impact on the recreational value of a water body and upon the health of aquatic habitat.

PHYSICAL CHARACTERISTICS OF SURFACE WATER QUALITY

Standard parameters, which can assess the quality of storm water, provide a method of measuring impairment. A background of these typical characteristics assists in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface run-off. In an urban environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, a high density of automobile traffic makes several potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the way it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water traditionally have served as the primary means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for storm water comprise a long list and are classified in many ways. Typically, the concentration of an urban pollutant, rather than the annual load of that pollutant, is required to assess a water quality problem. Some of the physical, chemical, or biological characteristics that evaluate the quality of the surface run-off are listed below.

- **Dissolved Oxygen.** Dissolved Oxygen (DO) in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The DO concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. DO is a transient property that can fluctuate rapidly in time and space, and represents the status of the water system at a point and time of sampling. The decomposition of

organic debris in water is a slow process, as are the resulting changes in oxygen status. The oxygen demand is an indication of the pollutant load and includes measurements of biochemical oxygen demand or chemical oxygen demand.

- Biochemical Oxygen Demand. The Biochemical Oxygen Demand (BOD) is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory at 20°C, after which the residual dissolved oxygen is measured. The BOD value commonly referenced is the standard 5-day values. These values are useful in assessing stream pollution loads and for comparison purposes.
- Chemical Oxygen Demand. The Chemical Oxygen Demand (COD) is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on bacteriological actions as with BOD. COD does not necessarily provide a good index of oxygen demanding properties in natural waters.
- Total Dissolved Solids. Total dissolved solids (TDS) concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. There are several reasons why TDS is an important indicator of water quality. Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water. TDS are also a major determinant of aquatic habitat. TDS affects saturation concentration of dissolved oxygen and influences the ability of a water body to assimilate wastes. Eutrophication rates depend on TDS.
- pH. The pH of water is the negative log, base 10, of the hydrogen ion (H⁺) activity. A pH of 7 is neutral; a pH greater than 7 indicates alkaline water; a pH less than 7 represents acidic water. In natural water, carbon dioxide reactions are some of the most important in establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life; generally, toxic limits are pH values less than 4.8 and greater than 9.2.
- Alkalinity. Alkalinity is the opposite of acidity, representing the capacity of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities less than 200 milligrams per liter (mg/l). Ranges of alkalinity of 100-200 mg/l seem to support well-diversified aquatic life.
- Specific Conductance. The specific conductivity of water, or its ability to conduct an electric current, is related to the total dissolved ionic solids. Long term monitoring of project waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities more than 2000 microohms per centimeter (μohms/cm) indicate a TDS level too high for most freshwater fish.
- Turbidity. The clarity of water is an important indicator of water quality that relates to the alkalinity of photosynthetic light to penetrate. Turbidity is an indicator of the property of water that causes light to become scattered or absorbed. Turbidity is caused by suspended clays and other organic particles. It can be used as an indicator of certain water quality constituents, such as predicting sediment concentrations.

- ***Nitrogen.*** Sources of nitrogen in storm water are from the additions of organic matter to water bodies or chemical additions. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication since nitrification consumes dissolved oxygen in the water. Nitrogen occurs in many forms. Organic nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen, a form available for plants. High concentrations of nitrate-nitrogen (N/N) in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of nitrate-nitrogen is needed for algal blooms. Some fish life can be affected when nitrate-nitrogen exceeds 4.2 mg/l. There are several ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen include Kjeldahl nitrogen (organic nitrogen plus ammonia), ammonia, nitrite plus nitrate, nitrite, and nitrogen in plants. The principal water quality criterion for nitrogen focuses on nitrate and ammonia.
- ***Phosphorus.*** Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban storm water discharge is generally from fertilizers and other industrial products. Orthophosphate is soluble and is the only biologically available form of phosphorus. Since phosphorus strongly associates with solid particles and is a significant part of organic material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. Important methods of measurement include detecting orthophosphate and total phosphorus.

Existing Storm Water Quality Conditions

The existing site lacks any measured data on storm water runoff quality. In the absence of site-specific data, existing storm water quality can be qualitatively discussed by relating typical pollutants to specific land uses. The project site is undeveloped with vegetation. Undeveloped land is likely to produce suspended solids and do not contain any structural Best Management Practices (BMPs), which could potentially decrease the amount of pollutants in storm water runoff. It is likely that portions of potential pollutants are removed using natural conveyance rather than a storm drain. Conveying flows overland through vegetation affords some infiltration and biofiltration of runoff and thus, potential pollutant removal. A drawback to conveying flows overland is that it increases erosion problems, thus, increasing suspended solids in the runoff.

SURFACE WATERS

Surface watersheds in California are divided into ten hydrologic regions, as defined by the California Department of Water Resources (DWR). The project site is located within the South Lahontan Hydrologic Region and is subject to the objectives and limits of the Water Quality Control Plan for the Lahontan Region (Basin Plan) under the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB). Hydrologic Regions are subdivided into Hydrologic Units (HUs), and further into Hydrologic Areas (HAs). The study area is in the Antelope HU and within the Lancaster HA.

Natural surface water features in the project area are generally ephemeral, meaning that they only convey flows in direct response to precipitation events. Several named streams originate as perennial waterbodies in the San Gabriel and Tehachapi Mountains and flow towards the center of the watershed. Notable named streams in the watershed include Amargosa Creek, Big Rock Creek, and Little Rock Creek which begin as well-defined channels in the San Gabriel Mountains and become broad, ephemeral washes

as they flow northeast onto the valley floor towards Rosamond Dry Lake. Oak Creek and Cottonwood Creek begin in the Tehachapi Mountains and flow southeast towards the center of the watershed.

Based on a review of the Clean Water Act (CWA) 303d list, the closest impaired waterbody to the project site is Elizabeth Lake, approximately 7.5 miles to the southwest; however, this waterbody does not lie within the Antelope Valley HU. Littlerock Reservoir, which is jointly owned by the Palmdale Water District (PWD) and the Littlerock Creek Irrigation District (LCID) collects runoff from the San Gabriel Mountains and discharges to Lake Palmdale, where the water is ultimately treated by PWD's Water Treatment Plant (WTP). The quality of the water in Lake Palmdale is considered good.

Beneficial Uses

The Water Quality Control Plan (Basin Plan) recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems. The Lahontan Basin Plan identifies beneficial uses for waters within the Lahontan Region. A beneficial use is one of the various ways that water can be used for the benefit of people and/or wildlife. Although more than one beneficial use may be identified for a given waterbody, the most sensitive use must be protected. The Basin Plan identifies the following beneficial uses for the Lancaster HA (Minor Surface Waters):

- MUN – Municipal and Domestic Supply. Beneficial uses of waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- AGR – Agricultural Supply. Beneficial uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- GWR – Ground Water Recharge. Beneficial uses of waters used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- REC-1 – Water Contact Recreation. Beneficial uses of waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
- REC-2 – Noncontact Water Recreation. Beneficial uses of waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
- COMM – Commercial and Sportfishing. Beneficial uses of waters used for commercial or recreational collection of fish or other organisms including, but not limited to, uses involving organisms intended for human consumption.

- WARM – Warm Freshwater Habitat. Beneficial uses of waters that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- COLD – Cold Freshwater Habitat. Beneficial uses of waters that support cold water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- WILD – Wildlife Habitat. Beneficial uses of waters that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.

GROUNDWATER¹

The Antelope Valley Groundwater Basin (AV Basin) is composed of two primary aquifers: the upper (principal) aquifer and the lower (deep) aquifer. The principal aquifer is an unconfined aquifer and historically provided artesian flows because of perched water tables in some areas. These artesian conditions are currently absent because of extensive pumping of groundwater. Separated from the principal aquifer by clay layers, the deep aquifer is generally considered to be confined. The Antelope Valley is a closed basin and the only major groundwater outflow is groundwater pumping.

In general, groundwater in the AV Basin flows northeasterly from the mountain ranges to the dry lakes. The basin is principally recharged by infiltration of precipitation and runoff from the surrounding mountains and hills in ephemeral stream channels. However, precipitation over the valley floor is generally less than 10 inches per year and evapotranspiration rates, along with soil moisture requirements, are high; therefore, recharge from direct infiltration of precipitation below the root zone is deemed negligible. Other sources of recharge to the basin include artificial recharge and return flows from agricultural and urban irrigation. Depending on the thickness and characteristics of the unsaturated zone of the aquifer below a site, these sources may or may not contribute to recharge of the groundwater.

The total storage capacity of the AV Basin has been reported at 68 million acre-feet. The groundwater basin is recharged principally by deep percolation of precipitation and runoff from the surrounding mountains and hills. The AV Basin is divided into twelve subbasins. Groundwater has been, and continues to be, an important resource within the Antelope Valley region. Prior to 1972, groundwater provided more than 90 percent of the total water supply in the Antelope Valley region; since 1972, it has provided between 50 and 90 percent. Groundwater pumping in the Antelope Valley region peaked in the 1950s, and it decreased in the 1960s and 1970s when agricultural pumping declined because of increased pumping costs from greater pumping lifts and higher electric power costs. The rapid increase in urban growth in the 1980s resulted in an increase in the demand for municipal and industrial water and an increase in groundwater use.

From the 1990s to the present, agricultural uses have significantly increased groundwater production and exacerbated the reduction in groundwater levels across the basin. In 1999, agricultural interests filed for litigation seeking to determine rights to groundwater. Subsequently, public water purveyors filed a cross-complaint seeking an adjudication of groundwater rights and a physical solution. These lawsuits and

¹ County of Los Angeles Department of Public Works, Los Angeles County Waterworks District No. 40, 2015 Urban Water Management Plan, January 2017.

others were joined in a coordinated and consolidated action known as the Antelope Valley Groundwater Cases. In December 2015, after several trial phases and a settlement reached among the majority of parties, the Court entered judgment. During the trial phases, the Court determined the basin boundaries: that the total safe yield of the basin is 110,000 acre-feet/year (AFY); that the native safe yield of the basin is 82,500 AFY; and that the basin has been in a state of overdraft for over 61 years. The judgment allocates rights to pump groundwater, including the pumping rights of the water purveyors, and sets forth a physical solution.

Los Angeles County Waterworks District 40 (District 40) would serve the project site. Under the judgment, District 40 has the right to pump approximately 20,005 AFY of groundwater including an allocated right to pump 6,789 AFY of the native safe yield, the right to pump 55 percent of the unused portion of the federal reserved right, and imported water return flows. Thirty-nine percent of the previous 5-year average of imported water used by District 40 is available for pumping in any given year. The annual return flows do not include imported water stored in the basin (i.e., banked water). According to the 2015 Urban Water Management Plan for District 40 (District 40 UWMP), banked water is a supply source that will be used in dry hydrology years where State Water Project (SWP) supplies are not available. Also, under a separate lease agreement, District 40 has the right to pump approximately 3,000 AFY in groundwater rights allocated to the Antelope Valley East Kern Water Agency (AVEK).

5.8.2 REGULATORY SETTING

This section discusses the Federal, State, and local drainage policies and requirements applicable to the project site.

FEDERAL

Federal Clean Water Act (Section 404)

The project would be subject to Federal permit requirements under the Federal CWA. The CWA requires that the discharge of pollutants to “Waters of the U.S.” from any point source be effectively prohibited, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. Under the NPDES permit program, the EPA established regulations for discharging storm water by municipal and industrial facilities and construction activities.

The NPDES permit is broken up into two Phases: I and II. Phase I requires medium and large cities, or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their storm water discharges. Phase II requires regulated small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. Polluted storm water run-off is commonly transported through MS4s. This run-off is often untreated and discharged into local water bodies.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was created by Congress in 1968. It provided a means for property owners to financially protect themselves from flood damage. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the program. Participating

communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding. The City of Lancaster is a participating community and must adhere to the NFIP.

STATE

Porter-Cologne Water Quality Control Act

The CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs and allows the EPA to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB) authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

IMPAIRED WATERBODIES

The CWA Section 303(d) and the Porter-Cologne Act require the State to establish the beneficial uses of its State waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes a Total Maximum Daily Load (TMDL) program, which sets the maximum quantity of a particular contaminant that a water body can maintain without experiencing adverse effects, to guide the application of State and regional water quality standards. Section 303(d) also requires the State to identify "impaired" streams (water bodies affected by the presence of pollutants or contaminants) and to establish the TMDL of each pollutant for each identified stream.

State Water Resources Control Board

The SWRCB administers water rights, water pollution control, and water quality functions throughout the State, while the RWQCBs conduct planning, permitting, and enforcement activities. For the proposed project, the NPDES permit is divided into two parts: construction and post-construction. The construction permitting is administered by the SWRCB, while the post-construction permitting is administered by the RWQCB.

Development projects typically result in the disturbance of soil that requires compliance with the NPDES General Permit, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities. This Statewide General Construction permit regulates discharges from construction sites that disturb one or more acres of soil. By law, all storm water discharges associated

with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre of total land area must comply with the provisions of this NPDES Permit, and develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is required to contain a site map(s), which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project.

The SWPPP is required to list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. The project applicant must submit a Notice of Intent (NOI) to the SWRCB, to be covered by the NPDES General Permit, and prepare the SWPPP before beginning construction. Implementation of the plan starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination (NOT) to the SWRCB to indicate that construction is completed.

Groundwater Management Act

The Groundwater Management Act (Water Code §§10750, et seq.) provides local water agencies with procedures to develop a groundwater management plan so those agencies can manage their groundwater resources efficiently and safely while protecting the quality of supplies. Under the Act, development of a groundwater management plan by a local water agency is voluntary. Once a plan is adopted, the rules and regulations contained therein must also be adopted to implement the program outlined in the plan.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. The Act provides 20 years for GSAs to implement plans and achieve long-term groundwater sustainability. It protects existing surface water and groundwater rights and does not impact current drought response measures.

GSAs responsible for high- and medium-priority basins must adopt groundwater sustainability plans within five to seven years, depending on whether the basin is in critical overdraft. Agencies may adopt a single plan covering an entire basin or combine a number of plans created by multiple agencies.

Plans must include a physical description of the basin, including groundwater levels, groundwater quality, subsidence, information on groundwater-surface water interaction, data on historical and projected water demands and supplies, monitoring and management provisions, and a description of how the plan will affect other plans, including city and county general plans. Plans will be evaluated every five years.

The AV Basin is a high-priority basin; however, because the Superior Court issued a final judgment in the adjudication, the AV Basin is exempt from the requirements of SGMA.²

² Ibid.

REGIONAL

Lahontan Regional Water Quality Control Board

The SWRCB oversees the nine RWQCBs in the State of California. The City of Lancaster is within the jurisdiction of the Lahontan RWQCB. The Lahontan RWQCB is responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters in their region. The LRWQCB is also responsible for protecting surface and ground waters from both point and non-point sources of pollution. Water quality standards and control measures for surface and ground waters of the Lahontan Region are contained in the Water Quality Control Plan for the Lahontan Region (Basin Plan). The Basin Plan designates beneficial uses for water bodies and establishes water quality objectives, waste discharge prohibitions, and other implementation measures to protect those beneficial uses.

Antelope Valley Integrated Regional Urban Water Management Plan

The Integrated Regional Urban Water Management Plan for Antelope Valley (IRUWMP) was prepared for District 40 and Quartz Hill Water District (QHWD). The IRUWMP is developed to address regional concerns about water supply reliability, water quality, flood protection, environmental resources, and land use management in the Antelope Valley. The 2007 Antelope Valley IRWMP provided a mechanism for: 1) coordinating, refining and integrating existing planning efforts within a comprehensive, regional context; 2) identifying specific regional and watershed-based priorities for implementation projects; and 3) providing funding support for the plans, programs, projects and priorities of existing agencies and stakeholders. The IRWMP was most recently updated in 2013.

LOCAL

Lancaster General Plan

The Plan for The Natural Environment of the City of Lancaster General Plan 2030 identifies policies related to hydrology and water quality. Policies and specific actions that are applicable to the proposed project are listed below:

- | | |
|-----------------|---|
| Policy 3.1.1 | Ensure that development does not adversely affect the groundwater basin. |
| Action 3.1.1(b) | Through the development review process, evaluate proposals under the California Environmental Quality Act (CEQA) to identify potential negative impacts on existing watershed areas, and to ensure inclusion of appropriate mitigation measures. |
| Action 3.1.1(d) | To ensure that the potential effect on the groundwater basin from proposed land use changes is appropriately evaluated, the applicants for all general plan and zoning ordinance amendments shall provide a factual statement of: <ul style="list-style-type: none">• <i>Current Water Demand</i>: the amount of water necessary to support development under the existing general plan and zoning designations;• <i>Proposed Water Demand</i>: the amount of water necessary to support development under the proposed general plan and/or zoning designations; |

- *Potential Conservation*: the amount of water that can be conserved by application of water conservation techniques in the proposed project; and
- *Water from New Sources*: the amount of water from new sources that can be specifically committed to this project.

Policy 4.2.1 Manage flood hazards to ensure an acceptable level of risk and to facilitate rapid physical and economic recovery following a flood through the identification and recognition of potentially hazardous conditions and implementation of effective standards for location and construction of development.

Action 4.2.1(e) Require, as a prerequisite to development approval, that drainage studies identify the facilities which are required to ensure that proposed development is adequately protected and that such development will not create or increase downstream or upstream flood hazards.

Action 4.2.1(f) Through the development review process, encourage the use of pervious paving materials in hardscape areas; swale designs in landscape or grassy areas which slow runoff and maximize infiltration; and the discharge of roof drainage into pervious, greenbelt and seepage pit areas to reduce increases in downstream runoff resulting from new developments.

Action 4.2.1(g) Require that street and storm drain flood control systems be designed to accommodate identified storm flows.

Policy 15.1.4 Ensure that mitigation is provided for all development in recognized flood prone areas. Any mitigation of flood hazard in one area shall not exacerbate flooding problems in other areas.

Action 15.1.4(a) As part of the development review process, require individual developments to install sufficient drainage facilities to provide all-weather access and protection as per FEMA requirements.

Lancaster Municipal Code

Lancaster Municipal Code 15.64.060, Drainage/Flood Control Improvements Fee, imposes a drainage/flood control improvements fee on all new development in the City pursuant to Article II of Chapter 13.04, to mitigate the storm water runoff impacts caused by new development.

Lancaster Master Plan of Drainage³

In 1992, the City of Lancaster adopted its Master Plan of Drainage based on the Antelope Valley Comprehensive Plan, which has since been updated to document updated facilities and drainage fee schedules. The City of Lancaster has a development fee schedule that funds all Master Plan of Drainage facilities through the collection of Drainage Impact Fees and Drainage Maintenance Fees. These fees are used to build regional storm drain facilities; developers are responsible for project-specific drainage

³ Michael Baker International, Inc. (RBF Consulting), *General Plan 2030 Master Environmental Assessment*, April, 2009.

facilities. Through this program, the City can assure that sufficient improved storm drain facilities are in place as new development occurs.

For large projects (equal to or greater than 100 lots) such as the proposed project, the City's Master Plan of Drainage requires the construction of local retention or detention basins until the regional system can be built. New local flood control facilities are presently built on an individual, project by project basis and are required to be designed for the Capital Flood Protection. Los Angeles County defines the Capital Flood as the runoff produced by a 50-year frequency design storm falling on a saturated watershed (soil moisture and field capacity). A 50-year frequency design storm has a one in 50 probability of being equaled or exceeded in any year. New developments that fall under the Capital Flood Protection criteria are thus required to design their storm drain plan based on a 50-year storm frequency, which frequently require the installation of detention basins. As the regional system is built, these basins may be eliminated or converted to detention basins for peak flows only. The lowest finish floor elevation of all habitable structures is required to be a minimum of one foot above maximum water level resulting from a Capital Flood.

For smaller projects (less than 100 residential units/lots, regardless of size), streets are considered the primary storm water conveyance facility. Local streets currently direct much of the storm water flows to the few existing improved storm drain structures. Existing City standards are to maintain a 50-year storm within the right-of-way. The City's Master Plan of Drainage calls for containment of 25-year and/or 10-year storm flows within the curbs of the streets. In portions of the City with no Master Plan of Drainage facilities, streets act as the primary local flood control program and new residential structures are usually built two to three feet above street grade.

Lancaster Storm Water Management Plan

The City of Lancaster is designated as a regulated Small Municipal Separate Storm System by the U.S. EPA pursuant to 40 CFR 122.322(a)(1). The City of Lancaster filed a Notice of Intent (NOI) to comply with the SWRCB Small MS4 General Permit in lieu of obtaining an individual permit. On April 20, 2003, NPDES General Permit No. CAS000004 was adopted and most recently renewed on May 21, 2013 (NPDES Permit No. PAG133577). The objective of the City's Storm Water Management Plan (SWMP) is to establish ordinances, policies, procedures, and practices to manage and control the quality of storm water runoff in the City.

5.8.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, hydrology and water quality impacts resulting from the project's implementation may be considered significant if they would result in the following:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., 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);

- 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 on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface run-off in a manner that would result in flooding on- or off-site;
- Create or contribute to run-off water that would exceed the capacity of existing or planned storm water drainage systems or provision of substantial additional sources of polluted run-off;
- Otherwise substantially degrade water quality;
- 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;
- Place a structure within a 100-year flood hazard area that would impede or redirect flood flows;
- 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 (refer to Section 8.0, *Effects Found Not To Be Significant*); or
- Result in inundation by seiche, tsunami, or mudflow (refer to Section 8.0, *Effects Found Not to Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.8.4 IMPACTS AND MITIGATION MEASURES

WATER QUALITY – SHORT-TERM IMPACTS

HWQ -1 *Grading, excavation, and construction activities associated with the proposed project could impact water quality.*

Impact Analysis: Short-term construction-related storm water pollution associated with the proposed project includes maintenance and operation of construction equipment and earthmoving activities. These sources, if not controlled, can generate soil erosion and on- and off-site transport via storm water run-off or mechanical equipment. Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other vehicle-related fluids on the project site are also common sources of storm water pollution and soil contamination. Generally, standard safety precautions for handling and storing construction materials can adequately reduce the potential pollution of storm water by these materials.

The project would be required to prepare and submit a NOI and a SWPPP to the SWRCB demonstrating compliance with the Construction General NPDES Permit. The General Permit requires that non-storm water discharges from construction sites be eliminated or reduced to the maximum extent practicable, that a SWPPP be developed governing construction activities for the proposed project, and that routine inspections be performed of all storm water pollution prevention measures and control practices being used at the site, including inspections before and after storm events. The SWPPP is required to specify BMPs that the project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the project site. Examples of BMPs that may be used during construction include, but are not limited to, sandbag barriers, geotextiles, storm drain inlet protection, sediment traps, rip rap soil stabilizers, and hydroseeding. Upon completion of the project, the applicant would be required to submit a Notice of Termination to the SWRCB to indicate that construction is completed. Mandatory compliance with the SWPPP would ensure that the proposed project would not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LONG-TERM OPERATIONAL IMPACTS

HWQ -2 *Implementation of the proposed project could potentially alter the existing drainage pattern, create or contribute to runoff water that would exceed the capacity of the existing or proposed storm water drainage systems, increase sources of polluted runoff, or substantially degrade water quality.*

Impact Analysis:

PROPOSED RUNOFF AND DRAINAGE FACILITIES

Development of the proposed project would increase storm water runoff from the project site. As discussed above, in the existing condition, the on-site peak runoff flow for Avanti South and Avanti West is 26.05 cfs and 9.13 cfs, respectively. In addition, 435 cfs of off-site runoff is conveyed through the existing double 72-inch storm drains at 65th Street West that cross under Avenue L and 218 cfs of off-site runoff enters the Avanti South site at the southeast corner of the project site.

With project development, the on-site peak runoff flow for Avanti South and Avanti West would be 161.80 cfs and 50.04 cfs, respectively. Runoff within the project site would be conveyed to proposed retention and detention basins through non-erosive drainage devices including catch basins and street gutters. On-site storm water runoff within Avanti South site would be mitigated through four detention basins located along the west side of 65th Street West. The detention basins would be designed to mitigate the maximum outflow to 85 percent of the pre-developed peak runoff. The site would be designed to convey site drainage to these basins via surface drainage and a system of storm drains (ranging from 24 to 54 inches in size) within the site. The four detention basins would function independently and outlet into the proposed 72-inch storm drains in 65th Street West.

On-site storm water runoff within Avanti West would be mitigated through retention basins, as there are no proposed storm drains for outlet. The retention basins would be sized to capture 100 percent of the 50-year generated runoff volume. Final basin size may vary dependent upon percolation rates and the final engineering design. On-site drainage would be conveyed via surface flow and internal storm drains (ranging from 24 to 60 inches in size) to the retention basins.

The Walmart project, located east of the project site, has been conditioned to install a storm drain in Avenue L to convey the existing off-site storm water runoff (218 cfs) to outlet at the southeast corner of the Avanti South site. The proposed project would convey the existing 435 cfs off-site storm water runoff via a storm drain in 65th Street West from Avenue L northerly to Avenue K-8 and the 218 cfs off-site storm water runoff via a storm drain along the eastern portion of Avanti South to Avenue K-8, then westerly in Avenue K-8 to 65th Street West. The Avanti North Project would then convey this off-site drainage through its site northerly to the existing 84-inch storm drain at Avenue J-12.

Overall, the proposed project would result in a decrease in runoff and flow depth to the adjacent roadways by limiting the flow leaving the site to 85 percent of the peak pre-developed flow for Avanti South and 100 percent of the post-development 50-year design storm for Avanti West. The proposed development would convey the on-site 25-year design storm via storm drain pipes and convey the remainder of the 50-year design storm via street gutters. The 50-year design storm would be routed to on-site basins to either retain the design volume or detain 85 percent of the pre-development peak flow rate. Additionally, the proposed grading design would maintain historic drainage patterns and adequately convey all off-site drainage through the site via the proposed storm drain system. The project would not alter the existing drainage pattern of the site or area through 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 on- or off-site. Impacts would be less than significant in this regard.

STORM WATER QUALITY

The project site would likely experience pollutant generation due to the proposed land uses, potentially increasing the generation of suspended solids/sediments, nutrients, heavy metals, pathogens, pesticides, oil and grease, toxic organic compounds, and trash and debris. As discussed above, the project would include retention and detention basins to accommodate increased runoff within the project site. On-site storm water runoff within Avanti South site would be mitigated through detention basins, which would be designed to mitigate the maximum outflow to 85 percent of the pre-developed peak runoff and outlet into the proposed 72-inch storm drains in 65th Street West. On-site storm water runoff within Avanti West would be mitigated through retention basins, which would be sized to capture 100 percent of the 50-year generated runoff volume. The proposed storm drain facilities would also provide water quality functions. Storm water would be clarified in the storm drain system with mechanical clarification devices before the runoff is directed into the project's basins, allowing for infiltration of clarified water. The retention basins within Avanti West would rely on percolation or infiltration for draw-down of the storm volume. The detention basins within Avanti South would have low areas allowing for infiltration into the soil before outletting into the 65th Street West storm drain. Thus, construction and operation of the proposed storm drain facilities would ensure that storm water originating from on- and off-site sources would be conveyed and treated prior to outletting to the regional storm drain system, resulting in less than significant impacts to water quality.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GROUNDWATER IMPACTS

HWQ -3 *Implementation of the proposed project could potentially deplete groundwater supplies or interfere substantially with groundwater recharge.*

Impact Analysis: Refer to Section 5.11, *Public Services and Utilities*, for a discussion concerning the project's water supplies, including groundwater. As discussed in Section 5.11, District 40 would serve the project site. District 40 relies, in part, on groundwater to meet water supplies. Although the proposed project would increase water demand over existing conditions, the project's water demands would not result in a depletion of groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. As noted above, the AV Basin has recently been adjudicated and the Court determined the total safe yield and the native safe yield of the basin. The judgment allocates rights to pump groundwater, including the pumping rights of the water purveyors, and sets forth a physical solution. Thus, the judgment limits the amount of groundwater that can be pumped to ensure the protection and safe yield of the AV Basin. As such, the project would not substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. Impacts would be less than significant in this regard.

The AV Basin is recharged principally by deep percolation of precipitation and runoff from the surrounding mountains and hills. However, according to the Antelope Valley IRUWMP, little percolation occurs in the Antelope Valley Region other than near the base of the surrounding mountains due to impermeable layers of clay overlying the groundwater basin. Groundwater recharge for the AV Basin is accomplished through approximately 400 acres of groundwater infiltration basins via the Water Supply Stabilization Project (also known as Westside Water Bank) and six acres of groundwater infiltration basins via the Eastside Water Banking and Blending Project. Future development would not remove existing groundwater infiltration basins such that a net deficit in aquifer volume or lowering of the local groundwater table would occur; nor would project implementation affect operations of the Water Supply Stabilization Project or the Eastside Water Banking and Blending Project. Thus, project implementation would not involve significant impacts to groundwater recharge.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

FLOOD HAZARD

HWQ -4 *Implementation of the proposed project could place housing or structures 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.*

Impact Analysis: The project site lies within Zone X and Zone X shaded, as indicated on the FEMA FIRM, which are determined to be areas of 0.2 percent annual chance flood; areas of one percent chance flood with average depths of less than one foot, or with drainage areas less than one square mile. The project site is not located within a regulated 100-year flood zone. Therefore, the project would not place housing or structures within a regulated 100-year flood hazard area. Impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.8.5 CUMULATIVE IMPACTS

HYDROLOGY AND WATER QUALITY

Development anticipated by the proposed project combined with cumulative development would not have an adverse impact on hydrology/drainage and water quality.

Impact Analysis: Development of the proposed project would result in the potential for short-term construction water quality impacts. However, the proposed project would be required to adhere to NPDES requirements and implement a SWPPP with specific BMPs, to reduce potential water quality impacts associated with construction activities. Similarly, cumulative development projects would be required to comply with the same NPDES requirements as the proposed project during construction. Therefore, the project impacts would not be cumulatively considerable, and impacts in this regard would be less than significant.

The project would result in increased storm water runoff due to development of the project site. The proposed development would convey the on-site 25-year design storm via storm drain pipes and convey the remainder of the 50-year design storm via street gutters. The 50-year design storm would be routed to on-site basins to either retain the design volume or detain 85 percent of the pre-development peak flow rate. Additionally, the proposed grading design would maintain historic drainage patterns and adequately convey all off-site drainage through the site via the proposed storm drain system.

Cumulative development projects would also increase storm water runoff and potentially alter the drainage patterns of the area. Similar to the project, cumulative development projects would be required to demonstrate that the respective development would not increase the flow rate beyond existing conditions and that peak flows generated by individual development projects would be accommodated by the City's existing and/or proposed storm drain facilities. Individual development projects would be required to construct local storm drains and/or contribute to the regional drainage system pursuant to the Lancaster Municipal Code. Future projects would also be required to comply with existing water quality standards, implement site-specific improvements, and include BMPs as necessary. As the proposed project would adequately convey the on-site and off-site drainage through the site via a proposed storm drain system, project impacts would not be cumulatively considerable, and impacts in this regard are less than significant.

The proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. As discussed above, the AV Basin has recently been adjudicated and the Court determined the total safe yield and the native safe yield of the basin. The judgment allocates rights to pump groundwater, including the pumping rights of the water purveyors, and sets forth a physical solution. Thus, the judgment limits the amount of groundwater that can be pumped to ensure the protection and safe yield of the AV Basin. As such, the project would not substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local

groundwater table; nor would it affect operations of the Water Supply Stabilization Project and the Eastside Water Banking and Blending Project.

Groundwater supplies would be limited based on the Court determination and adjudication of the AV Basin. Thus, the proposed project and cumulative development would not significantly impact groundwater resources associated with increased demand for water. The proposed project would not impact groundwater recharge; thus, the project's impact to groundwater recharge would not be cumulatively considerable. Impacts would be less than significant in this regard.

The proposed project would not place housing or structures within a regulated 100-year floodplain. The proposed project would not cumulatively contribute to flood impacts. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.8.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to hydrology and water quality have been identified following implementation of the Avanti South SP project.

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Section 5.9

Land Use and Planning

5.9 LAND USE AND PLANNING

This section identifies the existing land use conditions, evaluates the project's consistency with relevant planning policies, and recommends mitigation measures, if applicable, that would avoid or lessen the significance of potential impacts. On-site and surrounding land use conditions and relevant land use policies and regulations, as set forth by the City of Lancaster are also identified. Information in this section is based in part upon *City of Lancaster General Plan 2030* (General Plan 2030); *Lancaster Municipal Code* (Municipal Code); draft *Avanti South Specific Plan* (Specific Plan); and *Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS).

5.9.1 ENVIRONMENTAL SETTING

ON-SITE LAND USES

The project site is currently undeveloped with vegetation consisting of ornamental trees and native annuals. The site topography is relatively flat and level with a general slope down to the north/northeast.

Two drainages are located within Avanti South, including one within the center of the site and one along the eastern boundary. Along the southeastern boundary of Avanti West, a portion of a drainage pond and channel are located within the project site. The remainder of the pond and channel, along with another pond are located adjacent to the project site within the boundaries of the Good Shepherd Cemetery.

GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

The *City of Lancaster General Plan 2030* (General Plan 2030) Land Use Map designates Avanti South as Urban Residential (UR) (2.1-6.5 dwelling units/acre (du/ac)) with Specific Plan (SP) Overlay and Avanti West as Non-Urban Residential (NU) (0.4-2.0 dwelling units/acre).

The Zoning Map of the City of Lancaster (Zoning Map) identifies the zoning for Avanti South as Specific Plan (SP) and for Avanti West as RR-2.5 (Rural Residential of 1 unit/2.5 acres).

SURROUNDING LAND USES

Avanti South is surrounded by the following land uses:

- **North:** Vacant land, designated UR with SP overlay and zoned SP, is located to the north. The Avanti North Specific Plan Project proposed development of this area with single-family residential uses. This project was approved by the City Council on September 12, 2017.
- **East:** Single-family homes zoned R-7,000 (single-family residential, minimum lot size 7,000 square feet) back up to the northern portion of the project site. Vacant land designated Commercial (C) and UR and zoned Commercial Planned Development (CPD) and R-7,000 is located to the east of the southern portion of the project site. A Walmart has been approved, but not constructed, immediately to the east on the northwest corner of 60th Street West and Avenue L.

- South: Avenue L forms the southern boundary. Vacant land designated UR and zoned R-10,000 (single-family residential, minimum lot size 10,000 square feet), a single-family residence, and Quartz Hill High School are located to the south across Avenue L.
- West: 70th Street West forms the western boundary. Vacant land designated NU and zoned Semi-Rural Residential (SRR) and a cemetery are located to the west across 70th Street West.

Avanti West is surrounded by the following land uses:

- North: Vacant land, designated NU and C and zoned CPD and RR-2.5 (rural residential, minimum lot size 2.5 acres) is located directly adjacent to the project site.
- East: 70th Street West forms the eastern boundary. Vacant land is located across 70th Street West. The vacant land is designated UR with SP overlay and zoned SP. The Avanti North Specific Plan Project proposed development of this area with single-family residential uses. This project was approved by the City Council on September 12, 2017.
- South: A cemetery and vacant land are located to the south. The vacant land is designated NU and zoned RR-2.5; while the cemetery is designated and zoned CE (Cemetery).
- West: Vacant land designated Non-Urban Residential (0.4-2.0 du/ac) and zoned RR-2.5 is located west of the project site.

5.9.2 REGULATORY SETTING

REGIONAL PLANS AND POLICIES

Southern California Association of Governments

Regional planning agencies such as the Southern California Association of Governments (SCAG) recognize that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues such as affordable housing, transportation, and air pollution have resulted in the adoption of regional plans that affect the City of Lancaster.

SCAG has evolved as the largest council of governments in the United States, functioning as the Metropolitan Planning Organization (MPO) for six counties (Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial) and 191 cities. The region encompasses an area of more than 38,000 square miles. As the designated MPO, the Federal government mandates SCAG to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. These mandates led SCAG to prepare comprehensive regional plans to address these concerns.

SCAG is responsible for the maintenance of a continuous, comprehensive, and coordinated planning process resulting in a Regional Transportation Plan (RTP) and a Regional Transportation Improvement Program (RTIP). SCAG is responsible for the development of demographic projections, and is also responsible for development of the integrated land use, housing, employment, transportation programs, measures, and strategies for portions of the Antelope Valley Air Quality Management Plan (AQMP).

SUSTAINABLE COMMUNITIES STRATEGY

The passage of California Senate Bill 375 (SB 375) in 2008 requires that a MPO, such as SCAG, prepare and adopt a Sustainable Communities Strategy (SCS) that sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures, and policies, will reduce greenhouse gas emissions from automobiles and light duty trucks (Govt. Code §65080(b)(2)(B)). The SCS outlines certain land use growth strategies that provide for more integrated land use and transportation planning, and maximize transportation investments. The SCS is intended to provide a regional land use policy framework that local governments may consider and build upon.

2016 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

On April 7, 2016, SCAG's Regional Council adopted the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The 2016 RTP/SCS closely integrates land use and transportation so that the region can grow smartly and sustainably. SCAG works closely with local jurisdictions to develop the 2016 RTP/SCS, which incorporates local growth forecasts, projects and programs and includes complementary regional policies and initiatives. The 2016 RTP/SCS considers new patterns of development as the regional economy continues to recover and grow, the composition of our population changes, the housing market responds to evolving needs, and demands and mobility innovations emerge. The 2016 RTP/SCS also includes a long-term strategic vision for the region that will help guide decisions for transportation and how we use land, as well as the public investments in both, through 2040.

GROWTH FORECASTS

SCAG's Forecasting Section is responsible for producing socio-economic estimates and projections at multiple geographic levels and in multiple years. The Forecasting Section develops, refines, and maintains SCAG's regional and small area socio-economic forecasting/allocation models. The socio-economic estimates and projections are used by federal and state mandated long-range planning efforts such as the RTP, the AQMP, the RTIP, and the Regional Housing Needs Assessment (RHNA). SCAG's Adopted 2016 RTP Growth Forecasts are used to assess a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint; refer to [Section 6.3, *Growth-Inducing Impacts*](#). Adopted 2016 RTP/SCS Growth Forecasts provide population, household, and employment data for 2040.

SCAG REGIONAL HOUSING NEEDS ASSESSMENT

California State Housing Element Law enacted in 1980 requires SCAG and other regional councils of government in California to determine the existing and projected regional housing needs for persons at all income levels. SCAG is also required by law to determine each jurisdiction's share of the regional housing need in the six-county southern California region. The intent of SB 375 and the RHNA process is to create a better balance of jobs and housing in communities, ensure the availability of decent affordable housing for all income groups and achieve sustainability through long term strategic land use planning. SCAG takes the lead in overseeing the assessment by identifying measures to gauge housing demand and comparing those numbers against socioeconomic factors throughout the region. The RHNA consists of two measurements: 1) existing need for housing, and 2) future need for housing.

The State’s Housing Element law requires local governments to make plans to adequately address their share of existing and projected population growth, taking into consideration affordability of available and future housing. The California Department of Housing and Community Development (HCD) enforces the State Housing Element Law by requiring Housing Elements as part of every city’s General Plan. The City of Lancaster’s Housing Element was certified in 2014. The 5th cycle Final RHNA Allocation Plan was adopted by the SCAG Regional Council on October 4, 2012, and covers the planning period from October 15, 2013 to October 15, 2021.

Table 5.9-1, *RHNA Allocation (2014-2021)*, identifies Lancaster’s fair share housing needs allocation for the 2014 to 2021 planning period.

Table 5.9-1
RHNA Allocation (2014-2021)

Income Category	Number of Units	Percentage
Very Low (50% or less of median)	627	24.9%
Low (51% to 80% of median)	384	15.3%
Moderate (80% to 120% of median)	413	16.5%
Above Moderate (>120% of median)	1,086	43.3%
Total	2,150	100%
Source: Southern California Association of Governments Website, 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021, http://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf , accessed February 9, 2017.		

INTERGOVERNMENTAL REVIEW

SCAG’s Intergovernmental Review (IGR) Section is responsible for performing consistency review of regionally significant local plans, projects, and programs with SCAG’s adopted regional plans. The criteria for projects of regional significance are outlined in CEQA Guidelines Sections 15125 and 15206. The proposed project would be considered regionally significant as it would meet the following criteria, requiring consistency review:

- (1) A proposed local general plan, element, or amendment thereof for which an EIR was prepared.
- (2) A project has the potential for causing significant effects on the environment extending beyond the city or county in which the project would be located. Examples of the effects include generating significant amounts of traffic or interfering with the attainment or maintenance of state or national air quality standards. Projects subject to this subdivision include:
 - (A) A proposed residential development of more than 500 dwelling units.

A proposed plan, project, or program is directed to demonstrate how it is consistent with the 2016 RTP/SCS, which is established through consistency with 2016 RTP/SCS Goals and Adopted Growth Forecasts.

SCAG encourages review of the Final Program Environmental Impact Report (Final PEIR) for the 2016 RTP/SCS for guidance, as appropriate. The Final PEIR includes a list of project-level performance

standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible.

LOCAL PLANS AND POLICIES

Lancaster General Plan 2030

General Plan 2030, adopted July 14, 2009, is the City's long-term outlook for the future. This view of the future is a compilation of a system of basic community values, ideals, and aspirations as to how its natural and man-made environments should be organized and managed. The plan identifies the types of development that will be allowed, the spatial relationships among land uses, and the general pattern of future development. All subdivisions, public works, redevelopment projects, zoning decisions, and other various implementation tools must be consistent with the General Plan. Thus, the General Plan not only functions as a guide to the type of community that is desired, but also provides the means by which the community may achieve that desired future.

The General Plan 2030 presents seven separate plan documents that contain goals, objectives, policies, and specific actions. The exception is the Housing Element, which is contained under separate cover and comprises the eighth component of the General Plan Policy Document.

PLAN FOR THE NATURAL ENVIRONMENT

The Plan for the Natural Environment evaluates the natural and human-induced environments within the Lancaster General Plan study area. This plan focuses on those resources suitable for certain levels of maintenance and protection, as well as their limitations for rural or urban use. Overall, the Plan for the Natural Environment provides a management program for those resources consistent with community values, and ensures the City of Lancaster as an active participant in the management of the Antelope Valley's resources. The management program outlined in the Plan for the Natural Environment is aimed at balancing demands for new urban and rural development within Lancaster, with the desire of residents to protect natural resources and retain the open character of the General Plan study area.

PLAN FOR PUBLIC HEALTH AND SAFETY

The Plan for Public Health and Safety contains an evaluation of natural and manmade conditions which may pose certain levels of health and safety hazards to life and property within Lancaster, along with a comprehensive program to mitigate those hazards to acceptable levels. Inherent in this plan is a determination of "acceptable risk." Acceptable risk is based on a determination of how safe is safe enough, balancing the cost of hazard mitigation with its benefits. The Plan for Public Health and Safety identifies constraints to urban and rural development which must be considered as part of overall and site-specific development strategies. This plan also addresses existing hazards faced by Lancaster residents and businesses, and provides a program to mitigate those hazards.

PLAN FOR ACTIVE LIVING

The Plan for Active Living focuses on the components of the community's shelter, culture, and lifestyle. It also focuses on the manner in which those in need can be helped so that all may share in achieving a high quality of life. The Plan for Active Living addresses parks, recreation and other community services.

PLAN FOR PHYSICAL MOBILITY

The Plan for Physical Mobility focuses on transportation issues, such as how goods and people move within the study area. The Plan recognizes that transportation affects land use, urban design, energy consumption, air quality, and the City's infrastructure. Addressed not only at the local level, circulation decisions must be coordinated with regional, state, and federal agencies, as well as with neighboring communities. In the Plan for Physical Mobility, transportation facilities are discussed, as well as alternative modes of transportation.

PLAN FOR MUNICIPAL SERVICES AND FACILITIES

The Plan for Municipal Services and Facilities describes infrastructure and service providers and the future needs for such services and facilities. Specific topics include water facilities, wastewater facilities, flood control and drainage facilities, solid waste management, and public facilities and buildings. The Plan for Municipal Services and Facilities sets forth policies and programs for the rational and cost-efficient provision and extension of public services, infrastructure and facilities to serve the existing community and support planned development and protect natural resources.

THE PLAN FOR ECONOMIC DEVELOPMENT AND VITALITY

The Plan for Economic Development and Vitality analyzes the local economy and employment in the City. Specific topics include economic development, urban development, fiscal impacts of development, and development economic issues and options. It also contains the implementation structure for the Lancaster Economic Development/ Redevelopment Strategic Plan. The Plan for Economic Development and Vitality establishes policies and programs to guide the City to economic self-sufficiency.

PLAN FOR PHYSICAL DEVELOPMENT

The Plan for Physical Development focuses on the organization of the City's physical environment into a local, functional, and aesthetic pattern consistent with community values. These policies and programs are illustrated on the General Plan Land Use Map. This plan meets the California Government Code land use element mandate to designate the proposed general distribution, general location, and extent of the uses of land for housing, business, industry, and open space. Beyond that requirement, the Plan for Physical Development is also a summary of the manner in which other General Plan issues affect the arrangement and design of development within the General Plan 2030 study area. The plan focuses on understanding current land uses, the design and form of present developments, identifies land use constraints to development, land use trends for the future, and agency coordination to ensure compatible land uses.

As stated above, the General Plan Land Use Map, designates Avanti South as UR with a SP Overlay and Avanti West as NU.

The Plan for Physical Development also contains a Community Design subsection, which focuses on strengthening the City's physical image and identity. The Community Design subsection provides direction in the form of policies and action programs that call for the development and implementation of comprehensive community design guidelines that will provide guidance for the creation of an attractive and enduring physical environment.

HOUSING ELEMENT

The Housing Element is one of the state mandated elements of the Lancaster General Plan. It presents the overall goals, objectives, policies and action programs the City intends to implement in order to facilitate provision of housing for existing and future residents of the city. The City prepares the Housing Element to also meet the requirements of State law and achieve certification by the California Department of Housing and Community Development (HCD). Housing Element law requires the City to adequately plan to meet its existing and projected housing needs including its share of the regional housing need. HCD allocates the region's share of the statewide housing need to the Councils of Governments (COG) based on population projections and forecasts. SCAG develops the RHNA, allocating the region's share to the cities and counties within the region.

General Plan 2030 policies relevant to the proposed project are outlined in [Table 5.9-3, General Plan 2030 Consistency Analysis](#), provided in Section 5.9.4.

Lancaster Municipal Code

Lancaster Municipal Code Title 17, Zoning, comprises the Zoning Ordinance of the City of Lancaster. The purpose of the Zoning Ordinance is to implement the City's General Plan and pertinent goals, objectives, policies, and programs. Title 17 protects the public health, safety, and general welfare of the visitors to and residents of the City by regulating the use of buildings, structures, and land for residential, commercial, industrial and institutional purposes; regulates location, height, bulk, and area covered by buildings and structures; and controls lot size, yards, intensity of land use, signs and off-street parking.

As stated above, the Zoning Map identifies the zoning for Avanti South as SP and for Avanti West as RR-2.5.

Municipal Code Section 17.20.590, identifies the purpose and intent of the SP zone. The SP zone is intended to provide the means necessary to implement the General Plan; whether it is solely the SP designation, or in conjunction with any other General Plan land use designation. The SP zone is intended to be in accordance with applicable goals, objectives, policies and specific actions set forth by the General Plan. It is the intent of the SP zone that specific plans be prepared to regulate the use and development of property prior to, or in conjunction with, the review of development and subdivision proposals. It is intended that these specific plans be comprehensive and cover a logical planning area so that development in the SP zone occurs in a coordinated fashion, with adequate public/private services and infrastructure, rather than as a series of isolated individual projects. It is further intended that these specific plans provide the opportunity for unique and creative designs that are not possible under the City's typical development regulations.

Where specified on the General Plan Land Use Map, the land use category shall determine the type of land use permitted and/or the density range for the specific plan. Where the SP zone is specified without a land use designation on the General Plan Land Use Map, the specific plan shall include a comprehensive proposal for development, which may include but is not limited to, a variety of mixed land uses and standards to enhance and protect the physical features of the site and surrounding areas.

Municipal Code Section 17.08.030, identifies the purpose of the residential zones. Non-urban residential or RR zones are intended to provide for single-family dwellings in a non-urban environment with minimal urban services. The primary difference between the zones is the minimum lot size. Only those additional

uses that are complementary to and exist in harmony with a rural residential neighborhood are allowed. The RR-2.5 (rural residential) zone implements the “non-urban residential, rural residential” designation. This zone is intended for rural single-family residential use, allowing one dwelling unit per 2.5 acres.

5.9.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, hazardous materials impacts resulting from the project’s implementation may be considered significant if they would result in the following:

- Disrupt or physically divide an established community; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan, and/or policies by agencies with jurisdiction over the project; refer to Section 8.0, *Effects Found Not To Be Significant*.

Based on these significance thresholds and criteria, the project’s effects have been categorized as either “no impact,” a “less than significant impact,” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.9.4 IMPACTS AND MITIGATION MEASURES

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

LU-1 ***The project would not conflict with SCAG’s 2016 RTP/SCS goals and adopted growth forecasts.***

Impact Analysis: As stated above, SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS. SCAG refers to CEQA Guidelines Section 15206, Projects of Statewide, Regional or Areawide Significance, in determining whether a project meets the criteria to be deemed regionally significant. The following criteria are relevant to the project:

- Criteria 1: A proposed local general plan, element, or amendment thereof for which an EIR was prepared.
- Criteria 2(A): A proposed residential development of more than 500 dwelling units.

Because the proposed project satisfies Criteria 1 and 2(A) above, it is considered regionally significant and must demonstrate its consistency with the 2016 RTP/SCS, which is established through consistency with 2016 RTP/SCS goals and adopted growth forecasts. Table 5.9-2, *SCAG Consistency Analysis*, provides an

analysis of the proposed project's consistency with the applicable 2016 RTP/SCS goals and adopted growth forecasts. As concluded in [Table 5.9-2](#), the project is consistent with the 2016 RTP/SCS goals and adopted growth forecasts, resulting in a less than significant impact in this regard.

Table 5.9-2
SCAG Consistency Analysis

SCAG Goals and Growth Forecasts		Consistency Determination
RTP/SCS Goals¹		
RTP/SCS G1	Align the plan investments and policies with improving regional economic development and competitiveness	<u>Consistent.</u> The project would allow for the development of commercial uses, a school, and a fire station, providing additional employment opportunities within the City and supporting regional economic development.
RTP/SCS G2	Maximize mobility and accessibility for all people and goods in the region	<u>Consistent.</u> The project site is located adjacent to existing arterials, which provide direct access to SR-14, the regional transportation system that connects Lancaster and the surrounding area. Further, the project site is located near an existing Antelope Valley Transit Authority (AVTA) bus route (Route 9), which provides access to Downtown Lancaster and the Lancaster Metrolink Station. As discussed in response to RTP/SCS G6, below, the project proposes an extensive network that encourages accessibility through active transportation options.
RTP/SCS G3	Ensure travel safety and reliability for all people and goods in the region	<u>Consistent.</u> All new streets, trails, and bike lanes would be designed and constructed in accordance with the City's engineering standards to ensure travel safety, accessibility, and reliability for all people and goods. In addition, Los Angeles County Fire Department would review roadway and circulation improvements to ensure adequate fire safety access is provided.
RTP/SCS G4	Preserve and ensure a sustainable regional transportation system	<u>Consistent:</u> The project would contribute to an overall sustainable regional transportation system by providing improved transportation systems within the project area through the extension and connection of existing roadways, sidewalks, pedestrian trails, and bicycle facilities. Additionally, the project would provide a bus turnout adjacent to the project site that would provide residents and patrons access to regional transportation systems, such as the Lancaster Metrolink Station.
RTP/SCS G5	Maximize the productivity of our transportation system	<u>Consistent:</u> Refer to Responses to Goals RTP/SCS G2 and G4.
RTP/SCS G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking)	<u>Consistent.</u> The project proposes an extensive network of parks, paseos, trails, pathways, and promenades to encourage biking, walking and horseback riding throughout the project site. Accessible connections, including streets, sidewalks, bike paths, promenades, paseos and natural systems would provide opportunities for convenient non-vehicular circulation and access between proposed residential, recreational, school, and commercial uses. A Class I Bike Lane and Equestrian Trail on the east side of 70th Street, between Avenue L and the proposed Avenue K-8 extension, would be provided, consistent with the Proposed Class I bike path identified in the Lancaster Master Plan of Trails and Bikeways. In addition, consistent with the Lancaster Master Plan of Trails and Bikeways, Class II Bike Lanes would be provided along 75th Street West, Avenue K-8, Avenue L and 65th Street West, within and/or immediately adjacent to the project site.
RTP/SCS G7	Actively encourage and create incentives for energy efficiency, where possible	<u>Consistent.</u> The Specific Plan permits electrical vehicle charging stations and non-commercial solar energy systems. In addition, small-scale wind turbines and solar heating and energy production panels and films are encouraged and are not required to be screened, since screening may limit productivity. All development within the Specific Plan would be required to comply with the Lancaster Municipal Code pertaining to the provision of electric vehicle charging stations and installation of solar energy systems.

**Table 5.9-2 [continued]
SCAG Consistency Analysis**

SCAG Goals and Growth Forecasts		Consistency Determination
RTP/SCS G8	Encourage land use and growth patterns that facilitate transit and active transportation	<u>Consistent.</u> The Specific Plan proposes a variety of residential uses of varying densities in proximity to proposed commercial, school, and recreational uses. The proposed uses along with the associated amenities would provide improved active transportation opportunities within the project site. Further, the proposed project would contribute toward the regional system of bikeways and pedestrian trails by providing bikeways and trails in compliance with the Lancaster Master Plan of Trails and Bikeways adjacent to and within the project site. The project would introduce residential and commercial uses in proximity to an existing bus stop located at 60th Street West and Avenue L (Quartz Hill High School). Antelope Valley Transit Authority (AVTA) Route 9 provides service between Quartz Hill and Lancaster City Park, with a stop at Sierra Highway and Lancaster Boulevard, adjacent to the Lancaster Metrolink Station. A bus turnout is also proposed on Avenue L at 65th Street West.
RTP/SCS G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*	<u>Not Applicable.</u> This policy addresses the security of the regional transportation system, which is beyond the proposed project's scope.
RTP/SCS Adopted Growth Forecasts for Lancaster		
Adopted Growth Forecasts ² :	<u>2035 Growth Forecasts</u> Population: 195,800 Households: 61,000 Employment: 56,700	<u>Consistent.</u> Section 6.3, <i>Growth-Inducing Impacts</i> , discusses the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly. As concluded in Section 6.3 and summarized in Table 6-5, <i>Proposed Specific Plan Compared to SCAG Growth Forecasts</i> , project implementation would result in 1,700 dwelling units, with a resultant population of approximately 5,457 persons in the City. The proposed project would not cause SCAG's 2035 growth forecasts for the City to be exceeded. As concluded in Section 6.3, the proposed project's potential population, housing, and employment growth is considered less than significant.
<p>Notes: *SCAG does not yet have an agreed-upon security performance measure.</p> <ol style="list-style-type: none"> 1. Ping Chang, Acting Manager, Compliance and Performance Monitoring, SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Avanti South Project (SCAG NO. IGR8936), August 15, 2016. 2. Southern California Association of Governments, 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction, http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf, accessed June 22, 2017. 		

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LANCASTER GENERAL PLAN 2030

LU-2 *The project would not conflict with the Lancaster General Plan 2030 Land Use Plan or Policies.*

Impact Analysis: As detailed in Section 3.0, *Project Description*, the project requests adoption of the Avanti South Specific Plan (SP 15-02) and approval of a General Plan Amendment (GPA) 16-01, Zone Change (ZC) 16-01, and TTM No. 74312 for the approximately 307.7-acre project site. The Avanti South Specific Plan is a regulatory document and provides a means for implementing the General Plan 2030 for the project site. The policies and regulations contained in the draft Specific Plan would serve as the zoning

for the property. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

The project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses. A 12.8-acre school site and 1.3-acre fire station site are also proposed along with internal streets. Based on the proposed Land Use Plan (refer to [Table 3-3](#)), the Avanti Specific Plan would allow the development of up to 1,700 dwelling units, 213,600 square feet of commercial uses, 31.5 acres of open space/parks, and 38.4 acres of internal streets, as well as the 1.3-acre fire station site and 12.8-acre school site.

The Avanti South Specific Plan and proposed GPA 16-01 are analyzed below for consistency with the Lancaster General Plan 2030 land use designations and policies.

GENERAL PLAN 2030 LAND USE DESIGNATIONS

The General Plan Land Use Map currently designates Avanti West as NU and Avanti South as UR with a SP overlay. Per California Law, the proposed Specific Plan must be consistent with the General Plan 2030. To ensure consistency between the proposed Specific Plan and the General Plan 2030, the General Plan 2030 Land Use Map would be amended alongside adoption of the proposed Specific Plan. More specifically, proposed GPA 16-01 would amend the General Plan Land Use Map to change the land use designations for Avanti West to UR with a SP overlay and for Avanti South from UR with a SP overlay to Mixed-Use (MU) with a SP overlay and Public-School. Upon approval of GPA 16-01, the Specific Plan would be consistent with the General Plan Land Use Map.

GENERAL PLAN 2030 POLICIES

[Table 5.9-3, General Plan Policy Consistency Analysis](#), provides an analysis of the project's consistency with the relevant General Plan 2030 policies. As demonstrated in [Table 5.9-3](#), the proposed Specific Plan is determined to be consistent with the relevant General Plan 2030 policies and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

**Table 5.9-3
General Plan Policy Consistency Analysis**

General Plan Policy	Consistency of Proposed Project with Current Policy
Plan for the Natural Environment	
Policy 3.1.1. Ensure that development does not adversely affect the groundwater basin.	<u>Consistent.</u> As discussed in <u>Section 5.8, Hydrology and Water Quality</u> , although the proposed project would increase water demand over existing conditions, the project's water demands would not result in a depletion of groundwater supplies, adversely affecting the Antelope Valley Groundwater Basin (AV Basin). The AV Basin has recently been adjudicated and the Court determined the total safe yield and the native safe yield of the basin. The judgment allocates rights to pump groundwater, including the pumping rights of the water purveyors, and sets forth a physical solution. Thus, the judgment limits the amount of groundwater that can be pumped to ensure the protection and safe yield of the AV Basin. Further, development would not remove existing groundwater infiltration basins, nor would project implementation affect operations of the Water Supply Stabilization Project or the Eastside Water Banking and Blending Project.
Policy 3.2.1. Promote the use of water conservation measures in the landscape plans of new developments.	<u>Consistent.</u> The proposed Specific Plan includes landscape guidelines that recommends native and adaptive species with "low" to "very low" water demand and plants with similar water needs grouped together. High water use plants are also discouraged. Streetscapes would utilize desert-adapted and native plant materials to minimize irrigation needs. High efficiency automatic irrigation systems would be utilized throughout the project site and the Specific Plan requires the community be irrigated with reclaimed or recycled water wherever possible.
Policy 3.2.2. Consider the potential impact of new development projects on the existing water supply.	<u>Consistent.</u> As discussed in <u>Section 5.11, Public Services and Utilities</u> , a Water Supply Assessment (WSA) in compliance with SB 610 and SB 221 has been prepared for the proposed project and approved by Los Angeles County Waterworks District 40 (District 40). The WSA demonstrates that District 40's total projected water supplies available during normal, single dry, and multiple-dry water years would meet the projected water demand for the proposed project.
Policy 3.2.5. Promote the use of water conservation measures in the design of new developments.	<u>Consistent.</u> As discussed in response to Policy 3.2.1 above, the Specific Plan provides landscape guidelines and a landscape master plan that promotes and requires the use of drought-tolerant plant materials and water conserving irrigation systems and practices, as well as the use of reclaimed or recycled water, where available. Future residential and non-residential development would be required to comply with all Lancaster Municipal Code requirements pertaining to water conservation measures.

Table 5.9-3 [continued]
General Plan Policy Consistency Analysis

General Plan Policy	Consistency of Proposed Project with Current Policy
Policy 3.3.1. Minimize the amount of vehicular miles traveled.	<u>Consistent.</u> The Specific Plan proposes a variety of residential uses of varying densities in proximity to proposed commercial, school, and recreational uses. These uses would be connected through an extensive network of parks, paseos, trails, pathways, and promenades that encourage biking, walking and horseback riding throughout the project site and reduce the need for automobile trips, thereby reducing vehicular miles traveled. A Class I Bike Lane and Equestrian Trail on the east side of 70th Street West, between Avenue L and the proposed Avenue K-8 extension, would be provided, consistent with the Proposed Class I bike path identified in the Lancaster Master Plan of Trails and Bikeways. In addition, consistent with the Lancaster Master Plan of Trails and Bikeways, Class II bike lanes would be provided along 75th Street West, Avenue K-8, Avenue L and 65th Street West, within and/or immediately adjacent to the project site. The project would also introduce residential and commercial uses in proximity to an existing bus stop located at 60th Street West and Avenue L (Quartz Hill High School). AVTA Route 9 provides service between Quartz Hill and Lancaster City Park, with a stop at Sierra Highway and Lancaster Boulevard, adjacent to the Lancaster Metrolink Station, which would provide additional opportunities to reduce vehicular miles traveled.
Policy 3.3.2. Facilitate the development and use of public transportation and travel modes such as bicycle riding and walking.	<u>Consistent.</u> Refer to the response to Policy 3.3.1.
Policy 3.3.3. Minimize air pollutant emissions generated by new and existing development.	<u>Consistent.</u> As discussed in Section 5.2, <i>Air Quality</i> , air pollutant emissions associated with construction activities would be reduced with the implementation of mitigation measures. Project operations would not result in significant air pollutant emissions. Further, the project proposes incorporating several features, including pedestrian amenities and bike lanes that would further contribute to minimizing air pollutant emissions.
Policy 3.3.4. Protect sensitive uses such as homes, schools and medical facilities, from the impacts of air pollution.	<u>Consistent.</u> Refer to the response to Policy 3.3.3, above.
Policy 3.4.4. Ensure that development proposals, including City sponsored projects, are analyzed for short- and long-term impacts to biological resources and that appropriate mitigation measures are implemented.	<u>Consistent.</u> As discussed in Section 5.3, <i>Biological Resources</i> , biological resource assessments have been conducted in order to identify any potential adverse impacts to biological resources associated with project implementation. Potential impacts to burrowing owl and avian species associated with project construction activities were identified and mitigation measures would be required to reduce the potential impacts.
Policy 3.5.2. Since certain soils in the Lancaster study area have exhibited shrink-swell behavior and a potential for fissuring, and subsidence may exist in other areas, minimize the potential for damage resulting from the occurrence of soils movement.	<u>Consistent.</u> As discussed in Section 5.5, <i>Geology and Soils</i> , the project site does not contain soils having the potential for shrink-swell behavior, fissuring, or subsidence. According to the Geotechnical Investigation, soils in the upper one to five feet at the project site possess a potential for hydro-collapse. The Geotechnical Investigation recommends excavation and re-compaction as part of the site development to mitigate the collapsible soil condition. The project would be required to comply with the Geotechnical Investigation recommendations which would reduce potential impacts associated with soils movement.

**Table 5.9-3 [continued]
General Plan Policy Consistency Analysis**

General Plan Policy	Consistency of Proposed Project with Current Policy
<p>Policy 3.6.1. Reduce energy consumption by establishing land use patterns which would decrease automobile travel and increase the use of energy efficient modes of transportation.</p>	<p><u>Consistent</u>. Refer to response to Policy 3.3.1. As discussed above, the Specific Plan proposes a variety of residential uses of varying densities in proximity to proposed commercial, school, and recreational uses. These uses would be connected through an extensive network of parks, paseos, trails, pathways, and promenades that encourage biking, walking, and horseback riding throughout the project site, reducing the need for automobile travel while increasing opportunities for the use of energy efficient modes of transportation.</p>
<p>Policy 3.8.1. Preserve views of surrounding ridgelines, slope areas and hilltops, as well as other scenic vistas (see also Policy 19.2.5).</p>	<p><u>Consistent</u>. According to the General Plan 2030, important scenic resources in and around Lancaster include long-range views of the San Gabriel Mountains and desert expanses, and local views of the surrounding buttes and Quartz Hill. The project site is within the viewshed of the San Gabriel Mountains to the south, and Portal Ridge to the southwest. As discussed in <u>Section 5.1, Aesthetics</u>, due to the increased building heights associated with the project, new development within the Specific Plan area could partially obstruct views of Portal Ridge for motorists, bicyclists, and pedestrians traveling south on 60th Street West. However, due to site distance from these travelers to the project site (approximately 1,330 feet, or 0.25-mile), views of Portal Ridge would only be nominally obstructed. Based on the existing ridgeline elevations of approximately 3,600 feet amsl, compared to the 2,449 feet amsl at the project site, views of the hills and ridgelines of these visual resources from 60th Street West would largely remain. Further, as stated in the Specific Plan Design Guidelines, streetscapes in the Specific Plan area would be designed to enhance the vistas surrounding the community. Therefore, the proposed project would not have a substantially adverse impact on a scenic vista.</p>
<p>Plan for Public Health and Safety</p>	
<p>Policy 4.1.1. Manage potential seismic hazards resulting from fault rupture and strong ground motion to facilitate rapid physical and economic recovery following an earthquake through the identification and recognition of potentially hazardous conditions and implementation of effective standards for seismic design of structures.</p>	<p><u>Consistent</u>. Based on the Geological Investigation, there are no active faults known to cross the site and the site is not located in a State of California Earthquake Fault Zone. However, as discussed in <u>Section 5.5, Geology and Soils</u>, potential impacts associated with strong seismic ground shaking at the project site are considered significant. According to the Geotechnical Investigation, the proposed project is feasible from a geotechnical standpoint, provided that grading and construction are performed in compliance with the recommendations identified in the Geotechnical Investigation. Implementation of Mitigation Measure GEO-1 requires the project comply with the recommendations of the project Geotechnical Investigation, including any updates to address seismic parameters and project-specific conditions. Potential adverse effects to people and new structures from strong, seismically-induced, vibratory ground motion would be sufficiently mitigated through proper seismic design, conformance with the Lancaster Municipal Code Title 15, Chapter 15.08, Building Code, and Mitigation Measure GEO-1.</p>
<p>Policy 4.3.1. Ensure that noise-sensitive land uses and noise generators are located and designed in such a manner that City noise objectives will be achieved.</p>	<p><u>Consistent</u>. As indicated in <u>Section 5.10, Noise</u>, project construction activities would not exceed City noise standards and the off-site project-related traffic noise level increases would not impact off-site land uses. With implementation of recommended noise mitigation, the project would satisfy the City's 65 dBA CNEL exterior noise level standards at the residential and school land uses within the project site.</p>

**Table 5.9-3 [continued]
General Plan Policy Consistency Analysis**

General Plan Policy	Consistency of Proposed Project with Current Policy
<p>Policy 4.5.1. Ensure that activities within the City of Lancaster transport, use, store, and dispose of hazardous materials in a responsible manner which protects the public health and safety.</p>	<p><u>Consistent.</u> The project would not involve the routine transport, use, or disposal of substantial quantities of hazardous materials. Future commercial uses may store, handle, and/or transport hazardous materials. However, these future uses would be required to prepare business plans and adhere to strict procedures enforced by the City and Health Hazardous Materials Division (HHMD). As discussed in Section 5.7, <i>Hazards and Hazardous Materials</i>, the project would be required to comply with mitigation measures that address the proper handling and disposal of hazardous materials in the event they are located on-site.</p>
<p>Policy 4.6.1. Ensure that adequate law enforcement is provided to the citizens and businesses of the City of Lancaster.</p>	<p><u>Consistent.</u> In compliance with Lancaster Municipal Code Chapter 15.64.130, Sheriff's Substation Facilities Fee, mitigation fees would be imposed on development associated with the project. Lancaster Municipal Code Chapter 15.64.130 fees would be imposed by the City to finance land acquisition, design, construction, equipping and related capital costs for sheriff substation facilities. Compliance with the Lancaster Municipal Code Chapter 15.64.130 would ensure that the development would pay its fair share of the costs of providing the necessary public services and public facilities, including law enforcement facilities, vehicles, and equipment.</p>
<p>Policy 4.6.2. Ensure that the design of new development discourages opportunities for criminal activities to the maximum extent possible.</p>	<p><u>Consistent.</u> The project proposes residential neighborhoods that are designed around a framework of parks and recreation facilities to encourage a walkable community and active community interaction. The intent is to promote safety and security through increased social interaction and the use of Crime Prevention through Environmental Design (CPTED) principles in park and open space areas.</p>
<p>Policy 4.7.1. Ensure that an adequate number of fire stations and adequate firefighting equipment and personnel are provided to protect the citizens and businesses of the City of Lancaster.</p>	<p><u>Consistent.</u> The project includes a 1.3-acre site for future construction of a fire station that would serve the project site and surrounding area.</p>
<p>Policy 4.7.2. Ensure that the design of new development minimizes the potential for fire.</p>	<p><u>Consistent.</u> The project would be reviewed by the Los Angeles County Fire Department (LACFD) to ensure that the project design minimizes the potential for fire. As part of project design, all road widths and circulation, as well as the placement of fire hydrants and installation of automatic sprinkler systems, along with fire flow requirements, would be designed with the guidance of LACFD.</p>
<p>Plan for Active Living</p>	
<p>Policy 9.1.1. Work with area school districts to identify funding programs for school site acquisition and facilities construction which recognize chronic shortfalls in traditional funding programs, and to ensure that schools are appropriately located.</p>	<p><u>Consistent.</u> The project proposes a 12.8-acre site anticipated to accommodate elementary school uses. The site would be offered to the Westside Union School District for future construction of a school.</p>
<p>Policy 10.1.1. Provide opportunities for a wide variety of recreational activities and park experiences, including active recreation and passive open space enjoyment within a coordinated system of local, regional, and special use park lands areas.</p>	<p><u>Consistent.</u> The project proposes a variety of passive and active recreational uses that would be connected by a series of promenades and paseos/linear parks with multipurpose trails throughout the project site. The Specific Plan includes five private neighborhood parks located throughout the project and two private recreation areas within the planned gated adult community. The parks would provide both parkland and improvements. It is anticipated the parks would incorporate shade trees, pathways, open play areas, playgrounds, play courts, shade structures, responsibly designed water features, seating, seat walls, shaded picnic tables, barbecues, a dog park, and ornamental landscaping. The</p>

Table 5.9-3 [continued]
General Plan Policy Consistency Analysis

General Plan Policy	Consistency of Proposed Project with Current Policy
	proposed Equestrian/Class I trail on 70th Street West would be in an easement outside of the road right-of-way and would incorporate the City's planned equestrian and Class I multipurpose trail.
Policy 10.2.4. Facilitate the use of bicycles as an alternative form of transportation, as well as a form of recreation.	<u>Consistent.</u> A Class I Bike Lane and Equestrian Trail on the east side of 70th Street West, between Avenue L and the proposed Avenue K-8 extension, would be provided, consistent with the Proposed Class I bike path identified in the Lancaster Master Plan of Trails and Bikeways. In addition, consistent with the Lancaster Master Plan of Trails and Bikeways, Class II bike lanes would be provided along 75th Street West, Avenue K-8, Avenue L and 65th Street West, within and/or immediately adjacent to the project site. Internal roadways and paths would also provide opportunities for the use of bicycles for transportation and recreation.
Plan for Physical Mobility	
Policy 14.2.2. Manage the City's roadway network so that it is aesthetically pleasing through the development and maintenance of streetscapes.	<u>Consistent.</u> The Specific Plan includes a streetscape plan that would create transportation corridors that are aesthetically pleasing. The streetscape components consist of sidewalks, street trees, landscape areas adjacent to the sidewalk, landscape setbacks and median islands where they occur. Street landscaping would maximize shade with the use of trees and be designed to appeal to a variety of users, such as bicyclists, pedestrians, and equestrians.
Policy 14.2.3. Support a roadway network that takes into consideration noise and safety issues, along with other quality of life issues.	<u>Consistent.</u> The Specific Plan includes approximately 38.3 acres of land dedicated to the roadway network. The Mobility Plan includes traffic calming measures, such as roundabouts to improve safety. Other traffic calming measures would include curb extensions, interconnected streets, street trees, on-street parking, and short blocks, smaller turning radii, planting strips and trees, well-marked and raised crosswalks, and interconnected streets and alleys. The proposed cross sections provide for parkways, meandering sidewalks, and landscaping, along with dedicated bike lanes on the Primary and Secondary arterials, separating non-motorized users. Residential collectors would include a promenade with a multi-use trail and meandering sidewalk for additional safety. The traffic calming measures and landscaping would help to reduce vehicular noise. Additionally, fences and walls along the project perimeter would be allowed for noise attenuation purposes.
Policy 14.4.3. Encourage bicycling as an alternative to automobile travel for the purpose of reducing vehicle miles traveled (VMT), fuel consumption, traffic congestion, and air pollution by providing appropriate facilities for the bicycle riders (see also Policy 10.2.4 and subordinate specific actions of the Plan for Active Living).	Refer to response to Policies 3.3.1, 10.2.4, and 14.2.2.
Policy 14.4.5. Design transportation facilities to encourage walking, provide connectivity, ADA accessibility, and safety by reducing potential auto/pedestrian conflicts.	Refer to response to Policies 14.2.2 and 14.2.3.

**Table 5.9-3 [continued]
General Plan Policy Consistency Analysis**

General Plan Policy	Consistency of Proposed Project with Current Policy
Plan for Municipal Services and Facilities	
Policy 15.3.1: Direct growth to areas with adequate existing facilities and services, areas which have adequate facilities and services committed, or areas where public services and facilities can be economically extended.	<u>Consistent.</u> The project site, with the exception of Avanti West, is located within an area of the City identified by General Plan 2030 as “urbanizing”. Overall, the project site is located immediately adjacent to existing and proposed development. Facilities and services are located within the area or can be readily expanded to serve the project site.
Plan for Economic Development and Vitality	
Policy 16.6.1: Require new development to construct and/or pay for new on-site capital improvements necessitated by their project, consistent with performance criteria identified in Objective 15.1.	<u>Consistent.</u> Development within the proposed Specific Plan area would be required to construct and/or pay for any on-site and off-site improvements necessary to serve the development proposed.
Policy 16.6.2: Require new development to ensure that all new off-site capital improvements necessitated by their project are available, consistent with performance criteria identified in Objective 15.1.	<u>Consistent.</u> Refer to response to Policy 16.6.1.
Plan for Physical Development	
Policy 17.1.1: Maintain an adequate inventory of land for residential, commercial, employment, quasi-public, public and open space uses.	<u>Consistent.</u> The proposed Land Use Plan would provide for a mix of residential uses at varying densities, commercial, institutional, and open space/parks uses.
Policy 17.1.2: Provide sufficient land to accommodate a variety of housing types meeting the economic, lifestyle, and social needs of current and future residents.	<u>Consistent.</u> The proposed Land Use Plan would allow for a mix of residential uses at varying densities, including low density, medium density, and high density. The range in densities would allow for single-family and multi-family uses. Avanti South would include five medium density planning areas identified for active adult and age targeted uses. The Specific Plan proposes a variety of housing types, including single-family detached, duplex lots, row townhomes, motor court cluster, attached motor court cluster, multi-family flats, and alternative housing that would encourage family living.
Policy 17.1.5: Provide sufficient lands for the conduct of public, quasi-public, institutional, cultural, educational, and recreational activities.	<u>Consistent.</u> The Specific Plan would provide a 1.3-acre site for a fire station and a 12.8-acre site for school use, as well as 31.5 acres for open space/park use that would provide for a variety of recreational activities and amenities.
Policy 18.1.2: Encourage development that is compatible with the City’s designated rural and non-urban areas.	<u>Consistent.</u> The project site is located within the urbanizing area of the City and has been identified for development. Although proposed development would occur at greater densities than are currently allowed by the General Plan, the proposed uses and overall development character of the area would be compatible with the existing and planned development occurring within the area. The Specific Plan includes Development Regulations and Design Guidelines to ensure compatibility and to address intensity, scale, and massing associated with the proposed development.
Policy 18.1.4: Encourage the long-term maintenance of new residential development.	<u>Consistent.</u> A Master Homeowners Association (MHOA) would be formed for the maintenance of community-wide common areas identified in the Specific Plan, including but not limited to, community signage, private parks/recreation areas, promenades, and trails shared by the entire community. A second tier or Sub-Homeowners Association (HOA) may be formed for the maintenance of private facilities held in common ownership within individual planning areas, such as project landscaping and maintenance, lanes, senior amenities, private parks, entries, and

Table 5.9-3 [continued]

General Plan Policy Consistency Analysis

General Plan Policy	Consistency of Proposed Project with Current Policy
	lighting. CC&Rs would be developed as part of the HOA and would address maintenance of the residential components.
Policy 18.1.5: Employ transitional or graduated density zoning patterns, alternative development standards, or design techniques to mitigate the interface between higher and lower intensity land uses.	<u>Consistent.</u> Refer to Response to Policy 18.1.2, above. The Specific Plan provides for transitional densities within the project site and promotes design techniques to mitigate the interface between higher and lower intensity land uses. As stated, the Specific Plan includes Development Regulations and Design Guidelines to ensure compatibility and to address intensity, scale, and massing associated with the proposed development. Massing and architectural enhancements include requirements for facades that are visible from streets, trails, outdoor gathering spaces, parks and open spaces, and parking areas be articulated to improve the design quality. Setbacks would also provide separation between buildings and adjacent uses.
Policy 18.2.3: Consider more intense urban development in outlying portions of the Urbanizing Area only if designed as self-sufficient planned communities.	<u>Consistent.</u> The project site is located within the outlying portion of the Urbanizing Area. However, the Specific Plan proposes a self-sufficient planned community that would include a mix of residential uses at varying densities, as well as commercial, institutional, and open space/parks uses.
Objective 19.2: Integrate new development with established land use patterns through quality infill to enhance overall community form and create a vibrant sense of place.	
Policy 19.2.2: Create walkable, mixed-use, transit-accessible neighborhoods and commercial districts that provide opportunities for young and old to live, work, shop, and recreate.	<u>Consistent.</u> The proposed Land Use Plan would provide for a mix of residential uses at varying densities, commercial, institutional, and open space/parks uses interconnected by an extensive network of parks, paseos, trails, pathways, and promenades. Avanti South would include five medium density planning areas identified for active adult and age targeted uses. Further, the Specific Plan proposes a variety of housing types, including single-family detached, duplex lots, row townhomes, motor court cluster, attached motor court cluster, multi-family flats, and alternative housing that would encourage family living, encouraging a variety of households of various ages.
Policy 19.2.5: Create a network of attractive paths and corridors that encourage a variety of modes of transportation within the city (see also Policy 3.8.1).	<u>Consistent.</u> The project proposes an extensive network of parks, paseos, trails, pathways, and promenades to encourage biking, walking and horseback riding throughout the project site. Accessible connections, including streets, sidewalks, bike paths, promenades, paseos and natural systems would provide opportunities for convenient non-vehicular circulation and access between proposed residential, recreational, school, and commercial uses. A Class I Bike Lane and Equestrian Trail on the east side of 70th Street West, between Avenue L and the proposed Avenue K-8 extension, would be provided, consistent with the Proposed Class I bike path identified in the Lancaster Master Plan of Trails and Bikeways. In addition, consistent with the Lancaster Master Plan of Trails and Bikeways, Class II bike lanes would be provided along 75th Street West, Avenue K-8, Avenue L and 65th Street West, within and/or immediately adjacent to the project site.
Policy 19.3.1: Promote high quality development by facilitating innovation in architecture/building design, site planning, streetscapes, and signage.	<u>Consistent.</u> The Specific Plan proposes a development plan, development regulations, and design guidelines that would promote high quality development and encourage innovation in architecture/building design, site planning, streetscapes and signage.
Policy 19.3.2: Enhance the livability of Lancaster by creating attractive, safe, and accessible gathering spaces within the community.	<u>Consistent.</u> The Specific Plan proposes a variety of open space and recreational areas throughout the site that would allow for and encourage gathering and community interaction.

Table 5.9-3 [continued]

General Plan Policy Consistency Analysis

General Plan Policy	Consistency of Proposed Project with Current Policy
Housing Element	
Policy 6.1.1: Ensure that a mix of housing types are provided, including single- and multi-family housing within a variety of price ranges which will provide a range of housing options for those wishing to reside within the City of Lancaster, and which will enable the City to achieve Objective 6.1.	<u>Consistent.</u> Refer to response to Policy 17.1.2. The Specific Plan proposes a variety of housing types, including single-family and multi-family. The residential units would be market rate; however, the various housing types would provide a variety of price ranges within the project site.
Policy 8.1.1: Promote the development and rehabilitation of housing specifically designed for the elderly providing a variety of living environments	<u>Consistent.</u> Avanti South would include five medium density planning areas identified for active adults and age targeted uses. Although proposed for active adult use, the planning areas are not intended to be restricted to senior-oriented uses. Senior and age-qualified projects (including “continuum of care” communities that include a full range of independent living through skilled nursing) would be allowed within the Specific Plan.
Source: City of Lancaster General Plan 2030 and City of Lancaster General Plan Housing Element (2014 to 2021).	

LANCASTER MUNICIPAL CODE

LU-3 *The project would not conflict with the City of Lancaster Municipal Code Standards and Regulations.*

Impact Analysis: To ensure consistency with the proposed Specific Plan and the Lancaster Zoning Map, the Zoning Map would be amended alongside adoption of the proposed Specific Plan. The approval of ZC 16-01 is requested to amend the Lancaster Zoning Map to change the zoning for Avanti West from RR-2.5 to SP 15-02 and to change the zoning for the proposed school site to School. The Avanti South parcels would not require a zone change; however, they would be designated as SP 15-02 to reflect the Avanti South Specific Plan.

Lancaster Municipal Code Article VII – Specific Plan (SP) Zone establishes the Specific Plan zone and Article III – School (S) Zone establishes the school zone. Lancaster Municipal Code Chapter 17.24, Zone Changes and Zone Map, establishes the conditions and requirements for consideration of a zone change. In accordance with Section 17.24.120, Zone Change – Commission findings and decision, in making a recommendation relative to the zone change, the commission must consider specific principles and standards. Upon recommendation for approval, the City Council would hold a public hearing for consideration of the zone change.

The proposed zone change of the Avanti West site from RR-2.5 to SP 15-02 would provide consistency with the zoning for Avanti South and allow the Avanti South SP to regulate the use and development of Avanti West. A Specific Plan is intended to ensure development occurs in a coordinated fashion, with adequate public/private services and infrastructure, rather than as a series of isolated individual projects. A Specific Plan also provides the opportunity for unique and creative designs that are not possible under the City’s typical development regulations. The zone change for the proposed school site to School would provide for consistency, as the site has been identified for future school development. In addition to establishing development regulations, it provides the City and public with increased involvement in the

planning of future uses at existing school sites, including appropriate uses if the school site is no longer needed for education purposes.

In addition to ZC 16-01, the project requests approval of VTTM No. 74312, which would subdivide the four existing parcels into 45 lots for financial and conveyance purposes. Lancaster Municipal Code Section 15.20.650, Specific plan required, requires an applicant seeking to subdivide a property or to develop or use property in a SP zone, provide a proposal for a specific plan, which complies with the specific plan provisions of California Government Code. Further, Lancaster Municipal Code Chapter 16.08 – Tentative Map Procedural Requirements, establishes the provisions for the form, content, and approval of tentative maps, including vesting maps. In the case of a tentative map subject to a development agreement, the Planning Commission would make a recommendation to the City Council. Specific findings would be required for approval of any tentative map.

Upon adoption of the proposed Specific Plan and approval of ZC 16-01 and VTTM No. 74312, the project would be consistent with the Lancaster Municipal Code and Zoning Map. The Avanti South Specific Plan would provide the regulatory framework to provide design guidance, development regulations, and implementation measures for development of the Specific Plan area. All future development within the project site would be evaluated by the City to ensure consistency with the Avanti South Specific Plan. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.9.5 CUMULATIVE IMPACTS

LAND USE AND PLANNING

Implementation of the proposed project, combined with other related cumulative development, would not conflict with applicable land use plans, policies or regulations.

Impact Analysis: As stated above, SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS. SCAG refers to CEQA Guidelines Section 15206, Projects of Statewide, Regional or Areawide Significance, in determining whether a project meets the criteria to be deemed regionally significant. Each cumulative project would be evaluated on a project-by-project basis, to determine its regional significance, if any. As stated, the project would be consistent with the 2016 RTP/SCS goals and adopted growth forecasts. Thus, the project would not cumulatively contribute to impacts resulting from inconsistencies with the 2016 RTP/SCS. A less than significant impact would occur in this regard.

The proposed project would be consistent with General Plan 2030 policies and upon adoption of the proposed Specific Plan and approval of GPA 16-01 and ZC 16-01, the project would be consistent with the General Plan 2030 Land Use Map and Zoning Map. Cumulative development projects would undergo a similar plan review process as the proposed project, to determine potential land use planning policy and regulation conflicts. Each cumulative project would be analyzed independent of other projects, within the context of their respective land use and regulatory setting. As part of the review process, each project would be required to demonstrate compliance with the provisions of the applicable land use

designation(s) and zoning district(s). Each project would be analyzed to ensure that the General Plan 2030 goals and policies and Lancaster Municipal Code regulations and guidelines are consistently upheld. As the proposed project would be consistent with General Plan 2030 and the Municipal Code, the project would not cumulatively contribute to impacts resulting from inconsistencies. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.9.6 SIGNIFICANT UNAVOIDABLE IMPACTS

The proposed project would comply with the goals of the 2016 RTP/SCS and the goals and policies of the Lancaster General Plan 2030 and Lancaster Municipal Code. No significant unavoidable land use impacts would occur.

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Section 5.10

Noise

5.10 NOISE

This section evaluates noise impacts to on-site and surrounding land uses as a result of implementation of the proposed project. Short-term construction-related impacts, as well as future buildout conditions are evaluated. Mitigation measures are also recommended to avoid or lessen the project's noise impacts. Information in this section is based on the *Avanti South Specific Plan Noise Impact Analysis* (Noise Impact Analysis) prepared by Urban Crossroads (August 8, 2017) and included in [Appendix I, Noise Data](#).

5.10.1 ENVIRONMENTAL SETTING

NOISE SCALES AND DEFINITIONS

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, and 20 dBA higher four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are illustrated on [Exhibit 5.10-1, Sound Levels and Human Response](#).

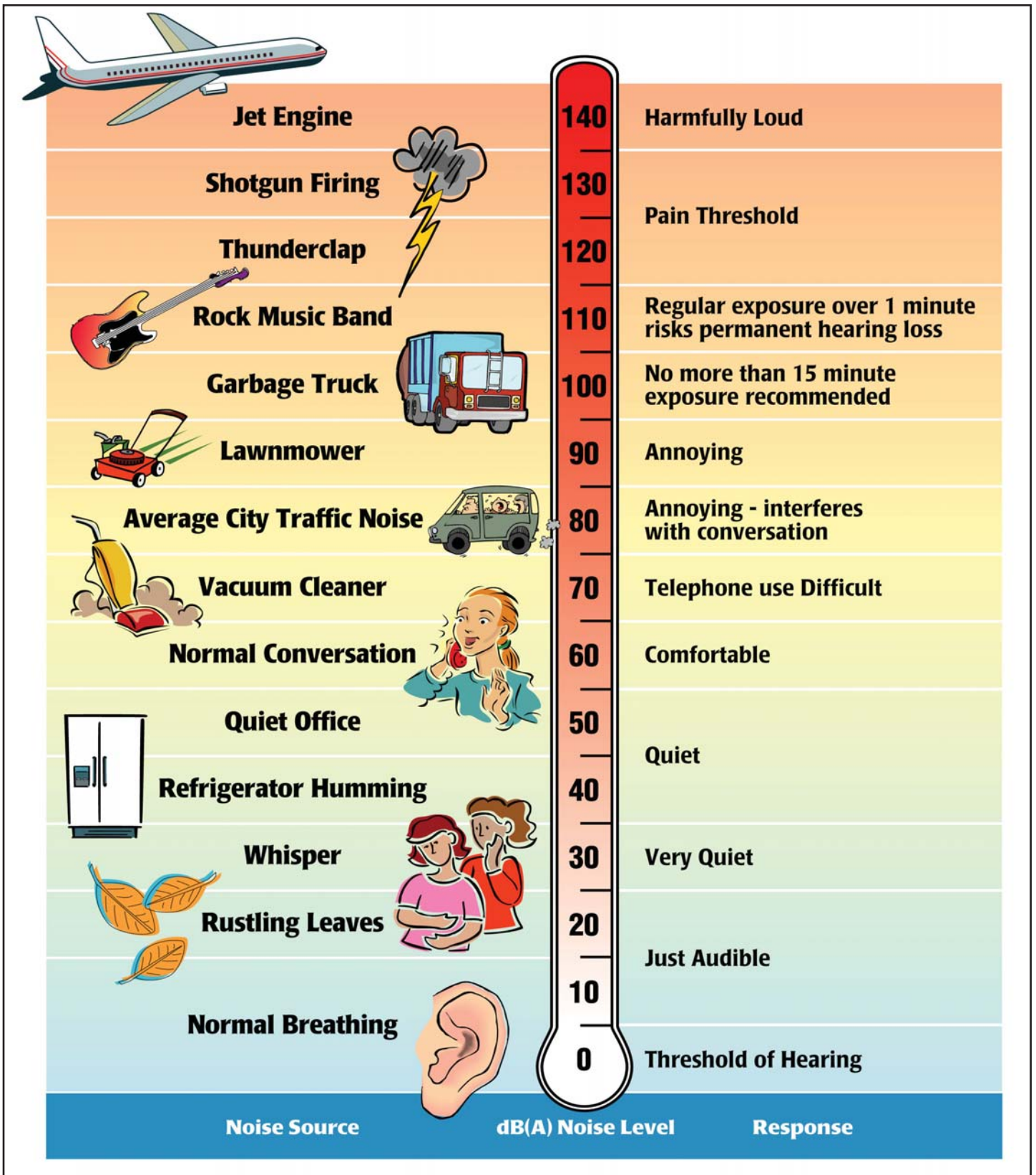
Methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time;
- The influence of periodic individual loud events; and
- The community response to changes in the community noise environment.

Methods developed to measure sound over a period of time are identified in [Table 5.10-1, Noise Descriptors](#).

HEALTH EFFECTS OF NOISE

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. However, many factors influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "not annoyed" to "highly annoyed."



Source: Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004), March 1974.

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**Table 5.10-1
Noise Descriptors**

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 PM to 10:00 PM, and +10 dBA for the night, 10:00 PM to 7:00 AM.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq} . The L_{dn} is calculated by averaging the L_{eq} 's for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01} , L_{10} , L_{50} , L_{90} , respectively) of the time during the measurement period.

Source: Cyril M. Harris, *Handbook of Noise Control*, dated 1979.

The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-Induced Hearing Loss;
- Interference with Communication;
- Effects of Noise on Sleep;
- Effects on Performance and Behavior;
- Extra-Auditory Health Effects; and
- Annoyance.

According to the United States Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individuals in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.

Interference with communication has proved to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition, and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern, or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and non-occupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high and the task sufficiently complex for effects on performance to occur.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one's peace of mind and the enjoyment of one's environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the United States Department of Transportation, the effects of annoyance to the community were quantified. In areas where noise levels were consistently above 60 dBA CNEL, approximately nine percent of the community is highly annoyed. When levels exceed 65 dBA CNEL, that percentage rises to 15 percent. Although evidence for the various effects of noise have differing levels of certainty, it is clear that noise can affect human health. Most of the effects are, to a varying degree, stress related.

GROUND-BORNE VIBRATION

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak or vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response. Typically, ground-borne vibration, generated by man-made activities, attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source. Both construction and operation of development projects can generate ground-borne vibration. In general, demolition of structures preceding construction generates the highest vibrations. Construction equipment such as vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight, and pavement conditions.

SENSITIVE RECEPTORS

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders. Noise, or the lack thereof, is a factor in the aesthetic perception of some settings, particularly those with religious or cultural significance. Certain land uses are particularly sensitive to noise, including residential units, schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. Sensitive receptors located within the project area include single-family residences and Quartz Hill High School; refer to [Exhibit 5.10-2, Receptor Locations](#).

AMBIENT NOISE MEASUREMENTS





In order to quantify existing ambient noise levels in the project area, eight 24-hour noise level measurements were taken at sensitive receptor locations in the vicinity of the project site on April 20-21, 2016; refer to [Table 5.10-2, Noise Measurements](#), and [Exhibit 5.10-3, Noise Measurement Locations](#). By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in “slow” mode to record noise levels in “A” weighted form. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013.

**Table 5.10-2
Noise Measurements**

Site No.	Location	Energy Average Hourly Noise Level (dBA Leq) ¹		CNEL
		Daytime	Nighttime	
L1	North of the project site on Avenue K adjacent to an existing 6-foot high barrier to residential homes.	64.9	62.7	69.7
L2	Northeast of the project site at an existing 6-foot high barrier to residential homes on Avenue K-8.	49.9	47.7	54.9
L3	East of the project site at an existing residential community on 60th Street.	59.4	55.1	62.9
L4	Southeast corner of project site on Avenue L near the SOAR Prep Academy.	65.1	60.0	68.3
L5	South of the project site on 65th Street near existing residential homes and the SOAR Prep Academy.	60.8	54.4	62.8
L6	Southwest of the project site on Avenue L adjacent to an existing 6-foot high barrier for residential homes.	60.3	57.7	64.7
L7	West of the project site on 70th Street at a vacant lot designated as semi-rural residential.	62.0	58.7	66.1
L8	On 70th Street adjacent to the Good Shepard Catholic Cemetery west of the project site.	67.5	64.2	71.6
Notes:				
1. The long-term 24-hour measurement printouts and locations are included in Appendix I, Noise Data .				
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.				



LEGEND:

-  Receiver Locations
-  Distance from receiver to Project site boundary (in feet)
-  Existing Barrier Height (in feet)
-  Existing Barrier

Source: Urban Crossroads, Avanti South Specific Plan Noise Impact Analysis; August 8, 2017.

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Michael Baker
INTERNATIONAL



11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT
Receptor Locations

Exhibit 5.10-2



Source: Urban Crossroads, Avanti South Specific Plan Noise Impact Analysis; August 8, 2017.

NOT TO SCALE

The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project area; refer to [Exhibit 5.10-3, *Noise Measurement Locations*](#). The long-term noise level measurements were positioned as close to the nearest sensitive receptor locations as possible to assess the existing ambient hourly noise levels surrounding the project site.

MOBILE SOURCES

VEHICULAR NOISE

Traffic noise is dominated by vehicular traffic along Avenue L and Avenue K; traffic along 70th Street West also provides some vehicular traffic noise. During peak travel hours, heavy traffic on these roadways causes higher noise levels compared to noise levels during non-peak hours. In order to assess the potential for mobile source noise impacts, it is necessary to determine the noise currently generated by vehicles traveling through the project area. The existing roadway noise levels in the vicinity of the project site were projected. Noise models were run using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (such as the number of lanes), roadway width, average daily traffic (ADT), vehicle travel speed, percentages of auto and truck traffic, roadway grade, angle-of-view, and site conditions ("hard" or "soft"). The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadway and adjacent land uses. A 40- to 55-mile per hour (mph) average vehicle speed was assumed for existing conditions based on empirical observations and posted maximum speeds along the adjacent roadways. Noise projections are based on modeled vehicular traffic volumes as derived from the *Avanti South Mixed-Use Land Development Traffic Study* (Traffic Impact Study), prepared by Ruetters & Schuler Civil Engineers, Revised June 2017.

Existing noise contours were calculated for major arterial and minor arterial roadways in the vicinity of the project site; refer to [Table 5.10-3, *Existing Traffic Noise Levels*](#). Noise generation for each roadway link was calculated and the distance to the 60 dBA L_{dn} , 65 dBA L_{dn} , and 70 dBA L_{dn} contours was determined. As shown in [Table 5.10-3](#), the existing traffic noise levels range from a low of 55.7 CNEL along Avenue K (east of 70th Street West), to a high of 70.4 CNEL along Avenue K (east of 20th Street West). It should be noted that the FHWA RD-77-108 models do not account for variations in topography, intervening structures, or soundwalls. It should be noted that these are modeled traffic noise levels, and are not based upon actual site measurements.

STATIONARY NOISE SOURCES

The project area consists of a mix of land uses including single-family residential, institutional (Quartz Hill High School), agricultural, commercial, cemetery, and vacant land uses. The primary sources of stationary noise in the project vicinity are suburban-related activities (e.g., mechanical equipment, landscaping equipment, parking areas, and pedestrians). The noise associated with these sources may represent a single-event or a continuous occurrence.

**Table 5.10-3
Existing Traffic Noise Levels**

Roadway Segment	ADT	Adjacent Land Use ¹	CNEL @ Nearest Adjacent Land Use	Distance to Contour from Centerline (feet) ²		
				60 L _{dn} Noise Contour	65 L _{dn} Noise Contour	70 L _{dn} Noise Contour
70th Street West						
South of Avenue K	2,900	Residential	55.8	R/W	R/W	143
Avenue K						
East of 70th Street West	2,800	Residential	55.7	R/W	R/W	138
East of 60th Street West	6,900	Residential	59.6	R/W	107	339
East of 50th Street West	8,300	Residential	60.4	R/W	129	408
East of 45th Street West	10,800	Residential	61.5	53	168	531
East of 40th Street West	14,100	Residential	61.7	55	175	555
East of 30th Street West	23,100	Residential	64.0	94	298	941
East of 25th Street West	26,600	Residential	69.9	108	341	1,078
East of 20th Street West	29,800	Commercial	70.4	121	382	1,208
East of 17th Street West	28,100	Commercial	70.2	114	360	1,139
Avenue L						
East of 70th Street West	3,400	Residential	56.5	R/W	53	167
East of 60th Street West	7,900	Residential	57.2	R/W	74	234
East of 45th Street West	18,800	Residential	66.3	R/W	176	556
East of 40th Street West	22,300	Residential	63.0	87	275	871
East of 30th Street West	24,900	Residential	63.4	97	308	973
East of 20th Street West	26,500	Residential	70.1	134	425	1,344
Notes:						
1. Per the <i>City of Lancaster General Plan 2030 Land Use Map</i> , November 24, 2013.						
2. R/W = location of the respective noise contour falls within the right-of-way of the roadway.						
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.						

5.10.2 REGULATORY SETTING

This section summarizes the laws, ordinances, regulations, and standards that are applicable to the project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, Federal and State agencies provide standards and guidelines to the local jurisdictions.

STATE

California Building Standards Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must

demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

LOCAL

Lancaster General Plan

The Noise section of the Plan for Public Health and Safety was adopted by the City to control and abate environmental noise, and to protect the citizens of the City from excessive exposure to noise. The Noise section specifies the maximum exterior noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. To protect City of Lancaster residents from excessive noise, the Noise section contains the following noise-related objectives and policies for the proposed project:

- Objective 4.3 Promote noise compatible land use relationships by implementing the noise standards identified in Table 3-1 (Table 5.10-4, *Noise Compatible Land Use Objectives*, below) to be utilized for design purposes in new development, and establishing a program to attenuate existing noise problem[s].
- Policy 4.3.1 Ensure that noise-sensitive land uses and noise generators are located and designed in such a manner that City noise objectives will be achieved.
- Policy 4.3.2 Wherever feasible, manage the generation of single event noise levels (SENL) from motor vehicles, trains, aircraft, commercial, industrial, construction, and other activities such that SENL levels are no greater than 15 dBA above the noise objectives included in the Plan for Public Health and Safety.
- Policy 4.3.3 Ensure that the provision of noise attenuation does not create significant negative visual impacts.

**Table 5.10-4
Noise Compatible Land Use Objectives**

Land Use Category	Maximum Exterior CNEL	Maximum Interior CNEL
Rural, Single-Family, Multiple-Family Residential	65 dBA	45 dBA
Schools:		
Classrooms	65 dBA	45 dBA
Playgrounds	70 dBA	-
Libraries	-	50 dBA
Hospitals/Convalescent Facilities:		
Living Areas	-	50 dBA
Sleeping Areas	-	40 dBA
Commercial and Industrial	70 dBA	-
Office Areas	-	50 dBA

Source: City of Lancaster, *City of Lancaster General Plan 2030*, July 14, 2009.

Lancaster Municipal Code

The most effective method to control community noise impacts from non-transportation noise sources (such as playgrounds, trash compactors, air-conditioning units, etc.) is through the application of a community noise ordinance. For the purpose of this analysis, the noise impacts associated with the project are controlled by General Plan 2030 Plan for Public Health and Safety, and the permitted hours of construction activity are established in the Lancaster Municipal Code.

The City of Lancaster has set restrictions with respect to the hours during which construction activity may take place. Municipal Code Section 8.24.040, Loud, unnecessary and unusual noises prohibited - Construction and Building, indicates that “...a person at any time on Sunday or any day between the hours of 8:00 p.m. and 7:00 a.m. shall not perform any construction or repair work of any kind upon any building or structure or perform any earth excavating, filling or moving where any of the foregoing entails the use of any air compressor, jack hammer, power-driven drill, riveting machine, excavator, diesel-powered truck, tractor or other earth moving equipment, hard hammers on steel or iron or any other machine tool, device or equipment which makes loud noises within 500 feet of an occupied dwelling, apartment, hotel, mobile home or other place of residence.”

5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, noise impacts resulting from the project’s implementation may be considered significant if they would result in the following:

- Expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; refer to Section 8.0, *Effects Found Not To Be Significant*; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels; refer to Section 8.0, *Effects Found Not To Be Significant*.

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

NOISE IMPACT CRITERIA

The Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (e.g., CNEL).

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur even though the noise criteria might not be exceeded. Therefore, for the purpose of this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project related noise level increase as a significant impact when nearby noise-sensitive receivers are affected. According to the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if noise-sensitive receivers are affected, since it likely contributes to an existing noise exposure exceedance. Table 5.10-5, *Significance of Noise Level Increases*, provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

**Table 5.10-5
Significance of Noise Level Increases**

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 – 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Source: Federal Interagency Committee on Noise (FICON), 1992.

Based on the significance criteria outlined below, noise impacts shall be considered significant if any of the following occur as a direct result of the proposed project:

Off-Site Traffic Noise

If the off-site traffic noise levels at nearby noise-sensitive land uses adjacent to roadways conveying project traffic:

- Are less than 60 dBA CNEL and the project creates a readily perceptible 5 dBA CNEL or greater project-related noise level increase; or
- Range from 60 to 65 dBA CNEL and the project creates a barely perceptible 3 dBA CNEL or greater project-related noise level increase; or
- Already exceed 65 dBA CNEL, and the project creates a community noise level impact of greater than 1.5 dBA CNEL.

On-Site Traffic Noise

If the on-site exterior noise levels:

- Exceed 65 dBA CNEL at the outdoor living areas (backyards or first floor patios) of single and multi-family residential uses, and the exterior facade of school classrooms. Interior noise levels for residential uses and school classrooms must satisfy the 45 dBA CNEL interior noise level standard (General Plan 2030 Public Health & Safety Element, [Table 5.10-4](#)); or
- Exceed 70 dBA CNEL at school playgrounds and commercial land uses within the project site (General Plan 2030 Public Health & Safety Element, [Table 5.10-4](#)).

Operational Noise

- If project-related operational (stationary-source) noise levels exceed the exterior 65 dBA L_{eq} noise level standard at nearby sensitive receiver locations (Based on the exterior noise level standards in the General Plan 2030 Public Health & Safety Element, [Table 5.10-4](#)).
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the project site:
 - Are less than 60 dBA and the project creates a *readily perceptible* 5 dBA or greater project-related noise level increase; or
 - Range from 60 to 65 dBA and the project creates a *barely perceptible* 3 dBA or greater project-related noise level increase; or
 - Already exceed 65 dBA, and the project creates a community noise level impact of greater than 1.5 dBA.

Construction Noise and Vibration

- If project-related construction activities occur at any time other than the permitted hours of 7:00 a.m. to 8:00 p.m. on weekdays, with no activity allowed on Sundays and generate noise levels which exceed the 80 dBA L_{max} noise level limit at nearby sensitive receiver locations (General Plan 2030, Plan for Public Health and Safety, Policy 4.3.2. Permitted hours based on Section 8.24.040 of the Municipal Code);
- If short-term project generated construction vibration levels exceed the County of Los Angeles acceptable vibration standard of 0.01 in/sec RMS at sensitive receiver locations (Los Angeles County Code, Section 12.08.560).

5.10.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION NOISE IMPACTS

NOI-1 *Grading and construction within the area could result in significant temporary noise impacts to nearby noise sensitive receivers.*

Impact Analysis: The construction of new land uses would generate short-term noise impacts. Construction activities have a short and temporary duration, lasting from a few days to a period of several

months. Groundborne noise and other types of construction-related noise impacts would typically occur during the initial site preparation, which can create the highest levels of noise. High groundborne noise levels can occur during construction activities due to the use of haul trucks, backhoes, and other heavy-duty construction equipment.¹ Construction activities have the potential to expose adjacent sensitive land uses (nearby residential, institutional, and park uses) to noise levels between 62 and 80 dBA at 50 feet from the noise source. Table 5.10-6, Construction Reference Noise Levels, provides a summary of sixteen construction equipment reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented in Table 5.10-6 have been adjusted to describe a common distance of 50 feet.

**Table 5.10-6
Construction Reference Noise Levels**

Noise Source	Reference Noise Levels @ 50 Feet (dBA L _{max})
Truck Pass-Bys and Dozer Activity ¹	63.7
Dozer Activity ¹	72.0
Construction Vehicle Maintenance Activities ²	70.4
Foundation Trenching ²	70.5
Rough Grading Activities ²	80.4
Residential Framing ³	72.3
Water Truck Pass-By and Backup Alarm ⁴	77.9
Dozer Pass-By ⁴	85.5
Two Scrapers and Water Truck Pass-By ⁴	84.6
Two Scrapers Pass-By ⁴	82.5
Scraper, Water Truck, and Dozer Activity ⁴	83.3
Concrete Mixer Truck Movements ⁵	73.1
Concrete Paver Activities ⁵	71.3
Concrete Mixer Pour and Paving Activities ⁵	71.9
Concrete Mixer Backup Alarms and Air Brakes ⁵	78.8
Concrete Mixer Pour Activities ⁵	79.2
Notes:	
1. As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.	
2. As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.	
3. As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.	
4. As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.	
5. Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.	
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.	

Table 5.10-7, Worst-Case Construction Equipment Noise Levels, shows the worst-case construction noise levels used for each piece of equipment during project construction, and Table 5.10-8, Unmitigated Construction Equipment Noise Level Summary (dBA L_{max}), provides a summary of the noise levels at each of the sensitive receptor locations in the project vicinity. Based on the reference construction noise levels, the project-related construction noise levels would range from 45.1 to 79.8 dBA L_{max} at the sensitive

¹ Groundborne noise refers to the rumbling sound caused by the vibration of room surfaces. Refer to Impact Statement NOI-2 for a discussion of groundborne vibration.

receptor locations in the project vicinity. It should be noted that these are maximum levels and would only be reached when equipment is operating at its highest intensity and at a point nearest the sensitive receiver location. The construction activity boundaries used in this analysis are based on the project site boundaries, and therefore, represent a conservative approach since not all stages of project construction would occur at the extent of the project site.

**Table 5.10-7
Worst-Case Construction Equipment Noise Levels**

Reference Construction Activity ¹	Reference Noise Levels @ 50 Feet (dBA L _{max})
Truck Pass-Bys and Dozer Activity	63.7
Dozer Activity	72.0
Rough Grading Activities	80.4
Dozer Pass-By	85.5
Concrete Mixer Truck Movements	73.1
Concrete Paver Activities	71.3
Concrete Mixer Pour and Paving Activities	71.9
Concrete Mixer Backup Alarms and Air Brakes	78.8
Peak Reference Noise Level at 50 feet	85.5
Notes:	
1. Reference construction noise level measurements taken by Urban Crossroads, Inc.	
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.	

**Table 5.10-8
Unmitigated Construction Equipment Noise Level Summary (dBA L_{max})**

Receiver Location ¹	Construction Noise Levels (dBA L _{max})		
	Peak Activity ²	Threshold	Threshold Exceeded? ³
R1	45.1	80	No
R2	71.3	80	No
R3	79.8	80	No
R4	50.8	80	No
R5	77.1	80	No
R6	73.0	80	No
R7	66.3	80	No
R8	77.5	80	No
R9	71.3	80	No
Notes:			
1. Noise receiver locations are shown on Exhibit 5.10-2 .			
2. Estimated construction noise levels during peak operating conditions, as shown on Table 5.10-7 .			
3. Do the estimated Project construction noise levels meet the construction noise level thresholds?			

As shown in [Table 5.10-8](#), construction noise levels are expected to range from 45.1 to 79.8 dBA L_{max} at the sensitive receptor locations in the project vicinity. As such, the project-related construction noise levels would be below the noise level threshold of 80 dBA L_{max} at the nearest sensitive receptors. Additionally, implementation of Mitigation Measure NOI-1 would reduce construction noise associated with future development through the use of a site-specific noise reduction methods. Specifically, NOI-1

would require all construction equipment to be equipped with properly operating and maintained mufflers, locate stationary construction equipment so that emitted noise is directed away from the nearest noise sensitive receptors, locate equipment staging in areas furthest away from sensitive receptors, and limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on any day with no activity allowed on Sundays). Compliance with Mitigation Measure NOI-1 would further reduce construction noise impacts at nearby sensitive receptors. A less than significant impact would occur in this regard.

Mitigation Measures:

NOI-1 To reduce noise impacts due to construction, the project applicant must demonstrate, to the satisfaction of the Development Services Director that the project complies with the following:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that construction activities shall only occur between the hours of 7:00 a.m. to 8:00 p.m. on any day with no activity allowed on Sundays. The project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.
- The construction contractor shall locate equipment staging in areas that would create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site (i.e., to the center) during all project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction activities (between the hours of 7:00 a.m. to 8:00 p.m. on any day with no activity allowed on Sundays). The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

Level of Significance: Less Than Significant With Mitigation Incorporated.

VIBRATION IMPACTS

NOI-2 ***Project implementation would not result in significant vibration impacts to nearby sensitive receptors.***

Impact Analysis: Construction activities associated with the proposed project would generate short-term vibration impacts. Construction activities can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude

with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). Groundborne vibration from construction activities rarely reach levels that damage structures. The project's construction activities most likely to cause vibration impacts include:

- **Heavy Construction Equipment.** Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- **Trucks.** Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Vibration from construction activities are typically evaluated against standards established under a City's Municipal Code. However, the General Plan 2030 and the Lancaster Municipal Code do not identify a maximum acceptable construction vibration threshold which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic increase. Therefore, the project vibration levels are evaluated based on the Los Angeles County Code standard of 0.01 inches per second (in/sec) root mean square (RMS).

The Los Angeles County Code (County Code), Section 12.08.560, states that operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on public space or public right-of-way is prohibited. The County Code defines the vibration perception threshold to be a motion velocity of 0.01 in/sec RMS over the range of one to 100 Hertz (Hz).

Ground-borne vibration levels resulting from construction activities occurring within the project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the project site include grading. Using the vibration source level of construction equipment provided in [Table 5.10-9, *Vibration Source Levels for Construction Equipment*](#), and the construction vibration assessment methodology published by the FTA, it is possible to estimate the project vibration impacts. [Table 5.10-10, *Construction Equipment Vibration Levels*](#), presents the expected project related vibration levels at each of the sensitive receiver locations.

**Table 5.10-9
Vibration Source Levels for Construction Equipment**

Equipment	PPV (in/sec) at 25 feet
Small Bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
in/sec = inches per second	
Source: Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment</i> , May 2006.	

Table 5.10-10
Construction Equipment Vibration Levels

Receptor Location ¹	Distance to Construction Activity (Feet)	Receptor PPV Levels (in/sec) ²					RMS Velocity Levels (in/sec) ³	Threshold Exceeded? ⁴
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Peak Vibration (PPV)		
R1	2,779	0.000	0.000	0.000	0.000	0.000	0.000	No
R2	134	0.000	0.003	0.006	0.007	0.007	0.005	No
R3	50	0.001	0.012	0.027	0.031	0.031	0.022	Yes
R4	1,421	0.000	0.000	0.000	0.000	0.000	0.000	No
R5	131	0.000	0.003	0.006	0.007	0.007	0.005	No
R6	209	0.000	0.001	0.003	0.003	0.003	0.003	No
R7	224	0.000	0.001	0.003	0.003	0.003	0.002	No
R8	125	0.000	0.003	0.007	0.008	0.008	0.006	No
R9	135	0.000	0.003	0.006	0.007	0.007	0.005	No

Notes: in/sec = inches per second; PPV = peak particle velocity; RMS = root mean square

1. Receptor locations are shown on [Exhibit 5.10-2](#).
2. Based on the Vibration Source Levels of Construction Equipment included in [Table 5.10-9](#).
3. Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans *Transportation and Construction Vibration Guidance Manual*, September 2013.
4. Threshold equals 0.01 in/sec RMS.

Source: Urban Crossroads, *Avanti South Specific Plan Noise Impact Analysis*, August 8, 2017.

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec PPV at a distance of 25 feet. At distances ranging from 50 to 2,779 feet from the project site, construction vibration velocity levels are expected to approach 0.031 in/sec PPV, as shown in [Table 5.10-10](#). In order to assess the human perception of vibration levels in PPV, the velocities are converted to RMS vibration levels based on the Caltrans *Transportation and Construction Vibration Guidance Manual* conversion factor of 0.71. [Table 5.10-10](#) shows the construction vibration levels in RMS are expected to approach 0.022 in/sec RMS at receiver location R3. Based on the County of Los Angeles vibration threshold used in this analysis, the proposed project construction activities would exceed the vibration threshold of 0.01 in/sec RMS at receiver location R3 during project construction; refer to [Table 5.10-10](#). However, the vibration levels shown in [Table 5.10-10](#) do not represent vibration levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. The peak project-construction vibration levels shown in [Table 5.10-10](#), approaching 0.031 in/sec PPV, would not exceed the FTA vibration levels for building damage at the residential homes near the project site. Further, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but would occur rather only during the times that heavy construction equipment is operating adjacent to the project site perimeter. Further, construction at the project site would be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impact during the sensitive nighttime hours. As such, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LONG-TERM (MOBILE) NOISE IMPACTS

NOI-3 *Traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards.*

Impact Analysis:

OFF-SITE TRAFFIC NOISE IMPACTS

Buildout of the proposed project would generate increased mobile noise impacts on surrounding roadways. To quantify the project's traffic noise impacts on the surrounding areas, the changes in traffic noise levels on 16 roadway segments surrounding the project were calculated based on the changes in the average daily traffic volumes. Table 5.10-11, Future Year 2021 Off-Site Project-Related Traffic Noise Impacts, outlines the future roadway noise levels in the project area assuming development occurs consistent with the proposed land uses in the Specific Plan. Table 5.10-11 shows that the unmitigated exterior noise levels are expected to range from 57.0 to 71.5 dBA CNEL for Future Year 2021 Without Project conditions. Table 5.10-11 presents the Future Year 2021 With Project conditions noise levels that are expected to range from 59.9 to 72.1 dBA CNEL. As shown on Table 5.10-11, the project is expected to generate an exterior noise level increase of up to 2.9 dBA CNEL, and would be below the significance thresholds identified in Table 5.10-5 for all roadway segments. Therefore, the off-site project-related traffic noise level increases are considered less than significant.

Table 5.10-11
Future Year 2021 Off-Site Project-Related Traffic Noise Impacts

Roadway	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA)			Threshold Exceeded? ²
			Without Project	With Project	Project Addition	
70th Street West	South of Avenue K	Residential	57.0	59.9	2.9	No
Avenue K	East of 70th Street West	Residential	59.7	60.8	1.2	No
	East of 60th Street West	Residential	63.7	65.0	1.3	No
	East of 50th Street West	Residential	63.7	64.8	1.2	No
	East of 45th Street West	Residential	64.2	65.2	1.0	No
	East of 40th Street West	Residential	63.9	64.6	0.8	No
	East of 30th Street West	Residential	65.3	65.8	0.4	No
	East of 25th Street West	Residential	71.1	71.4	0.3	No
	East of 20th Street West	Commercial	71.4	71.6	0.2	No
	East of 17th Street West	Commercial	71.1	71.4	0.2	No
Avenue L	East of 70th Street West	Residential	62.1	64.4	2.3	No
	East of 60th Street West	Residential	61.9	63.4	1.5	No
	East of 50th Street West	Residential	68.5	69.6	1.1	No
	East of 45th Street West	Residential	64.7	65.7	0.9	No
	East of 40th Street West	Residential	65.0	65.7	0.8	No
	East of 30th Street West	Residential	71.5	72.1	0.6	No

Notes:

1. Source: City of Lancaster, *City of Lancaster General Plan 2030 Land Use Map*, November 24, 2013.

2. Significance thresholds are identified in Table 5.10-5.

Source: Urban Crossroads, *Avanti South Specific Plan Noise Impact Analysis*, August 8, 2017.

ON-SITE TRAFFIC NOISE IMPACTS

It is expected that the primary source of noise impacts to the project site would be traffic noise from 75th Street West, 70th Street West, 65th Street West, Avenue K-8, and Avenue L. The project would also experience some background traffic noise impacts from the project’s internal local streets; however, due to the low traffic volume/speeds, traffic noise from these roads would not make a significant contribution to the noise environment beyond the right-of-way of the roadways.

The expected future exterior noise levels for the on-site buildings were calculated using the FHWA’s RD-77-108 traffic noise prediction model. Table 5.10-12, Exterior Traffic Noise Levels on Project Site, presents a summary of future exterior noise level impacts in the outdoor living areas (backyards and first floor patio areas) of future buildings facing 75th Street West, 70th Street West, 65th Street West, Avenue K-8, and Avenue L. Commercial land uses within the project site are evaluated based on the exterior noise levels at the building facade, since they do not have outdoor living areas requiring exterior noise mitigation. The on-site traffic noise level impacts indicate that the buildings adjacent to 75th Street West, 70th Street West, 65th Street West, Avenue K-8, and Avenue L would experience unmitigated exterior noise levels ranging from 64.5 to 74.4 dBA CNEL, and the City’s noise level standards would be exceeded at multiple residences within the Specific Plan area; refer to Table 5.10-12.

**Table 5.10-12
Exterior Noise Levels on Project Site**

Planning Area	Land Use	Roadway	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Barrier Height (Feet)	Top of Barrier Elevation (Feet)
PA-1	Residential	75th Street West	70.1	63.5	6.0	2,407
PA-5	Residential	75th Street West	70.1	63.5	6.0	2,424
PA-3	Residential	70th Street West	71.1	64.6	6.0	2,396
PA-19	Residential	70th Street West	69.4	63.3	6.0	2,417
PA-27	Commercial	70th Street West	69.0	-1	-1	-1
PA-21	School	65th Street West	64.5	-1	-1	-1
PA-18	Residential	65th Street West	69.1	62.8	6.0	2,414
PA-23	Residential	65th Street West	64.8	-1	-1	-1
PA-26	Commercial	65th Street West	68.5	-1	-1	-1
PA-6	Residential	Avenue K-8	70.4	63.7	6.0	2,421
PA-11	Residential	Avenue K-8	70.2	63.6	6.0	2,401
PA-15	Residential	Avenue K-8	70.4	63.7	6.0	2,400
PA-28	Residential	Avenue L	73.8	64.8	6.0	2,440
PA-25	Residential	Avenue L	74.4	65.0	6.0	2,429
Notes:						
1. Unmitigated exterior noise level satisfies the City of Lancaster exterior noise level standard. No exterior noise mitigation is required.						
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017						

To satisfy the City’s 65 dBA CNEL exterior noise level standards for residential land uses, the construction of 6-foot high noise barriers is required for outdoor living areas (backyards) of Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28 if located adjacent to 75th Street West, 70th Street West, 65th Street West, Avenue K-8, or Avenue L. With implementation of the recommended noise barriers as shown

on Exhibit 5.10-4, *Noise Mitigation Recommendations*, the mitigated future exterior noise levels would range from 62.8 to 65.0 dBA CNEL, which satisfies the City's 70 dBA CNEL standard for commercial land uses. In addition, the unmitigated exterior noise levels would approach 64.5 dBA CNEL at the Planning Area 21 school land use which would satisfy the City's 65 dBA CNEL exterior noise level standard for classrooms, and 70 dBA CNEL standard for playgrounds. This noise analysis shows that with the recommended noise mitigation barriers (Mitigation Measure NOI-2) the project would satisfy the City's 65 dBA CNEL exterior noise level standards at the residential land uses within the Project site. If homes within Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28 face the roadways or have no outdoor living areas (backyards) adjacent to the roadways, then the recommended exterior noise barriers would not be required as there would be no outdoor living area of frequent human use requiring exterior noise mitigation. With implementation of Mitigation Measure NOI-2, a less than significant impact would occur with regard to on-site traffic noise impacts.

Mitigation Measures:

NOI-2 After the plot plans and architectural drawings have been developed, and prior to the issuance of building permits, the project applicant shall demonstrate, to the satisfaction of the Development Services Director that the proposed project plans and specifications include a six-foot noise barrier for outdoor living areas (backyards) of Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28 (as recommended in the Noise Impact Analysis Report [Urban Crossroads, *Avanti South Specific Plan Noise Impact Analysis*, August 8, 2017]). If homes within these Planning Areas face the roadways or have no outdoor living areas (backyards) adjacent to the roadways, then the recommended exterior noise barriers shall not be required since there would be no outdoor living area of frequent human use requiring exterior noise mitigation.

Level of Significance: Less Than Significant With Mitigation Incorporated.

LONG-TERM (STATIONARY) NOISE IMPACTS

NOI-4 *The proposed project would not result in a significant increase in long-term stationary ambient noise levels.*

Impact Analysis: Project-related stationary-source (operational) noise would be generated by the commercial, park, school, and fire station uses. The on-site project-related noise sources are expected to include: roof-top air conditioning units, parking lot vehicle movement activities, park activities, fire station activities, and school athletic field activities. Further, the proposed residential land uses are considered noise-sensitive receiving land uses and are not expected to include any specific type of operational noise levels beyond the typical noise sources associated with existing residential land use in the project area.

To estimate the project's operational noise impacts, noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed project. Table 5.10-13, *Stationary Source Noise Level Measurements*, shows the noise level measurements used to estimate the proposed project's operational noise impacts. It is important to note that the noise levels in Table 5.10-13 assume the worst-case noise environment with the roof-top air conditioning units, parking lot vehicle movement activities, park activities, fire station activities, and school athletic field activities all operating simultaneously. In reality, these noise levels would vary throughout the day.



NOTE:
 If homes within Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28 face the roadways or have no outdoor living areas (backyards) adjacent to the roadways, then no exterior noise barriers are required.

LEGEND:

- Planning areas with lots adjacent to roadways requiring standard windows with a minimum STC rating of 27 and a means of mechanical ventilation (e.g., air conditioning).
- Planning areas with lots adjacent to Avenue L require upgraded second floor windows with a minimum STC rating of 31.
- 6' Recommended Noise Barrier Height (in feet)
- ▬ Recommended Noise Barrier

LEGEND:

- School and Fire Station
- Commercial
- Low Density Residential
- Medium Density
- High Density
- Parks

Source: Urban Crossroads, Avanti South Specific Plan Noise Impact Analysis; August 8, 2017.

NOT TO SCALE



Noise Mitigation Recommendations

Table 5.10-13

Stationary Source Noise Level Measurements

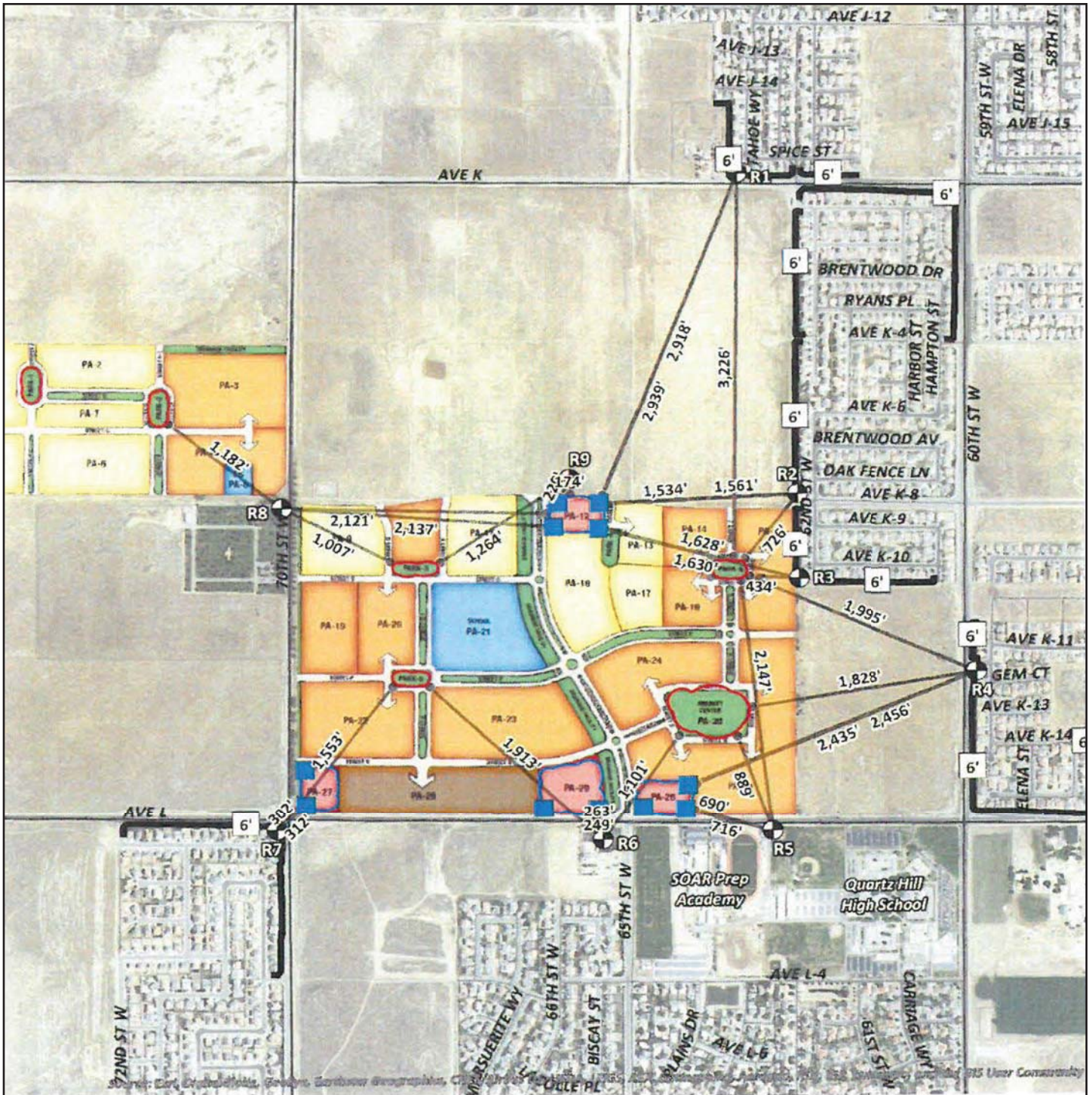
Noise Source	Noise Level (dBA L _{eq})	
	@ 5 Feet From Source	@ 50 Feet From Source
Roof-Top Air Conditioning Units ¹	77.2	57.2
Parking Lot Vehicle Movement Activities ²	60.1	45.1
Park Activities ³	63.4	43.4
Fire Station Activities ⁴	-	-
School Athletic Field Activities ⁴	-	-
Notes: <ol style="list-style-type: none"> As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway. As measured by Urban Crossroads, Inc. on 5/30/2012 at the Laguna Niguel Walmart located at 27470 Alicia Parkway. As measured by Urban Crossroads, Inc. on 10/8/2014 at the Founders Park in the unincorporated community of Ladera Ranch. The City of Lancaster Municipal Code excludes 'warning devices on emergency vehicles' from the noise regulations based on the Section 8.24.020 definition of 'sound-amplifying equipment'. 		
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.		

Based upon the noise levels in [Table 5.10-13](#), the project's operational stationary-source noise levels at each of the sensitive receiver locations have been estimated. The operational noise level calculations shown in [Table 5.10-14, Project Operational Noise Levels](#), account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions were used for this operational noise analysis, which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e., roof-top air conditioning unit, park activities) and 4.5 dB for each doubling of distance from a line source (parking lot vehicle movements). As shown in [Table 5.10-14](#), the hourly noise levels associated with the roof-top air conditioning units, parking lot vehicle movement activities, park activities, fire station activities, and school athletic field activities are expected to range from 17.1 to 41.8 dBA L_{eq} at the sensitive off-site receptor locations. Locations of the noise sources and receptor locations are depicted in [Exhibit 5.10-5, Operational Noise Source and Receptor Locations](#).








To demonstrate compliance with local noise standards, the project-only operational noise levels are evaluated against the City of Lancaster's exterior noise level standards. As shown in [Table 5.10-14](#), the operational noise levels associated with the proposed project would be below the City's noise level standards at the nearby sensitive residential receptors. Therefore, project-related operational stationary noise levels would result in a less than significant impact.

Table 5.10-14
Project Operational Noise Levels

Receiver Location	Noise Sources ¹	Operational Noise Levels (dBA L _{eq}) ²
R1	Roof-Top Air Conditioning Units	14.6
	Parking Lot Vehicle Movement Activities	13.2
	Park Activities	1.7
	Combined Noise Level	17.1
R2	Roof-Top Air Conditioning Units	20.0
	Parking Lot Vehicle Movement Activities	17.3
	Park Activities	14.6
	Combined Noise Level	22.6
R3	Roof-Top Air Conditioning Units	19.6
	Parking Lot Vehicle Movement Activities	16.9
	Park Activities	18.9
	Combined Noise Level	23.4
R4	Roof-Top Air Conditioning Units	16.1
	Parking Lot Vehicle Movement Activities	14.3
	Park Activities	6.5
	Combined Noise Level	18.6
R5	Roof-Top Air Conditioning Units	32.2
	Parking Lot Vehicle Movement Activities	28.0
	Park Activities	18.4
	Combined Noise Level	33.7
R6	Roof-Top Air Conditioning Units	40.9
	Parking Lot Vehicle Movement Activities	34.6
	Park Activities	16.5
	Combined Noise Level	41.8
R7	Roof-Top Air Conditioning Units	34.1
	Parking Lot Vehicle Movement Activities	27.3
	Park Activities	7.9
	Combined Noise Level	34.9
R8	Roof-Top Air Conditioning Units	22.7
	Parking Lot Vehicle Movement Activities	20.7
	Park Activities	17.3
	Combined Noise Level	25.5
R9	Roof-Top Air Conditioning Units	37.5
	Parking Lot Vehicle Movement Activities	31.5
	Park Activities	9.8
	Combined Noise Level	38.5
Notes:		
1. Reference noise sources as shown in Table 5.10-12.		
2. Stationary source noise level calculations are provided in Appendix 10.1 (of Appendix I, Noise Data).		
Source: Urban Crossroads, <i>Avanti South Specific Plan Noise Impact Analysis</i> , August 8, 2017.		



LEGEND:

-  Receiver Locations
-  Existing Barrier Height (in feet)
-  Existing Barrier
-  Roof-Top Air Conditioning Unit
-  Parking Lot Vehicle Movements
-  Park Activity
-  Distance from receiver to Project site boundary (in feet)

Source: Urban Crossroads, Avanti South Specific Plan Noise Impact Analysis; August 8, 2017.

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Michael Baker
INTERNATIONAL



11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Operational Noise Source and Receptor Locations

Exhibit 5.10-5

Project Operational Noise Contribution

To describe the project's operational noise level contributions, the project operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by project operational noise sources. The difference between the combined project and ambient noise levels describe the project noise level contributions. Noise levels that would be experienced at receptor locations when project-source noise is added to the ambient daytime and nighttime conditions are presented in [Table 5.10-15, Daytime Operational Noise Level Contributions](#), and [Table 5.10-16, Nighttime Operational Noise Level Contributions](#).

Table 5.10-15
Daytime Operational Noise Level Contributions

Receptor Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	17.1	L1	64.9	64.9	0.0	No
R2	22.6	L2	49.9	49.9	0.0	No
R3	23.4	L2	49.9	49.9	0.0	No
R4	18.6	L3	59.4	59.4	0.0	No
R5	33.7	L4	65.1	65.1	0.0	No
R6	41.8	L5	60.8	60.9	0.1	No
R7	34.9	L6	60.3	60.3	0.0	No
R8	25.5	L8	67.5	67.5	0.0	No
R9	38.5	L2	49.9	50.2	0.3	No

Notes:

- Sensitive receptor locations are illustrated on [Exhibit 5.10-2](#).
- Total project operational noise levels as shown in [Table 5.10-13](#).
- Noise level measurement locations as shown on [Exhibit 5.10-3](#).
- Observed daytime ambient noise levels as shown in [Table 5.10-2](#).
- Represents the combined ambient conditions plus the project activities.
- The noise level increase expected with the addition of the proposed project activities.
- Noise standards as shown in [Tables 5.10-4](#) and [Table 5.10-5](#).

Source: Urban Crossroads, *Avanti South Specific Plan Noise Impact Analysis*, August 8, 2017.

Table 5.10-16
Nighttime Operational Noise Level Contributions

Receptor Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	17.1	L1	62.7	62.7	0.0	No
R2	22.6	L2	47.7	47.7	0.0	No
R3	23.4	L2	47.7	47.7	0.0	No
R4	18.6	L3	55.1	55.1	0.0	No
R5	33.7	L4	60.0	60.0	0.0	No
R6	41.8	L5	54.4	54.6	0.2	No
R7	34.9	L6	57.7	57.7	0.0	No
R8	25.5	L8	64.2	64.2	0.0	No
R9	38.5	L2	47.7	48.2	0.5	No

Notes:

- Sensitive receptor locations are illustrated on [Exhibit 5.10-2](#).
- Total project operational noise levels as shown in [Table 5.10-13](#).
- Noise level measurement locations as shown on [Exhibit 5.10-3](#).
- Observed daytime ambient noise levels as shown in [Table 5.10-2](#).
- Represents the combined ambient conditions plus the project activities.
- The noise level increase expected with the addition of the proposed project activities.
- Noise standards as shown in [Table 5.10-4](#) and [Table 5.10-5](#).

Source: Urban Crossroads, *Avanti South Specific Plan Noise Impact Analysis*, August 8, 2017.

As indicated in [Table 5.10-15](#), the project would contribute to an operational noise level increase approaching 0.3 dBA L_{eq} during the daytime hours, and [Table 5.10-16](#) shows that the project would contribute an operational noise level increase approaching 0.5 dBA L_{eq} during the nighttime hours. Since the project-related operational noise level contributions would be below the significance criteria in [Table 5.10-4](#) and [Table 5.10-5](#), a less than significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.10.5 CUMULATIVE IMPACTS

SHORT-TERM CONSTRUCTION NOISE IMPACTS

Grading and construction within the area combined with other related cumulative projects would not result in significant short-term noise impacts to nearby noise sensitive receivers, following implementation of mitigation measures.

Impact Analysis: Construction activities as a result of the proposed project and cumulative projects may overlap, resulting in increased construction noise in the area. The closest cumulative development projects to the project site include a residential planned development of 753 single-family lots with two neighborhood parks and open space adjoining the project site to the north, a new Target shopping center located at the southeast corner of Avenue L and 60th Street West, and a Walmart located at the northwest corner of Avenue L and 60th Street West (refer to [Table 4-1](#)). The City of Lancaster has discretionary authority over these projects. Construction noise impacts for each cumulative project would be mitigated through compliance with the City's standards and ordinances, and any necessary mitigation measures identified through the City's development review process. Thus, impacts would not be cumulatively considerable. The proposed project would result in a less than significant impact regarding short-term construction noise with implementation of Mitigation Measure NOI-1. Therefore, the project's contribution to cumulative noise impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure NOI-1.

Level of Significance: Less Than Significant With Mitigation Incorporated.

VIBRATION IMPACTS

Project implementation combined with other related cumulative projects would not result in significant vibration impacts to nearby sensitive receptors.

Impact Analysis: As noted above, nearby cumulative projects could have short-term construction and long-term operational vibration impacts. These cumulative projects would be analyzed on a case-by-case basis, and reviewed by the City and through the CEQA process to determine any vibration-related impacts. Further, as discussed above, short-term construction vibration impacts from the proposed project would be less than significant. In addition, long-term operational groundborne vibration impacts would be less than significant, as the land uses identified in the Specific Plan would not generate excessive groundborne

vibration. Therefore, the proposed project's vibration impacts would not be cumulatively considerable, and a less than significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LONG-TERM (MOBILE) NOISE IMPACTS

Traffic generated by the proposed project combined with other related cumulative projects would not significantly contribute to existing traffic noise in the area or exceed the City's established standards.

Impact Analysis: Cumulative development projects in the project site vicinity could result in an increase in mobile trips and traffic noise along 70th Street West, Avenue K, Avenue L, and other local roadways. However, as shown in [Table 5.10-11](#), the off-site project-related traffic noise level increases are considered less than significant. Therefore, long-term off-site mobile noise impacts of the proposed project would not be cumulatively considerable, and a less than significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LONG-TERM (STATIONARY) NOISE IMPACTS

The proposed project combined with other related cumulative projects would not result in a significant increase in long-term stationary ambient noise levels.

Impact Analysis: The cumulative development projects listed in [Table 4-1](#) represent those off-site cumulative development projects with potential to generate off-site operational noise sources and do not account for any planned residential land uses without potential stationary noise sources. The closest cumulative development projects' potential stationary noise sources were estimated based on their planned land use designation. Stationary noise sources would include loading dock activities, park activities, and a transformer (for a photovoltaic project).² [Table 5.10-17, Cumulative Development Operational Noise Level Projections](#), shows the estimated cumulative development noise levels at each receptor location based on the distance to each sensitive receptor location. As shown in [Table 5.10-17](#), operational (stationary) noise levels due to the cumulative development activities are expected to range from 10.7 to 45.2 dBA L_{eq} .

² The stationary-source noise levels were determined using reference noise level measurements of similar land uses taken by Urban Crossroads, Inc. Refer to Table 10-6 in [Appendix I, Noise Data](#).

Table 5.10-17
Cumulative Development Operational Noise Level Projections

Cumulative Project	Land Use	Noise Levels at Receptor Locations (dBA L _{eq}) ¹								
		R1	R2	R3	R4	R5	R6	R7	R8	R9
CUP 06-08	Commercial	-.2	-.2	35.1	40.5	39.1	33.9			30.4
CUP 06-09	Commercial	-.2	-.2	38.4	42.3	43.4	36.2	29.7	28.9	32.4
CUP 14-13	Church	27.8	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2
SPR 14-05	Commercial	-.2	-.2	-.2	-.2	34.5	-.2	-.2	-.2	-.2
TTM 72534	Residential with park	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2
TTM 71210	Residential with park	-.2	5.2	-.2	8.0	-.2	-.2	-.2	-.2	-.2
SP 15-01	Residential with park	15.0	6.6	5.1	-.2	-.2	-.2	-.2	5.7	8.2
CUP 14-10	Photovoltaic	-.2	-.2	-.2	-.2	-.2	-.2	0.0	0.0	-.2
Combined Noise Levels		28.0	10.7	40.1	44.5	45.2	38.2	29.7	28.9	34.5

Notes:
1. Sensitive receptor locations are illustrated on [Exhibit 5.10-2](#).
2. The noise receptor is located within the cumulative development boundaries, as defined in [Section 4.0, Basis of Cumulative Analysis](#).
Source: *Avanti South Specific Plan Noise Impact Analysis*, prepared by Urban Crossroads, August 8, 2017; refer to [Appendix I, Noise Data](#).

The ambient noise level measurements, previously shown in [Table 5.10-2](#), were used in this analysis to determine the existing ambient noise environment at each receptor location. Once the noise level contributions created by the cumulative developments and project are determined, the project's overall contribution to the cumulative noise level increases can then be evaluated.

To assess the noise level contributions from cumulative development in the project area, the cumulative development activity noise levels, shown in [Table 5.10-17](#), were combined with the existing noise levels at each receptor location. The existing noise levels were then subtracted from the combined cumulative plus existing noise levels to determine the magnitude of the noise level increases due to the cumulative developments. As discussed in the Noise Impact Analysis, the cumulative daytime noise level increases under existing conditions would approach 0.4 dBA L_{eq} at the receptor locations, and nighttime cumulative noise level increase would be 0.7 dBA L_{eq}. Based on the significance criteria in [Table 5.10-5](#), the cumulative development impacts during the daytime and nighttime hours represent a less than significant impact on the existing ambient noise environment.

As discussed above, the proposed project's long-term operational noise contributions would be less than significant. As such, the project-related noise contribution over the cumulative noise level increase is not cumulatively considerable. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to noise have been identified following implementation of the recommended Mitigation Measures NOI-1 and NOI-2, and compliance with the applicable Federal, State, and local regulatory requirements.

Section 5.11

Public Services and Utilities

5.11 PUBLIC SERVICES AND UTILITIES

Public services addressed in this section include fire protection, police protection, school services, and parks and recreation facilities. The utilities and service systems analysis includes water, wastewater (sewer), and solid waste. Storm drain systems are addressed in [Section 5.8, Hydrology and Water Quality](#). This section examines existing conditions and background information necessary to determine potential impacts resulting from project implementation. Mitigation measures are identified to avoid or lessen potential impacts, where necessary. This section is based in part upon the *Water Supply Assessment Avanti South* (WSA) prepared by Kimley-Horn and Associates (April 2017) and included in [Appendix J, Water Supply Assessment](#), and information received from public service and utility agencies that would provide services to the project site; refer to [Appendix K, Public Services and Utilities Correspondence](#).

5.11.1 ENVIRONMENTAL SETTING

PUBLIC SERVICES

Fire Protection

The City of Lancaster contracts with the Los Angeles County Fire Department (LACFD) for fire and paramedic services. LACFD maintains six fire stations within the City of Lancaster, which includes a Division Headquarters and Fire Prevention Office, as well as one in the unincorporated community of Antelope Acres. The project site is within the service boundaries of Station 84, which is located at 5030 West Avenue L-14. Station 84 maintains a pumper engine, a patrol engine, and a paramedic squad.¹ There are five firefighters on duty 24 hours a day, seven days a week. The LACFD's response time goal is eight minutes or less for the City's suburban area, which is met, and five minutes or less for urban communities.

Police Protection

Law enforcement services (i.e., police protection, crime prevention, and traffic enforcement) within the City are provided by contract with the Los Angeles County Sheriff's Department (LASD). The Lancaster Sheriff's Station is located at 501 West Lancaster Boulevard. The Station has 189 sworn personnel and 74 civilian personnel.² Station personnel cover an area of more than 600 square miles, including the City of Lancaster, and communities of Lake Los Angeles, Quartz Hill, and Antelope Acres.³ Based on the City's July 2016 population of 160,106 persons and 189 sworn personnel, the department operates at a ratio of approximately one sworn police officer per 847 persons.⁴

Schools

The City of Lancaster is served by four school districts: Lancaster School District, Westside Union School District (Westside), Eastside Union School District (Eastside), and Antelope Valley Union High School District (AVUHSD). The four school districts provide educational services for students in grades

¹ FireDepartment.net, *Los Angeles County Fire Department – Station 129*, <http://www.firedepartment.net/directory/california/los-angeles-county/lancaster/los-angeles-county-fire-department-station-84>, accessed on June 6, 2017.

² Los Angeles County Sheriff's Department, *Lancaster Station*, <http://shq.lasdnews.net/pages/patrolstation.aspx?id=LAN>, accessed on June 6, 2017.

³ Ibid.

⁴ United States Census Bureau Website, <http://www.census.gov/quickfacts/table/PST045215/0640130,00>, accessed on June 6, 2017.

Kindergarten through 12. Education facilities and resources within Lancaster also include online programs and private, public, and higher education.

The project site is located within the attendance boundaries of Westside and AVUHSD. The project site is undeveloped. Thus, there are no students currently residing within the project site that attend schools in either Westside or AVUHSD.

WESTSIDE UNION SCHOOL DISTRICT

Westside has an enrollment of approximately 9,000 students from Kindergarten through 8th Grade.⁵ There are seven elementary schools which consist of Kindergarten through 6th grade (Cottonwood, Esperanza, Leona Valley, Quartz Hill, Rancho Vista, Sundown, and Valley View), two middle schools which consist of 7th and 8th grades (Hillview and Joe Walker), two schools which consist of Kindergarten through 8th grade (Anaverde Hills and Del Sur) and two Academies (Gregg Anderson and Westside); refer to Table 5.11-1, Westside Union School District Facilities.⁶ Although there is remaining capacity at several of the school sites, Westside’s school facilities are presently inadequate to address Westside needs as there are currently unhoused students warranting the assessment of Level II Developer Fees.⁷ Westside currently charges a developer fee of \$3.22 per square foot for new development.⁸

**Table 5.11-1
Westside Union School District Facilities**

School	Address	Capacity	Enrollment
Cottonwood Elementary	2740 West Avenue P-8, Palmdale	812	495
Esperanza Elementary	40521 35 th Street West, Palmdale	841	1,116
Leona Valley Elementary	9063 Leona Avenue, Leona Valley	116	105
Quartz Hill Elementary	41820 50th Street West, Quartz Hill	638	847
Rancho Vista Elementary	40641 Peonza Lane, Palmdale	319	705
Sundown Elementary	6151 West Avenue J-8, Lancaster	870	1,014
Valley View Elementary	3310 West Avenue L-8, Lancaster	493	823
Hillview Middle	40525 Peonza Lane, Palmdale	841	913
Joe Walker Middle	5632 West Avenue L-8, Quartz Hill	870	922
Anaverde Hills K-8	2902 Greenbrier Street, Palmdale	662	675
Del Sur K-8	9023 West Avenue H, Lancaster	625	796
Gregg Anderson Academy	5151 West Avenue, N-8, Palmdale	1073	890
Westside Academy	5606 West Avenue L-8, Quartz Hill	unknown	unknown
Source: California Department of Education, <i>Data Quest</i> , http://dq.cde.ca.gov/dataquest/ and Written Correspondence, Cyndi Vidinha, Development Technician, Westside Union School District, July 6, 2017.			

⁵ Westside Union School District, *Home Page*, <http://westside.k12.ca.us/>, accessed on June 6, 2017.

⁶ Westside Union School District, *Schools of Westside*, <http://westside.k12.ca.us/schools>, accessed on June 6, 2017.

⁷ Written Correspondence, Cyndi Vidinha, Development Technician, Westside Union School District, July 6, 2017.

⁸ Ibid.

ANTELOPE VALLEY UNION HIGH SCHOOL DISTRICT

AVUHSD covers a geographic area from the Angeles Forest in the south, to the Kern county line in the north, and from the Ventura/Kern county lines in the west, to the San Bernardino county line in the east.⁹ Approximately 22,000 students are enrolled in the AVUHSD's comprehensive and continuation high schools. Seventh and eighth grade students are also able to enroll in the Academies of the Antelope Valley (SOAR Prep Academy, Knight Prep Academy, Palmdale Prep Academy, or Virtual Academy); refer to [Table 5.11-2, Antelope Valley Union High School District Facilities](#). According to the District, as of August 3, 2017, AVUHSD will charge a developer fee of \$2.22 per square foot.¹⁰

Table 5.11-2
Antelope Valley Union High School District Facilities

School	Address	Capacity	Enrollment
Antelope Valley High	44900 Division Street, Lancaster	2,450	1,873
Eastside High	3200 East Avenue J-8, Lancaster	2,800	2,283
Highland High	39055 25th Street West, Palmdale	3,100	2,886
William J. "Pete" Knight High	37423 70th Street East, Palmdale	3,300	2,975
Lancaster High	44701 North 32nd Street West, Lancaster	3,350	2,425
Littlerock High	10833 East Avenue R, Littlerock	2,300	1,502
Palmdale High	2137 East Avenue R, Palmdale	3,325	2,664
Quartz Hill High	6040 West Avenue L, Quartz Hill	3,200	3,032
SOAR High	3041 West Avenue K, Lancaster	400	406
Academies of the Antelope Valley	6300 West Ave L, Lancaster	600	440
Desert Winds Continuation	415 East Kettering Street, Lancaster	700	678
Phoenix Community Day	228 East Avenue H-8, Lancaster	150	63
R. Rex Parris Continuation	38801 Clock Tower Plaza Drive, Palmdale	725	723
Desert Pathways	6300 West Avenue L, Quartz Hill	50	45
Source: California Department of Education, <i>Data Quest</i> , http://dq.cde.ca.gov/dataquest/ and Written Correspondence, Cynthia Thompson, Secretary to Mr. Jeffery Foster, Deputy Superintendent, Antelope Valley Union School District, June 20, 2017.			

PARKS AND RECREATION FACILITIES

Recreation Programs

The City of Lancaster offers a variety of recreation programs for all ages, including youth and adult sports leagues; aquatics and swim lessons; parks and recreational facilities; community services; and senior activities. Program offerings are year-round and seasonal.

⁹ Antelope Valley Union High School District, *AVUHSD Boundary Map*, http://www.avdistrict.org/apps/pages/index.jsp?uREC_ID=244404&type=d&pREC_ID=539682, accessed on June 6, 2017.

¹⁰ Written Correspondence, Cynthia Thompson, Secretary to Mr. Jeffery Foster, Deputy Superintendent, Antelope Valley Union High School District, June 22, 2017.

Parks and Recreation Facilities

The City of Lancaster provides more than 450 acres of park space.¹¹ A total of seven recreational facilities, 12 City parks, and one stadium are located within the City.¹² The closest park to the project site is the George Lane Park, which is a County park located approximately 0.8 mile southeast of the project site at 5520 West Avenue L-8, Quartz Hill. The closest City parks are the Prime Desert Woodland Preserve, located approximately 2.25 miles east of the project site at 43201 35th Street West, and Rawley Duntley Park, located approximately 3.0 miles east of the project site at 3334 West Avenue K.

PUBLIC LIBRARIES

Lancaster Public Library, located at 601 West Lancaster Boulevard, is part of the County of Los Angeles Public Library System. The Lancaster Public Library provides the community with books, computers, passport services, research assistance, print and copy services, online services, and children and teen services. The library includes a meeting room, study room, children's area, teen space, and Veterans Resource Center. Although located outside of the City limits, the closest library to the project site is the Quartz Hill Library (located at 5040 Avenue M-2, Quartz Hill) approximately 1.7 miles southeast of the project site. Quartz Hill Library is also part of the County of Los Angeles Public Library System and provides books, computers, research assistance, print and copy services, online services, and children and teen services. The library includes a meeting room, study room, children's area and teen space.

UTILITIES AND SERVICE SYSTEMS

Water

WATER SUPPLIES AND DEMAND^{13,14}

The project site is currently undeveloped and not generating water demand.

Water Supply Entitlements, Rights, Service Contracts and Memorandum of Understanding

The Antelope Valley is located in a desert environment and underlain by a closed groundwater basin. Water service to the City of Lancaster is provided by numerous retail water agencies with all water provided from either groundwater, imported water from the Antelope Valley-Easter Kern Water Agency (AVEK), or a combination. Los Angeles County Waterworks District 40 (District 40) would serve the project site.

District 40 is a County agency governed by the Board of Supervisors, and is responsible for providing water to its service area. It is the largest retail water purveyor in the region, providing water service to both Lancaster and Palmdale areas, a service area of approximately 40,000 acres. In 2015, District 40 received an estimated 38,410 acre-feet (AF) of water that was a combination of groundwater and State Water Project (SWP) water. District 40's current sources include:

¹¹ City of Lancaster, *Parks*, <http://www.cityoflancasterca.org/about-us/departments-services/parks-recreation-arts/parks>, accessed on June 6, 2017.

¹² Ibid.

¹³ Los Angeles County Waterworks Districts, *Final 2015 Urban Water Management Plan for District 40*, February 2017.

¹⁴ Kimley-Horn and Associates, *Water Supply Assessment Avanti South*, April 2017.

- Imported SWP Water – purchased from AVEK
- Banked Groundwater – purchased from AVEK for use in future dry years
- Groundwater – the District operates production wells with supply coming from the Antelope Valley Groundwater Basin, a subbasin to the South Lahontan Hydrologic Region Basin
- Recycled Water – the District does not currently serve recycled water for irrigation purposes

District 40 provides retail water service to customers located within its service area, all of which is located within AVEK's boundary. The sources of supply include groundwater and imported water which AVEK has obtained from the SWP for delivery on a wholesale basis to retail water purveyors within AVEK's boundaries, such as District 40.

Purchased Water. District 40 purchases imported water from AVEK. AVEK has an entitlement to SWP water delivered to the Antelope Valley. The Antelope Valley began to receive water deliveries from the SWP in 1972. AVEK has an allocation of 144,844 acre-feet per year (AFY) of water from the SWP. The amount of water listed in "Table A" of the contract between the SWP and contracting agencies represents the maximum amount of water an agency may request each year. District 40 is not a SWP contractor and cannot obtain additional "Table A" entitlement.

To maximize the use of SWP supplies, AVEK has developed the Westside Water Bank within its service area. Through the Westside Water Bank facilities, AVEK can take delivery of SWP supplies exceeding customers' demands for use as groundwater recharge for future recovery in dry years.

The Antelope Valley Water Bank (AVWB) encompasses an 18-square-mile area totaling roughly 13,440 acres, of which 1,482 acres would be dedicated for spreading basins. At full buildout, the AVWB will be a water banking facility capable of 100,000 AFY of recharge, 100,000 AFY of recovery, and 500,000 AF of total storage capacity within the underlying aquifer. The AVWB would contribute to existing and future water requirements in the Antelope Valley during periods when surface water supplies are deficient.

Groundwater. Historically, groundwater has been the secondary source of water supply within District 40. Groundwater is extracted from the Antelope Valley Groundwater Basin (Basin). Prior to the 2015 Urban Water Management Plan for District 40 (2015 UWMP), the groundwater basin was under adjudication. In 2015, the Superior Court of California (Court) entered a judgment and physical solution in the Antelope Valley Groundwater Cases. The judgement imposes pumping restrictions, which will be fully implemented following a 7-year ramp-down period starting in 2016. As part of the judgement, a "Watermaster" board was appointed by the Court to implement and enforce the judgement. The board has the power to impose a fee on those that pump more than their allocated right.

The Basin, located within the South Lahontan Hydrologic Region, is bounded on the northwest by the Garlock fault zone at the base of the Tehachapi Mountains; on the southwest by the San Andreas fault zone at the base of the San Gabriel Mountains; on the east by ridges, buttes, and low hills; and on the north by the Fremont Valley Groundwater Basin.

Natural recharge to the Basin is primarily accomplished by perennial runoff from the surrounding mountains and hills. Most recharge occurs at the foot of the mountains and hills by percolation through the head of alluvial fan systems. The Big Rock and Little Rock Creeks, in the southern part of the Basin, contribute to 80 percent of natural runoff into the Basin. Other minor recharge is from return of irrigation water and septic system effluent.

District 40 extracts groundwater from the Basin. The Basin was found to be in overdraft by the adjudication court. Since the 1990s, agricultural uses have significantly increased groundwater production, exacerbating the drop in groundwater levels across the Basin. Groundwater projections from the 2015 UWMP allow for a total groundwater right of 36,790 AFY starting in 2020.

Existing and committed demands and existing water supplies are approximately equal. Additional water supplies will have to be acquired and imported into the Antelope Valley to meet the demands associated with the level of growth projected for the service area. To acquire these additional water supplies, District 40 has executed a Memorandum of Understanding (MOU) with AVEK to implement a new Water Supply Entitlement Acquisition program for new developments that will be used to acquire additional imported water supplies. Developers may secure entitlements by entering into agreements with District 40 to purchase a permanent water supply.

The volume of new water supply needed to serve a project is determined by District 40 upon review of water demand calculations submitted by developers. The developers must pay the deposit prior to obtaining a will-serve letter from District 40. District 40 will transfer the deposit to AVEK to acquire the new water supply, which will be allocated to the District. In the event that the cost of water exceeds the amount of the deposit, the developer is required to pay the difference.

Project Water Demand and Supply

Table 5.11-3, *District 40 Projected Yearly Water Demand by Land Use Type (AFY)*, summarizes the demand projections by land use type for the District.

**Table 5.11-3
District 40 Projected Yearly Water Demand by Land Use Type (AFY)**

Land Use	2020 Demand	2025 Demand	2030 Demand	2035 Demand
Single-Family Residential	66,410	74,330	82,170	90,020
Multi-Family Residential	3,590	4,020	4,440	4,870
Commercial	5,050	4,450	3,840	3,230
Industrial	5,380	6,030	6,660	7,300
Institutional/Governmental	1,680	1,480	1,280	1,080
Losses	6,180	6,800	7,410	8,020
Recycled Water	8,200	10,900	13,60	16,300
Total (without recycled water)	88,290	97,110	105,800	114,520
Total (with recycled water)	96,490	108,010	119,400	130,820

Source: Kimley-Horn and Associates, *Water Supply Assessment Avanti South*, April 2017.

District 40's projected water supply during a normal water year is summarized in Table 5.11-4, District 40 Projected Water Supplies – Normal Water Year (AFY).

Table 5.11-4
District 40 Projected Water Supplies – Normal Water Year (AFY)

Water Supply Sources	2020	2025	2030	2035
Groundwater	36,790	36,790	36,790	36,790
AVEK (Purchased)	61,000	61,000	61,000	61,000
Recycled Water	8,200	10,900	13,600	16,300
Anticipated New Supply	4,100	12,900	21,600	30,300
Total	110,090	121,590	132,990	144,390
Source: Kimley-Horn and Associates, <i>Water Supply Assessment Avanti South</i> , April 2017.				

Table 5.11-5, Summary of Projected Water Supply and Demand (AFY), summarizes projected water supply and demand for normal, single-dry, and multiple-dry year conditions. Detailed supply information for normal water year, single-dry year, and multiple dry year conditions is provided in Table 8 of the WSA; refer to Appendix J.

Table 5.11-5
Summary of Projected Water Supply and Demand (AFY)

Supply and Demand	2020	2025	2030	2035
Projected Demand	96,500	108,000	119,400	130,800
Total Projected Supply				
<i>Normal Year</i>	110,090	121,590	132,990	144,390
<i>Single-Dry Year</i>	96,500	108,000	119,400	130,800
<i>Multiple-Dry Year</i>	96,500	108,000	119,400	130,800
Source: Kimley Horn and Associates, <i>Water Supply Assessment Avanti South</i> , April 2017.				

Drought. The drought in California has made water supply deficiencies a major concern prompting the Governor to issue an Executive Order requiring a statewide reduction in water use of 25 percent. To achieve this, each agency is assigned a mandated water reduction target. District 40's mandated water reduction target is 32 percent. District 40 is highly susceptible to drought conditions, which exacerbate water shortages. In order to provide demands during short-term drought situations, District 40 implemented a Phased Water Conservation Plan (PWCP). The PWCP is comprised of 10 phases with water conservation targets set for each phase. In 2015, water use declined as a result of the mandated demand reductions. However, it is not known to what extent water use will rebound to pre-drought levels with the ending of the drought.

Recycled Water. Recycled water helps provide the Antelope Valley a beneficial reuse of treated wastewater. The distribution infrastructure that conveys recycled water to users is referred to as the Antelope Valley Backbone. Only a portion of the Antelope Valley Backbone is constructed. As funding sources become available, the Antelope Valley Backbone will be expanded to serve additional recycled water demands. Lancaster Water Reclamation Plant (LWRP), Palmdale Water Reclamation Plant (PWRP) and Rosamond Wastewater Treatment Plant (RWWTTP) would provide tertiary treated water to supply recycled water demands.

New Water Supply. District 40 has projects planned in the near future to increase supplies and reliability. District 40 will also purchase additional SWP water, if available, to be banked by AVEK for extraction during future dry years.

As discussed above, in order to acquire sufficient water supplies for future demands, District 40 has established, through a MOU with AVEK, a New Water Supply (Developer Fee) for new developments, which provides a method to acquire additional imported water supplies. The method creates a coordination effort between the developer, District 40, and AVEK. The developer and District 40 work together to determine the volume of new water supply needed, which the developer then pays AVEK to receive a letter of commitment to the District for the new water supply. AVEK then designates this new water supply to the District for the developer over and above the District 40's current allocation of supplies.

WATER INFRASTRUCTURE

Within the project area, an existing 36-inch water transmission main is located in 60th Street West, to the east of the Avanti South project area. In addition, existing 12-inch and 16-inch lines are located in a portion of Avenues K-8 and K, respectively.

Wastewater

WASTEWATER COLLECTION AND TREATMENT

The project site is currently undeveloped and not generating wastewater requiring conveyance and treatment. Collection, treatment, and disposal of wastewater within the City of Lancaster and adjacent unincorporated areas are under the jurisdiction of the County Sanitation Districts of Los Angeles County (Districts). The Districts own and maintain the trunk sewers and LWRP, which convey and treat wastewater generated by residential, commercial, and industrial areas of the City of Lancaster, as well as portions of the City of Palmdale and unincorporated Los Angeles County. The boundary of the Districts' service area is located immediately adjacent to the project site on the east and south.

Wastewater collected in the City initially flows through the local sewer pipelines owned and maintained by the City. The Districts' trunk main network consists of approximately 64 miles of pipeline. Trunk sewer pipelines, 24 inches in diameter or smaller, are usually constructed of vitrified clay pipe. Larger trunk sewers are typically reinforced concrete pipe.

Wastewater flows from the City are treated at the LWRP located near Avenue D and east of State Route 14 (SR-14), north of the City boundary. LWRP has a current capacity of 18 million gallons per day (mgd) and processes an average flow of 12.9 mgd.¹⁵ Capacity needs are estimated at 26 mgd by the year 2020.

The closest backbone sewer lines to the project site are located in Avenue L, to the east of the project site. The Districts' 36-inch diameter Avenue J West Trunk Sewer is located in Avenue J at 60th Street West and has a capacity of 15.9 mgd and conveyed a peak flow of 2.6 mgd when last measured in 2014.¹⁶

¹⁵ Adriana Raza, Customer Service Specialist, Facilities Planning Department, County Sanitation Districts of Los Angeles County, written correspondence to Notice of Preparation, August 15, 2016.

¹⁶ Ibid.

SOLID WASTE

The project site is currently undeveloped and does not require solid waste disposal services or result in solid waste being disposed of at the local landfills.

Waste Management of Antelope Valley is currently the sole franchise private hauler serving the City for waste collection. The Lancaster Landfill (located at 600 East Avenue F, Lancaster) and the Antelope Valley Landfill (located at 1200 West City Ranch Road, Palmdale) are two landfill sites located in the Antelope Valley. Nearly 100 percent of Lancaster's solid waste is taken to one of these landfills; however, other regional landfills in Los Angeles County also accept solid waste from the City. The Lancaster Landfill has a permitted daily capacity of 5,100 tons per day and a total permitted capacity of 27,700,000 cubic yards. The Lancaster Landfill's remaining capacity is 14,514,648 cubic yards with an anticipated closure date of March 1, 2044.¹⁷ The Antelope Valley Landfill has a permitted daily capacity of 3,564 tons per day. The Antelope Valley Landfill's remaining capacity is 18,303,272 cubic yards with an anticipated closure date of January 1, 2042.¹⁸

5.11.2 REGULATORY SETTING

FIRE PROTECTION

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or just "Title 24," contains the regulations that govern the construction of buildings in California. It is a compilation of three types of building criteria from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Title 24 adopts standards from the national model code that apply to all occupancies in California except for modifications adopted by state agencies and local governing bodies.

Title 24, Part 9 contains the California Fire Code, which contains regulations consistent with nationally recognized accepted practices for safeguarding, to a reasonable degree, life and property from the hazards of fire and explosion; hazardous conditions in the use or occupancy of buildings or premises; and dangerous conditions arising from the storage, handling and use of hazardous materials and devices.

¹⁷ CalRecycle, *Facility/Site Search: Lancaster Landfill and Recycling Center (19-AA-0050)*, <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-0050/Detail/>, accessed June 9, 2017.

¹⁸ CalRecycle, *Facility/Site Search: Antelope Valley Public Landfill (19-AA-5624)*, <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-5624/Detail/>, accessed June 9, 2017.

California Health and Safety Code

State fire regulations are set forth in *California Health and Safety Code* Sections 13000 et seq., and include regulations concerning building standards as also set forth in the 2016 CBSC, 2016 California Residential Code (CRC), and related updated Codes.

Lancaster General Plan

The primary goal of the Plan for Public Health and Safety is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The Plan for Public Health and Safety specifically addresses fire prevention and suppression services, crime prevention and protection services, disaster preparedness, emergency medical facilities, geology and seismicity, flooding and drainage, noise, air installation land use compatibility, and hazardous materials. The type and location of hazards are identified, as well as policies and programs to minimize impacts. Additionally, the Plan for the Natural Environment evaluates the natural and human-induced environments within the City. The following policies and specific actions are applicable to the proposed project:

- Policy 4.7.1 Ensure that an adequate number of fire stations and adequate fire fighting equipment and personnel are provided to protect the citizens and businesses of the City of Lancaster.

- Action 4.7.1(c) Involve fire department personnel in the development review process for all new development proposals through participation in the Development Review Committee and by referring development requests to the Los Angeles County Fire Department for review and comment.

Lancaster Municipal Code

Lancaster Municipal Code Title 15, Chapter 15.32, Fire Code, adopts by reference the 2017 County of Los Angeles Fire Code, incorporating by adoption the 2016 California Fire Code. All development within the City of Lancaster must comply with these standards to ensure fire safety precautions during project demolition and construction, adequate emergency access (during demolition, construction, and operation), and fire hydrant, fire sprinkler, and fire alarm system availability.

Lancaster Municipal Code Chapter 15.76, Fire Protection Fees, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. The purpose of the fees is to minimize, to the greatest extent practicable, a new development's impact on the Consolidated Fire Protection District of Los Angeles County public services and public facilities. The intent is that applicants for development projects pay their fair share of the costs of providing such public services and public facilities. The development impact fee is imposed in an amount based upon the gross square footage of new residential and nonresidential development or a similarly fair and reasonable basis.

POLICE PROTECTION

California Penal Code

The California Penal Code establishes the basis for the application of criminal law enforcement in California.

Lancaster General Plan

As stated above, the primary goal of the Plan for Public Health and Safety is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The Plan for Public Health and Safety specifically addresses crime prevention and protection services. The following policies and specific actions are applicable to the proposed project:

- Policy 4.6.1 Ensure that adequate law enforcement is provided to the citizens and businesses of the City of Lancaster.

- Action 4.6.1(b) In cooperation with the Sheriff's Department, establish methodologies to monitor the effectiveness of public safety programs and to identify sources of funding for such programs.

- Policy 4.6.2 Ensure that the design of new development discourages opportunities for criminal activities to the maximum extent possible.

- Action 4.6.2(a) Involve the Public Safety Office and Community Neighborhood Division in the development review process for all new development proposals through participation in the Development Review Committee for review and comment.

- Action 4.6.2(b) Promote public safety through the incorporation of Crime Prevention Through Environmental Design (CPTED) concepts and other methods into the development design.

City Emergency Operations

According to General Plan 2030, disaster preparedness measures are outlined in the City of Lancaster's *Multihazard Functional Plan*. The City has also prepared the *2013 City of Lancaster Hazard Mitigation Plan* (HMP) and *Emergency Operations Plan* (EOP), 2010.

The HMP identifies hazards that threaten the area as well as the associated risks and provides a five-year mitigation strategy action plan. The City of Lancaster Hazard Mitigation Action Plan includes resources and information to assist residents, public and private sector organizations, and other interested in participating in planning for hazards. The Mitigation Strategy Action Plan provides a list of activities designed to assist the City to reduce risk and prevent losses from future hazard events. The strategies address multi-hazard issues, as well as hazard specific activities for windstorms, earthquakes, fires, flooding, landslides, and terrorism. The EOP was prepared to ensure the most effective and economical allocation of resources for the maximum benefit and protection of the civilian population in time of emergency. The EOP establishes the emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts of the various emergency staff and service elements utilizing the SEMS and the National Incident Management System (NIMS).

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.64, Development Impact Fees, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects for the purpose of defraying the costs of public expenditures for capital improvements and operational services which would

benefit such new development. Section 15.64.130, Sheriff's Substation Facilities Fee, requires a sheriff's substation facilities fee for all new development in the City. The sheriff's substation facilities fee is used to finance land acquisition, design, construction, equipping and related capital costs for sheriff substation facilities.

SCHOOLS

Senate Bill 50

Senate Bill 50 (SB 50) and Proposition 1A, both of which passed in 1998, provided a comprehensive school facilities financing and reform program, in part by authorizing a \$9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murrieta court cases. The Mira, Hart, and Murrieta court cases ruled that cities and counties under their legislative authority could impose additional fees for school construction to mitigate the effect of new construction.

The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate, and reinstates the school facility fee cap for legislative actions (i.e., General Plan amendments, specific plan adoption, zoning plan amendments) as was allowed under the Mira, Hart and Murrieta court cases. The statutes state that these fees are the exclusive means of considering as well as mitigating school impacts caused by new development. Accordingly, these fees limit the scope of impact review in an Environmental Impact Report, the mitigation that can be imposed, and the findings a lead agency must make in justifying its approval of a project. Under *Chawanakee Unified School District v. County of Madera* (2011) 196 Cal.App.4th 1016, the impacts of new school construction (including reasonably foreseeable new school construction necessitated by new residential development) on the non-school environment and such impacts as traffic impacts of increased student busing to and from a school facility do have to be examined, if applicable to a particular project, but the project's impacts in causing school overcrowding or inadequate classroom facilities do not. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." These provisions remain in place as long as subsequent State bonds are approved and available.

SB 50 also establishes three levels of Developer Fees that may be imposed upon new development by the governing board of a school district depending upon certain conditions within a district. Level One Fees are the statutory fees, which can be adjusted for inflation every two years. Level Two Fees allow school districts to impose fees beyond the base statutory cap, under specific circumstances. Level Three Fees come into effect if the State runs out of bond funds after 2006, which would allow school districts to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies. The school fee amounts provided for in Government Code Sections 65995, 65995.5 and 65995.7 would constitute full and complete mitigation for school facilities.

In order to accommodate students from new development projects, school districts may alternatively finance new schools through special school construction funding resolutions and/or agreements between developers, the affected school districts, and occasionally, other local governmental agencies. These special resolutions and agreements often allow school districts to realize school mitigation funds in excess of the developer fees allowed under SB 50.

The passage of Proposition 1A in 1998 created the School Facility Program (SFP), in order to streamline the process districts go through to obtain state funding. Pursuant to the SFP, funding for new construction and modernization is provided by the State in the form of per-pupil grants. Generally, projects also require local matching funds. The SFP also implemented numerous reforms intended to streamline the application process, simplify the state facilities program, and create a more transparent and equitable funding mechanism.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.68, Funding for Interim Classrooms and School District Facilities, was adopted to establish a method of providing interim classrooms and related facilities for school districts having conditions of overcrowding within one or more attendance areas. Section 15.68.080, Payment of Fees-Land Made Available, requires the developer of a proposed residential development to pay fees or make land available if the area has been determined by City Council to have conditions of school attendance overcrowding. The purpose of such fees/land availability is to minimize, to the greatest extent practicable, a new development's impact on the school district serving that area. Compliance requirements include:

- Where the payment of fees is required, they shall be collected by the school district prior to the issuance of a building permit, or in the case of an installation of a mobile home or the construction of a mobile home park, a utility permit (for example, electrical, sewer, plumbing, construction, etc.). Upon receipt of payment, the school district shall issue its certificate of completion of requirements under this chapter for interim school facilities' financing.
- Where land is to be made available, the developer shall provide a recordable written agreement to the school district which grants to the school district exclusive use of the land acceptable to the school district for an interim period. This written agreement shall be provided to the school district prior to the issuance of a building permit, or in the case of an installation of a mobile home or the construction of a mobile home park, a utility permit (for example, electrical, sewer, plumbing, construction, etc.). Upon receiving the recordable agreement, the school district shall issue its certificate of completion.
- If the school district determines that the requirement for land or use fees in lieu thereof would result in an inequitable duplication of land or fees previously provided by the developer or his predecessors in interest, the school district shall adjust the requirement to the extent necessary to eliminate such duplications.

PARKS AND RECREATION FACILITIES

Quimby Act

The Quimby Act (Government Code § 66477) states that the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map, provided certain requirements are met. This Section further states that "the dedication of land, or the payment of fees, or both, shall not exceed the proportionate amount necessary to provide three acres of park area per 1,000 persons residing within a subdivision subject to this section."

Lancaster General Plan

The Plan for Active Living focuses on the components of the community's shelter, culture, and lifestyle. It also focuses on the manner in which those in need can be helped so that all may share in achieving a high quality of life. The Plan for Active Living addresses a variety of topics including park land and pedestrian, equestrian, and bicycle trails. Objective 10.1 pertains to the provision of parkland and states "Provide sufficient neighborhood and community park facilities such that a rate of 5.0 acres of park land per 1,000 residents is achieved and distributed so as to be convenient to Lancaster residents." Objective 10.2 addresses pedestrian, equestrian, and bicycle trails and states "Through the adoption and implementation of a Master Plan of trails, establish and maintain a hierarchical system of trails (including equestrian, bicycle, and pedestrian trails) providing recreational opportunities and an alternative means of reaching schools, parks and natural areas, and places of employment, and connecting to regional trail systems."

The following policies and specific actions are applicable to the proposed project:

Policy 10.1.1: Provide opportunities for a wide variety of recreational activities and park experiences, including active recreation and passive open space enjoyment within a coordinated system of local, regional, and special use park lands areas.

Specific Action 10.1.1(b) Maintain ordinance provisions requiring that proposed residential development provide land and improvements for park land (or payment of in-lieu fees) consistent with the provisions of the Parks, Recreation, Open Space and Cultural Master Plan. Conduct an annual review of the fee structure to ensure that fees keep pace with the cost of acquisition and construction of new parks and recreation facilities.

Specific Action 10.1.1(c) Where an individual development is of sufficient size to support one or more neighborhood or community parks, consider the dedication of such land for park use and developed as part of the project or payment of in-lieu fees may be made, subject to the policies, programs and standards of the Parks, Recreation, Open Space and Cultural Master Plan.

Specific Action 10.2(b) Where consistent with the Master Plan of Trails, require all new development within the City of Lancaster to provide dedication of rights-of-way or easements, along with improvements.

Policy 10.2.3: Ensure that trail construction takes into consideration the safety and convenience of the trail users as the primary concern.

Parks, Recreation, Arts, and Cultural Facilities Master Plan

Adopted in October 2007, the *Lancaster Parks, Recreation, Arts, and Cultural Facilities Master Plan* (Parks Master Plan) identifies needs and provides goals and policies for the implementation of cultural programs and facilities within the City. The three major purposes of the Parks Master Plan are to (1) Present a long-term vision and goals for the Department and the community for the next 20 to 25 years; (2) Describe current and future needs, interests and community preferences for parks, recreation, arts programs and facilities; and (3) Develop a process and priorities for managing the Department's commitments so that new requests and initiatives are considered in light of existing commitments. The Master Plan is used as

a guide to implement an array of parks and recreational needs throughout the City and represents an important implementation program consistent with the General Plan.

Master Plan of Trails and Bikeways

Adopted in March 2012, the *Lancaster Master Plan of Trails and Bikeways* identifies needs and provides goals, policies, and actions for the implementation of non-motorized transportation within the City. The goals of the Master Plan of Trails and Bikeways include:

- Provide a safe, connected, and convenient street environment where people of all ages and physical abilities can travel throughout Lancaster without a vehicle.
- Create a network of off-street shared-use paths and trails within the City that is well located, safe, and secure.
- Provide amenities and facilities to increase the number of bicyclists and pedestrians by enticing more people to use their bicycles or walk instead of driving.
- Promote the health of Lancaster residents by providing more opportunities to bicycle or walk for commuting, recreating, shopping and visiting.
- Support safe access to and from schools.
- Develop routes and facilities to enhance the economic viability of Lancaster, including promotional events and activities supportive of "Destination Lancaster."

Lancaster Municipal Code

Lancaster Municipal Code Section 15.64.090, Park Acquisition Fee, imposes a park acquisition fee on all new residential development in the City to mitigate the impacts of new residential development on the availability of open space land and park and recreational facilities.

Lancaster Municipal Code Section 15.64.100, Park Development Fee, requires a park development fee for all new residential development in the City to mitigate the impacts of new residential development on the availability of open space land and park and recreational facilities. The park development fee provides funds for the development of park, recreation and arts facilities.

Lancaster Municipal Code Section 15.56.030, Transportation demand and trip reduction, requires nonresidential development of 50,000 square feet or more to provide bicycle racks or other secure bicycle parking to accommodate four bicycles per the first 50,000 square feet of development, and one bicycle per additional 50,000 square feet of development. The City requires a minimum of one bicycle space per 10 employees for development in the office-professional zone and industrial zone per sections 17.12.880 and 17.16.210. Bicycle parking is not required for residential development, with the exception of multi-family projects, where it will be considered when assigning parking.

LIBRARY FACILITIES

Lancaster Municipal Code

Lancaster Municipal Code Section 15.64.140, Library Facilities Fee, requires a library facilities fee for all new development in the City to provide adequate public services and to support the well-being and general welfare of the City's growing population. The library facilities fee is used to finance land acquisition, design, construction, equipping, and related capital costs for local library facilities.

WATER SUPPLY

Federal Safe Drinking Water Act of 1974

The Safe Drinking Water Act (SDWA) authorizes the U.S. Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The EPA, states, and water systems then work together to make sure that these standards are met. Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap. SDWA applies to every public water system in the United States. There are currently more than 160,000 public water systems providing water to almost all Americans at some time in their lives.

Urban Water Management Act

The Urban Water Management Plan Act (UWMP Act) was passed in 1983 and codified at Water Code §§ 10610 through 10657. Since its adoption in 1983, the Act has been amended on several occasions. In 2004, the Act was amended to require additional discussion of transfer and exchange opportunities, non-implemented demand management measures, and planned water supply projects. In 2005, the Act was amended to require water use projections (required by Water Code § 10631) to include projected water use for single-family and multi-family residential housing needed for lower income households. In addition, Government Code § 65589.7 was amended to require local governments to provide a copy of the adopted housing element to water and sewer providers. The Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet (AF) of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." Urban water suppliers must file these plans with the California Department of Water Resources every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by the Memorandum of Understanding Regarding Urban Water Conservation in California and Assembly Bill 11 (Filante, 1991), the 2005 UWMP Act incorporated water conservation initiatives and a Water Shortage Contingency Plan.

Water Conservation Act of 2009

Water Code §§ 10800, et seq. creates a framework for future planning and actions by urban (and agricultural) water suppliers to reduce California's water use. The law requires urban water suppliers to reduce statewide per capita water consumption by 20 percent by 2020. Additionally, the State is required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent

by 2015. Each urban retail water supplier was required to develop water use targets and an interim water use target by July 1, 2011. Each urban retail water supplier was required, by July 2011, to include in their water management plan the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.

Senate Bills 221 and 610

SB 221 and 610 were signed into law in 2001 and took effect January 1, 2002. The two bills amended State law to better link information on water supply availability to certain land use decisions by cities and counties. The two companion bills provide a regulatory forum that requires more collaborative planning between local water suppliers and cities and counties. SB 221 and 610 reports are generated and adopted by the public water supplier. SB 610 requires a detailed report regarding water availability and planning for additional water suppliers that is included with the environmental document for specified projects. All projects that meet any of the following criteria require the water availability assessment:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel and/or motel having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant or an industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specified above; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

While SB 610 primarily affects the Water Code, SB 221 principally applies to the Subdivision Map Act. The primary effect of SB 221 is to condition every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier (PWS) has sufficient water supply available to serve it. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. SB 221 applies to any subdivision, defined as:

- A proposed residential development of more than 500 dwelling units (if the PWS has more than 5,000 service connections); or
- Any proposed development that increases connections by 10 percent or more (if the PWS has fewer than 5,000 connections).

The proposed project requires preparation and approval of a WSA to meet the requirements of SB 610 and support a letter of verification to meet the requirements of SB 221; refer to [Appendix J](#).

Assembly Bill 3030

Assembly Bill (AB) 3030, the Groundwater Management Act, is Section 10750 et seq. of the California Water Code. AB 3030 provides local water agencies with procedures to develop a groundwater management plan so those agencies can manage their groundwater resources efficiently and safely while protecting the quality of supplies. Under AB 3030, the development of a groundwater management plan by a local water agency is voluntary. Once a plan is adopted, the rules and regulations contained therein must also be adopted to implement the program outlined in the plan.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was enacted by the legislature in 2014, with subsequent amendments in 2015. The SGMA requires groundwater management in priority groundwater basins. The designation of the priority of groundwater basins was done as part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program. The CASGEM Program was developed in response to legislation enacted in California's 2009 Comprehensive Water package. The CASGEM Groundwater Basin Prioritization is a statewide ranking of groundwater basin importance that incorporates groundwater reliance and focuses on basins producing greater than 90 percent of California's annual groundwater. The CASGEM Program has ranked the Antelope Valley Groundwater Basin (4-66) as high priority.

The SGMA directs the Department of Water Resources (DWR) to identify groundwater basins and sub-basins in conditions of critical overdraft. DWR identified such basins in Bulletin-118 (DWR 2004). DWR issued an updated draft list of critically overdrafted basins in July 2015. The Antelope Valley Groundwater Basin (4-66) is not on the list.

2015 Urban Water Management Plan for District 40

The 2015 Urban Water Management Plan for District 40 (2015 UWMP) analyzes past, current, and projected future water supply and demand as they relate to population density, types of water use, water quality, climate, water source availability and reliability, alternate water sources, and potential water shortages. In addition, District 40 has developed a strategy to increase water supply and reduce demand through conservation and reduction targets.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.64, Development Impact Fees, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects for the purpose of defraying the costs of public expenditures for capital improvements and operational services which would benefit such new development. Section 15.64.070, Water Improvements Fee, requires the payment of a water improvements fee for all new development in the City. The purpose of the water improvements fee is to provide funding of capital improvements, including pump stations, water reservoir facilities, wells, treatment facilities, waterlines, and other related improvements to ensure a continuing supply of potable water.

WASTEWATER

County Sanitation Districts of Los Angeles County

The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system or for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate a proposed project. Payment of a connection fee is required before a permit to connect to the sewer is issued.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 13.08, Sanitary Sewers and Industrial Waste, was adopted to protect the public health and safety, and to prevent endangerment of public and private property. Pursuant to Section 13.08.030, Plan Approval Prerequisite to Issuance, no sewer construction permit shall be issued until the director has checked and approved the plans.

The Lancaster Municipal Code Section 13.08.035, Tapping Fee Payment Required When, establishes fees for connection to the local sewer system:

- A. *When, in the opinion of the director, it is necessary to connect a house lateral to a public sewer at a point where no connection facility has been provided, application for a city encroachment permit shall be submitted and a fee shall be paid by the applicant before the permit is issued for the construction and inspection of the house lateral.*
- B. *Tapping of the public sewer as required on sewer plans approved by the director shall be constructed by a licensed contractor under inspection of the director.*

Pursuant to Section 13.08.050, Excessive Discharge of Sewage, states:

- A. *Any person proposing to have sewage discharged from any property to a public sewer in quantities or at a rate greater than the capacity for which the sewer was designed, when proportioned to such property, and which such additional quantity will immediately overload the sewer, shall be denied a permit to connect any facilities to the sewer which will discharge more than the proportionate share allotted to the property. However, if such additional discharge will not immediately but may in the future overload the sewer, a conditional permit to connect to the sewer may be issued after the owner of the property agrees by a covenant satisfactory to the director recorded against the land to construct or to share in the cost of construction of additional sewer capacity at such future time as the director determines that an overload situation exists or is imminent.*

SOLID WASTE

Solid Waste Management

The California Integrated Waste Management Act of 1989 (aka "AB 939" found at Public Resources Code, §§ 40000, et seq.) was adopted to "reduce, recycle, and re-use solid waste generated in the state to the

maximum extent feasible.” CalRecycle is the California department concerned with the State’s recycling and waste reduction efforts, including the implementation of AB 939. Officially known as the Department of Resource Recycling and Recovery, CalRecycle is a part of the California Natural Resources Agency and administers programs formerly managed by the California Integrated Waste Management Board and Division of Recycling. CalRecycle has broad authority related to solid waste handling, disposal, and reclamation. Under this Act, the California Integrated Waste Management Board (CIWMB) initially (1) created a State solid waste management and resource recovery policy; (2) developed minimum standards for solid waste handling and disposal; and (3) approved county Solid Waste Management Plans (SWMP).

AB 939 establishes a waste management hierarchy as follows:

- Source Reduction;
- Recycling;
- Composting;
- Transformation; and
- Disposal.

The law also requires that each county prepare a new Integrated Waste Management Plan and each city prepare a Source Reduction and Recycling Element (SRRE). The SRRE is required to identify how each jurisdiction will meet the mandatory state waste diversion goal of 50 percent by the year 2000. The Act mandated that California’s 450 jurisdictions (i.e., cities, counties, and regional waste management compacts), implement waste management programs aimed at a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. If the 50 percent goal was not met by the end of 2000, the jurisdiction was required to submit a petition for a goal extension to CalRecycle. Senate Bill (SB) 2202 made a number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local governments shall continue to divert 50 percent of all solid waste on and after January 1, 2000.

The per capita disposal rate is a jurisdiction-specific index, which is used as one of several “factors” in determining a jurisdiction’s compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs. Meeting the disposal rate targets is not necessarily an indication of compliance. CalRecycle reports that Lancaster’s Disposal Rate Targets for Reporting Year 2015 were 6.4 pounds per day (PPD) per Resident and 23.2 PPD per Employee.¹⁹

Lancaster Municipal Code

The Lancaster Municipal Code Section 13.16.120, Recycling Waste Reduction Program, establishes the provision of recycling programs by the City:

The city shall provide through contractual provisions for recycling programs which have been recognized by city council as exemplary public policy and are necessary to be implemented by the laws established by the state of California. All contractors shall comply with existing state or local mandates for reduction of waste stream and promoting recycling per specific provisions of the contract.

¹⁹ CalRecycle, *Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report*, <http://www.calrecycle.ca.gov/lgcentral/Reports/Jurisdiction/DiversionDisposal.aspx>, Accessed June 7, 2017.

5.11.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, impacts associated with public services and utilities resulting from the project's implementation may be considered significant if they would result in the following:

PUBLIC SERVICES

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire Protection;
 - Police Protection;
 - Schools;
 - Parks;
 - Other Public Facilities.

RECREATION

- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

UTILITIES AND SERVICE SYSTEMS

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects (refer to Section 5.8, Hydrology and Water Quality);
- Have insufficient water supplies available to serve the project from existing entitlement and resources, and new or expanded entitlement is needed;
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.11.4 IMPACTS AND MITIGATION MEASURES

FIRE PROTECTION SERVICES

PSU-1 *Project implementation could result in the need for additional fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.*

Impact Analysis: The City of Lancaster contracts with LACFD for fire and paramedic services. The project site is located within the services boundaries of Station 84, which is located at 5030 West Avenue L-14.

The approximately 307.7-acre project site is currently undeveloped. Project implementation involves the adoption of the Avanti South SP, which proposes the development of residential, commercial, open space/parks, school, fire station, and transportation land uses within the project site. With project implementation, fire service calls would incrementally increase. According to the LACFD, project implementation would require provisions for a fire station facility to serve the project site.²⁰ A 1.3-acre fire station site has been identified within the Avanti West portion of the Specific Plan to serve the project area and would be offered to LACFD. Specifics of the location and configuration of the fire station would require approval by the Chief of the Fire Department's Planning Division and construction of the fire facility would be the responsibility of LACFD. The fire station has been identified as part of the proposed project and therefore its construction and operation has been analyzed within Section 5.0 of this Draft EIR.

The location of a fire station within the project site would reduce any potential impacts to response times associated with increased calls for service due to the proposed project. It is also anticipated that Fire Station 84 would provide service to the project site, as needed. Further, Lancaster Municipal Code Chapter 15.76, Fire Protection Fees, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. Compliance with Chapter 15.76, which requires payment of a development impact fee, would minimize, to the greatest extent practicable, the project's impact on the City's fire protection services. If the fire station is not constructed, compliance with Chapter 15.76 would ensure that the proposed development would pay its fair share of the costs of providing the

²⁰ Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, County of Los Angeles Fire Department, written correspondence to Notice of Preparation, August 16, 2016.

necessary public services and public facilities, including fire suppression facilities, vehicles, and equipment.

The project proposes development of residential, commercial, open space/parks, school, fire station, and transportation land uses within a currently undeveloped site. All development within the City of Lancaster, including the proposed project, is required to comply with Lancaster Municipal Code Title 15, Chapter 15.32, Fire Code, which adopts by reference the 2017 County of Los Angeles Fire Code, incorporating by adoption the 2016 California Fire Code. Before the City issues a Building Permit, the development plans (including the Fire/Life Safety Plan) would be reviewed and approved by the LACFD, in order to ensure compliance with all fire safety precautions during demolition and construction. Specific LACFD requirements would include, but not be limited to, emergency access, turning radii, driveway/roadway/cul-de-sac widths and lengths, fire flows, and fire hydrant spacing.

Provision of the fire station site and compliance Lancaster Municipal Code Chapter 15.76, would ensure that project implementation would result in a less than significant impact to fire protection services. Potential environmental impacts associated with the proposed project, which includes construction and operation of the fire station facility, have been analyzed and identified throughout Section 5.0 of this Draft EIR. Impacts to fire station facilities and services would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

POLICE PROTECTION SERVICE

PSU-2 ***Project implementation would not result in the need for additional police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.***

Impact Analysis: The City of Lancaster contracts with LASD for police protection services. The Lancaster Sheriff's Station is located at 501 West Lancaster Boulevard. The project does not propose or require new or physically altered police protection facilities. The proposed Avanti South SP would introduce new development to the currently undeveloped project site. Thus, project implementation would likely result in an increased demand for police protection services to the project area.

Lancaster Municipal Code Chapter 15.64, Development Impact Fees, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects for the purpose of defraying the costs of public expenditures for capital improvements and operational services which would benefit such new development. Section 15.64.130, Sheriff's Substation Facilities Fee, requires a sheriff's substation facilities fee for all new development in the City. The sheriff's substation facilities fee is used to finance land acquisition, design, construction, equipping and related capital costs for sheriff substation facilities. Thus, compliance with Section 15.64.130, which requires payment of a development impact fee, would minimize, to the greatest extent practicable, the project's impact on the City's police protection services. Further, future development within the project area would be reviewed by LASD as part of the development review process and impose standard conditions of approval. LASD's review would ensure

adequate design features are incorporated to minimize safety issues associated with the development. Thus, impacts to police protection services would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

SCHOOLS

PSU-3 ***Project implementation could result in the need for additional school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives.***

Impact Analysis: The project site is located within the attendance boundaries of Westside and AVUHSD. Currently, AVUHSD is operating under capacity while Westside is operating over capacity. Implementation of the proposed Avanti SP would result in the development of up to 1,700 dwelling units; however, 431 are age-targeted or identified for active adults and therefore are not anticipated to generate new students. The remaining 1,269 dwelling units provide the potential for school-aged children to reside within the project area and attend schools within Westside and AVUHSD.

New students potentially residing within the project area could further impact Westside, as capacity is not available to serve existing students. Westside and AVUHSD charge developer fees on a per-square-foot basis for new residential and commercial development. According to Westside, the District's school facilities are presently inadequate to address District needs as there are currently unhoused students warranting the assessment of Level II Developer Fees. For this reason, the District is of the opinion that its school facilities and ability to serve children within its jurisdiction would be significantly impacted by the proposed project in a manner that cannot be fully mitigated by the payment of the current Level II fees alone.²¹

Project implementation would include a 12.8-acre elementary school site within the Avanti South portion of the Specific Plan to serve the project area and would be offered to Westside. If Westside accepts the school site, a Developer fee credit would be given for school site land dedication value. The school has been identified as part of the proposed project and therefore its construction and operation have been analyzed within [Section 5.0](#) of this Draft EIR. Specifics of the school and ultimate construction would be the responsibility of Westside. The location of an elementary school within the project site would reduce impacts to Westside associated with new students potentially generated by the proposed project. Further, in accordance with SB 50, development within the Avanti South SP would be required to pay school impact fees to Westside and AVUHSD in place at the time, which is deemed to provide full and complete mitigation of impacts on school facilities from the development of real property.

Provision of the school site and/or payment of school fees in compliance with SB 50, would ensure that project implementation would result in a less than significant impact to schools serving the project area. Potential environmental impacts associated with the proposed project, which includes construction and operation of an elementary school, have been analyzed and identified throughout [Section 5.0](#) of this Draft EIR. Impacts to schools would be less than significant.

²¹ Written Correspondence, Cyndi Vidinha, Development Technician, Westside Union School District, July 6, 2017.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

PARKS AND RECREATION

PSU-4 *Project implementation could result in the need for additional parks and recreational facilities and/or the increased use of existing neighborhood and regional parks such that substantial physical deterioration could occur or be accelerated. Project implementation would result in the construction of parks and recreational facilities which could have an adverse physical effect on the environment.*

Impact Analysis:

PARK DEMAND AND INCREASED USE OF EXISTING PARK FACILITIES

Implementation of the proposed Avanti SP would result in the development of up to 1,700 dwelling units potentially resulting in a population of 5,457 persons to the project site.²² The introduction of residents to the area would result in new demand for parks and recreational facilities when compared to existing conditions. The Lancaster General Plan establishes a parkland ratio of five acres per 1,000 residents. Thus, the proposed project would result in the demand for approximately 27.3 acres of parkland.

The Avanti South SP proposes 31.5 acres of neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail incorporated into the edge of the proposed drainage facilities to serve residents of the project site; refer to [Table 3-4](#). Five private neighborhood parks would be located throughout the project site and a sixth private neighborhood park and amenity center would be located within the adult community. The parks and facilities would be owned and maintained by the Homeowners Association (HOA). Design of the amenity center would be part of site plan and design review for the active adult community. Private pocket parks or amenity areas may be incorporated into each residential planning area. The pocket parks would be designed as part of the subdivision process for each planning area and subject to design review.

In addition to parkland, open space areas would be incorporated throughout the project area. Promenade areas (widened and enhanced medians) would be provided in some of the project streets. The promenades would be 60 feet wide and include a multipurpose trail, seating, landscaping, and fitness course stations. An Equestrian/Class I trail would be located on 70th Street. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City's planned equestrian and Class I multipurpose trail. Drainage facilities totaling 8.6 acres would serve drainage, water quality, and trail functions. The edge of the facilities would incorporate a multipurpose trail and interpretive signage.

With the provision of the 31.5 acres of neighborhood parks, pocket parks, amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail within the Avanti South SP site, the proposed project would provide a variety of parkland and amenities to serve the project's residents. Due to the

²² Based on 3.21 persons per household, State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017.

amount and variety of parkland and facilities provided by the project, it is not anticipated that residents would utilize neighborhood and regional parks outside of the project site to the extent that substantial physical deterioration would occur or be accelerated.

Further, Lancaster Municipal Code Section 15.64.090, Park Acquisition Fee, and Section 15.64.100, Park Development Fee, impose a fee on all new residential development in order to mitigate the impacts on the availability of open space land and park and recreational facilities and ensure adequate park, recreation and open space facilities are provided throughout the City. Payment of the fees would further reduce any potential impact to parks, recreation, and open space facilities associated with the demand for parks and recreational facilities created by the proposed project. Impacts would be less than significant in this regard.

PROVISION OF NEW PARK/RECREATIONAL FACILITIES

The project proposes 31.5-acres of private neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail to serve residents of the project site. Construction of these facilities could have an adverse physical effect on the environment. Potential environmental impacts associated with the proposed project, which includes construction and operation of the proposed 31.5-acres of park and recreation amenities, have been analyzed and identified throughout [Section 5.0](#) of this Draft EIR. No impacts specific to the provision of new park and recreational facilities have been identified.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LIBRARY FACILITIES

PSU-5 *Project implementation would not result in significant impacts to library facilities.*

Impact Analysis: The County of Los Angeles Public Library System provides library services to the City. The Lancaster Library is the primary library serving the Lancaster residents. The proposed project could result in a population of 5,457 persons associated with the development of up to 1,700 new dwelling units. The introduction of residents to the project site would result in increased demand for library facilities and services when compared to existing conditions. The proposed development would be required to comply with Lancaster Municipal Code Section 15.64.140, Library Facilities Fee, which requires all new development in the City to pay a library facilities fee. The library facilities fee is used to finance land acquisition, design, construction, equipping and related capital costs for local library facilities. This mitigation fee would reduce potential impacts to library facilities associated with the proposed project to a less than significant level.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WATER SERVICES

PSU-6 *Project implementation would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects or have insufficient water supplies available to serve the project from existing entitlement and resources, and new or expanded entitlement is needed.*

Impact Analysis:

WATER INFRASTRUCTURE

Within the project vicinity, a 36-inch water transmission main is located in 60th Street West, to the east of the Avanti South project area. In addition, existing 12-inch and 16-inch lines are located in a portion of Avenues K-8 and K, respectively. The project proposes to install 12-inch water lines to serve the Specific Plan area, which would extend from the existing water mains to the backbone roads of Avanti South; refer to [Exhibit 3-7](#). Connections through the Avanti North Specific Plan area would be provided by that development. Water lines from these backbone mains would be extended into individual planning areas as they are developed. The water system would be a public system with the exception of water lines within gated portions of the community (the active adult and age-targeted planning areas), which would be privately owned and maintained. Potential environmental impacts associated with the proposed project, which includes water infrastructure to serve the proposed development, have been analyzed and identified throughout [Section 5.0](#) of this Draft EIR. Impacts associated with water infrastructure facilities would be less than significant.

Further, Lancaster Municipal Code Section 15.64.070, *Water Improvements Fee*, requires the payment of a water improvement fee for all new development in the City. The purpose of the water improvements fee is to provide funding of capital improvements, including pump stations, water reservoir facilities, wells, treatment facilities, waterlines, and other related improvements to ensure a continuing supply of potable water. Payment of the fees would further reduce potential impacts to water facilities associated with the proposed development. Impacts would be less than significant in this regard.

WATER SUPPLIES

The proposed Avanti South SP would introduce new development to the currently undeveloped project site, resulting in a new demand for water. As stated above, District 40 would serve the project site. The project proposes up to 1,700 dwelling units, 213,600 square feet of commercial uses, 12.8-acre school site, 1.3-acre fire station site, and 31.5 acres of open space/park uses. Since implementation of the Avanti South SP would result in more than 500 dwelling units, a WSA is required, pursuant to SB 610. A WSA for the proposed project was prepared by Kimley-Horn and Associates (April 2017) and approved by the County of Los Angeles Board of Supervisors on June 20, 2017; refer to [Appendix J](#).

According to the WSA, the project would result in a water demand of 1,295.4 AFY. Water demand identified in the 2015 UWMP includes land that is vacant or currently planned for redevelopment from 2015-2035. Thus, water demand projections include anticipated development. The WSA concluded that development proposed by the Avanti South SP has been accounted for in the 2015 UWMP. Through a combination of existing supply, groundwater banking, new supply, and recycled water, the 2015 UWMP

projects that total supply will meet demand, including Avanti South SP demand, through 2035 under normal, single-dry, and multiple-dry water year conditions. The WSA demonstrates that District 40's total projected water supplies available during normal, single-dry, and multiple-dry water years would meet the projected water demand for the Avanti South SP over the next 20-years.

Pursuant to the MOU between District 40 and AVEK, the volume of new water supply needed to serve proposed development would be determined by District 40 upon review of water demand calculations submitted by developers. The developers would be required to pay the deposit prior to obtaining a will-serve from District 40. District 40 would transfer the deposit to AVEK to acquire the new water supply, which would be allocated to District 40.

As the WSA has determined that projected water supplies would meet the projected water demand for the proposed project and future developments would be required to pay the deposit to secure water supplies prior to development, impacts to water supplies associated with the proposed project would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WASTEWATER SERVICES

PSU-7 *Project implementation would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects, or result in a determination by the wastewater treatment provider, which serves or may serve the project that does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.*

Impact Analysis:

WASTEWATER INFRASTRUCTURE

The closest backbone sewer lines to the project site are located in Avenue L, to the southeast of the project site. A 36-inch trunk sewer is located in Avenue J to the north of the project site. Wastewater generated from the proposed project would be collected and conveyed through a conventional gravity system of pipes located within the new street right-of-ways and conveyed via a proposed 12- to 18-inch sewer located in 65th Street West through the Avanti North Project to the existing 36-inch trunk line located in Avenue J; refer to [Exhibit 3-8](#). The wastewater system would be a public system with the exception of lines within gated portions of the community (the active adult and age-targeted planning areas), which would be privately owned and maintained. Potential environmental impacts associated with the proposed project, which includes wastewater infrastructure to serve the proposed development, have been analyzed and identified throughout [Section 5.0](#) of this Draft EIR. Impacts associated with wastewater infrastructure facilities would be less than significant.

Pursuant to Lancaster Municipal Code Section 13.08.030, Plan Approval Prerequisite to Issuance, no sewer construction permit shall be issued until the director has checked and approved the plans. Further, Lancaster Municipal Code Section 13.08.035, Tapping Fee Payment Required When, establishes fees for connection to the local sewer system to ensure the sewage discharged from any property does not exceed the system's capacity. Approval of wastewater facilities and payment of any fees in accordance with the Lancaster Municipal Code would reduce potential impacts to wastewater facilities associated with the proposed development. Impacts would be less than significant in this regard.

WASTEWATER TREATMENT

Wastewater flows from the project site would be conveyed to the Districts' 36-inch trunk sewer located in Avenue J and would be treated at the LWRP. According to the Districts', the trunk sewer has a capacity of 15.9 mgd and conveyed a peak flow of 2.6 mgd when last measured in 2014. The LWRP has a capacity of 18 mgd and currently processes an average flow of 12.9 mgd. The project proposes up to 1,700 dwelling units, 213,600 square feet of commercial uses, 12.8-acre school site, 1.3-acre fire station site, and 31.5 acres of open space/park uses. According to the Districts, the average wastewater flow from the project would be approximately 1,503,233 gallons per day. With the trunk sewer's remaining capacity of 13.3 mgd, adequate capacity would be available to convey the project's projected wastewater flow. Similarly, with LWRP's remaining capacity of 5.1 mgd, adequate treatment capacity would be available to accommodate the projected wastewater flow from the project site.

In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by SCAG. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecasts. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. The Districts would only provide service up to the levels that are legally permitted.

Further, the Districts would charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee would be required before a permit to connect to the sewer is issued. Impacts to wastewater conveyance and treatment facilities associated with the proposed project would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

SOLID WASTE

PSU -8 *Project implementation would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and comply with federal, state, and local statutes and regulations related to solid waste.*

Impact Analysis: Implementation of the Avanti South SP would involve the development of residential and non-residential uses on a currently undeveloped site. The proposed development would result in the generation of solid waste requiring disposal. Table 5.11-6, *Estimated Solid Waste Generation*, shows the estimated solid waste generation associated with the project.

**Table 5.11-6
Estimated Solid Waste Generation**

Land Use	Proposed Development	Generation Rate ¹	Solid Waste Generation (lbs/day)
Residential	1,700 du	12.23 lbs/household/day	20,791
Commercial retail (including fire station)	270,228 sf	2.5 lbs/1000 sf/day	676
Institutional	557,568 sf	0.007 lbs/sf/day	3,903
Total			25,370
du = dwelling unit; sf= square feet; lbs = pounds			
1. CalRecycle, <i>Waste Characterization, Estimated Solid Waste Generation and Disposal Rates</i> , http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/default.htm , accessed June 19, 2013.			

As shown in Table 5.11-6, development associated with implementation of the proposed project would generate approximately 25,370 pounds/day (12.7 tons/day). The Lancaster Landfill has permitted capacity to receive 5,100 tons per day, and remaining capacity of 14,514,648 cubic yards. The Antelope Valley Landfill has the permitted capacity to receive 3,564 tons per day, and remaining capacity of 18,303,272 cubic yards. With a total permitted capacity of 8,664 tons per day and remaining capacity of 32,817,920 cubic yards at the landfill facilities, it is anticipated that the landfill facilities could accommodate the additional 12.7 tons/day of solid waste generated by the project.

Further, the project would be required to comply with the City's SRRE for diverting solid waste. Source reduction programs available to the residential and commercial uses include a citywide recycling program; curbside collection program; and communication of the recycling programs and locations. Compliance with the SRRE would reduce the volume of solid waste ultimately disposed of at a landfill. Additionally, compliance with the SRRE would be in furtherance of meeting the City's disposal rate targets and diversion requirement. Continued compliance with the SRRE would ensure that the project would comply with the statutes and regulations related to solid waste. Therefore, the project would not conflict with federal, state, or local statutes and regulations related to solid waste, and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.11.5 CUMULATIVE IMPACTS

PUBLIC SERVICES AND UTILITIES

The project combined with cumulative projects would not create increased demand for public services, recreational facilities, and utilities and service systems that would cause significant environmental impacts.

Impact Analysis: For purposes of fire and police protection, parks and recreation, and other public facilities, cumulative impacts are considered for projects served by the same providers. For purposes of school impact analyses, cumulative impacts are considered for projects located in Westside and AVUHSD.

FIRE, POLICE, PARKS AND RECREATION, AND OTHER PUBLIC FACILITIES

As concluded above, the project would result in increased demands on the City's fire and police protection services. The project would provide a fire station site, which upon its development, would reduce any potential impacts to response times associated with increased calls for service due to the proposed project. The project would also provide 31.5 acres of neighborhood parks, pocket parks, amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail within the Avanti South SP site, providing a variety of parkland and amenities to serve the project's residents. The project would be required to pay the appropriate development impact fees in accordance with the Lancaster Municipal Code, which would finance public facilities attributable to new development, including fire suppression and law enforcement facilities, vehicles, and equipment, parks/open space, recreation facilities, and other public use (libraries) facilities. The development impact fees are designed to alleviate cumulative impacts to the City associated with new development; thus, the project's incremental effects to fire and police protection services, parks/recreational services and facilities, and other public facilities would not be cumulatively considerable.

Although cumulative development would similarly result in increased demands on existing fire and police protection services, parks/recreational services and facilities, and other public facilities, each cumulative project would be reviewed on a case-by-case basis by the City for compliance with minimum standards. Additionally, each cumulative project would be subject to compliance with the Lancaster Municipal Code and payment of development impact fees to finance public facilities attributable to the new development, including fire suppression and law enforcement facilities, vehicles, and equipment, parks/open space, recreation facilities, and other public use (libraries) facilities. Such fees would minimize, to the greatest extent practicable, the cumulative development's impact on Lancaster's public services and public facilities. Thus, cumulative development projects would pay their fair share of the costs of providing such public services and public facilities. Therefore, the combined cumulative impacts to fire and police protection services, and parks/recreational services and facilities associated with the project's incremental effects and those of the cumulative projects would be less than significant.

SCHOOLS

As concluded above, the project could indirectly generate student population growth in Westside and AVUHSD. Project implementation would include a 12.8-acre elementary school site within the Avanti South portion of the Specific Plan to serve the project area and would be offered to Westside. If Westside takes the school site, a Developer fee credit would be given for school site land dedication value. The

location of an elementary school within the project site would reduce impacts to Westside associated with new students potentially generated by the proposed project. Further, in accordance with SB 50, development within the Avanti South SP would be required to pay school mitigation impact fees to Westside and AVUHSD in place at the time, which is deemed to provide full and complete mitigation of impacts on school facilities from the development of real property. Thus, the project's incremental effects to schools would not be cumulatively considerable.

Cumulative development served by Westside and AVUHSD could result in significant impacts associated with new students residing in their attendance boundaries. Individual development projects would be reviewed to determine their potential impact on school facilities. Each cumulative project would be required to pay the school mitigation fees in compliance with SB 50, which are deemed to be full mitigation. Therefore, the combined cumulative impacts to school districts associated with the project's incremental effects and those of the cumulative projects would be less than significant.

WATER

The project would install water lines to serve the Specific Plan area, which would extend from the existing water mains to the backbone roads of Avanti South. Water lines from these backbone mains would be extended into individual planning areas as they are developed. Individual development projects would be required to provide the onsite water infrastructure and connections necessary to serve the proposed development. Similar to the proposed project, cumulative development projects would be required to pay the water improvement fee to fund capital improvements, including pump stations, water reservoir facilities, wells, treatment facilities, waterlines, and other related improvements to ensure a continuing supply of potable water. Payment of the fees would reduce potential impacts to water facilities associated with the project and cumulative development. Thus, the project's incremental effects would not be cumulatively considerable.

The project along with cumulative development served by District 40 would result in increased demands on water supplies. However, as with the proposed project, all future cumulative development would undergo environmental review on a project-by-project basis, in order to evaluate potential impacts to the local water system and ensure compliance with the established regulatory framework. Further, the volume of new water supply needed to serve cumulative development would be determined by District 40 upon review of water demand calculations submitted by developers. The developers would be required to pay the deposit prior to obtaining a will-serve from District 40. District 40 would transfer the deposit to AVEK to acquire the new water supply, which would be allocated to the District. As the WSA has determined that projected water supplies would meet the projected water demand for the proposed project and future developments would be required to pay the deposit to secure water supplies prior to development, impacts to water supplies associated with the proposed project would be less than significant. Therefore, project implementation would not result in cumulatively considerable impacts to water supplies.

WASTEWATER

Wastewater generated from the proposed project would be collected and conveyed through a conventional gravity system of pipes located within the new street right-of-ways and conveyed via a proposed 12- to 18-inch sewer located in 65th Street West through the Avanti North Project to the existing 36-inch trunk line located in Avenue J. Approval of wastewater facilities and payment of any fees in accordance with the Lancaster Municipal Code would reduce potential impacts to wastewater facilities associated with the proposed project. Individual development projects would be required to provide the

onsite wastewater infrastructure and connections necessary to serve the proposed development. Similar to the project, cumulative development would be required to pay any fees in accordance with the Lancaster Municipal Code. Thus, the project's incremental effects would not be cumulatively considerable.

The project along with cumulative development would result in increased wastewater generation requiring treatment at LWRP. As concluded above, adequate capacity would be available to serve the proposed project. The project along with cumulative development would be required to pay the connection fee before a permit to connect to the sewer is issued. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecasts. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. The Districts would only provide service up to the levels that are legally permitted. Thus, project implementation would not result in cumulatively considerable impacts to sewer and treatment facilities.

SOLID WASTE

The project along with cumulative projects would increase development resulting in an increase in solid waste generation requiring disposal at local landfills. As discussed above, adequate landfill capacity is available to serve the proposed project. The project along with cumulative development would be required to comply with the City's SRRE, which would reduce the volume of solid waste ultimately disposed of at a landfill. Additionally, compliance with the SRRE would be in furtherance of meeting disposal rate targets and exceeding diversion requirements. Therefore, the combined cumulative impacts to landfill capacities associated with the project's incremental effects and those of the cumulative projects would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.11.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to public services, recreational facilities, and utilities and service systems have been identified following implementation of the Avanti South SP project.

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Section 5.12

Transportation/Traffic

5.12 TRANSPORTATION/TRAFFIC

The purpose of this section is to evaluate development of the proposed project from a traffic and circulation standpoint. This analysis considers impacts on local intersections, roadway segments, and regional transportation facilities. Mitigation measures are recommended, if necessary, to avoid or reduce project impacts on traffic and circulation. This section is based upon the *Avanti South Mixed-Use Land Development Traffic Study* (Traffic Study) prepared by Ruettggers & Schuler (May 2016, Revised June 2017), and included in [Appendix L, Traffic Study](#).

The Traffic Study analyzes existing and future weekday peak hour traffic conditions for the following conditions:

- Existing conditions;
- Existing with project conditions;
- Forecast Year 2021 without project conditions;
- Forecast Year 2021 with cumulative project conditions; and
- Forecast Year 2021 with project and cumulative project conditions.

5.12.1 ENVIRONMENTAL SETTING

STUDY AREA

Study Intersections

The location of the study intersections and roadway segments are listed in [Table 5.12-1, Study Intersections](#), and [Table 5.12-2, Study Roadway Segments](#), respectively. The study intersection existing configurations are illustrated on Table 2 of the Traffic Study (refer to [Appendix L](#)).

Local Roadways

The characteristics of the primary roadways within the study area are described below:

- [Antelope Valley Freeway \(State Route 14 \[SR-14\]\)](#) is located approximately five miles east of the project site. This north-south freeway exists as a six-lane facility with full interchanges at Columbia Way, Avenue L, Avenue K, Avenue I, and Avenue H, which provides access to east-west arterials throughout Lancaster. The freeway originates along the Golden State Freeway at the north end of the San Fernando Valley and extends through Santa Clarita, Palmdale, Lancaster and further north.
- [Avenue K](#) is a major east-west arterial that provides access to residential and commercial land uses, SR-14, as well as Antelope Valley College. It exists as a two-lane roadway in the project vicinity and at various stages of widening adjacent to development in other areas.
- [Avenue K-8](#) is a secondary east-west arterial at various stages of widening and is currently discontinuous in the vicinity of the project. It provides access to residential land uses through central Lancaster and a crossing at SR-14 with no interchange.

**Table 5.12-1
Study Intersections**

Intersection ID	Intersection Location	Type
1	70th Street West & Avenue K	All-Way Stop
2	60th Street West & Avenue K	Signalized
3	50th Street West & Avenue K	All-Way Stop
4	45th Street West & Avenue K	Signalized
5	40th Street West & Avenue K	Signalized
6	30th Street West & Avenue K	Signalized
7	25th Street West & Avenue K	Signalized
8	20th Street West & Avenue K	Signalized
9	17th Street West & Avenue K	Signalized
10	State Route 14 SB Ramps & Avenue K	Signalized
11	State Route 14 NB Ramps & Avenue K	Signalized
12	70th Street West & West Avenue K-4	Future Intersection
13	70th Street West & Avenue K-8	Future Intersection
14	65th Street West & Avenue K-8	Future Intersection
15	60th Street West & Avenue K-8	Two-Way Stop (N-S)
16	70th Street West & Avenue L	All-Way Stop
17	65th Street West & Avenue L	Stop (NB Only)
18	QHHS Dwy/Walmart Dwy & Avenue L	Stop (NB Only)
19	60th Street West & Avenue L	Signalized
20	55th Street West & Avenue L	Stop (NB Only)
21	50th Street West & Avenue L	Signalized
22	45th Street West & Avenue L	Signalized
23	40th Street West & Avenue L	Signalized
24	35th Street West & Avenue L	Signalized
25	30th Street West & Avenue L	Signalized
26	25th Street West & Avenue L	Signalized
27	20th Street West & Avenue L	Signalized
28	15th Street West & Avenue L	Signalized
29	State Route 14 SB Ramps & Avenue L	Signalized
30	State Route 14 NB Ramps & Avenue L	Signalized

SB = southbound; NB = northbound; QHHS = Quartz Hill High School; Dwy =driveway

Source: Table 1a, Ruettggers & Schuler, Avanti South Mixed-Use Land Development Traffic Study; May 2016, Revised June 2017.

**Table 5.12-2
Study Roadway Segments**

Roadway ID	Roadway Segment	From	To
1	Avenue K	70th Street West	60th Street West
2	Avenue K	60th Street West	50th Street West
3	Avenue K	50th Street West	45th Street West
4	Avenue K	45th Street West	40th Street West
5	Avenue K	40th Street West	30th Street West
6	Avenue K	30th Street West	25th Street West
7	Avenue K	25th Street West	20th Street West
8	Avenue K	20th Street West	17th Street West
9	Avenue K	17th Street West	Avenue K Ramps
10	70th Street West	Avenue L	Avenue K
11	Avenue K-8	70th Street West	60th Street West
12	65th Street West	Avenue K-8	Avenue L
13	Avenue L	70th Street West	60th Street West
14	Avenue L	60th Street West	50th Street West
15	Avenue L	50th Street West	45th Street West
16	Avenue L	45th Street West	40th Street West
17	Avenue L	40th Street West	30th Street West
18	Avenue L	30th Street West	20th Street West
19	Avenue L	20th Street West	15th Street West
20	Avenue L	15th Street West	Avenue L Ramps

Source: Table 1b, Ruettggers & Schuler, Avanti South Mixed-Use Land Development Traffic Study; May 2016, Revised June 2017.

- Avenue L is designated as a major arterial from 90th Street West to 60th Street West and as a regional arterial from 60th Street West to the eastern City boundary. Avanti South is bounded by Avenue L to the south. In the vicinity of the project, Avenue L exists as a two-lane facility with a two-way left turn lane where it is adjacent to Quartz Hill High School. Avenue L provides access to residential and commercial land uses as well as SR-14.
- 15th Street West is a two-lane secondary arterial north of Lancaster Boulevard and a four-lane divided roadway with a two-way left-turn lane south of Lancaster Boulevard. 15th Street West generally parallels SR-14 on the west side and provides access to residential and commercial land uses.
- 20th Street West is a north-south four- to six-lane divided major arterial, with a two-way left-turn lane. It provides access to residential and commercial land uses throughout the central region of Lancaster.
- 25th Street West is a north-south secondary arterial at various stages of widening adjacent to development. It exists as a two- or four-lane facility with a two-way left-turn south of Avenue J and as a divided roadway north of Avenue J. 25th Street West provides access to residential and commercial land uses throughout the central region of Lancaster.

- 30th Street West is a north-south major arterial at various stages of widening adjacent to development. It exists as a two- or four-lane facility with a two-way left-turn, and provides access to residential and commercial land uses as well as Antelope Valley College.
- 35th Street West is a north-south secondary arterial that is discontinuous between Avenue L and West Avenue K. It exists as a two-lane facility and provides access to residential areas.
- 40th Street West is a major north-south arterial, but is discontinuous between Avenue L-8 and Avenue M-8. It exists as a three-lane facility in the vicinity of the project, and it provides access to existing and developing residential land uses in eastern Lancaster.
- 45th Street West is a secondary north-south arterial between Avenue G and Avenue K. In the vicinity of the project, it exists as a two-lane facility and provides access to existing and developing residential land uses in eastern Lancaster.
- 50th Street West is a regional north-south arterial extending between Avenue G and Avenue N-8. It exists as a two-lane facility that provides access to residential and commercial land uses in eastern Lancaster.
- 55th Street West is a north-south arterial that terminates on the south side of Avenue L. 55th Street West exists as a two-lane facility and provides access to residential areas in southwest Lancaster.
- 60th Street West is a regional north-south arterial at various stages of widening adjacent to development. In the vicinity of the project, 60th Street West exists as a two-lane facility and provides access to residential land uses, as well as, Quartz Hill High School in the south and Antelope Valley State Prison to the north.
- 65th Street West is a secondary north-south arterial that extends north from Avenue M-8 to Avenue L. A portion of the roadway extends south from Avenue J, but is discontinuous between Avenue J and Avenue L. 65th Street West exists as a two-lane facility that provides access to existing and developing residential land uses on the west side of Lancaster.
- 70th Street West is a major north-south arterial that exists as a two-lane facility in the project vicinity. It provides access to residential land uses on the west side of Lancaster. To the north of the California Aqueduct, 70th Street West curves easterly and becomes Avenue N.

Congestion Management Program Facilities

The Los Angeles County Congestion Management Program (CMP) identifies SR-14 as a CMP facility. Therefore, the following intersections are included within the CMP study area:

- Intersection #10 – SR-14 Southbound (SB) Ramps and Avenue K
- Intersection #11 – SR-14 Northbound (NB) Ramps and Avenue K
- Intersection #29 – SR-14 Southbound Ramps (SB) and Avenue L
- Intersection #30 – SR-14 Northbound Ramps (NB) and Avenue L

TRAFFIC ANALYSIS METHODOLOGY

The Traffic Study analyzes the potential impacts associated with the proposed project. The traffic analysis evaluates existing operating conditions at key study intersections and roadway segments within the project vicinity, estimates the trip generation potential of the proposed project, and forecasts future operating conditions with and without the proposed project. The Traffic Study was coordinated with City of Lancaster staff.

Existing Traffic Volumes

Existing weekday (AM and PM) peak hour volumes and turning movement counts were collected in April 2016. Existing peak hour volumes are provided in Figure 5 of the Traffic Study.

Forecast Year 2021 Volumes

An annual growth rate of 2.0 percent was applied to existing traffic volumes to estimate future traffic volumes for forecast year 2021. Forecast year 2021 peak hour volumes are provided in Figure 8 of the Traffic Study.

Cumulative projects trips were also added from additional projects in the project vicinity identified by the City of Lancaster; refer to [Section 4.0, Basis of Cumulative Analysis](#), for further information regarding these projects. Forecast year 2021 with cumulative projects peak hour volumes are provided in Figure 9 of the Traffic Study.

Intersection Level of Service Methodology

A capacity analysis of the study intersections was conducted using Synchro 9 software from Trafficware. The capacity analysis methodology in the Transportation Research Board's fifth edition of the Highway Capacity Manual (HCM 2010) was used for the unsignalized intersections and the Intersection Capacity Utilization (ICU) methodology was used for the signalized intersections.

LOS criteria for unsignalized and signalized intersections are described in [Table 5.12-3, LOS Criteria – Unsignalized Intersections](#), and [Table 5.12-4, LOS Criteria – Signalized Intersections](#).

Table 5.12-3
LOS Criteria – Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short traffic delays
C	> 15 and ≤ 25	Average traffic delays
D	> 25 and ≤ 35	Long traffic delays
E	> 35 and ≤ 50	Very long traffic delays
F	> 50	Extreme delays
sec = seconds; veh = vehicle		
Source: Highway Capacity Manual, 2010.		

Table 5.12-4
LOS Criteria – Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	Intersection Capacity Utilization
A	≤ 10	≤ 0.55
B	> 10 and ≤ 20	0.56 – 0.63
C	> 20 and ≤ 35	0.64 – 0.72
D	> 35 and ≤ 55	0.73 – 0.81
E	> 55 and ≤ 80	0.82 – 0.90
F	> 80	0.91 – 1.00
sec = seconds; veh = vehicle		
Source: Highway Capacity Manual, 2010.		

Traffic Signal Warrants

Weekday peak hour signal warrants were evaluated for each of the unsignalized intersections based on the 2014 edition of the California Manual on Uniform Traffic Control Devices (2014 CA MUTCD). Signal warrants assess delay to traffic on the minor street approaches at major street intersections.

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting signal warrant criteria does not suggest traffic signals are required, but rather, that other factors and conditions should be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above LOS “D,” or operate below LOS “D” and not meet signal warrant criteria.

Roadway Segment Analysis

The roadway segment volume-to-capacity (v/c) ratios were calculated for roadways with published average daily trip (ADT) information and future projected traffic. A v/c of greater than 0.80 corresponds to a LOS of less than C, as defined in the Highway Capacity Manual.

CONGESTION MANAGEMENT PROGRAM ANALYSIS METHODOLOGY

The CMP recommends the use of ICU analysis methodology for determining the LOS of an intersection within the CMP study area. The Synchro 9 software was configured, as described in the CMP guidelines, and utilized to determine the ICU levels of services. Table 5.12-5, LOS and Density Ranges – CMP Intersections, identifies the volume to capacity ranges used for determining an intersection’s LOS per the 2010 CMP Guidelines.

Table 5.12-5
LOS and Density Ranges – CMP Intersections

LOS	V/C Ratio
A	≤ 0.60
B	> 0.60 to ≤ 0.70
C	> 0.70 to ≤ 0.80
D	> 0.80 to ≤ 0.90
E	> 0.90 to ≤ 1.00
F(0)	> 1.00 to ≤ 1.25
F(1)	> 1.25 to ≤ 1.35
F(2)	> 1.35 to ≤ 1.45
F(3)	> 1.45
LOS = level of service; V/C = volume to capacity	
Source: Table 11, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.	

Freeway segment analysis methodology involves estimating freeway mainline LOS through the calculation of the demand to capacity ratio. Table 5.12-6, *LOS and Density Ranges – CMP Freeway Segments*, identifies the demand to capacity ranges used for determining a freeway segment’s LOS per the 2010 CMP Guidelines.

Table 5.12-6
LOS and Density Ranges – CMP Freeway Segments

LOS	D/C Ratio
A	0.00 – 0.35
B	> 0.35 – 0.54
C	> 0.54 – 0.77
D	> 0.77 – 0.93
E	> 0.93 – 1.00
F(0)	> 1.00 – 1.25
F(1)	> 1.25 – 1.35
F(2)	> 1.35 – 1.45
F(3)	> 1.45
LOS = level of service; D/C = demand to capacity	
Source: Table 11, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.	

PERFORMANCE CRITERIA

The City of Lancaster’s target for peak hour intersection operation is LOS D or better.

The City of Lancaster’s operational goal for roadway capacity is LOS D or better.

EXISTING LOCAL INTERSECTION LEVELS OF SERVICE

Table 5.12-7, *Existing Peak Hour LOS – Unsignalized Intersections*, summarizes the existing peak hour LOS for the unsignalized study intersections.

**Table 5.12-7
Existing Peak Hour LOS – Unsignalized Intersections**

Intersection		Movement	Existing	
			AM Peak Hour	PM Peak Hour
1	70th Street West/Avenue K	Overall Intersection	A (8.8)	A (8.5)
3	50th Street West/Avenue K	Overall Intersection	C (20.8)	C (23.8)
12	70th Street West/Avenue K-4	EB	-.1	-.1
		WB	-.1	-.1
13	70th Street West/Avenue K-8	Roundabout	-.1	-.1
14	65th Street West/Avenue K-8	Roundabout	-.1	-.1
15	60th Street West/Avenue K-8	EB	C (16.0)	B (14.5)
		WB	B (12.1)	B (13.6)
16	70th Street West/Avenue L	Overall Intersection	A (9.8)	A (9.3)
17	65th Street West/Avenue L	NB	B (10.0)	A (9.5)
		SB	-.1	-.1
18	WalMart Driveway/ Quartz Hill High School Driveway	NB	B (10.4)	A (9.5)
		SB	-.1	-.1
20	55th Street West/Avenue L	NB	B (14.2)	B (12.1)
Delay/ICU (); EB = eastbound; WB = westbound; NB = northbound; SB = southbound				
Note: 1 Analyzed with Related Projects only or Project only where applicable.				
Source: Tables 4a and 4c, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.				

Table 5.12-8, *Existing Peak Hour LOS – Signalized Intersections*, summarizes the existing peak hour LOS for the signalized study intersections.

As indicated in Tables 5.12-7 and 5.12-8, under existing conditions all study intersections are currently operating at an acceptable LOS in the AM and PM peak hours with the exception of (#10) SR-14 NB Ramp/Avenue K, which is currently operating at a LOS E in both the AM and PM peak hours.

Table 5.12-8
Existing Peak Hour LOS – Signalized Intersections

Intersection		Existing	
		AM Peak Hour	PM Peak Hour
2	60th Street West/Avenue K	A (0.52)	A (0.45)
4	45th Street West/Avenue K	B (0.62)	A (0.46)
5	40th Street West/Avenue K	B (0.58)	B (0.62)
6	30th Street West/Avenue K	C (0.64)	B (0.63)
7	25th Street West/Avenue K	C (0.68)	A (0.53)
8	20th Street West/Avenue K	C (0.66)	C (0.69)
9	17th Street West/Avenue K	A (0.54)	C (0.65)
10	SR-14 SB Ramp/Avenue K	A (0.45)	B (0.59)
11	SR-14 NB Ramp/Avenue K	E (0.89)	E (0.90)
15	60th Street West/Avenue K-8	.1	.2
16	70th Street West/Avenue L	.1	.2
18	WalMart Driveway/Quartz Hill High School Driveway	.1	.2
19	60th Street West/Avenue L	C (0.66)	B (0.58)
21	50th Street West/Avenue L	C (0.70)	C (0.71)
22	45th Street West/Avenue L	C (0.69)	D (0.76)
23	40th Street West/Avenue L	D (0.75)	B (0.63)
24	35th Street West/Avenue L	A (0.52)	A (0.54)
25	30th Street West/Avenue L	D (0.76)	D (0.74)
26	25th Street West/Avenue L	B (0.58)	B (0.61)
27	20th Street West/Avenue L	C (0.69)	C (0.68)
28	15th Street West/Avenue L	A (0.54)	C (0.64)
29	SR-14 SB Ramp/Avenue L	A (0.36)	A (0.48)
30	SR-14 NB Ramp/Avenue L	A (0.53)	C (0.64)
Delay/ICU ()			
Notes:			
1 Analyzed with Related Projects only or Project only where applicable.			
2. Analyzed with signalization for future scenarios per the Commons at Quartz Hill improvements.			
Source: Tables 5a and 5d, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.			

Traffic Signal Warrants

Table 5.12-9, *Existing Traffic Signal Warrants (Weekday)*, summarizes the traffic signal warrants analysis for existing conditions. As indicated in Table 5.12-9, intersection (#3) 50th Street West and Avenue K meets traffic signal warrant criteria for both the AM and PM peak hours under existing conditions.

**Table 5.12-9
Existing Conditions Traffic Signal Warrants (Weekday)**

#	Intersection	Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met	
		AM	PM	AM	PM	AM	PM
1	70th Street West at Avenue K	282	251	97	113	No	No
3	50th Street West at Avenue K	593	662	368	281	Yes	Yes
12	70th Street West at Avenue K-4	- ¹	- ¹	- ¹	- ¹	- ¹	- ¹
15	60th Street West at Avenue K-8	881	798	67	41	No	No
16	70th Street West at Avenue L	329	286	112	142	No	No
17	65th Street West at Avenue L	219	292	107	57	No	No
18	Walmart Driveway at Avenue L	376	417	37	17	No	No
20	55th Street West at Avenue L	761	822	146	84	No	No

Note:
1 Analyzed with Related Projects only or Project only where applicable.
Source: Tables 6a and 6c, Ruettgers & Schuler, *Avanti South Mixed-Use Land Development Traffic Study*, May 2016, Revised June 2017.

EXISTING LOCAL ROADWAY SEGMENT LEVELS OF SERVICE

Table 5.12-10, *Existing Roadway Segments LOS*, summarizes the existing LOS for the roadway segments.

**Table 5.12-10
Existing Roadway Segments LOS**

Segment	Existing ADT ¹	Existing Capacity	V/C Ratio	LOS
Avenue K: 70th Street West to 60th Street West	2,861	22,200	0.13	A
Avenue K: 60th Street West to 50th Street West	7,179	22,200	0.32	A
Avenue K: 50th Street West to 45th Street West	8,583	23,300	0.37	A
Avenue K: 45th Street West to 40th Street West	11,236	18,300	0.61	B
Avenue K: 40th Street West to 30th Street West	14,618	40,500	0.36	A
Avenue K: 30th Street West to 25th Street West	23,981	40,500	0.59	A
Avenue K: 25th Street West to 20th Street West	27,623	50,650	0.55	A
Avenue K: 20th Street West to 17th Street West	31,004	54,000	0.57	A
Avenue K: 17th Street West to Avenue K Ramps	29,235	54,000	0.54	A
70th Street West: Avenue L to Avenue K	2,965	22,200	0.13	A
Avenue K-8: 70th Street West to 60th Street West	3,614	16,900	0.21	A
65th Street West: Avenue L to Avenue K-8	--	13,500	--	--
Avenue L: 70th Street West to 60th Street West	3,485	18,300	0.19	A
Avenue L: 60th Street West to 50th Street West	8,219	36,800	0.22	A
Avenue L: 50th Street West to 45th Street West	13,863	18,300	0.76	C
Avenue L: 45th Street West to 40th Street West	19,08	19,200	1.02	F
Avenue L: 40th Street West to 30th Street West	23,201	40,500	0.57	A
Avenue L: 30th Street West to 20th Street West	25,906	40,500	0.64	B
Avenue L: 20th Street West to 15th Street West	27,519	50,650	0.54	A
Avenue L: 15th Street West to Avenue L Ramps	36,102	60,800	0.59	A

Notes:
1 2014 volumes provided by the City of Lancaster and projected to Existing Year.
2 Analyzed with signalization for future scenarios per the Commons at Quartz Hill improvements.
Source: Table 7a, Ruettgers & Schuler, *Avanti South Mixed-Use Land Development Traffic Study*, May 2016, Revised June 2017.

As indicated in [Table 5.12-10](#), under existing conditions all roadway segments are operating at an acceptable LOS with the exception of Avenue L from 45th Street to 40th Street West, which is currently operating at an LOS F.

EXISTING CMP INTERSECTION LEVELS OF SERVICE

[Table 5.12-11](#), *Existing Peak Hour LOS – CMP Intersections*, summarizes the existing LOS for the CMP intersections.

Table 5.12-11
Existing Peak Hour LOS – CMP Intersections

Intersection		Existing	
		AM Peak Hour	PM Peak Hour
10	SR-14 SB Ramps and Avenue K	A (0.45)	A (0.59)
11	SR-14 NB Ramps and Avenue K	E (0.89)	E (0.90)
29	SR-14 SB Ramps and Avenue L	A (0.36)	A (0.48)
30	SR-14 NB Ramps and Avenue L	A (0.53)	B (0.64)
Delay/ICU ()			
Source: Tables 12a and 12c, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.			

As indicated in [Table 5.12-11](#), all CMP intersections are currently operating at an acceptable LOS with the exception of (#11) SR-14 NB ramps and Avenue K, which is currently operating at LOS E.

EXISTING CMP ROADWAY SEGMENT LEVELS OF SERVICE

[Table 5.12-12](#), *Existing Conditions Peak Hour LOS – CMP Freeway Segments*, summarizes the existing LOS for the CMP freeway segments.

Table 5.12-12
Existing Conditions Peak Hour LOS – CMP Freeway Segments

Freeway Segment	Peak Hour Capacity	Existing					
		Peak Hour Volume ²		D/C		LOS	
		AM	PM	AM	PM	AM	PM
n/o SR-14 NB On-Ramps n/o Avenue K	6,000	2,412	5,858	0.402	0.976	B	E
n/o SR-14 SB Off-Ramps n/o Avenue K	6,000	5,629	2,872	0.938	0.479	E	B
s/o SR-14 SB On-Ramps s/o Avenue L	6,000	2,412	5,858	0.402	0.976	B	E
s/o SR-14 NB Off-Ramps s/o Avenue L	6,000	5,629	2,872	0.938	0.479	E	B
n/o = north of; NB = northbound; SB = southbound; D/C = demand-to-capacity; LOS = level of service.							
Notes:							
1 Capacity taken from 2010 Congestion Management Program for Los Angeles County.							
2 SR-14 Peak Hour demand taken from 2010 Congestion Management Program for Los Angeles County; Peak Hour data grown at 2% to current year.							
Source: Tables 14a and 14c, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.							

As indicated in [Table 5.12-12](#), the following freeway segments are operating at an unacceptable LOS under existing conditions:

- North of SR-14 NB On-Ramps n/o Avenue K (PM peak hour)
- North of SR-14 SB Off-Ramps n/o Avenue K (AM peak hour)
- South of SR-14 SB On-Ramps s/o Avenue L (PM peak hours)
- South of SR-14 NB Off-Ramps s/o Avenue L (AM peak hour)

EXISTING TRANSIT SERVICE

The Antelope Valley Transit Authority (AVTA) provides transit serves to the City of Lancaster. AVTA's total service area covers 1,200 square miles and is bounded by the Kern County line to the north, the San Bernardino County line to the east, the Angeles National Forest to the south, and Interstate 5 to the West. The fixed route service area consists of approximately 100 square miles. AVTA Route 9 is the closest route to the project site and provides service between Quartz Hill and Lancaster City Park via Avenue H. A bus stop is located at 60th Street West and Avenue L (Quartz Hill High School), east of the project site.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Within the project vicinity, an existing Class II Bike Lane is located along Avenue L, east of 65th Street West. There are no sidewalks located immediately adjacent to the project site.

5.12.2 REGULATORY SETTING

STATE

California Department of Transportation

Caltrans publishes a document entitled *Guide for the Preparation of Traffic Impact Studies*, which provides guidelines and recommended elements of traffic studies for projects that could potentially impact state facilities such as State Route highways and freeway facilities. This is a State-level document that is used by each of the Caltrans District offices.

The Guide defines when traffic studies should be conducted to address impacts to state facilities, but does not define quantitative impact standards. The Guide states that Measures of Effectiveness (MOEs) are used to evaluate Caltrans facilities, and that the agency strives to maintain a LOS value of C on its facilities. However, the Guide states that the appropriate target LOS varies by facility and congestion level, and is defined differently by Caltrans depending on the analyzed facility.

REGIONAL

County of Los Angeles Congestion Management Program

Pursuant to Proposition 111, every county in California is required to develop a CMP that examines the relationships between land use, transportation, and air quality. The CMP addresses the impact of local growth on the regional transportation system. Proposition 111 also established a nine percent per gallon gas tax, staged over a five-year period, for the purpose of funding transportation-related improvements

statewide. In order to be eligible for the revenues associated with Proposition 111, the CMP legislation (originally AB 471, amended by AB 1791) requires that a CMP be developed, adopted, and updated biennially for every county that includes an urbanized area and shall include every city and the county government within that county. Statutory elements of the CMP include Highway and Roadway System monitoring, multi-modal system performance analysis, the Transportation Demand Management Program, the Land Use Analysis Program, and local conformance for all the county's jurisdictions.

As the Congestion Management Agency for Los Angeles County, the Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for implementing Los Angeles County's CMP. Metro serves as Los Angeles County's transportation planner and coordinator, designer, builder and operator.

The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs throughout the County. The program is consistent with that of the Regional Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG). The CMP program requires review of significant individual projects, which might on their own impact the CMP transportation system.

According to the 2010 CMP (Los Angeles County Metropolitan Transportation Authority), those proposed projects, which meet the following criteria, shall be evaluated:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

LOCAL

Lancaster General Plan

The General Plan 2030 Plan for Physical Mobility focuses on transportation issues, such as how goods and people move within the study area. The Plan recognizes that transportation affects land use, urban design, energy consumption, air quality, and the City's infrastructure. Addressed not only at the local level, circulation decisions must be coordinated with regional, state, and federal agencies, as well as with neighboring communities. In the Plan for Physical Mobility, transportation facilities are discussed, as well as alternative modes of transportation. The following policies and specific actions are applicable to the proposed project:

- Policy 14.1.1 Design the City's street system to serve both the existing population and future residents.
- Action 14.1.1(c) As part of the development review process, continue to analyze the potential impacts of traffic generated by projects and the effects on adjacent land uses and surrounding neighborhoods. This information shall be used to determine appropriate mitigation measures for the project and will be added to the citywide traffic data base.

- Action 14.1.1(d) As part of the development and environmental review process, ensure that new development meets the provisions of the Los Angeles County Congestion Management Program (CMP) by requiring preparation of Traffic Impact Analyses and provision of mitigation as outlined in the CMP.
- Objective 14.2.1 Promote a roadway system which balances the need to move vehicles while protecting environmental, aesthetic, and quality of life issues.
- Policy 14.2.1 Support and improve a roadway network that is sensitive to environmental issues such as, biological, land, and water resources, as well as air quality, while permitting continued development within the study area.
- Action 14.2.1(a) Continue implementation of state environmental requirements mandated by the California Environmental Quality Act (CEQA) to mitigate, to the extent feasible, significant environmental impacts associated with traffic and circulation improvements.
- Policy 14.2.2 Manage the City's roadway network so that it is aesthetically pleasing through the development and maintenance of streetscapes.
- Action 14.2.2(b) Through the development review process, require the installation of street trees in new developments.
- Policy 14.2.3 Support a roadway network that takes into consideration noise and safety issues, along with other quality of life issues.
- Action 14.2.3(a) When considering the design of subdivisions, circulation patterns and street layouts, traffic flow requirements shall be balanced against their effect on pedestrian access and the livability of both existing and proposed neighborhoods. Where conflicts arise between motorist convenience and the livability and wellbeing of neighborhoods, the latter concerns shall have priority.
- Policy 14.4.3 Encourage bicycling as an alternative to automobile travel for the purpose of reducing vehicle miles traveled (VMT), fuel consumption, traffic congestion, and air pollution by providing appropriate facilities for the bicycle riders (see also Policy 10.2.4 and subordinate specific actions of the Plan for Active Living).
- Action 14.4.3(c) Through the adoption and implementation of a Master Plan for Trails, require bikeways to link residential neighborhood areas with parks, scenic areas, and other points of interest. These bikeways also should be designed to encourage intra-city travel to employment areas, civic and commercial areas, and schools.
- Policy 14.4.4 Encourage commuters and employers to reduce vehicular trips by implementing Transportation Demand Management strategies.
- Action 14.4.4(a) As part of the development and environmental review process, require implementation of transportation demand management programs for new commercial and industrial development based on local government responsibilities in the Los Angeles County Congestion Management Plan as applicable.

Lancaster Municipal Code

Lancaster Municipal Code Chapter 15.56, Trip Reduction and Travel Demand Measures, requires review of transit impacts and the implementation of transportation demand management and trip reduction measures prior to approval of any development project. Specific requirements are provided based on the type and size of the development.

Lancaster Municipal Code Section 15.64.040, Street improvements fee, imposes a fee on all new development in the City to finance the costs of street improvements, including acquisition, widening and reconstruction, street landscaping, intersection improvements and freeway interchange improvements in order to mitigate the additional traffic burdens created by new development to the City's arterial and collector street system.

Lancaster Municipal Code Section 15.64.050, Traffic signalization fee, imposes a traffic signalization fee on all new development in the City to finance the costs of traffic signalization improvements in order to mitigate additional burdens created by new development to the City's traffic problems beyond the financial ability of the City to control.

City of Lancaster Master Plan of Trails and Bikeways

The City of Lancaster Master Plan of Trails and Bikeways (March 2012) is intended to guide the planning and design of pedestrian, bicycle and equestrian facilities in a comprehensive manner throughout Lancaster. The City's vision is to create a connected network of on-road and off-road trails and bikeway facilities to accommodate users of all ages and abilities including equestrians. When implemented, it is anticipated that the proposed network will provide linkages between residential areas, commercial centers, transportation hubs, employment centers, and recreational activities.

5.12.3 IMPACT THRESHOLDS AND CRITERIA SIGNIFICANCE

DEFINITION OF SIGNIFICANT IMPACT

The City of Lancaster utilizes the following criteria to evaluate whether the addition of project traffic would result in a significant impact to an intersection or roadway segment, and therefore, require mitigation:

- A significant impact is indicated when the addition of project traffic degrades the level of service from LOS A, B, C, or D to LOS E or F.
- If level of service for a signalized intersection or roadway segment is already at LOS E or F without project traffic, then a significant impact is indicated when the addition of project traffic increases the volume-to-capacity (v/c) ratio by at least 0.020.
- If level of service for an unsignalized intersection is already at LOS E or F without project traffic, then a significant impact is indicated when the addition of project traffic increases delay by at least two percent.

According to the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1$); if the facility is already at LOS

F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$).

SIGNIFICANCE CRITERIA

The issues presented in Appendix G of the CEQA Guidelines have been utilized as thresholds of significance in this section. Accordingly, traffic impacts resulting from the project's implementation may be considered significant if they would result in the following:

- 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;
- 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;
- 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; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); refer to Section 8.0, *Effects Found Not To Be Significant*;
- Result in inadequate emergency access; refer to Section 8.0, *Effects Found Not To Be Significant*; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.12.4 IMPACTS AND MITIGATION MEASURES

PROJECT TRAFFIC GENERATION

TRA-1 *Project implementation would generate traffic volumes that would conflict with an applicable circulation system performance criteria.*

Impact Analysis: The proposed Avanti South SP would allow for the development of up to 1,700 dwelling units, 213,600 square feet of commercial uses, a 12.8-acre school site, 1.3-acre fire station site, and 31.5 acres of parks and recreational facilities.

PROJECT TRIP GENERATION

To calculate trips forecast to be generated by the proposed project, Institute of Transportation Engineers (ITE) trip generation rates were utilized. [Table 5.12-13, Proposed Project Trip Generation](#), summarizes the daily and peak hour trips generated by the proposed project based upon the ITE trip generation rates.

**Table 5.12-13
Proposed Project Trip Generation**

Land Use (ITE Code)	Daily Trips		AM Peak Hour			PM Peak Hour		
	ADT Rate	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
1,030 Single-Family Detached Housing (210)	9.52	9,806	0.75	25% 193	75% 579	1	63% 649	37% 381
325 Apartments (220)	6.65	2,161	0.51	20% 33	80% 133	0.62	65% 131	35% 71
200 Residential Condominium/Townhouse (230)	5.81	1,162	0.44	17% 15	83% 73	0.52	67% 70	33% 34
280 Senior Adult Housing – Attached (252)	3.44	963	0.2	34% 19	66% 37	0.25	54% 38	46% 32
850 Student Elementary School (520)	1.29	1,097	0.45	55% 210	45% 172	0.28	45% 107	55% 131
200 tsf Shopping Center (820)	42.7	8,540	0.96	62% 119	38% 73	3.71	48% 356	52% 386
Subtotal Trips		23,729		589	1,067		1,351	1,035
Adjustments								
- Capture ¹ – 8%		1,898		47	85		108	83
- Pass-by ² – 15%		1,281		18	11		53	58
Total		20,550		524	971		1,190	894

Notes:
ADT = average daily trips
1 Internal capture applied to all land uses. Calculated using ITE Trip Generation Handbook, 2nd Edition.
2 Shopping Center only.

Source: Tables 3, Ruettggers & Schuler, *Avanti South Mixed-Use Land Development Traffic Study*, May 2016, Revised June 2017.

A capture rate of 8.0 percent was applied to the daily and peak hour trip estimates for each land use type to account for project trips that neither enter or leave the project area, and therefore, have no impact on adjacent street traffic. The capture rate used was developed based on the ITE Trip Generation Handbook, 2nd Edition. Additionally, based on Caltrans guidelines, a pass-by rate of 15.0 percent was applied to the trip estimates for the shopping center only. The pass-by rate accounts for trips which are made as intermediate stops between trip origin and ultimate destination.

Project Trip Distribution and Assignment

Figure 4, Outbound Project Traffic Distribution by Percentage, of the Traffic Study shows the forecast trip distribution of project-generated trips. Project traffic distribution was estimated based on a review of the proposed land use types, potential draw from population centers within the region, and input from the City of Lancaster Traffic Engineering Division. Figure 6, Project Peak Hour Traffic, of the Traffic Study

shows the corresponding assignment of project-generated AM and PM peak hour trips assuming the trip percent distributions shown in Figure 4.

EXISTING WITH PROJECT CONDITIONS

Existing with project conditions AM and PM peak hour volumes were derived by adding forecast project-generated trips to existing conditions traffic volumes.

Peak Hour Local Intersection Level of Service

Figure 7, Existing+Project Peak Hour Traffic, of the Traffic Study, shows existing with project conditions AM and PM peak hour volumes at the study intersections.

Table 5.12-14, *Existing With Project Conditions Peak Hour LOS – Unsignalized Intersections*, and Table 5.12-15, *Existing With Project Conditions Peak Hour LOS – Signalized Intersections*, summarizes existing with project conditions AM and PM peak hour LOS of the study intersections.

Table 5.12-14
Existing With Project Conditions Peak Hour LOS – Unsignalized Intersections

Intersection	Movement	Existing		Existing With Project		Change in Delay (seconds)		Existing With Project With Mitigation	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour		
1	70th Street West/Avenue K	Overall Intersection	A (8.8)	A (8.5)	B (11.5)	B (11.2)	2.7	2.7	--
3	50th Street West/Avenue K	Overall Intersection	C (20.8)	C (23.8)	E (47.0)	F (61.5)	26.2	37.7	C (15.5)
12	70th Street West/Avenue K-4	EB WB	- ¹ - ¹	- ¹ - ¹	B (12.8) A (0.0)	B (14.3) A (0.0)	- -	- -	--
13	70th Street West/Avenue K-8	Roundabout	- ¹	- ¹	A (4.3)	A (4.9)	-	-	--
14	65th Street West/Avenue K-8	Roundabout	- ¹	- ¹	A (4.4)	A (5.0)	-	-	--
15	60th Street West/Avenue K-8	EB WB	C (16.0) B (12.1)	B (14.5) B (13.6)	F 236.6 B (13.5)	F (>300) D (26.9)	220.6 1.4	(>300) (13.3)	B (0.61)
16	70th Street West/Avenue L	Overall Intersection	A (9.8)	A (9.3)	B (11.8)	B (12.1)	2.0	2.8	--
17	65th Street West/Avenue L	NB SB	B (10.0) - ¹	A (9.5) - ¹	B (11.4) A (0.0)	B (11.0) A (0.0)	1.4 -	1.5 -	--
18	WalMart Driveway/ Quartz Hill High School Driveway	NB SB	B (10.4) - ¹	A (9.5) - ¹	C (15.5) A (0.0)	B (13.2) A (0.0)	1.3 -	3.2 -	--
20	55th Street West/Avenue L	NB	B (14.2)	B (12.1)	D (33.9)	D (28.8)	19.7	16.7	--
Delay/ICU ()									
Note: 1 Analyzed with Related Projects only or Project only where applicable.									
Source: Tables 4a and 4c, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.									

Table 5.12-15
Existing With Project Conditions Peak Hour LOS – Signalized Intersections

Intersection	Existing		Existing With Project		Change in ICU		Existing With Project With Mitigation	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour		
2	60th Street West/Avenue K	A (0.52)	A (0.45)	C (0.66)	B (0.62)	0.14	0.17	--
4	45th Street West/Avenue K	B (0.62)	A (0.46)	D (0.76)	B (0.59)	0.14	0.13	--
5	40th Street West/Avenue K	B (0.58)	B (0.62)	C (0.65)	D (0.80)	0.07	0.08	--
6	30th Street West/Avenue K	C (0.64)	B (0.63)	C (0.65)	B (0.63)	0.01	0.00	--
7	25th Street West/Avenue K	C (0.68)	A (0.53)	C (0.72)	B (0.59)	0.04	0.06	--
8	20th Street West/Avenue K	C (0.66)	C (0.69)	C (0.67)	C (0.69)	0.01	0.00	--
9	17th Street West/Avenue K	A (0.54)	C (0.65)	B (0.56)	C (0.67)	0.02	0.02	--
10	SR-14 SB Ramp/Avenue K	A (0.45)	B (0.59)	A (0.46)	B (0.62)	0.01	0.03	--
11	SR-14 NB Ramp/Avenue K	E (0.89)	E (0.90)	E (0.89)	E (0.90)	0.00	0.00	--
15	60th Street West/Avenue K-8	-.1	-.1	-.1	-.1	-.1	-.1	--
16	70th Street West/Avenue L	-.1	-.1	-.1	-.1	-.1	-.1	--
18	WalMart Driveway/ Quartz Hill High School Driveway	-.1	-.1	-.1	-.1	-.1	-.1	--
19	60th Street West/Avenue L	C (0.66)	B (0.58)	F (0.93)	E (0.86)	0.27	0.28	D (0.79)
21	50th Street West/Avenue L	C (0.70)	C (0.71)	F (0.95)	F (1.03)	0.25	0.32	C (0.68)
22	45th Street West/Avenue L	C (0.69)	D (0.76)	E (0.89)	F (1.05)	0.20	0.29	B (0.61)
23	40th Street West/Avenue L	D (0.75)	B (0.63)	F (0.97)	E (0.84)	0.22	0.21	C (0.66)
24	35th Street West/Avenue L	A (0.52)	A (0.54)	B (0.64)	C (0.68)	0.12	0.14	--
25	30th Street West/Avenue L	D (0.76)	D (0.74)	D (0.81)	E (0.83)	0.05	0.09	D ² (0.76)
26	25th Street West/Avenue L	B (0.58)	B (0.61)	C (0.68)	D (0.73)	0.10	0.12	--
27	20th Street West/Avenue L	C (0.69)	C (0.68)	D (0.76)	C (0.71)	0.07	0.03	--
28	15th Street West/Avenue L	A (0.54)	C (0.64)	B (0.59)	C (0.72)	0.05	0.08	--
29	SR-14 SB Ramp/Avenue L	A (0.36)	A (0.48)	A (0.37)	A (0.54)	0.01	0.06	--
30	SR-14 NB Ramp/Avenue L	A (0.53)	C (0.64)	B (0.60)	D (0.80)	0.07	0.16	--
Delay/ICU ()								
Notes:								
1 Analyzed with signalization for future scenarios per the Commons at Quartz Hill improvements.								
2 Mitigation due to PM peak hour.								
Source: Tables 5a and 5c, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.								

As indicated in [Tables 5.12-14](#) and [5.12-15](#), under existing conditions, all study intersections would operate at an acceptable LOS with the exception of the following intersection:

- (#11) SR-14 NB Ramp/Avenue K – AM and PM peak hours

As also shown in [Tables 5.12-14](#) and [5.12-15](#), with the addition of project-generated trips, the following intersections are also forecast to operate at an unacceptable LOS under existing with project conditions:

- (#3) 50th Street West and Avenue K – AM and PM peak hours
- (#15) 60th Street West and Avenue K-8 – AM and PM peak hours
- (#19) 60th Street West and Avenue L – AM and PM peak hours
- (#21) 50th Street West and Avenue L – AM and PM peak hours
- (#22) 45th Street West and Avenue L – AM and PM peak hours

- (#23) 40th Street West and Avenue L – AM and PM peak hours
- (#25) 30th Street West and Avenue L – PM peak hour

Traffic Signal Warrants

Table 5.12-16, *Existing with Project Conditions Traffic Signal Warrants (Weekday)*, summarizes the traffic signal warrants analysis for existing with project conditions.

**Table 5.12-16
Existing With Project Conditions Traffic Signal Warrants (Weekday)**

#	Intersection	Existing						Existing With Project					
		Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met		Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	70th Street West at Avenue K	282	251	97	113	No	No	489	416	143	235	No	No
3	50th Street West at Avenue K	593	662	368	281	Yes	Yes	998	1213	368	317	Yes	Yes
12	70th Street West at Avenue K-4	-1	-1	-1	-1	-1	-1	518	604	108	68	No	No
15	60th Street West at Avenue K-8	881	798	67	41	No	No	1120	1270	395	366	Yes	Yes
16	70th Street West at Avenue L	329	286	112	142	No	No	511	504	177	263	No	No
17	65th Street West at Avenue L	219	292	107	57	No	No	520	759	115	115	No	No
18	Walmart Dwy at Avenue L	376	417	37	17	No	No	952	1224	37	17	No	No
20	55th Street West at Avenue L	761	822	146	84	No	No	1420	1743	146	84	Yes	Yes

Note:
1 Analyzed with Related Projects only or Project only where applicable.
Source: Tables 6a and 6c, Ruettgers & Schuler, *Avanti South Mixed-Use Land Development Traffic Study*, May 2016, Revised June 2017.

As indicated in Table 5.12-16, with the addition of project traffic, the following intersections would meet traffic signal warrant criteria:

- (#3) 50th Street West and Avenue K (AM and PM peak hours)
- (#15) 60th Street West and Avenue K-8 (AM and PM peak hours)
- (#20) 55th Street West and Avenue L (AM and PM peak hours)

Recommended Improvements

In order to mitigate the project impacts identified under the existing with project conditions, the following intersection improvements are recommended:

- (#3) 50th Street West and Avenue K – construct a single lane roundabout.
- (#15) 60th Street West and Avenue K-8 – add one northbound through lane.
- (#19) 60th Street West and Avenue L – change the northbound through right turn lane to one north bound through, one northbound right turn lane and one southbound left turn lane.
- (#21) 50th Street West and Avenue L – add one eastbound through lane and one westbound through lane.

- (#22) 45th Street West and Avenue L – add one eastbound through lane and one westbound through lane.
- (#23) 40th Street West and Avenue L – add one eastbound through lane.
- (#25) 30th Street West and Avenue L – add one eastbound through lane and one westbound through lane.

As shown in [Tables 5.12-14](#) and [5.12-15](#), with implementation of the recommended improvements, the study intersections would operate at an acceptable LOS under existing with project conditions.

Roadway Segments Level of Service

[Table 5.12-17, Existing With Project Conditions Roadway Segment LOS](#), summarizes existing with project conditions roadway segment analysis.

As indicated in [Table 5.12-17](#), under existing conditions, all roadway segments would operate at an acceptable LOS with the exception of the following:

- Avenue L from 45th Street West to 40th Street West (AM and PM peak hours)

With the addition of project-generated trips, the following additional roadway segment would operate at an unacceptable LOS under existing with project conditions:

- Avenue L from 50th Street West to 45th Street West (PM peak hour)

Recommended Improvements

In order to mitigate the potential project impacts to the roadway segments under the existing with project conditions, the following improvement is recommended:

- Avenue L from 50th Street West to 45th Street West – add two lanes (1 lane in each direction)

As shown in [Table 5.12-17](#), with implementation of the recommended improvement, the project-impacted roadway segment would operate at an acceptable LOS under existing with project conditions.

Table 5.12-17
Existing With Project Conditions Roadway Segment LOS

Street	Existing	Existing With Project ADT	Existing Capacity	Existing V/C	LOS	Existing With Project V/C	LOS	Mitigated Capacity	Existing with Project with Mitigation V/C	LOS
Avenue K: 70th Street West to 60th Street West	2,861	4,902	22,200	0.13	A	0.22	A			
Avenue K: 60th Street West to 50th Street West	7,179	12,967	22,200	0.32	A	0.58	A			
Avenue K: 50th Street West to 45th Street West	8,583	13,750	23,300	0.37	A	0.59	A			
Avenue K: 45th Street West to 40th Street West	11,236	15,989	18,300	0.61	B	0.87	D			
Avenue K: 40th Street West to 30th Street West	14,618	18,957	40,500	0.36	A	0.47	A			
Avenue K: 30th Street West to 25th Street West	23,981	27,077	40,500	0.59	A	0.67	B			
Avenue K: 25th Street West to 20th Street West	27,623	30,305	50,650	0.55	A	0.60	A			
Avenue K: 20th Street West to 17th Street West	31,004	32,858	54,000	0.57	A	0.61	B			
Avenue K: 17th Street West to Avenue K Ramps	29,235	31,089	54,000	0.54	A	0.58	B			
70th Street West: Avenue L to Avenue K	2,965	6,367	22,200	0.13	A	0.29	A			
Avenue K-8: 70th Street West to 60th Street West	3,614	10,862	16,900	0.21	A	0.64	B			
65th Street West: Avenue L to Avenue K-8 ¹	-	3,077	13,500	-	-	0.23	A			
Avenue L: 70th Street West to 60th Street West	3,485	11,443	18,300	0.19	A	0.63	B			
Ave L: 60th Street West to 50th Street West	8,219	17,301	36,800	0.22	A	0.47	A			
Ave L: 50th Street West to 45th Street West	13,863	22,136	18,300	0.76	C	1.21	F	36,800	0.60	A
Ave L: 45th Street West to 40th Street West	19,508	27,574	19,200	1.02	F	1.44	F	36,800	0.75	C
Ave L: 40th Street West to 30th Street West	23,201	30,863	40,500	0.57	A	0.76	C			
Ave L: 30th Street West to 20th Street West	25,906	32,345	40,500	0.64	B	0.80	C			
Ave L: 20th Street West to 15th Street West	27,519	32,745	50,650	0.54	A	0.65	A			
Ave L: 15th Street West to Avenue L Ramps ²	36,102	40,924	60,800	0.59	A	0.67	B			
Note:										
1. Segment does not currently exist; analysis includes project traffic only.										
Source: Table 7a, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.										

FORECAST YEAR 2021 CONDITIONS

Peak Hour Local Intersection Level of Service

Table 5.12-18, *Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – Unsignalized Intersections*, and Table 5.12-19, *Forecast Year 2021 Without Cumulative Projects and Without and With Project Conditions Peak Hour LOS – Signalized Intersections*, summarizes forecast year 2021 cumulative without project conditions and with project conditions AM and PM peak hour LOS of the study intersections.

As indicated in Tables 5.12-18 and 5.12-19, by forecast year 2021, the (#3) 50th Street and Avenue K intersection is forecast to again operate at an unacceptable LOS in the PM peak hour and require additional improvements. With the addition of cumulative project trips, the following additional intersections are forecast to operate at an unacceptable LOS in forecast year 2021:

- (#4) 45th Street West and Avenue K (AM peak hour)
- (#5) 40th Street West and Avenue K (PM peak hour)
- (#27) 20th Street West and Avenue L (AM peak hour)
- (#30) State Route 14 NB Ramps and Avenue L (PM peak hour)

It is forecast that the following intersection, at which a project-only impact was identified, would again operate at an unacceptable LOS and require additional improvements under forecast 2021 with cumulative projects conditions:

- (#19) 60th Street West and Avenue L (PM peak hour)

All other intersections would continue to operate at an acceptable LOS for forecast year 2021 with cumulative projects conditions.

With the addition of project-generated trips, the following additional intersections are forecast to operate at unacceptable LOS for forecast year 2021 with cumulative projects trips and project conditions:

- (#2) 60th Street West and Avenue K (AM peak hour)
- (#7) 25th Street West and Avenue K (AM peak hour)
- (#17) 65th Street West and Avenue L (AM and PM peak hours)
- (#18) Walmart Driveway/Quartz Hill High School Driveway & Avenue L (PM peak hour)
- (#20) 55th Street West and Avenue L (AM and PM peak hours)
- (#24) 35th Street West and Avenue L (PM peak hour)
- (#25) 30th Street West and Avenue L (AM and PM peak hours)
- (#26) 25th Street West and Avenue L (AM and PM peak hours)
- (#28) 15th Street West and Avenue L (PM peak hour)

The following intersections, at which project-only impacts were identified, would again operate at an unacceptable LOS and require additional improvements.

- (#21) 50th Street West and Avenue L (AM and PM peak hours)
- (#22) 45th Street West and Avenue L (PM peak hour)
- (#23) 40th Street West and Avenue L (AM and PM peak hours)

Table 5.12-18
Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – Unsignalized Intersections

Intersection	Movement	2021		2021 With Cumulative Projects		2021 With Cumulative Projects and Project		Change in Delay (seconds)		2021 With Cumulative Projects and Project and Mitigation		
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
1	70th Street West/Avenue K	Overall Intersection	A (9.1)	A (8.7)	A (9.4)	A (9.0)	B (12.9)	B (12.3)	3.5	3.3	--	--
3	50th Street West/Avenue K	Overall Intersection	D (33.0)	E (47.6)	D (66.0)	F (72.2)	F (69.2)	F (72.9)	3.2	0.7	B (11.7)	C (15.1)
12	70th Street West/Avenue K-4	EB WB	-.1 -.1	-.1 -.1	A (0.0) A (8.5)	A (0.0) A (8.5)	B (10.0) A (9.8)	B (11.3) A (10.7)	10.0 1.3	11.3 2.2	--	--
13	70th Street West/Avenue K-8	Roundabout	-.1	-.1	A (3.3)	A (3.3)	A (4.4)	A (5.0)	1.1	1.7	--	--
14	65th Street West/Avenue K-8	Roundabout	-.1	-.1	A (4.3)	A (4.3)	A (5.2)	A (6.2)	0.9	1.9	--	--
15	60th Street West/Avenue K-8	EB WB	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	- -	- -	--	--
16	70th Street West/Avenue L	Overall Intersection	-.2	-.2	-.2	-.2	-.2	-.2	-	-	--	--
17	65th Street West/Avenue L	NB SB	A (9.9) -.1	A (9.6) -.1	B (13.2) -.1	B (12.7) -.1	C (16.9) F (63.3)	C (17.3) F (>300)	3.7 -	4.0 -	B (0.59)	B (0.62)
18	WalMart Driveway/ Quartz Hill High School Driveway	NB SB	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	-.2 -.2	- -	- -	--	--
20	55th Street West/Avenue L	NB	B (14.6)	D (28.3)	D (30.9)	D (28.3)	F (129.9)	F (91.4)	99.0	63.1	D (0.74)	C (0.71)
Delay/ICU ()												
Notes: 1 Analyzed with Related Projects only or Project only where applicable. 2 Analyzed with signalization for future scenarios per the Commons at Quartz Hill improvements.												
Source: Tables 4b and 4d, Ruettgers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.												

Table 5.12-19
Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS –Signalized Intersections

Intersection		2021		2021 With Cumulative Projects		2021 With Cumulative Projects and Project		Change in ICU		2021 With Cumulative Projects and Project and Mitigation	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
2	60th Street West/Avenue K	B (0.61)	B (0.57)	C (0.72)	C (0.67)	E (0.82)	D (0.77)	0.11	0.10	C (0.73)	C ² (0.66)
4	45th Street West/Avenue K	C (0.67)	A (0.52)	F (0.94)	C (0.73)	F (1.08)	E (0.91)	0.14	0.18	D (0.79)	C (0.64)
5	40th Street West/Avenue K	B (0.62)	C (0.67)	D (0.75)	F (0.94)	E (0.83)	F (1.12)	0.08	0.18	D (0.80)	D (0.74)
6	30th Street West/Avenue K	C (0.66)	C (0.65)	C (0.72)	C (0.65)	D (0.76)	C (0.70)	0.04	0.05	--	--
7	25th Street West/Avenue K	C (0.73)	B (0.56)	D (0.80)	C (0.65)	E (0.84)	C (0.71)	0.04	0.06	D (0.75)	C ² (0.71)
8	20th Street West/Avenue K	C (0.68)	C (0.71)	C (0.70)	D (0.74)	C (0.71)	D (0.78)	0.01	0.04	--	--
9	17th Street West/Avenue K	A (0.58)	C (0.70)	B (0.62)	C (0.73)	B (0.64)	D (0.75)	0.02	0.02	--	--
10	SR-14 SB Ramp/Avenue K	A (0.48)	C (0.65)	A (0.49)	C (0.68)	A (0.50)	C (0.70)	0.01	0.31	--	--
11	SR-14 NB Ramp/Avenue K	E (0.93)	F (0.98)	F (0.93)	F (0.99)	F (0.93)	F (0.99)	0.00	0.00	-- ³	-- ³
15	60th Street West/Avenue K-8	A (0.40)	A (0.37)	A (0.49)	B (0.56)	B (0.61)	D (0.79)	0.12	0.24	--	--
16	70th Street West/Avenue L	A (0.41)	A (0.39)	B (0.58)	B (0.63)	C (0.71)	D (0.76)	0.13	0.13	--	--
18	WalMart Driveway/ Quartz Hill High School Driveway	A (0.29)	A (0.38)	A (0.39)	D (0.75)	B (0.64)	F (0.98)	0.13	0.23	A ¹ (0.46)	C (0.65)
19	60th Street West/Avenue L	C (0.68)	C (0.64)	D (0.77)	F (0.92)	A (0.52)	F (0.95)	0.04	0.03	C ¹ (0.66)	D (0.74)
21	50th Street West/Avenue L	B (0.59)	C (0.67)	D (0.75)	D (0.80)	D (0.81)	F (1.00)	0.13	0.18	C (0.72)	D (0.74)
22	45th Street West/Avenue L	A (0.52)	A (0.55)	C (0.67)	C (0.71)	D (0.77)	E (0.87)	0.10	0.16	D ¹ (0.77)	C (0.71)
23	40th Street West/Avenue L	C (0.70)	B (0.64)	D (0.79)	D (0.80)	E (0.91)	F (0.96)	0.12	0.16	D (0.75)	D (0.79)
24	35th Street West/Avenue L	B (0.55)	B (0.58)	C (0.69)	C (0.72)	D (0.79)	E (0.83)	0.10	0.11	D ¹ (0.79)	D (0.81)
25	30th Street West/Avenue L	D (0.79)	D (0.77)	D (0.79)	D (0.79)	E (0.84)	E (0.87)	0.10	0.16	D (0.76)	D (0.79)
26	25th Street West/Avenue L	B (0.62)	C (0.66)	D (0.74)	D (0.79)	E (0.83)	F (0.92)	0.09	0.13	C (0.65)	C (0.72)
27	20th Street West/Avenue L	C (0.73)	C (0.70)	E (0.84)	D (0.75)	F (0.92)	E (0.85)	0.08	0.10	D (0.75)	D (0.79)
28	15th Street West/Avenue L	B (0.58)	C (0.69)	C (0.65)	D (0.77)	C (0.70)	E (0.85)	0.05	0.08	C ¹ (0.66)	D (0.76)
29	SR-14 SB Ramp/Avenue L	A (0.39)	A (0.52)	A (0.40)	B (0.60)	A (0.41)	C (0.66)	0.01	0.06	--	--
30	SR-14 NB Ramp/Avenue L	B (0.58)	C (0.70)	C (0.64)	E (0.89)	C (0.71)	F (1.05)	0.07	0.16	A (0.47)	B (0.57)
Delay/ICU ()											
Notes:											
1 Mitigation due to PM peak hour.											
2 Mitigation due to AM peak hour.											
3 No Mitigation; increased capacity due to project traffic is less than 2 percent.											
Source: Tables 5b and 5d, Ruetters & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.											

All other study intersections that are forecast to operate at an acceptable LOS in forecast year 2021 with cumulative projects trips are forecast to operate at an acceptable LOS with the addition of project-generated trips.

Traffic Signal Warrants

Table 5.12-20, *Forecast Year 2021 With Cumulative Projects and With Project Conditions Traffic Signal Warrants (Weekday)*, summarizes the traffic signal warrants analysis for forecast year 2021 with cumulative projects and project conditions.

As shown in Table 5.12-20, no additional study intersections are forecast to meet the signal warrant criteria for forecast year 2021 without cumulative projects and project conditions.

The following intersection is forecast to meet traffic signal warrant criteria for forecast year 2021 with cumulative projects.

- (#18) Walmart Driveway/Quarz Hill High School Driveway & Avenue L (PM peak hour)

The following additional intersections are forecast to meet traffic signal warrant criteria for forecast year 2021 with cumulative projects and project conditions:

- (#1) 70th Street West and Avenue K (PM peak hour)
- (#16) 70th Street West and Avenue L (AM and PM peak hours)
- (#17) 65th Street West and Avenue L (AM and PM peak hours)

No other study intersections are forecast to meet signal warrant criteria for forecast year 2021 with cumulative projects and project conditions.

Recommended Improvements

In order to mitigate the project impacts identified under forecast year 2021 with project conditions, the following intersection improvements are recommended:

- (#3) 50th Street West and Avenue K – Construct a single lane roundabout.
- (#15) 60th Street West and Avenue K-8 – Add one northbound through lane.
- (#19) 60th Street West and Avenue L – Change northbound through/right turn lane to one northbound through lane, one northbound right turn lane and add one southbound left turn lane.
- (#21) 50th Street West and Avenue L – Add one eastbound through lane and one westbound through lane.
- (#22) 45th Street West and Avenue L – Add one eastbound through lane and one westbound through lane.
- (#23) 40th Street West and Avenue L – Add one eastbound through lane.
- (#25) 30th Street West and Avenue L – Add one eastbound through lane and one westbound through lane.

Table 5.13-20
Forecast Year 2021 With Cumulative Projects and With Project Conditions Traffic Signal Warrants (Weekday)

#	Intersection	2021						2021 With Cumulative Projects						2021 With Cumulative Projects and Project					
		Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met		Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met		Major Street Total Approach Volume		Minor Street High Approach Volume		Warrant Met	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	70th Street West at Avenue K	311	278	107	124	No	No	323	303	135	138	No	No	530	453	181	251	No	Yes
3	50th Street West at Avenue K	654	731	406	310	Yes	Yes	1368	1551	408	399	Yes	Yes	1773	2102	408	435	Yes	Yes
12	70th Street West at Avenue K-4	-1	-1	-1	-1	-1	-1	349	287	14	8	No	No	555	644	108	68	No	No
15	60th Street West at Avenue K-8	974	880	74	46	No	No	1246	1486	214	129	Yes	Yes	1485	1958	542	454	Yes	Yes
16	70th Street West at Avenue L	362	315	124	157	No	No	536	630	219	278	No	No	718	751	284	394	Yes	Yes
17	65th Street West at Avenue L	241	323	118	63	No	No	600	861	118	63	No	No	901	1328	118	115	Yes	Yes
18	Walmart Driveway at Ave L	415	460	40	19	No	No	837	1183	40	158	No	Yes	1413	1990	40	158	No	Yes
20	55th Street West at Avenue L	841	907	161	93	Yes	No	1435	1777	166	97	Yes	Yes	2094	2698	166	97	Yes	Yes

Note:

1 Analyzed with Related Projects only or Project only where applicable.

Source: Tables 6a and 6c, Ruettgers & Schuler, *Avanti South Mixed-Use Land Development Traffic Study*, May 2016, Revised June 2017.

In order to mitigate the impacts identified under forecast year 2021 with cumulative projects and with project conditions, the following intersection improvements are recommended:

- (#2) 60th Street West and Avenue K – Add one westbound through lane.
- (#3) 50th Street and Avenue K – Increase roundabout to two lanes.
- (#4) 45th Street West and Avenue K – Add one eastbound through lane and one westbound through lane.
- (#5) 40th Street West and Avenue K (PM peak hour) – Add one westbound through lane and change the southbound through/right turn lane to one southbound through lane and one southbound right turn lane.
- (#7) 25th Street West and Avenue K – Add one eastbound through lane.
- (#15) 60th Street West and Avenue K-8 – Add one northbound through lane.
- (#17) 65th Street West and Avenue L – Signalize; change eastbound through/right turn lane to one eastbound left turn/through lane, 1 eastbound through lane, and one eastbound right turn lane; and change westbound through/right turn/left turn lane to two westbound through lanes (1 lane addition), one westbound right turn lane, and one westbound left turn lane.
- (#18) Walmart Driveway/Quartz Hill High School Driveway & Avenue L – Change westbound through/left turn lane to two westbound through lanes (1 lane addition) and one westbound left turn lane.
- (#19) 60th Street West and Avenue L (PM peak hour) – Add one eastbound left turn lane, one westbound left turn lane, one northbound left turn lane, and one northbound through lane.
- (#20) 55th Street West and Avenue L – Signalize; add one eastbound through lane; change westbound through/left turn lane to two westbound through lanes (1 lane addition) and one westbound left turn lane.
- (#21) 50th Street West and Avenue L – Change southbound through/right turn lane to one southbound through and one southbound right turn lane; change eastbound through/right turn lane to one eastbound through lane, one eastbound right turn lane, add one eastbound through lane (total three eastbound through lanes); change westbound through/right lane to one westbound through lane, one westbound right turn lane, and add one westbound through lane (total three westbound through lanes).
- (#22) 45th Street West and Avenue L – Change westbound through/right turn lane to one westbound through lane, one westbound right turn lane, and add one westbound through lane; change southbound through/right turn lane to one southbound through lane and one southbound right turn lane.
- (#23) 40th Street West and Avenue L – Change eastbound through/right turn lane to one eastbound through lane, one eastbound right turn lane, add one eastbound through lane and add one westbound through lane.

- (#24) 35th Street West and Avenue L – Change eastbound through/right turn lane to eastbound through lane and eastbound right turn lane.
- (#25) 30th Street West and Avenue L – Add one northbound left turn lane and one southbound left turn lane.
- (#26) 25th Street West and Avenue L – Add one eastbound through lane and one westbound through lane.
- (#27) 20th Street West and Avenue L (AM peak hour) – Add one eastbound through lane and one southbound through lane.
- (#28) 15th Street West and Avenue L – Change southbound through lane to southbound through/left turn lane.
- (#30) State Route 14 NB Ramps and Avenue L (PM peak hour) – Add one northbound left turn lane.

As shown in [Tables 5.12-18](#) and [5.12-19](#), with implementation of the recommended improvements, the study intersections would operate at an acceptable LOS under forecast year 2021 with cumulative projects and with project conditions.

Roadway Segment Level of Service

[Table 5.12-21, Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Roadway Segment LOS](#), summarizes forecast year 2021 cumulative without project conditions and with project conditions roadway segment analysis.

As shown in [Table 5.12-21](#), all roadway segments are forecast to operate at an acceptable LOS for forecast year 2021 conditions.

As also shown in [Table 5.12-21](#), with the addition of cumulative projects traffic, it is forecast that all roadway segments would continue to operate at an acceptable LOS with the exception of the following roadway segment:

- Avenue K from 45th Street West to 40th Street West

With the addition of project-generated trips, the following roadway segments are forecast to operate at an unacceptable LOS for future 2021 conditions:

- Avenue K from 60th Street West to 50th Street West
- Avenue K from 50th Street West to 45th Street West
- Avenue L from 70th Street West to 60th Street West
- Avenue L from 40th Street West to 30th Street West
- Avenue L from 30th Street West to 20th Street West

Table 5.12-21
Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Roadway Segment LOS

Segment	2021 With Cumulative Projects ADT	2021 With Cumulative Projects With Project ADT	2021 Capacity	2021 V/C	LOS	2021 With Project V/C	LOS	2021 With Cumulative Projects With Project V/C	LOS	2021 With Cumulative Projects With Project With Mitigation V/C	LOS
Avenue K: 70th Street West to 60th Street West	7,034	9,075	22,200	0.14	A	0.32	A	0.41	A	--	
Avenue K: 60th Street West to 50th Street West	17,785	23,573	22,200	0.36	A	0.80	C	1.06	F	0.50	A
Avenue K: 50th Street West to 45th Street West	17,667	22,834	23,300	0.41	A	0.76	C	0.98	E	0.51	A
Avenue K: 45th Street West to 40th Street West	19,993	24,746	18,300	0.68	B	1.09	F	1.35	F	0.64	B
Avenue K: 40th Street West to 30th Street West	23,006	27,345	40,500	0.40	A	0.57	A	0.68	B	--	
Avenue K: 30th Street West to 25th Street West	31,245	34,341	40,500	0.65	B	0.77	C	0.85	D	--	
Avenue K: 25th Street West to 20th Street West	37,159	37,334	50,650	0.60	A	0.68	B	0.74	C	--	
Avenue K: 20th Street West to 17th Street West	35,206	39,013	54,000	0.63	B	0.69	B	0.72	C	--	
Avenue K: 17th Street West to Avenue K Ramps	35,206	37,060	54,000	0.60	B	0.65	C	0.69	A	--	
70th Street West: Avenue L to Avenue K	3,812	7,214	22,200	0.15	A	0.17	A	0.32	A	--	
Avenue K-8: 70th Street West to 60th Street West	6,412	13,660	16,900	0.24	A	0.38	A	0.81	D	--	
65th Street West: Avenue L to Avenue K-8 ¹	-	3,077	13,500	-	-	-	-	0.23	-	--	
Avenue L: 70th Street West to 60th Street West	12,308	20,266	18,300	0.21	A	0.67	B	1.11	F	0.55	A
Ave L: 60th Street West to 50th Street West	22,947	32,029	36,800	0.25	A	0.62	B	0.87	D	--	
Ave L: 50th Street West to 45th Street West	24,799	33,072	18,300	0.84	A	1.36	B	1.81	D	--	
Ave L: 45th Street West to 40th Street West	30,331	38,397	19,200	1.12	A	1.58	D	2.00	F	0.66	B
Ave L: 40th Street West to 30th Street West	33,602	41,264	40,500	0.63	B	0.83	D	1.02	F	0.68	B
Ave L: 30th Street West to 20th Street West	35,286	41,725	40,500	0.71	C	0.87	D	1.03	F	0.69	B
Ave L: 20th Street West to 15th Street West	36,206	41,432	50,650	0.60	A	0.71	B	0.82	C	--	
Ave L: 15th Street West to Avenue L Ramps	45,403	50,225	60,800	0.66	B	0.75	C	0.83	D	--	
Delay/ICU ()											
Notes:											
1 Segment does not currently exist, analysis includes project traffic only.											
Source: Tables 7b, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.											

It is also forecast that the following roadway segment, which project-only impacts were identified, would again operate at an unacceptable LOS and require additional improvements.

- Avenue L from 45th Street West to 40th Street West

All other study roadway segments that are forecast to operate at an acceptable LOS in forecast year 2021 with cumulative projects trips are forecast to operate at an acceptable LOS with the addition of project-generated trips.

Recommended Improvements

In order to mitigate the impacts identified under forecast year 2021 with cumulative projects and with project conditions, the following roadway segment improvements are recommended:

- Avenue K from 60th Street West to 50th Street West – add two lanes (one lane in each direction)
- Avenue K from 50th Street West to 45th Street West – add two lanes (one lane in each direction)
- Avenue K from 45th Street West to 40th Street West – add two lanes (one lane in each direction)
- Avenue L from 70th Street West to 60th Street West – add two lanes (one lane in each direction)
- Avenue L from 45th Street West to 40th Street West – add two lanes (one lane in each direction)
- Avenue L from 40th Street West to 30th Street West – add two lanes (one lane in each direction)
- Avenue L from 30th Street West to 20th Street West – add two lanes (one lane in each direction)

As indicated in [Table 5.12-21](#), with implementation of the recommended improvements, all study roadway segments would operate at an acceptable LOS under forecast year 2021 with cumulative projects and with project conditions.

Mitigation Measures:

- TRA-1 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 507 and Resolution No. 89-193, which establishes traffic impact fees. The purpose of the traffic impact fees is to collect funds to provide for street construction, including right-of-way purchase when necessary, utility relocation and installation, and other necessary items to complete the roadway construction through the City as determined by the Development Services Department. Improvements constructed by the proposed project may be eligible for a fee credit or reimbursement through the program (to be determined at the City's discretion).
- TRA-2 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 339 and Resolution No. 02-171 which establishes impact fees related to the installation and upgrade of traffic signals. The traffic signal fee is intended to provide new traffic signals and/or modify existing traffic signals throughout the City as determined by the Development Services Department. Signals installed by the proposed project may be eligible for a fee credit or reimbursement through the program (to be determined at the City's discretion).
- TRA-3 The proposed project shall comply with the mandatory requirements of the City of Lancaster Ordinance No. 850 and Resolution Nos. 06-163 and 08-99, which establishes traffic impact fees for Los Angeles County, and which are applicable for projects located along certain

sections of Avenue K and Avenue L. The Los Angeles County traffic impact fee is intended to mitigate the adversely impact existing local street/roadway system adjacent to the City boundaries within the County of Los Angeles.

TRA-4 In the event that any of the intersection improvements identified in the proposed project's traffic study (Avanti South Mixed-Use Land Development Traffic Study, June 2017) prepared by Ruetters & Schuler are not covered by one of the fee programs identified in TRA-1 through TRA-3, the applicant shall either construct the improvements or make a fair-share fee payment to the City of Lancaster based on the proposed project's percentage of traffic that would utilize the intersection in 2021, as identified in the traffic report. This payment shall be made prior to the issuance of a certificate of occupancy. Determination of construction of improvement or payment of fair-share is at the discretion of the City of Lancaster as identified in the Conditions of Approval.

Level of Significance: Less Than Significant With Mitigation Incorporated.

CMP FACILITIES

TRA-2 *Project implementation would result in a significant increase in traffic for forecast conditions at CMP Facilities.*

Impact Analysis:

Existing With Project Conditions

CMP Intersection Level of Service

Table 5.12-22, *Existing With Project Conditions Peak Hour LOS – CMP Intersections*, summarizes existing with project conditions AM and PM peak hour LOS of the CMP study intersections.

**Table 5.12-22
Existing With Project Conditions Peak Hour LOS – CMP Intersections**

Intersection		Existing		Existing With Project		Change in ICU	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
10	SR-14 SB Ramps and Avenue K	A (0.45)	A (0.59)	A (0.46)	B (0.62)	0.01	0.03
11	SR-14 NB Ramps and Avenue K	E (0.89)	E (0.90)	E (0.89)	E (0.90)	0.00	0.00
29	SR-14 SB Ramps and Avenue L	A (0.36)	A (0.48)	A (0.37)	A (0.54)	0.01	0.06
30	SR-14 NB Ramps and Avenue L	A (0.53)	B (0.64)	A (0.60)	C (0.80)	0.07	0.16
Delay/ICU ()							
Source: Tables 12a and 12c, Ruetters & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.							

As shown in [Table 5.12-22](#), with the exception of the (#11) SR-14 NB Ramps and Avenue K intersection, all CMP study intersections are operating at an acceptable LOS under existing conditions. With the addition of project-generated trips, the CMP intersections are forecast to continue to operate at an acceptable LOS for existing with project conditions with the exception of (#11) SR-14 NB Ramps and Avenue K. Project-generated trips would not result in additional delay to the (#11) SR-14 NB Ramps and Avenue K intersection under existing with project conditions.

CMP Roadway Segments Level of Service

[Table 5.12-23, Existing With Project Conditions Peak Hour LOS – CMP Freeway Segments](#), summarizes existing with project conditions AM and PM peak hour LOS of the CMP freeway segments.

As indicated in [Table 5.12-23](#), the following CMP freeway segments are forecast to operate at an unacceptable LOS for existing and existing with project conditions:

- North of SR-14 NB On-Ramps n/o Avenue K (PM peak hour)
- North of SR-14 SB Off-Ramps n/o Avenue K (AM peak hour)
- South of SR-14 SB On-Ramps s/o Avenue L (PM peak hours)
- South of SR-14 NB Off-Ramps s/o Avenue L (AM peak hour)

However, as indicated in [Table 5.12-23](#), the addition of project generated trips would result in a significant impact at only the south of SR-14 southbound on ramps, south of Avenue L freeway segment in the PM peak hour.

The City of Lancaster does not have jurisdiction over Caltrans' facilities and Caltrans does not currently propose any improvements for this freeway segment. The City of Lancaster does not collect impacts fees for Caltrans facilities. Therefore, the proposed project would result in a significant unavoidable impact.

Table 5.12-23
Existing With Project Conditions Peak Hour LOS – CMP Freeway Segments

Freeway Segment	Peak Hour Capacity ¹	Existing						Existing With Project						Impact	
		Peak Hour Volume ²		D/C		LOS		Peak Hour Volume ²		D/C		LOS			
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
n/o SR 14 NB On-Ramps n/o Ave K	6,000	2,412	5,858	0.402	0.976	B	E	2,480	5,920	0.413	0.987	B	E	1.13%	1.03% ³
n/o SR 14 SB Off-Ramps n/o Ave K	6,000	5,629	2,872	0.938	0.479	E	B	5,666	2,956	0.944	0.493	E	B	0.62% ³	1.40%
s/o SR 14 SB On-Ramps s/o Ave L	6,000	2,412	5,858	0.402	0.976	B	E	2,597	6,035	0.433	1.006	B	F(0)	3.08%	2.95% ⁴
s/o SR 14 NB Off-Ramps s/o Ave L	6,000	5,629	2,872	0.938	0.479	E	B	5,734	3,103	0.956	0.517	E	C	1.75% ³	3.85%
Delay/ICU ()															
Notes:															
1 Capacity taken from 2010 Congestion Management Program for Los Angeles County.															
2 SR-14 Peak Hour demand taken from 2010 Congestion Management Program for Los Angeles County; Peak Hour data grown at 2% to current year.															
3 The addition of project traffic does not create a significant impact based on CMP guidelines.															
4 Significant impact identified.															
Source: Tables 14a and 14c, Ruetters & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.															

Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions

CMP Intersection Level of Service

Table 5.12-24, *Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – CMP Intersections*, summarizes forecast year 2021 with cumulative projects and without project conditions and with project conditions AM and PM peak hour LOS of the CMP study intersections.

**Table 5.12-24
Forecast Year 2021 Cumulative Without and With Project Conditions
Peak Hour LOS – CMP Intersections**

Intersection		2021		2021 With Cumulative Projects ¹		2021 With Cumulative Projects and Project		2021 With Cumulative Projects and Project and Mitigation	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
10	SR-14 SB Ramps and Avenue K	A (0.48)	B (0.65)	A (0.49)	B (0.68)	A (0.50)	B (0.70)	--	--
11	SR-14 NB Ramps and Avenue K	E (0.92)	E (0.98)	E (0.93)	E (0.99)	E ² (0.93)	E ² (0.99)	--	--
29	SR-14 SB Ramps and Avenue L	A (0.39)	A (0.52)	A (0.40)	A (0.60)	A (0.41)	B (0.66)	--	--
30	SR-14 NB Ramps and Avenue L	A (0.58)	C (0.70)	B (0.64)	D (0.89)	C (0.71)	F ³ (1.05)	A (0.47)	A (0.57)
Delay/ICU ()									
Notes:									
1 Related Projects – other project traffic added to future background volumes.									
2 The addition of project traffic does not create significant impact based on CMP guidelines.									
3 Mitigation due to PM peak hour.									
Source: Tables 12b and 12d, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.									

As indicated in [Table 5.12-24](#), with the addition of cumulative projects traffic and project traffic, the following intersections are forecast to operate at an unacceptable LOS under forecast year 2021 conditions:

- (#11) SR-14 NB Ramps and Avenue K (AM and PM peak hours)
- (#30) SR-14 NB Ramps and Avenue L (PM peak hour)

However, as indicated in [Table 5.12-24](#), the addition of project generated trips would result in a significant impact at only the (#30) SR-14 northbound ramps and Avenue L in the PM peak hour.

Recommended Improvements

As discussed above, recommended improvements to the (#30) SR-14 NB Ramps and Avenue L include adding one northbound left turn lane. As shown in [Table 5.12-19](#), with the recommended improvement, the intersection would operate at an acceptable LOS.

CMP Roadway Segments Level of Service

Table 5.12-25, *Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – CMP Freeway Segments*, summarizes forecast year 2021 with cumulative projects and without project conditions and with project conditions AM and PM peak hour LOS of the CMP freeway segments.

Table 5.12-25
Forecast Year 2021 With Cumulative Projects and Without and With Project Conditions Peak Hour LOS – CMP Freeway Segments

Freeway Segment	Peak Hour Capacity	2021						2021 + Related Projects						2021 + Related Projects + Project						Impact	
		Peak Hour Volume ²		D/C		LOS		Peak Hour Volume ²		D/C		LOS		Peak Hour Volume ²		D/C		LOS			
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
n/o SR 14 NB On-Ramps n/o Ave K	6,000	2,663	6,468	0.444	1.078	B	F(0)	2,784	6,546	0.464	1.091	B	F(0)	2,852	6,608	0.475	1.101	B	F(0)	1.1%	1.0% ³
n/o SR 14 SB Off-Ramps n/o Ave K	6,000	6,214	3,171	1.036	0.529	F(0)	B	6,259	3,297	1.043	0.550	F(0)	C	6,296	3,381	1.049	0.564	F(0)	C	0.6% ³	1.4%
s/o SR 14 SB On-Ramps s/o Ave L	6,000	2,663	6,468	0.444	1.078	B	F(0)	2,937	6,634	0.490	1.106	B	F(0)	3,122	6,811	0.520	1.135	B	F(0)	3.1%	3.0% ⁴
s/o SR 14 NB Off-Ramps s/o Ave L	6,000	6,214	3,171	1.036	0.529	F(0)	B	6,307	3,456	1.051	0.576	F(0)	C	6,412	3,687	1.069	0.615	F(0)	C	1.8% ³	3.9%
Delay/ICU ()																					
Notes:																					
1 Capacity taken from 2010 Congestion Management Program for Los Angeles County.																					
2 SR-14 Peak Hour demand taken from 2010 Congestion Management Program for Los Angeles County; Peak Hour data grown at 2% to current year.																					
3 The addition of Project traffic does not create a significant impact based on CMP guidelines.																					
4 Significant impact identified.																					
Source: Tables 14a and 14c, Ruettggers & Schuler, <i>Avanti South Mixed-Use Land Development Traffic Study</i> , May 2016, Revised June 2017.																					

As indicated in Table 5.12-25, with the addition of project trips, the following CMP freeway segments are forecast to continue to operate at an unacceptable LOS for forecast year 2021 with cumulative projects and with project conditions:

- North of SR-14 NB On-Ramps n/o Avenue K (PM peak hour)
- North of SR-14 SB Off-Ramps n/o Avenue K (AM peak hour)
- South of SR-14 SB On-Ramps s/o Avenue L (PM peak hours)
- South of SR-14 NB Off-Ramps s/o Avenue L (AM peak hour)

However, as indicated in Table 5.12-25, the addition of project generated trips would result in a significant impact at only the south of SR-14 southbound on-ramps, south of Avenue L segment during the PM peak hour.

The City of Lancaster does not have jurisdiction over Caltrans' facilities and Caltrans does not currently propose any improvements for this freeway segment. The City of Lancaster does not collect impacts fees for Caltrans facilities. Therefore, the proposed project would result in a significant unavoidable impact.

Mitigation Measures: No mitigation measures have been identified which would reduce impacts to less than significant levels.

Level of Significance: Significant and Unavoidable Impact.

CONFLICT WITH POLICIES, PLANS, OR PROGRAMS

TRA-3 Implementation of the project would not result in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities as a result of a conflict with adopted policies, plans, or programs.

Impact Analysis:

TRANSIT SERVICE

The Antelope Valley Transit Authority (AVTA) provides transit serves to the City of Lancaster. AVTA Route 9 is the closest route to the project site and provides service between Quartz Hill and Lancaster City Park via Avenue H. A bus stop is located at 60th Street West and Avenue L (Quartz Hill High School), east of the project site. The project would not decrease the performance or safety of public transit. The project proposes a bus turn-out of Avenue L at 65th Street West. Thus, project implementation would provide improved opportunities for people to access the project area and utilize public transportation. Further, proposed and existing Class II bike lanes would connect the Specific Plan area with the bus route. The project would not conflict with adopted policies, plans, or programs pertaining to public transit and therefore, would not result in a decrease of the performance or safety of public transit. Impacts would be less than significant in this regard.

PEDESTRIAN AND BICYCLE FACILITIES

Within the project vicinity, an existing Class II Bike Lane is located along Avenue L, east of 65th Street West. There are no sidewalks located immediately adjacent to the project site.

The City of Lancaster Master Plan of Trails and Bikeways (Master Plan) is intended to guide the planning and design of pedestrian, bicycle and equestrian facilities in a comprehensive manner throughout Lancaster. Within the project area, the Master Plan identifies a Class I Bike Path along 70th Street West, north of Avenue L and a Class II Bike Lane along 70th Street West, south of Avenue L. A Class II Bike Lane is identified along Avenue L, east of 70th Street West. These facilities would connect to other bicycle facilities within the area.

The Specific Plan incorporates a network of on- and off-street trails to promote access and walkability throughout the project site. The system provides for bicycles, pedestrians, and equestrians; refer to [Exhibit 3-6](#). Multi-use trails located along the promenades would connect parks within the project site. An 8- to 12-foot wide multi-purpose trail is proposed on the inside edge of the drainage facility. A 12-foot wide equestrian trail is proposed on the east side of 70th Street West between Avenue L and the Avenue K-8 extension. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City's planned equestrian and Class I multipurpose trail.

The Specific Plan would provide for Class I (off-street) and Class II (on-street) bike lanes. A 12-foot wide Class I bike lane is proposed on the east side of 70th Street between Avenue L and the Avenue K-8 extension. Striped 7-foot wide Class II bike lanes are also proposed in both directions of travel on 75th Street, Avenue K-8, 65th Street, and Avenue L.

Sidewalks and traffic calming measures would also be incorporated to improve pedestrian safety and accessibility throughout the site and surrounding areas.

The project would not conflict with adopted policies, plans, or programs pertaining to bicycle or pedestrian facilities. Thus, the proposed project would not result in a decrease of the performance or safety of bicycle or pedestrian facilities.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.12.5 CUMULATIVE IMPACTS

TRAFFIC/TRANSPORTATION

Implementation of the proposed project and other related cumulative projects, could result in cumulative traffic/transportation impacts.

Impact Analysis: Forecast year 2021 cumulative traffic conditions were analyzed under Significance Threshold TRA-1, above.

FORECAST YEAR 2021 INTERSECTION ANALYSIS

Tables [5.12-18](#) and [5.12-19](#) summarize forecast year 2021 cumulative without project conditions and with project conditions AM and PM peak hour LOS of the study intersections. With the addition of cumulative project trips, the following additional intersections are forecast to operate at an unacceptable LOS in forecast year 2021:

- (#4) 45th Street West and Avenue K (AM peak hour)
- (#5) 40th Street West and Avenue K (PM peak hour)
- (#27) 20th Street West and Avenue L (AM peak hour)
- (#30) State Route 14 NB Ramps and Avenue L (PM peak hour)

It is forecast that the following intersection, at which a project-only impact was identified, would again operate at an unacceptable LOS and require additional improvements under forecast 2021 with cumulative projects conditions:

- (#19) 60th Street West and Avenue L (PM peak hour)

All other intersections would continue to operate at an acceptable LOS for forecast year 2021 with cumulative projects conditions.

With the addition of project-generated trips, the following additional intersections are forecast to operate at unacceptable LOS for forecast year 2021 with cumulative projects trips and project conditions:

- (#2) 60th Street West and Avenue K (AM peak hour)
- (#7) 25th Street West and Avenue K (AM peak hour)
- (#17) 65th Street West and Avenue L (AM and PM peak hours)
- (#18) Walmart Driveway/Quartz Hill High School Driveway & Avenue L (PM peak hour)
- (#20) 55th Street West and Avenue L (AM and PM peak hours)
- (#24) 35th Street West and Avenue L (PM peak hour)
- (#25) 30th Street West and Avenue L (AM and PM peak hours)
- (#26) 25th Street West and Avenue L (AM and PM peak hours)
- (#28) 15th Street West and Avenue L (PM peak hour)

The following intersections, at which project-only impacts were identified, would again operate at an unacceptable LOS and require additional improvements.

- (#21) 50th Street West and Avenue L (AM and PM peak hours)
- (#22) 45th Street West and Avenue L (PM peak hour)
- (#23) 40th Street West and Avenue L (AM and PM peak hours)

All other study intersections that are forecast to operate at an acceptable LOS in forecast year 2021 with cumulative projects trips are forecast to operate at an acceptable LOS with the addition of project-generated trips.

As shown in [Tables 5.12-18](#) and [5.12-19](#), with implementation of the recommended improvements, the study intersections would operate at an acceptable LOS under forecast year 2021 with cumulative projects and with project conditions.

Forecast Year 2021 Roadway Segment Analysis

[Table 5.12-21](#) summarizes forecast year 2021 cumulative without project conditions and with project conditions roadway segment analysis.

As shown in [Table 5.12-21](#), with the addition of cumulative projects traffic, it is forecast that all roadway segments would continue to operate at an acceptable LOS with the exception of the following roadway segment:

- Avenue K from 45th Street West to 40th Street West

With the addition of project-generated trips, the following roadway segments are forecast to operate at an unacceptable LOS for future 2021 conditions:

- Avenue K from 60th Street West to 50th Street West
- Avenue K from 50th Street West to 45th Street West
- Avenue L from 70th Street West to 60th Street West
- Avenue L from 40th Street West to 30th Street West
- Avenue L from 30th Street West to 20th Street West

It is also forecast that the following roadway segment, which project-only impacts were identified, would again operate at an unacceptable LOS and require additional improvements.

- Avenue L from 45th Street West to 40th Street West

All other study roadway segments that are forecast to operate at an acceptable LOS in forecast year 2021 with cumulative projects trips are forecast to operate at an acceptable LOS with the addition of project-generated trips.

As indicated in [Table 5.12-21](#), with implementation of the recommended improvements, all study roadway segments would operate at an acceptable LOS under forecast year 2021 with cumulative projects and with project conditions.

CMP Facility Analysis

[Table 5.12-24](#) summarizes forecast year 2021 with cumulative projects and without project conditions and with project conditions AM and PM peak hour LOS of the CMP study intersections.

As indicated in [Table 5.12-24](#), with the addition of cumulative projects traffic and project traffic, the following intersections are forecast to operate at an unacceptable LOS under forecast year 2021 conditions:

- (#11) SR-14 NB Ramps and Avenue K (AM and PM peak hours)
- (#30) SR-14 NB Ramps and Avenue L (PM peak hour)

As also shown in [Table 5.12-24](#), the addition of project-generated trips to the CMP intersections is forecast to result in a significant impact at the following CMP intersection for forecast year 2021 with cumulative projects and project conditions:

- (#30) SR-14 NB Ramps and Avenue L (PM peak hour)

As shown in [Table 5.12-19](#), with the recommended improvement, the intersection would operate at an acceptable LOS.

Table 5.12-25 summarizes forecast year 2021 with cumulative projects and without project conditions and with project conditions AM and PM peak hour LOS of the CMP freeway segments.

As indicated in Table 5.12-25, with the addition of project trips, the following CMP freeway segments are forecast to continue to operate at an unacceptable LOS for forecast year 2021 with cumulative projects and with project conditions:

- North of SR-14 NB On-Ramps n/o Avenue K (PM peak hour)
- North of SR-14 SB Off-Ramps n/o Avenue K (AM peak hour)
- South of SR-14 SB On-Ramps s/o Avenue L (PM peak hours)
- South of SR-14 NB Off-Ramps s/o Avenue L (AM peak hour)

As also shown in Table 5.12-25, the addition of project-generated trips to the CMP freeway segments is forecast to result in a significant impact at the following freeway segment for forecast year 2021 with cumulative projects and with project conditions:

- South of SR-14 SB On-Ramps s/o Avenue L (PM peak hours)

The City of Lancaster does not have jurisdiction over Caltrans' facilities and Caltrans does not currently propose any improvements for this freeway segment. The City of Lancaster does not collect impacts fees for Caltrans facilities. Therefore, the proposed project would result in a significant unavoidable impact to this CMP facility.

Conflict with Policies, Plans, or Programs

Cumulative projects would be reviewed for compliance with City policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities on a project-by-project basis. Implementation of the proposed project would not impede the existing public transit, bicycle, or pedestrian facilities; nor would it reduce their safety. As discussed above, the project proposes a bus turnout, which would improve safety and accessibility to public transit. Further, the Specific Plan would incorporate a network of on- and off-street trails to promote access and walkability throughout the project site. The system would provide for bicycles, pedestrians, and equestrians. The project would enhance and connect to the City's existing and/or planned bicycle facilities, supporting the City of Lancaster Master Plan of Trails and Bikeways. Thus, implementation of the project would not conflict with adopted policies, plans, or programs resulting in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities. Project impacts would not be cumulatively considerable and impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TRA-1 through TRA-4, above.

Level of Significance: Significant and Unavoidable Impact.

5.12.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in significant unavoidable traffic impacts at CMP facilities with implementation of the proposed project.

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SECTION 6.0

Other CEQA Considerations

6.0 OTHER CEQA CONSIDERATIONS

6.1 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

Pursuant to Section 15126.2 of the CEQA Guidelines, following is a discussion of short-term uses of the environment and the maintenance and enhancement of long-term productivity. If the proposed project is approved and constructed, a variety of short- and long-term impacts would occur on a local level. During project grading and construction, portions of surrounding uses may be temporarily impacted by dust and noise. Short-term soil erosion may also occur during grading. There may also be an increase in vehicle pollutant emissions caused by grading and construction activities. However, these disruptions would be temporary and may be avoided or lessened to a large degree through mitigation cited in this EIR and through compliance with the *City of Lancaster Municipal Code* (Municipal Code); refer to Section 5.0, Environmental Analysis, and Section 8.0, Effects Found Not To Be Significant.

Ultimate development of the project site would create long-term environmental consequences associated with a transition in land use. Development of the proposed project and the subsequent long-term effects may impact the physical, aesthetic, and human environments. Long-term physical consequences of development include increased traffic volumes, increased noise from project-related mobile (traffic) and stationary (mechanical and landscaping) sources, and increased energy and natural resource consumption. Incremental degradation of local and regional air quality would also occur because of mobile source emissions generated from project-related traffic, and stationary source emissions generated from the consumption of natural gas and electricity.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

According to Sections 15126(c) and 15126.2(c) of the *CEQA Guidelines*, an EIR is required to address any significant irreversible environmental changes that would occur should the proposed project be implemented. As stated in *CEQA Guidelines* Section 15126.2(c):

"[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 likely, 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 project would consume limited, slowly renewable and non-renewable resources. This consumption would occur during the construction phase of the project and would continue throughout its operational lifetime. Project development would require a commitment of resources that would include: (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project site. Project construction would require the consumption of resources that are not replenishable or which may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: lumber and other forest products; aggregate materials used

in concrete and asphalt; metals; and water. Fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment.

The resources that would be committed during project operation would be similar to those currently consumed within the City of Lancaster. These would include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project, and the existing, finite supplies of these natural resources would be incrementally reduced. Project operation would occur in accordance with Title 24, Part 6 of the California Code of Regulations, which sets forth conservation practices that would limit the amount of energy consumed by the project. However, the energy requirements associated with the project would, nonetheless, represent a long-term commitment of essentially non-renewable resources.

Limited use of potentially hazardous materials typical of commercial and residential uses, including minor amounts of cleaning products and waste, along with the occasional use of pesticides and herbicides for landscape maintenance are the extent of materials anticipated to be utilized on-site. The use of these materials would be in small quantities and used, handled, stored, and disposed of in accordance with the manufacturer's instructions and applicable government regulations and standards. Compliance with these regulations and standards would serve to protect against significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In summary, project construction and operation would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these resource quantities for future generations or for other uses during the life of the project. However, continued use of such resources would be on a relatively small scale and consistent with regional and local growth forecasts in the area. As such, although irreversible environmental changes would result from the project, such changes would not be considered significant.

6.3 GROWTH-INDUCING IMPACTS

As required by the CEQA Guidelines, an EIR must include a discussion of the ways in which a project could directly or indirectly foster economic development or population growth, or the construction of additional housing and how that growth would, in turn, affect the surrounding environment (CEQA Guidelines Section 15126.2(d)). Growth can be induced in many ways, including the elimination of obstacles to growth, or through the stimulation of economic activity within the region. The discussion of removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval. Under CEQA, induced growth is not considered necessarily beneficial, detrimental, or of little significance to the environment.

In general, a project may foster spatial, economic, or population growth in a geographic area if it results in any of the following:

- Removal of an impediment to growth (e.g., establishment of an essential public service and provision of new access to an area);
- Fostering of economic expansion or growth (e.g., changes in revenue base and employment expansion);

- Fostering of population growth (e.g., construction of additional housing), either directly or indirectly;
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning and general plan amendment approval); or
- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an infill project).

Should a project meet any one of the above-listed criteria, it may be considered growth inducing. Generally, growth-inducing projects are either located in isolated, undeveloped, or underdeveloped areas, necessitating the extension of major infrastructure such as sewer and water facilities or roadways, or encourage premature or unplanned growth. The potential growth-inducing impacts of the proposed project are evaluated below.

Note that the CEQA Guidelines require an EIR to “discuss the ways” a project could be growth inducing and to “discuss the characteristics of some projects that may encourage ... activities that could significantly affect the environment.” However, the CEQA Guidelines do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages (refer to CEQA Guidelines Section 15145).

IMPACT ANALYSIS

Removal of an Impediment to Growth

Although the project site and surrounding area consists primarily of vacant land, the project site is within an urbanizing area of the City and has been identified for urban development. Existing development within the project area is already served by electricity, water, wastewater, storm drains, communications, roadways, and other infrastructure systems necessary to accommodate existing conditions. These facilities can be readily upgraded and/or extended to serve the proposed development. The increased demands for utility and service systems would not reduce or impair any existing or future levels of utility services, either locally or regionally, as costs for increases in utility and service systems would be provided through cooperative agreements between the proposed development and servicing agencies. As systems are readily available for expansion and extension into the project site, the proposed project would not remove an impediment to growth associated with establishment of an essential public service.

Regional access to the City is provided via State Route 14 (SR-14) and local access is generally provided by an existing network of roadways, including two Primary Arterials, Avenue L and 70th Street West, which directly border the project site. The Specific Plan proposes to extend Avenue K-8 through the Specific Plan area, connecting Avanti South and Avanti West. 65th Street West would be extended through the Specific Plan area connecting the extension of Avenue K-8 on the north and Avenue L on the south. In addition, 75th Street West would be constructed along the western edge of Avanti West, connecting to the proposed extension of Avenue K-8. Interior collectors, local streets, and alleys would be constructed within the project site, providing access to the proposed uses. As stated above, the project site and surrounding area are currently served by Primary Arterials. Implementation of the proposed Specific Plan would not provide new access to an area. The proposed roadway extensions would provide access to and within the project site from the adjacent roadways and connect adjacent developments. Thus, the

proposed project would not remove an impediment to growth associated with provision of new access to an area and is not considered growth-inducing in this regard.

Fostering of Economic Expansion or Growth

The project site is currently vacant. In addition to residential development, the proposed Specific Plan anticipates the development of approximately 213,600 square feet of commercial uses, as well as a future fire station and school. During project construction, construction-related jobs would be created. However, these jobs would be temporary and would not be growth-inducing. The non-residential development would generate sales taxes with a resultant increase in the City's revenue base and new employment opportunities; however, due to the nature and scale of development, significant jobs or economic growth is not anticipated. Additional retail sales and employment opportunities within the City are a beneficial impact of implementing the proposed project and beneficial to the City.

Population, Housing, and Employment

POPULATION

County of Los Angeles. The County encompasses approximately 4,750 square miles. It is bordered by Kern County to the north, San Bernardino County to the east, Orange County to the southeast, the Pacific Ocean to the south, and the Ventura County to the west. As of January 2017, the County of Los Angeles had a population of 10,241,278 people.¹ This represents an increase of approximately 4.3 percent over the County's 2010 population of 9,818,605.²

The Southern California Association of Governments (SCAG) serves as the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties. Generally, SCAG serves as the regional planning organization for growth management, transportation, and a range of additional planning and environmental issues within southern California. SCAG develops, refines, and maintains SCAG's regional and small area socio-economic forecasting/allocation models. The socio-economic estimates and projections are used for federal and state mandated long-range planning efforts such as the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the Air Quality Management Plan (AQMP), the Federal Transportation Improvement Program (FTIP), and the Regional Housing Needs Assessment (RHNA). As part of its forecasting, SCAG projects that the County's population will reach 10,326,200 by 2020 and 11,145,100 by 2035.³

City of Lancaster. *Table 6-1, Population Estimates*, provides a summary of both 2010 and 2017 population estimates for Los Angeles County and the City of Lancaster. On a local level, the Lancaster's January 2017 population was 157,820. This represents an increase of approximately 0.8 percent over the City's 2010 population of 156,633. SCAG projects that the City's population will reach 167,400 by 2020 and 195,800 by 2035.

¹ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017.

² State of California, Department of Finance, *E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010*, Sacramento, California, November 2012.

³ Southern California Association of Governments, *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction*, http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf, accessed July 27, 2017.

**Table 6-1
Population Estimates**

Year	County of Los Angeles	City of Lancaster
Population		
2010 Census ¹	9,818,605	156,633
January 2017 ²	10,241,278	157,820
2010 – 2017 Change	422,673	1,187
2010 – 2017 % Change	4.3%	0.8%
2020 SCAG Forecasts ³	10,326,200	167,400
2017 – 2020 Change	84,922 (0.8%)	9,580 (6.1%)
2035 SCAG Forecasts ³	11,145,100	195,800
2017 – 2035 Change	903,822 (8.8%)	37,980 (24.1%)
Notes:		
1. State of California, Department of Finance, <i>E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010</i> , Sacramento, California, November 2012.		
2. State of California, Department of Finance, <i>E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark</i> , Sacramento, California, May 2017.		
3. Southern California Association of Governments, <i>2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction</i> , http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf , accessed July 27, 2017.		

HOUSING

County of Los Angeles. Table 6-2, *Housing Estimates*, provides a summary of housing estimates for Los Angeles County and the City of Lancaster. The County's housing stock was estimated to be 3,527,312 units in January 2017. This represents an increase of approximately 2.5 percent over the estimated 3,443,087 housing units reported in 2010. The vacancy rate in January 2017 was estimated to be approximately 5.7 percent, and the persons per household estimate for occupied units was approximately 3.02. SCAG projections indicate that the number of households within the County will increase to 3,493,700 in 2020 and to 3,809,300 in 2035.

**Table 6-2
Housing Estimates**

Year/Description	County of Los Angeles		City of Lancaster	
	Dwelling Units	Households	Dwelling Units	Households
Census 2010 ¹	3,443,087	3,239,280	51,835	46,992
January 2017 ²	3,527,312	3,326,188	52,807	46,887
2010 – 2017 Change	84,225	86,908	972	-105
2010 – 2017 % Change	2.5%	2.7%	1.9%	-0.22%
2017 Vacancy Rate ²	5.7%	--	11.2%	--
2017 Persons per Household ²	--	3.02	--	3.21
2020 SCAG Forecasts ^{3,4}	3,692,841	3,493,700	58,269	52,400
2017 – 2020 Change	165,529 (4.7%)	167,512 (5.0%)	5,462 (10.3%)	5,513 (11.8%)
2035 SCAG Forecasts ^{3,4}	4,026,430 ⁴	3,809,300	67,832	61,000
2017 – 2035 Change	499,118 (14.2%)	483,112 (14.5%)	15,025 (28.5%)	14,113 (30.1%)
Notes:				
1. State of California, Department of Finance, <i>E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010</i> , Sacramento, California, November 2012.				
2. State of California, Department of Finance, <i>E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark</i> , Sacramento, California, May 2017.				
3. Southern California Association of Governments, <i>2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction</i> , http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf , accessed July 27, 2017.				
4. Dwelling unit forecasts are based on 2017 vacancy rate.				

City of Lancaster. The City's housing stock was estimated to be 52,807 units in January 2017 with 46,887 households (occupied housing units). This represents an increase of approximately 1.9 percent over the estimated 51,835 housing units reported in 2010 and a reduction in households of 0.2 percent. The vacancy rate in January 2017 was estimated to be approximately 11.2 percent, with the persons per household estimate for occupied units being 3.21. According to SCAG projections, the number of households in the City is expected to be 52,400 in 2020 and 61,000 in 2035.

EMPLOYMENT

County of Los Angeles. According to the California Employment Development Department, the annual average civilian labor force within Los Angeles County totals approximately 5,040,600 as of January 2017. An estimated 5.1 percent of the County's workforce (258,200 persons) was unemployed.⁴ SCAG projections indicate that the number of jobs within the County will be 4,662,500 in 2020 and 5,062,100 in 2035.⁵

City of Lancaster. According to the California Employment Development Department, the annual average civilian labor force within the City of Lancaster totals approximately 63,700 persons as of January 2017. An estimated 5.7 percent of the City's workforce (3,700 persons) was unemployed.⁶ SCAG projections indicate that the number of jobs within the City will be 51,700 in 2020 and 56,700 in 2035.⁷

POPULATION GROWTH

A project could induce population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Although existing roads and infrastructure would be improved/modified, the proposed Specific Plan does not involve the extension of roads or other infrastructure into undeveloped areas; refer to the *Impediment to Growth* discussion above.

The residential development anticipated by the proposed Specific Plan would induce direct growth in the City's population. As indicated in Table 6-3, *Proposed Specific Plan Compared to Existing Conditions*, the City's existing housing stock is an estimated 52,807 dwelling units and a population of 157,820 persons. The population growth associated with the new residential development (1,700 dwelling units) would be approximately 5,457 persons, representing an increase of approximately 3.3 percent over the City's existing 2017 population of 157,820 persons. Therefore, the residential development anticipated by the proposed Specific Plan would induce direct growth in the City's population.

Additionally, the Specific Plan would increase the City's employment as a result of new non-residential development to the area. Employment growth could result in direct growth in the City's population, because future employees (and their families) may relocate to the City. Estimating the number of these future employees who would relocate to the City would be highly speculative, because many factors influence personal housing location decisions (i.e., family income levels and the cost and availability of

⁴ Employment Development Department, Labor Market Division, *Monthly Labor Force Data for Counties*, January 2017.

⁵ Southern California Association of Governments, *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction*, http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf, accessed July 27, 2017.

⁶ Employment Development Department, Labor Market Division, *Monthly Labor Force Data for Cities*, January 2017.

⁷ Southern California Association of Governments, *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction*, http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf, accessed June 22, 2017.

suitable housing in the local area). Thus, the number of new employees who may relocate to the City to fill the newly created positions is unknown. Overall, the project is considered growth inducing since it would foster population growth in the City through development of both new housing and employment-generating land uses.

**Table 6-3
Proposed Specific Plan Compared to Existing Conditions**

Year	Dwelling Units	Population
Existing City 2017 ¹	52,807	157,820
Proposed Specific Plan ²	1,700	5,457
<i>Total</i>	<i>54,507</i>	<i>163,277</i>
<i>% Change</i>	<i>3.2%</i>	<i>3.3%</i>

Notes:
 1. State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017.
 2. Population projection is based on 3.21 persons per household (State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017).

Potential growth inducing impacts are also assessed based on a project’s consistency with adopted plans that have addressed growth management from a local and regional standpoint. Table 6-4, *Proposed Specific Plan Compared to Lancaster General Plan 2030 Growth Forecasts*, compares the proposed project’s population and housing growth to the General Plan’s population and housing forecasts for the City at buildout. The City’s housing stock is forecast to total approximately 81,955 dwelling units at buildout, with a resultant population of approximately 257,740 persons; refer to Table 6-4. Upon buildout of the proposed Specific Plan, the City’s housing stock would total 54,507 dwelling units, with a resultant population of approximately 163,277 persons. The proposed Specific Plan would not cause the City’s buildout population forecast to be exceeded. Therefore, implementation of the proposed Specific Plan would induce less than significant population growth in the City with respect to General Plan forecasts.

**Table 6-4
Proposed Specific Plan Compared to Lancaster General Plan 2030 Growth Forecasts**

Description	Dwelling Units	Population
Existing City 2017 ¹	52,807	157,820
Proposed Specific Plan ²	1,700	5,457
<i>Total City (including Project)</i>	<i>54,507</i>	<i>163,277</i>
Lancaster General Plan		
General Plan Buildout Forecasts	81,955 ³	257,740 ³
<i>General Plan Buildout Compared to City (including Project)</i>	<i>-27,448</i>	<i>-94,463</i>
<i>General Plan Buildout Compared to City (including Project) Percentage</i>	<i>-50.4%</i>	<i>-57.9%</i>

Notes:
 1. State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017.
 2. Population projection is based on 3.21 persons per household (State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark*, Sacramento, California, May 2017).
 3. City of Lancaster, *Lancaster General Plan 2030 Program Environmental Impact Report*, adopted April 2009.

Table 6-5, *Proposed Specific Plan Compared to SCAG Growth Forecasts*, compares the proposed Specific Plan’s forecast housing and population growth with SCAG’s 2035 growth projections for the City. As indicated in Table 6-5, SCAG projects the City’s housing stock would total 67,832 dwelling units, with a resultant population of approximately 195,800 persons. With implementation of the proposed Specific Plan, the City’s housing stock would total 54,507 dwelling units, with a resultant population of approximately 163,277 persons. The proposed Specific Plan would not cause SCAG’s housing and population forecasts to be exceeded. Therefore, implementation of the proposed Specific Plan would induce less than significant population growth in the City with respect to SCAG’s forecasts.

**Table 6-5
Proposed Specific Plan Compared to SCAG Growth Forecasts**

Description	Dwelling Units	Population
Existing City 2017 ¹	52,807	157,820
Proposed Specific Plan ²	1,700	5,457
Total City (including Project)	54,507	163,277
SCAG 2016 RTP		
SCAG 2035 Forecasts ^{3,4}	67,832	195,800
SCAG 2035 Compared to City (including Project)	-12,875	-35,523
SCAG 2035 Compared to City (including Project) Percentage	-23.6%	-19.9%
Notes:		
1. State of California, Department of Finance, <i>E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark</i> , Sacramento, California, May 2017.		
2. Population projection is based on 3.21 persons per household (State of California, Department of Finance, <i>E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2017, With 2010 Benchmark</i> , Sacramento, California, May 2017).		
3. Southern California Association of Governments, <i>2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction</i> , http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf , accessed July 27, 2017.		
4. Dwelling unit forecasts are based on 2017 vacancy rate.		

PRECEDENT SETTING ACTION

The proposed project would require approval of a General Plan Amendment and Zone Change to allow implementation of the proposed Avanti South Specific Plan; refer to Section 3.0. The Specific Plan’s proposed Land Use Plan and development regulations would apply only to the Specific Plan area; thus, the proposed project would not be considered growth inducing with respect to a precedent-setting action.

DEVELOPMENT OR ENCROACHMENT OF OPEN SPACE

The proposed project would not be growth-inducing with respect to development or encroachment into an isolated or adjacent area of open space. Although the project site is currently undeveloped the project site, with the exception of Avanti West, is located within an area of the City identified by General Plan 2030 as “urbanizing”. The project site is located immediately adjacent to existing and proposed development and would include a mix of residential uses at varying densities, as well as commercial, institutional, and open space/parks uses. Facilities and services are located within the area or can be readily expanded to serve the project site. Development of the project site has been anticipated by General Plan 2030.

SUMMARY

Overall, implementation of the proposed Specific Plan would foster economic expansion and population growth. However, it would not be growth inducing, inasmuch as it would not remove an impediment to growth, would not establish a precedent-setting action, and would not develop or encroach into an isolated or adjacent area of open space. The proposed Specific Plan would not foster significant unanticipated growth in the project area or region, as described above. Development within the project site would not require substantial development of unplanned and unforeseen support uses and services.

6.4 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F require a description (where relevant) of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Appendix F of the CEQA Guidelines provides guidance for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently.

6.4.1 PROJECT ENERGY CONSUMPTION

Energy consumption is analyzed in this EIR due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both project construction and operations.

ELECTRICITY/NATURAL GAS SERVICES

In 2014, the City of Lancaster created Lancaster Choice Energy (LCE), allowing residents and businesses in the City of Lancaster to choose the source of their electricity. LCE provides three plans: Clear Choice (35% renewable energy content), Smart Choice (100% renewable energy content), and Personal Choice (for those who generate solar/wind power). Although residents and businesses are provided with an opportunity to opt out of LCE and remain with Southern California Edison (SCE), most of the City purchases its power from LCE with SCE continuing to deliver the electricity and provide billing, customer service and powerline maintenance and repair.

Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). One MW provides enough energy to power 1,000 average California homes per day. Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

The Southern California Gas Company (SCG) provides natural gas services to Lancaster. Natural gas is a hydrocarbon fuel found in reservoirs beneath the earth's surface and is composed primarily of methane (CH₄). It is used for space and water heating, process heating and electricity generation, and as

transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants that are fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. Nearly 45 percent of the electricity consumed in California was generated using natural gas.⁸ While the supply of natural gas in the United States and production has increased greatly, California produces little, and imports 90 percent of its natural gas.⁹

Electricity and natural gas service is available to locations where land uses could be developed. Lancaster's ongoing development review process includes a review and comment opportunity for privately owned utility companies, including SCE, to allow informed input from each utility company on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

ENERGY USAGE

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,676 trillion BTU in 2015 (the most recent year for which this specific data is available), which equates to an average of 197 million BTU per capita. Of California's total energy usage, the breakdown by sector is 39 percent transportation, 24 percent industrial, 19 percent commercial, and 18 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.¹⁰ In 2016, taxable gasoline sales (including aviation gasoline) in California accounted for 15,297,030,909 gallons of gasoline.¹¹

The electricity consumption attributable to Los Angeles County from 2006 to 2015 is shown in Table 6-6, *Electricity Consumption in Los Angeles County 2006-2015*. As indicated in Table 6-6, energy consumption in Los Angeles County remained relatively constant between 2006 and 2015, with no substantial increase.

The natural gas consumption attributable to nonresidential land uses in Los Angeles County from 2006 to 2015 is shown in Table 6-7, *Natural Gas Consumption in Los Angeles County 2006-2015*. Similar to energy consumption, natural gas consumption in Los Angeles County remained relatively constant between 2006 and 2015, with no substantial increase.

⁸ California Energy Commission, *Supply and Demand of Natural Gas in California*, http://www.energy.ca.gov/almanac/naturalgas_data/overview.html, accessed July 27, 2017.

⁹ Ibid.

¹⁰ EIA (US Energy Information Administration), *California State Profile and Energy Estimates*, updated April 16, 2015, <http://www.eia.gov/state/data.cfm?sid=CA#ConsumptionExpenditures> and https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=US&sid=CA, accessed July 27, 2017.

¹¹ California Board of Equalization, *Net Taxable Gasoline Sales, 2016*, https://www.boe.ca.gov/sptaxprog/reports/mvf_10_year_report.pdf, accessed July 27, 2017.

Table 6-6
Electricity Consumption in Los Angeles County 2006-2015

Year	Electricity Consumption (in millions of kilowatt hours)
2006	70,909
2007	71,227
2008	72,050
2009	69,921
2010	68,227
2011	68,117
2012	69,163
2013	68,364
2014	69,932
2015	69,529

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed July 27, 2017.

Table 6-7
Natural Gas Consumption in Los Angeles County 2006-2015

Year	Natural Gas Consumption (in millions of therms)
2006	3,001
2007	2,990
2008	3,011
2009	2,955
2010	3,124
2011	3,061
2012	2,993
2013	3,129
2014	2,858
2015	2,823

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed July 27, 2017.

GASOLINE/DIESEL FUELS

Automotive fuel consumption in Los Angeles County from 2006 to 2016 is shown in Table 6-8, *Automotive Fuel Consumption in Los Angeles County 2006-2017*, (projections for the year 2017 are also shown). As shown in Table 6-8, on-road automotive fuel consumption in Los Angeles County has declined steadily, since 2006. Heavy-duty vehicle fuel consumption dropped in 2008 and 2009 and has steadily risen.

Table 6-8
Automotive Fuel Consumption in Los Angeles County 2006-2017

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/ Diesel Fuel Consumption (Gallons)
2006	110,537,377	18,166,290
2007	109,386,981	18,372,492
2008	102,440,016	16,283,230
2009	102,492,787	14,803,537
2010	103,227,994	15,030,371
2011	101,165,002	14,443,216
2012	98,999,034	14,195,585
2013	98,670,801	14,592,763
2014	98,964,042	14,999,124
2015	100,012,816	15,796,184
2016	99,786,205	16,366,248
2017 (projected)	98,816,048	16,731,343

Source: California Air Resources Board, EMFAC2014.

6.4.2 REGULATORY SETTING

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process.

STATE OF CALIFORNIA

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

In 1978, the CEC established Title 24, California's energy efficiency standards for residential and non-residential buildings, in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2013, the CEC updated Title 24 standards with more stringent requirements. The 2016 standards substantially reduce electricity and natural gas consumption. Additional savings result from the application of the standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional electricity. These savings are cumulative, doubling as years go by. The 2016 standards have been approved and went into effect on January 1, 2017. California's energy efficiency standards are updated on an approximate three-year cycle.

California Green Building Standards

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water

efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2016 and went into effect January 1, 2017.

CITY OF LANCASTER

Zero Net Energy Home Ordinance

The City of Lancaster adopted the Zero Net Energy (ZNE) Home Ordinance in February 2017. The ZNE Ordinance mandates all builders to install a solar system equal to two watts per square foot for each home built. Developers would have three options available to comply with the City's ZNE requirement: a solar component, mitigation fees in lieu of a solar component, or a combination of both.

The first option is to install a solar component where the size of the system is based on the size of each home constructed (equal to two watts per square foot). This option generates a zero-balance energy bill for the homeowner.

Instead of installing a solar component, the second option is for the builders to pay a Zero Net Energy mitigation/in lieu fee. The mitigation/in lieu fee is equal to \$1.40 per square feet of each constructed home. As a benefit for the homeowner, with this option the homeowner receives credits for the new Lancaster Choice Energy (LCE) ZNE Home Rate. This special rate will provide the homeowner with a 50% discount on the energy generation portion of their LCE bill for 20 years.

The third option is a combination of the two options listed above. Instead of the size of the solar installation being determined by the square footage of the home, builders can install a two kilowatt (2,000 watt) solar system on each new home of 1,000 square feet or less. For larger homes, the builder then pays a ZNE mitigation/in lieu fee of \$1.40 for the remaining square footage of the home. As with option two, the homeowner will receive the LCE ZNE Home Rate (a 50% discount on their generation rate for the next 20 years).

RECENT CEQA LITIGATION

In California, *Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173 ("CCEC"), the Court observed that *CEQA Guidelines* Appendix F lists environmental impacts and mitigation measures that an EIR may include. Potential impacts requiring EIR discussion include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.

5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

6.4.3 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. Because Appendix F does not include specific significance criteria, the following threshold is based on the goal of Appendix F. Therefore, the proposed project would have a significant impact related to energy, if it would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

METHODOLOGY

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development as well as the fuel necessary for project construction. The analysis of electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) greenhouse gas (GHG) emissions modeling, which quantifies energy use for occupancy. The results of the CalEEMod modeling are included in [Appendix C, Air Quality/Greenhouse Gas Emissions Data](#). Modeling was based primarily on the default settings in the computer program for Los Angeles County (Mojave Desert Air Basin). The amount of operational fuel use was estimated using the California Air Resources Board's Emissions Factor 2014 (EMFAC2014) computer program, which provides projections for typical daily fuel usage in the Mojave Desert portion of Los Angeles County. The results of EMFAC2014 modeling and construction fuel estimates are included in [Appendix C](#).

Energy consumption impacts are analyzed below according to topic.

6.4.4 ENERGY CONSUMPTION

The project's estimated energy consumption is summarized in [Table 6-9, Energy Consumption](#). As shown in [Table 6-9](#), the electricity usage as a result of the project would constitute an approximate 0.02 percent increase over Los Angeles County's typical annual electricity consumption and an approximate 0.02 percent increase in the typical annual natural gas consumption in Los Angeles County. The project-related vehicle fuel consumption would increase the Mojave Desert portion of Los Angeles County's consumption by 3.5 percent.

**Table 6-9
Energy Consumption**

Energy Type	Project Annual Energy Consumption ¹	Los Angeles County Annual Energy Consumption	Percentage Increase Countywide ²
Electricity Consumption	14,120 MWh	69,529,000 MWh	0.02%
Natural Gas Consumption	437,642 therms	2,823,000,000 therms	0.02%
Fuel Consumption			
<ul style="list-style-type: none"> Construction (Heavy-Duty Diesel Vehicle) Fuel Consumption³ 	999 gallons	16,731,343 gallons	0.01%
<ul style="list-style-type: none"> Operational Automotive Fuel Consumption³ 	3,519,158 gallons	98,816,048 gallons	3.5%
Notes: 1. As modeled in CalEEMod version 2016.3.1. 2. The project increases in electricity and natural gas consumption are compared with the total consumption in Los Angeles County in 2016. The project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2017. 3. Project fuel consumption calculated based on CalEEMod results. Countywide (Mojave Desert portion of Los Angeles County) fuel consumption is from the California Air Resources Board EMFAC2014 model.			

CONSTRUCTION-RELATED ENERGY CONSUMPTION

Project construction would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site clearing, grading, and construction. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in [Table 6-9](#) the project's fuel from construction would be 999 gallons, which would increase fuel use in the County by 0.01 percent. As such, project construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, a less than significant impact would occur in this regard.

OPERATIONAL ENERGY CONSUMPTION

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. [Table 6-9](#) provides an estimate of the daily fuel consumed by vehicles traveling to and from the project site. As indicated in [Table 6-9](#), operation of the project is estimated to consume approximately 3,519,158 gallons per of fuel per year, which would increase the Mojave Desert portion of Los Angeles County's automotive fuel consumption by 3.5 percent. The project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses with a network of multi-use trails, bikeways, and multi-purpose pathways, which would reduce vehicle trips and vehicle trip lengths. The project would not result in any unusual characteristics that would result in excessive operational fuel consumption. Fuel consumption associated with project-related vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Electricity Demand

The proposed project would consume energy for interior and exterior lighting, heating/ventilation and air conditioning (HVAC), refrigeration, electronics systems, appliances, and security systems, among other things. The proposed project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators (CCA) to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources, which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. Lancaster has a goal to become the nation's first net-zero city by generating more clean energy than it consumes. In 2014, the City of Lancaster created LCE, allowing residents and businesses in the City of Lancaster to choose the source of their electricity, including an opportunity to opt up to 100% renewable energy. SCE continues to deliver the electricity and provide billing, customer service and powerline maintenance and repair, while customers who choose to participate in this program

would receive power from renewable electric generating private-sector partners at affordable rates.¹² The increase in reliance of such energy resources further ensures the project would not result in the waste of the finite energy resources.

As indicated in Table 6-9, operational energy consumption would represent an approximate 0.02 percent increase in electricity consumption and a 0.02 percent increase in natural gas consumption over the current Countywide usage. The project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards, as well as the project's design features. The project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. Additionally, the project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

CONCLUSION

The project would be subject to compliance with all Federal, State, and local requirements for energy efficiency. As shown in Table 6-9, the increase in electricity and natural gas over existing conditions is minimal. The increase in automotive fuel consumption is approximately 3.5 percent over the Mojave Desert portion of Los Angeles County. The project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses with a network of multi-use trails, bikeways, and multi-purpose pathways, which would reduce vehicle trips and vehicle trip lengths. For the reasons described above, the project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand, or cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation.

¹² Lancaster Choice Energy, <http://www.lancasterchoiceenergy.com/about-lce/>, accessed August 1, 2017.

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SECTION 7.0

Alternatives to the Proposed Project

7.0 ALTERNATIVES TO THE PROPOSED PROJECT

Under CEQA, the identification and analysis of alternatives to a project is a fundamental part of the environmental review process. CEQA Public Resources Code Section 21002.1(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is ... to identify alternatives to the project."

Direction regarding the definition of project alternatives is provided in the CEQA Guidelines as follows:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.¹

The CEQA Guidelines emphasize that the selection of project alternatives be based primarily on the ability to reduce significant effects relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."² The CEQA Guidelines further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are addressed.³

In selecting project alternatives for analysis, potential alternatives must pass a test of feasibility. CEQA Guidelines Section 15126.6(f)(1) states that:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...

Beyond these factors, CEQA Guidelines require the analysis of a "no project" alternative and where the project approvals seek an amendment to the local general plan, an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives.⁴ In addition, CEQA Guidelines Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and discuss the reasons for their rejection.

To provide background regarding the selection or rejection of a project alternative, the discussion below provides a summary of project objectives, in addition to a description of the significant and unavoidable impacts found to occur upon project implementation. An explanation behind each selected project alternative is provided, in addition to a discussion of alternatives that were considered during the scoping process but not selected for further analysis, if any.

¹ CEQA Guidelines Section 15126.6(a).

² CEQA Guidelines Section 15126.6(b).

³ CEQA Guidelines Section 15126.6(f).

⁴ CEQA Guidelines Section 15126.6(e)(2).

Throughout the following analysis, impacts of the alternatives are analyzed for each of the issue areas examined in Section 5.0 of this EIR. In this manner, each alternative can be compared to the proposed action on an issue-by-issue basis.

Table 7-3, Comparison of Alternatives, which is provided at the end of this section, provides an overview of the alternatives analyzed and a comparison of each alternative's impact in relation to the proposed action.

SUMMARY OF PROJECT OBJECTIVES

As stated above, an EIR must only discuss in detail an alternative that is capable of feasibly attaining most of the basic objectives associated with the action, while at the same time avoiding or substantially lessening any of the significant effects associated with the proposed project. Thus, the project's objectives, as provided within Section 3.0, Project Description, are provided below:

- Develop a master planned community that incorporates fundamentals of great neighborhood design by balancing land uses, providing for vehicular and pedestrian mobility, and providing for the preservation/enhancement of recreation and open spaces.
- Identify opportunities for a variety of residential land uses throughout the development, with high and medium density uses located in proximity to commercial, and active adult communities located adjacent to existing single-family neighborhoods.
- Provide a range of residential, commercial, recreational, and business activities and services to the City.
- Distribute commercial uses throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation.
- Implement a circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts.
- Create a network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development.
- Provide a variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas.
- Retain the existing drainage patterns to use as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance.
- Promote the use of green building practices and sustainable development methods throughout the project.
- Implement community design and landscaping elements that complement and are responsive to the Lancaster environment.

SUMMARY OF SIGNIFICANT IMPACTS

The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making. The range of potential alternatives to the proposed project shall also include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Among the factors that may be considered when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). Only locations that would avoid or substantially lessen any of the project's significant effects need be considered for inclusion. An alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative need not be considered.

Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Based on the analysis provided within Section 5.0 of this EIR, the proposed project would result in significant and unavoidable Traffic/Transportation impacts associated with the addition of project-generated trips to CMP freeway segment (south of SR-14 SB On-Ramps south of Avenue L).

7.1 "NO PROJECT/NO DEVELOPMENT" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The No Project/No Development Alternative assumes the Avanti South Specific Plan would not be adopted and the Avanti South (234.3 acres) and Avanti West (73.4 acres) sites would remain in their current conditions as undeveloped land with vegetation consisting of ornamental trees and native annuals, and would not be developed for other uses, including the proposed project. None of the low-, medium-, or high-density housing would be developed, including housing for age-targeted/active adults. Similarly, the neighborhood-serving commercial uses would not be constructed. The school and fire station sites would not be made available for construction of a new school or fire station within the project site. The 31.5 acres of open space/park facilities, including neighborhood and pocket parks, and amenity center, along with open space promenades and the equestrian and Class I multipurpose trail would not be developed. Under this alternative, a new network of residential collectors and local streets and secondary arterials, as well as the proposed drainage and water quality improvements would not be constructed and proposed landscape improvements would not be installed.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics

The short-term visual impacts associated with grading and construction activities that would occur with the proposed project would not occur with the No Project/No Development Alternative. Development of a varied mix of residential, commercial, civic/institutional, open space, and recreational uses within the project area would not occur and the changes in the visual character of the project site and its surroundings would not result. Specifically, the project's proposed 1,375 single-family residential lots, 325 multifamily units, 14 acres of commercial uses, over 31 acres of parks and open space, a recreational

trail network, 12.8-acre elementary school site, and 1.3-acre fire station site would not be constructed and the site would remain vacant with ornamental trees and native annuals. New roadways and associated parkways and landscaping would not be developed and improvements along 70th Street West associated with the Equestrian/Class I trail would not occur. Further, the project's introduction of new light sources in the area would not occur.

The No Project/No Development Alternative would be environmentally superior to the proposed project regarding aesthetics/light and glare, given it would not result in short-term construction impacts and no change in the existing character of the project site and its surroundings, including the introduction of new sources of light and glare would occur.

Air Quality

This Alternative would not result in any construction activities, thus, the project's short-term construction emissions would not occur. The project's less than significant operational emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} generated by mobile, area, and energy sources associated with future development of the Specific Plan would not result. The No Project/No Development Alternative would be environmentally superior to the proposed project regarding air quality emissions, given it would avoid the project's construction emissions and operational emissions involving mobile, area, and energy sources within the Specific Plan area.

Biological Resources

Although not observed on-site, the proposed project has the potential to impact burrowing owl within the project site. Further, prairie falcon and loggerhead shrike have been historically recorded on-site and could be present. Mature trees and vegetation present on-site also has the potential to provide suitable nesting opportunities for avian species. Under this Alternative, potential impacts to these special status wildlife species and migratory birds during the nesting season would be avoided. The No Project/No Development Alternative would be environmentally superior to the proposed project regarding biological resources, given it would avoid construction activities that could impact special status wildlife and migratory birds.

Cultural and Tribal Cultural Resources

Future development within the Specific Plan area could impact unknown historic/archaeological, paleontological, and tribal cultural resources, or human remains. Under this Alternative, these potential construction-related impacts would be avoided. Thus, the No Project/No Development Alternative would be environmentally superior to the proposed project regarding cultural and tribal cultural resources, given it would not result in construction activities potentially resulting in impacts to unknown resources.

Geology and Soils

The City of Lancaster, including the project site, is located within a seismically active region of southern California and is subject to strong seismic groundshaking. Future development associated with implementation of the proposed project would increase residential and non-residential land uses, as well as roadways and other infrastructure within the project area. These uses would be subject to strong seismic ground shaking as well as potential unidentified areas of unstable soils (i.e., liquefaction and hydro-collapse). Construction-related activities associated with future development would also have the

potential for subjecting additional lands to the effects of erosion or loss of topsoil; although these impacts would be less than significant following compliance with the Lancaster Municipal Code requirements, regulatory requirements (e.g., AVAQMD Rule 403 and NPDES requirements), and recommended mitigation measures.

Under this Alternative, no impacts associated with geology and soils would occur, as no future development would result. Exposure of people or structures to seismic ground shaking, unstable soils, and soil erosion would not result. Thus, the No Project/No Development Alternative would be environmentally superior to the proposed project regarding geology and soils.

Greenhouse Gas Emissions

Implementation of the proposed project is expected to result in increased GHG emissions; largely due to increased vehicle miles traveled (VMT), as well as from construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with project implemented would be less than significant. Further, developments would be required to comply with the City of Lancaster's Zero Net Energy (ZNE) Home Ordinance.

Under the No Project/No Development Alternative, no increases in GHG emissions would result, as no new development would occur. Thus, the No Project/No Development Alternative would be environmentally superior to the proposed project regarding GHG emissions.

Hazards and Hazardous Materials

The proposed project would result in the increase in use/generation, transport, and/or disposal of hazardous materials as part of future commercial uses, as well as the potential for accidental conditions during construction and operations of the proposed project. However, compliance with regulatory requirements and implementation of recommended mitigation measures, would reduce potential impacts to less than significant levels. Under this Alternative, no future commercial development would occur. Further, no construction activities with the potential for accidental conditions or potential lane closures during construction (potentially affecting emergency access) would occur. Thus, the No Project/No Development Alternative would be environmentally superior to the proposed project.

Hydrology and Water Quality

Implementation of the proposed project would facilitate the continued urbanization of the area, and would involve increased development, including infrastructure and hardscapes, which could result in hydrology and water quality impacts associated with construction activities and long-term impacts associated with a reduction of permeable surface within the project site and surrounding area. Development of the Avanti South Specific Plan area would increase storm water runoff from the project site. The proposed project would be required to construct drainage facilities to convey and retain runoff within the project site. The proposed development would convey the on-site 25-year design storm via storm drain pipes and convey the remainder of the 50-year design storm via street gutters. The 50-year design storm would be routed to on-site basins to either retain the design volume or detain 85 percent of the pre-development peak flow rate. The proposed storm drain facilities would also provide water quality functions.

Under this Alternative, potential impacts to water quality associated with project construction would not occur, as no development would occur under this Alternative. Similarly, no new drainage facilities would be constructed within the project site and runoff would continue consistent with existing conditions. With this Alternative, the water quality functions that would have been implemented with the proposed project would not occur. Thus, long-term water quality conditions would not be addressed and runoff conditions could impact water quality. Thus, the No Project/No Development Alternative would be environmentally inferior to the proposed project regarding hydrology and water quality. Although construction activities would not occur and new land uses would not be developed, storm water runoff from the site would remain untreated.

Land Use and Planning

Implementation of the Specific Plan would be consistent with SCAG's 2016 RTP/SCS growth projections. The project would contribute to an overall sustainable regional transportation system by providing improved transportation systems within the project area through the extension and connection of existing roadways, sidewalks, pedestrian trails, and bicycle facilities potentially improving air quality and promoting energy efficiency, which is consistent with SCAG's 2016 RTP/SCS goals. Additionally, the project would provide a bus turnout adjacent to the project site that would provide residents and patrons access to regional transportation systems, such as the Lancaster Metrolink Station.

A General Plan Amendment and Zone Change would be required to implement the Specific Plan. The Specific Plan would serve as the regulatory document to guide development of the project site. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

Under this Alternative no population increase associated with new development would occur. This Alternative would not directly conflict with SCAG's 2016 RTP/SCS goals; however, it would not support the multi-modal transportation goals that would be achieved by the proposed project. The No Project/No Development Alternative would not require any General Plan Amendments or Zoning Changes.

The No Project/No Development Alternative would be considered neither environmentally inferior nor superior to the proposed project in this regard.

Noise

The proposed project would result in less than significant short-term construction-related noise and vibration impacts with compliance with the Lancaster Municipal Code and recommended mitigation. Future development would generate increased mobile noise impacts in the project area and surrounding roadways. The traffic noise levels associated with buildout of the Specific Plan would likely exceed the "normally acceptable" land use compatibility thresholds (65 dB CNEL at residential land uses and school classrooms) for Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28. Mobile noise impacts would be significant unless mitigated with construction of noise barriers, which would reduce these impacts to less than significant levels. Operational stationary noise sources associated with the proposed project would be below the City's noise level standards at the nearby sensitive residential receptors.

Under this Alternative, short-term and operational (stationary and mobile) noise impacts would not occur, as no new development would result. When compared to the proposed project, the No Project/No Development Alternative would be environmentally superior regarding noise impacts.

Public Services and Utilities

Implementation of the proposed project would result in increased development, placing greater demand on public services and utilities. Development of the Specific Plan would involve future development of a fire station facility, or payment of fair share fees should the fire station not be developed. Project implementation would also include a 12.8-acre elementary school site within the Avanti South portion of the Specific Plan to serve the project area and would be offered to Westside Union School District (Westside). Provision of the school site and/or payment of school mitigation fees in compliance with SB 50, would ensure that project implementation would result in a less than significant impact to schools serving the project area.

The Avanti South SP also proposes 31.5 acres of neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail incorporated into the edge of the proposed drainage facilities to serve residents of the project site. In addition to parkland, open space areas would be incorporated throughout the project area. Promenade areas (widened and enhanced medians) would be provided in some of the project streets. The promenades would be 60 feet wide and include a multipurpose trail, seating, landscaping, and fitness course stations. An Equestrian/Class I trail would be located on 70th Street. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City's planned equestrian and Class I multipurpose trail. Drainage facilities totaling 8.6 acres would serve drainage, water quality, and trail functions. The edge of the facilities would incorporate a multipurpose trail and interpretive signage. Further, Lancaster Municipal Code Section 15.64.090, Park Acquisition Fee, and Section 15.64.100, Park Development Fee, impose a fee on all new residential development in order to mitigate the impacts on the availability of open space land and park and recreational facilities and ensure adequate park, recreation and open space facilities are provided throughout the City.

Development of the Specific Plan area would also result in the construction of appropriate water infrastructure, water supplies, wastewater infrastructure and treatment facilities, and solid waste services (including adequate landfill capacity).

This Alternative would result in no increases in the need for fire and police protection services, schools, and parks and recreational facilities when compared to the proposed project. However, it is acknowledged that under this alternative, a new school and fire station would not be constructed, and 31.5 acres of neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail would not be developed. Thus, this Alternative would not contribute to improving the existing school facility deficiencies that occur within Westside; nor would this Alternative contribute to improving the park/open space deficiencies that occur within the area. Thus, this Alternative would be considered environmentally inferior to the proposed project in this regard.

Transportation/Traffic

Existing peak hour traffic conditions were evaluated in the *Traffic Study*; refer to [Section 5.12, Transportation/Traffic](#). All study intersections are currently operating at an acceptable LOS except for (#10) SR-14 NB Ramp/Avenue K, which is currently operating at a LOS E in both the AM and PM peak

hours. All roadway segments are operating at an acceptable LOS except for Avenue L from 45th Street to 40th Street West, which is currently operating at an LOS F. CMP intersections are currently operating at an acceptable LOS except for (#11) SR-14 NB ramps and Avenue K, which is currently operating at LOS D. Additionally, four freeway segments are operating at an unacceptable LOS under existing conditions: North of SR-14 NB On-Ramps North of Avenue K (PM peak hour); North of SR-14 SB Off-Ramps North of Avenue K (AM peak hour); South of SR-14 SB On-Ramps South of Avenue L (PM peak hours); and South of SR-14 NB Off-Ramps South of Avenue L (AM peak hour). With the addition of project-generated trips several additional intersections and roadway segments would operate at an unacceptable LOS and result in a significant impact. The project's fair share contribution to recommended improvements would mitigate the project impacts. However, the addition of project-generated trips to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would result in a significant and unavoidable impact.

The project would provide transit, pedestrian, and bicycle facilities within the project area. More specifically, the project proposes a bus turn-out of Avenue L at 65th Street West. Thus, project implementation would provide improved opportunities for people to access the project area and utilize public transportation. Further, proposed and existing Class II bike lanes would connect the Specific Plan area with the bus route. The Specific Plan would also incorporate a network of on- and off-street trails to promote access and walkability throughout the project site. The system provides for bicycles, pedestrians, and equestrians. Sidewalks and traffic calming measures would also be incorporated to improve pedestrian safety and accessibility throughout the site and surrounding areas.

The increase in traffic associated with the proposed project would not occur with this Alternative since no development would occur. Therefore, this Alternative would not result in any impacts to intersections and roadway segments, including CMP and Caltrans facilities. The significant and unavoidable impact to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would not occur. The transit, pedestrian, and bicycle facilities proposed by the project would also not be implemented.

The No Project/No Development Alternative would be environmentally superior to the proposed project regarding traffic and circulation, given it would result in no traffic impacts at intersections, roadways, CMP, or Caltrans' facilities and the significant and unavoidable freeway segment impact would be avoided.

ABILITY TO MEET PROJECT OBJECTIVES

The No Project/No Development Alternative would not meet any of the project objectives. With this Alternative, development of a master planned community would not be developed. Consideration of neighborhood design with balancing land uses, increased vehicular and pedestrian mobility, and preservation/enhancement of recreation and open spaces would not be made. This Alternative would not identify opportunities for a variety of residential land uses throughout the development, with high and medium density uses located in proximity to commercial, and active adult communities located adjacent to existing single-family neighborhoods. This Alternative would not provide a range of residential, commercial, recreational, and business activities and services to the City. Commercial uses would not be distributed throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation. A circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts would not be implemented. A network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development would not be created. A variety of recreational

opportunities incorporating a comprehensive trail system, parks, and recreational areas would not be developed. Although the existing drainage patterns would be retained, these areas would not be used as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance. Green building practices and sustainable development methods would not be promoted throughout the project. Last, community design and landscaping elements would not be implemented that complement and are responsive to the Lancaster environment.

7.2 “NO PROJECT/EXISTING GENERAL PLAN AND ZONING” ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The “No Project/Existing General Plan and Zoning” Alternative proposes development of what would reasonably be expected to occur in the foreseeable future, based on the site’s current General Plan land use and Zoning designations. The City of Lancaster General Plan 2030 (General Plan 2030) Land Use Map, designates Avanti South as Urban Residential (2.1-6.5 dwelling units/acre (du/ac)) with a Specific Plan (SP) Overlay and Avanti West as Non-Urban Residential (0.4-2.0 dwelling units/acre). The Zoning Map of the City of Lancaster (Zoning Map) identifies the zoning for Avanti South as Specific Plan (SP) and for Avanti West as RR-2.5 (Rural Residential of 1 unit/2.5 acres).

This Alternative assumes development of Avanti South would occur consistent with the Urban Residential land use designation and SP zoning, resulting in adoption of a Specific Plan and development of up to 1,523 dwelling units; refer to [Table 7-1, No Project/Existing General Plan and Zoning Alternative Development Potential](#). This Alternative assumes the Specific Plan for Avanti South would provide development regulations and design guidelines to provide for compatible and consistent development of a mix of single-family housing units along with the infrastructure necessary to serve the development, including residential collectors and local streets, as well as pedestrian improvements and landscaping. Similarly, development of Avanti West would occur consistent with the Non-Urban Residential land use designation and RR-2.5 zoning, resulting in up to 29 dwelling units. Avanti West would be developed consistent with the Lancaster Municipal Code, including the provision of the necessary infrastructure to serve the development and local streets.

**Table 7-1
No Project/Existing General Plan and Zoning Alternative Development Potential**

Project Site	Acres	Density	Dwelling Units
Avanti South	234.3	6.5 du/acre	1,523
Avanti West	73.4	1 du/2.5 acres	29
Total			1,552

Since the proposed project would result in 340 dwelling units at Avanti West and 1,360 dwelling units at Avanti South (for a total of 1,700 dwelling units), the No Project/ Existing General Plan and Zoning Alternative would result in a net decrease of 148 dwelling units within the Specific Plan area, compared to the proposed project. As there would be less dwelling units constructed, it is assumed that fewer parks/open space would be constructed and no new fire station, amenity center, or school would be built

within the Specific Plan area. Under this Alternative, the project's proposed 213,600 square feet of commercial uses would not be constructed.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics

The short-term visual impacts associated with grading and construction activities that would occur with the proposed project would also occur with the No Project/Existing General Plan and Zoning Alternative, although to a lesser extent. Development of the existing General Plan and Zoning land uses would result in the construction of 148 fewer dwelling units and the project's 213,600 square feet of commercial uses would not be constructed. Therefore, the project's construction-related impacts to the visual character/quality of the project site and its surroundings would be decreased under this Alternative. This Alternative would likely result in similar building heights within Avanti South associated with the low- and medium-density residential development proposed with the project. However, overall building heights would be reduced, as development of high density and commercial development would not occur. Thus, the potential for view obstruction of Portal Ridge for motorists, bicyclists, and pedestrians would be reduced.

Development associated with this Alternative would include 148 fewer dwelling units, fewer parks/open space, no new school or fire station facilities, and no commercial development, compared to the proposed project. Similar to the proposed project, with compliance with applicable design standards and regulations, as well as the City's design review process, less than significant impacts to the area's visual character/quality and light/glare would result. Development of the Avanti South portion of the site would be regulated by a Specific Plan that would include Development Regulations and Design Guidelines to ensure compatible development within Avanti South. Although landscaping and open space/park amenities would be required, the mix of uses would not occur within this Alternative, as fewer residential densities and no commercial development would occur.

In conclusion, the No Project/Existing General Plan and Zoning Alternative would be neither environmentally superior nor inferior to the proposed project regarding aesthetics/light and glare.

Air Quality

Future development is subject to the AVAQMD District Rules, particularly those involving visible emissions and fugitive dust generated at future construction sites by requiring dust abatement measures. As part of these District Rules, all trucks hauling excavated or graded material would be required to comply with State Vehicle Code Section 23114 regarding the prevention of such material spilling onto public streets. Future construction contractors would also be required to adhere to limits for volatile organic compounds from architectural coatings. This Alternative would still result in air quality impacts during construction, although to a lesser extent than the project due to the lower development potential.

The operational emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} generated by mobile, area, and energy sources associated with future development of the Specific Plan would still exist with development of this Alternative, although to a lesser extent than the project. Mobile source emissions would be reduced since this Alternative would result in 148 fewer residential units and 213,600 square feet fewer commercial space.

Thus, the No Project/Existing General Plan and Zoning Alternative would be environmentally superior to the proposed project regarding air quality emissions, given it would decrease construction emissions and operational emissions involving mobile, area, and energy sources within the project area.

Biological Resources

Although not observed on-site, the proposed project has the potential to impact burrowing owl with the project site. Further, prairie falcon and loggerhead shrike have been historically recorded on-site and could be present. Mature trees and vegetation present on-site also has the potential to provide suitable nesting opportunities for avian species. Under this Alternative, similar less than significant impacts to biological resources would result compared to the proposed project, as development of this Alternative would result in a similar area of disturbance as the project. Thus, the No Project/Existing General Plan and Zoning Alternative would be neither environmentally superior nor inferior to the proposed project regarding biological resources, given it would impact a similar area of disturbance.

Cultural and Tribal Cultural Resources

Future development within the project area could impact unknown historic/archaeological, paleontological, and tribal cultural resources, or human remains. Under this Alternative, similar less than significant impacts to historical, archeological, and tribal cultural resources as well as human remains would result, compared to the proposed project, as development would result in a similar area of disturbance as the project. Thus, the No Project/Existing General Plan and Zoning Alternative would be neither environmentally superior nor inferior to the proposed project regarding cultural and tribal cultural resources, given it would impact a similar area of disturbance.

Geology and Soils

The City of Lancaster, including the project site, is located within a seismically active region of southern California and is subject to strong seismic groundshaking. Future development associated with implementation of the proposed project would increase residential and non-residential land uses, as well as roadways and other infrastructure within the project area. These uses would be subject to strong seismic ground shaking as well as potential unidentified areas of unstable soils (i.e., hydro-collapse). Construction-related activities associated with future development would also have the potential for subjecting additional lands to the effects of erosion or loss of topsoil. Following compliance with the Lancaster Municipal Code requirements, regulatory requirements (e.g., AVAQMD Rule 403 and NPDES requirements) and recommended mitigation measures, project implementation would result in less than significant impacts involving the exposure of persons or structures to seismic ground shaking, potential exposure to unstable soils, and increased effects of erosion or loss of topsoil during construction.

Under this Alternative, similar impacts associated with geology and soils would occur, as the same land area would be developed. However, this Alternative would result in slightly reduced impacts associated with the potential exposure of persons or structures to seismic ground shaking and unstable soils, due to the decreased development and resulting population that would be exposed to these geological conditions. Although slightly reduced exposure, the No Project/Existing General Plan and Zoning Alternative would be neither environmentally superior nor inferior to the proposed project regarding geology and soils.

Greenhouse Gas Emissions

Implementation of the Specific Plan is expected to result in increased GHG emissions; largely due to increased VMT, as well as from construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with future developments include CO₂, N₂O, and CH₄. The total net GHG emissions that could occur as a result of project implementation are 67,349.76 MTCO₂eq/yr, which is below the 100,000 MTCO₂eq/yr AVAQMD threshold. GHG emissions associated with project implemented would be less than significant. Further, developments would be required to comply with the City of Lancaster's Zero Net Energy (ZNE) Home Ordinance. The project would also comply with AB 32, the AVAQMD *California Environmental Quality Act and Federal Conformity Guidelines*, and the most recent CBC, including the CALGreen Code (Title 24, Part 11).

Under this Alternative, impacts involving GHG emissions would be decreased, as development would result in 148 fewer dwelling units and 213,600 square feet less of commercial uses, when compared to the proposed project. Thus, the overall GHG emissions would be reduced, compared to the proposed project. The No Project/Existing General Plan and Zoning Alternative would be environmentally superior to the proposed project regarding GHG emissions, given it would result in lower GHG emissions within the Specific Plan area.

Hazards and Hazardous Materials

The proposed project would result in the increase in use/generation, transport, and/or disposal of hazardous materials as part of future commercial uses, as well as the potential for accidental conditions during construction and operations of the proposed project. However, compliance with regulatory requirements and implementation of recommended mitigation measures, would reduce impacts to less than significant levels. Under this Alternative, similar less than significant impacts involving hazards and hazardous materials during construction would occur, as this Alternative would result in similar construction activities within the site. However, the long-term operations involving storage and handling of hazardous materials and maintenance of potential underground and aboveground storage tanks would result in reduced impacts, as this Alternative would result in no commercial development at the project site. Thus, the No Project/Existing General Plan and Zoning Alternative would be environmentally superior to the proposed project regarding hazards and hazardous materials.

Hydrology and Water Quality

Implementation of the proposed project would facilitate the continued urbanization of the area, and would involve increased development, including infrastructure and hardscapes, which could result in hydrology and water quality impacts associated with construction activities and long-term impacts associated with a reduction of permeable surface within the project site and surrounding area. Development of the Avanti South Specific Plan would increase storm water runoff from the project site. The project would be required to construct drainage facilities to convey and retain runoff within the project site. The proposed development would convey the on-site 25-year design storm via storm drain pipes and convey the remainder of the 50-year design storm via street gutters. The 50-year design storm would be routed to on-site basins to either retain the design volume or detain 85 percent of the pre-development peak flow rate. The proposed storm drain facilities would also provide water quality functions.

Under this Alternative, similar less than significant impacts to hydrology and water quality would occur, as development of the existing General Plan land uses and Zoning within the project area would be required to convey and retain/detain stormwater consistent with the pre-development peak flow rate. However, it is acknowledged that potential water quality impacts may be slightly decreased as a result of the decreased development potential and lack of commercial development associated with this Alternative. The No Project/Existing General Plan and Zoning Alternative would be neither environmentally superior nor inferior to the proposed project regarding hydrology and water quality.

Land Use and Planning

Implementation of the Specific Plan would be consistent with SCAG's 2016 RTP/SCS growth projections. The project would contribute to an overall sustainable regional transportation system by providing improved transportation systems within the project area through the extension and connection of existing roadways, sidewalks, pedestrian trails, and bicycle facilities potentially improving air quality and promoting energy efficiency, which is consistent with SCAG's 2016 RTP/SCS goals. Additionally, the project would provide a bus turnout adjacent to the project site that would provide residents and patrons access to regional transportation systems, such as the Lancaster Metrolink Station.

General Plan and Zoning amendments would be required to implement the Specific Plan. The Specific Plan would serve as the regulatory document to guide development of the project site. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

Development under this Alternative would also be consistent with SCAG's 2016 RTP/SCS growth projections and would not directly conflict with SCAG's 2016 RTP/SCS goals. However, this Alternative would not support the multi-modal transportation goals to the extent of the proposed project.

Although a Specific Plan would be required for Avanti South, this Alternative would not require any General Plan Amendments or Zone Changes, as Avanti South is designated as UR with a SP Overlay. The Specific Plan would establish the regulatory framework for the development of Avanti South. It would be required to include a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

The No Project/Existing General Plan and Zoning Alternative would be environmentally superior to the proposed project in this regard.

Noise

The proposed project would result in less than significant short-term construction-related noise and vibration impacts upon compliance with the Lancaster Municipal Code and recommended mitigation. Future development would generate increased mobile noise impacts in the project area and surrounding roadways. The traffic noise levels associated with buildout of the Specific Plan would likely exceed the "normally acceptable" land use compatibility thresholds (65 dB CNEL at residential land uses and school classrooms) for Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28. Mobile noise impacts would be significant unless mitigated with construction of noise barriers, which would reduce these

impacts to less than significant levels. Operational stationary noise sources associated with the proposed project would be below the City's noise level standards at the nearby sensitive residential receptors.

Under this Alternative, short-term and operational (stationary and mobile) noise impacts would be reduced, as development of this Alternative would result in 148 fewer dwelling units and 213,600 square feet less commercial development, when compared to the project. Further, neither a school nor fire station would not be constructed in the Specific Plan area. When compared to the proposed project, the No Project/Existing General Plan and Zoning Alternative would be environmentally superior regarding noise impacts, given it would result in fewer construction-related, mobile, and stationary noise sources within the project area.

Public Services and Utilities

Implementation of the proposed project would result in increased development, placing greater demand on public services and utilities. Development of the Specific Plan area would involve future development of a fire station facility, or payment of fair share fees should the fire station not be developed. Project implementation would also include a 12.8-acre elementary school site within the Avanti South portion to serve the project area and would be offered to Westside Union School District (Westside). Provision of the school site and/or payment of school mitigation fees in compliance with SB 50, would ensure that project implementation would result in a less than significant impact to schools serving the project area.

The Avanti South SP also proposes 31.5 acres of neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail incorporated into the edge of the proposed drainage facilities to serve residents of the project site. In addition to parkland, open space areas would be incorporated throughout the project area. Promenade areas (widened and enhanced medians) would be provided in some of the project streets. The promenades would be 60 feet wide and include a multipurpose trail, seating, landscaping, and fitness course stations. An Equestrian/Class I trail would be located on 70th Street. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City's planned equestrian and Class I multipurpose trail. Drainage facilities totaling 8.6 acres would serve drainage, water quality, and trail functions. The edge of the facilities would incorporate a multipurpose trail and interpretive signage. Further, Lancaster Municipal Code Section 15.64.090, Park Acquisition Fee, and Section 15.64.100, Park Development Fee, impose a fee on all new residential development to mitigate the impacts on the availability of open space land and park and recreational facilities and ensure adequate park, recreation and open space facilities are provided throughout the City.

Development of the Specific Plan would also result in the construction of appropriate water infrastructure, water supplies, wastewater infrastructure and treatment facilities, and solid waste services (including adequate landfill capacity).

This Alternative involves less development when compared to the proposed project. Therefore, this Alternative would result in a decrease in impacts to fire and police protection services, schools, libraries and parks and recreational facilities when compared to the proposed project. Additionally, the decrease in development with this Alternative would result in reduced demand for water and wastewater and solid waste generation when compared to the proposed project. However, it is acknowledged that under this Alternative, no new school or fire station would be constructed and fewer park/open space would be developed. Thus, development of this Alternative would not contribute to improving the existing school facilities deficiencies that occur within Westside. Development under this Alternative would be required to comply with the Lancaster General Plan and Municipal Code to ensure adequate services and utilities

are available to serve the development being proposed and payment of any mitigation fees. Although these impacts would be slightly decreased under this Alternative, the No Project/Existing General Plan and Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Transportation/Traffic

Existing peak hour traffic conditions were evaluated in the *Traffic Study*; refer to Section 5.12, Transportation/Traffic. All study intersections are currently operating at an acceptable LOS except for (#10) SR-14 NB Ramp/Avenue K, which is currently operating at a LOS E in both the AM and PM peak hours. All roadway segments are operating at an acceptable LOS except for Avenue L from 45th Street to 40th Street West, which is currently operating at an LOS F. CMP intersections are currently operating at an acceptable LOS except for (#11) SR-14 NB ramps and Avenue K, which is currently operating at LOS D. Additionally, four freeway segments are operating at an unacceptable LOS under existing conditions: North of SR-14 NB On-Ramps North of Avenue K (PM peak hour); North of SR-14 SB Off-Ramps North of Avenue K (AM peak hour); South of SR-14 SB On-Ramps South of Avenue L (PM peak hours); and South of SR-14 NB Off-Ramps South of Avenue L (AM peak hour). With the addition of project-generated trips several additional intersections and roadway segments would operate at an unacceptable LOS and result in a significant impact. The project's fair share contribution to recommended improvements would mitigate the project impacts. However, the addition of project-generated trips to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would result in a significant and unavoidable impact.

The project would provide transit, pedestrian, and bicycle facilities within the project area. More specifically, the project proposes a bus turn-out of Avenue L at 65th Street West. Thus, project implementation would provide improved opportunities for people to access the project area and utilize public transportation. Further, proposed and existing Class II bike lanes would connect the Specific Plan area with the bus route. The Specific Plan would also incorporate a network of on- and off-street trails to promote access and walkability throughout the project site. The system provides for bicycles, pedestrians, and equestrians. Sidewalks and traffic calming measures would also be incorporated to improve pedestrian safety and accessibility throughout the site and surrounding areas.

This Alternative would involve less development when compared to the proposed project. Although less development would occur, traffic impacts would be similar to the proposed project, as this Alternative would result in greater single-family residential development, which generates more vehicle trips, and would not provide for a mix of land uses that encourage trip reductions. The significant and unavoidable impact to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would occur under this Alternative, similar to the project. The Specific Plan required for Avanti South would incorporate pedestrian and bicycle facilities, but not to the extent as with the proposed project.

The No Project/Existing General Plan and Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

ABILITY TO MEET PROJECT OBJECTIVES

The No Project/Existing General Plan and Zoning Alternative would not meet all the project objectives. With this Alternative, development of a master planned community within Avanti South would occur, as a Specific Plan would be required, which would consider neighborhood design; however balanced land uses that provide for vehicular and pedestrian mobility, and provide for the preservation/enhancement

of recreation and open spaces would not occur to the extent of the project. This Alternative would not identify opportunities for a variety of residential land uses throughout the development, with high and medium density uses located in proximity to commercial, and active adult communities located adjacent to existing single-family neighborhoods. This Alternative would not provide a range of residential, commercial, recreational, and business activities and services to the City. Commercial uses would not be distributed throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation. A circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts would not be implemented. A network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development would not be created. A variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas may occur within Avanti South; however, not to the extent of the project. Although the existing drainage patterns would be retained, these areas would not be used as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance. Green building practices and sustainable development methods would likely be promoted throughout the project with this Alternative. Further, community design and landscaping elements would be implemented that complement and are responsive to the Lancaster environment.

7.3 “REDUCED DENSITY” ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The “Reduced Density” Alternative assumes development of the project, as proposed, apart from Planning Areas (PA) 27 and 28, which would be developed as Medium Density Residential (MDR) at an average density of 8.0 du/acre; refer to [Table 7-2, Reduced Density Alternative Compared to Proposed Project](#), and [Exhibit 7-1, Reduced Density Alternative](#).

**Table 7-2
Reduced Density Alternative Compared to Proposed Project**

Land Use	Proposed Project		Reduced Density Alternative	
	Acres	Dwelling Units/ Square Feet	Acres	Dwelling Units/ Square Feet
Low Density Residential (LDR)	93	566	93	566
Medium Density Residential (MDR)	102.4	809	119.4	1,285
High Density Residential (HDR)	14.3	325	--	--
Commercial	14.0	213,600	11.3	171,980
Open Space/Parks	31.5	--	31.5	--
School	12.8	--	12.8	--
Fire Station	1.3	--	1.3	--
Total	269.3	1,700 du 213,600 sf	269.3	1,511 du 171,980 sf



Source: Kimley-Horn, August 2017.

NOT TO SCALE

Michael Baker
INTERNATIONAL



11/17 | JN 153750

AVANTI SOUTH SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

Reduced Density Alternative

Exhibit 7-1

Under this Alternative, up to 1,511 units of low- and medium-density housing would be developed, including housing for age-targeted/active adults; no High Density Residential (HDR) development would occur. Approximately 171,980 square feet of neighborhood-serving commercial uses would be constructed within PAs 12, 26, and 29. Comparatively, the Reduced Density Alternative would result in a net decrease of 189 dwelling units and 41,620 square feet fewer commercial development within the Specific Plan area, compared to the proposed project. The school and fire station sites would continue to be made available for construction of a new school and fire station within the project site. The 31.5 acres of open space/park facilities, including neighborhood and pocket parks, and amenity center, along with open space promenades and the equestrian and Class I multipurpose trail would be developed. A new network of residential collectors and local streets and secondary arterials, as well as the proposed drainage and water quality improvements would also be constructed and proposed landscape improvements would be installed.

This Alternative would require adoption of the Avanti South Specific Plan; a General Plan Amendment to amend the General Plan Land Use Map to change the land use designations for Avanti West to UR with a SP overlay and for Avanti South from UR with a SP overlay to Mixed-Use (MU) with a SP overlay and Public-School; and a Zone Change to amend the Lancaster Zoning Map to change the zoning for Avanti West from RR-2.5 to SP 15-02 and to change the zoning for the proposed School site to School. The remainder of Avanti South would not require a zone change; however, it would be designated as SP 15-02 to reflect the Avanti South Specific Plan.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics

The short-term visual impacts associated with grading and construction activities that would occur with the proposed project would also occur with the Reduced Density Alternative, although to a lesser extent. Development of the Reduced Density Alternative land uses would result in the construction of 189 fewer dwelling units and 41,620 square feet fewer commercial uses. Therefore, the project's construction-related impacts to the visual character/quality of the project site and its surroundings would be decreased under the Reduced Density Alternative. Further, this Alternative would result in potential building heights ranging from 35 to 60 feet, rather than the project's proposed range of building heights, from a maximum of 35 feet to 72 feet in height. The project would concentrate building heights along Avenue L, whereas this Alternative would concentrate heights at the intersections of Avenue L/65th Street West and Avenue K-4/65th Street West. Thus, as building heights would be slightly reduced and concentrated, potential view impacts associated with the project would also be slightly reduced.

Development under this Alternative would result in 189 fewer dwelling units and 41,620 square feet fewer commercial uses, compared to the proposed project. However, similar development of park/open space uses and construction of a new school and fire station would occur. Development of this Alternative would require compliance with applicable design standards and regulations, as well as the City's design review process. The project's proposed Specific Plan regulatory framework, including Development Regulations and Design Guidelines for a compatible mixed-use development, neighborhood serving commercial uses, and a variety of park and recreation amenities, would still be developed. Thus, implementation of this Alternative would result in similar impacts pertaining to character/quality when compared to the proposed project.

In conclusion, the Reduced Density Alternative would be neither environmentally superior nor inferior to the proposed project regarding aesthetics/light and glare.

Air Quality

Future development is subject to the AVAQMD District Rules, particularly those involving visible emissions and fugitive dust generated at future construction sites by requiring dust abatement measures. As part of these District Rules, all trucks hauling excavated or graded material would be required to comply with State Vehicle Code Section 23114 regarding the prevention of such material spilling onto public streets. Future construction contractors would also be required to adhere to limits for volatile organic compounds from architectural coatings. The Reduced Density Alternative would still result in air quality impacts during construction, although to a lesser extent due to the lower development potential.

The operational emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} generated by mobile, area, and energy sources associated with future development of the Specific Plan would occur with development of this Alternative, although to a lesser extent than the project. Mobile source emissions would be reduced, since this Alternative would result in 189 fewer residential units and 41,620 square feet fewer commercial development.

Thus, the Reduced Density Alternative would be environmentally superior to the proposed project regarding air quality emissions, given it would decrease construction emissions and operational emissions involving mobile, area, and energy sources within the project area.

Biological Resources

Although not observed on-site, the proposed project has the potential to impact burrowing owl with the project site. Further, prairie falcon and loggerhead shrike have been historically recorded on-site and could be present. Mature trees and vegetation present on-site also has the potential to provide suitable nesting opportunities for avian species. Under this Alternative, similar less than significant impacts to biological resources would result compared to the proposed project, as development of the Reduced Density Alternative would result in similar area of disturbance. The Reduced Density Alternative would be neither environmentally superior nor inferior to the proposed project regarding biological resources, given it would have a similar area of disturbance.

Cultural and Tribal Cultural Resources

Future development within the Specific Plan area could impact unknown historic/archaeological, paleontological, and tribal cultural resources, or human remains. Under this Alternative, similar less than significant impacts to historical, archeological, and tribal cultural resources as well as human remains would result, compared to the proposed project, as development associated with this Alternative would result in similar area of disturbance as the project. The Reduced Density Alternative would be neither environmentally superior nor inferior to the proposed project regarding cultural and tribal cultural resources, given it would impact a similar area of disturbance.

Geology and Soils

The City of Lancaster, including the project site, is located within a seismically active region of southern California and is subject to strong seismic groundshaking. Future development associated with

implementation of the proposed project would increase residential and non-residential land uses, as well as roadways and other infrastructure within the project area. These uses would be subject to strong seismic ground shaking as well as potential unidentified areas of unstable soils (i.e., hydro-collapse). Construction-related activities associated with future development would also have the potential for subjecting additional lands to the effects of erosion or loss of topsoil. Following compliance with the Lancaster Municipal Code requirements, regulatory requirements (e.g., AVAQMD Rule 403 and NPDES requirements), and recommended mitigation measures, project implementation would result in less than significant impacts involving the exposure of persons or structures to seismic ground shaking, potential exposure to unstable soils, expansive soils, and increased effects of erosion or loss of topsoil during construction.

Under this Alternative, similar impacts associated with geology and soils would occur, as the same land area would be developed. However, this Alternative would result in slightly reduced impacts associated with the potential exposure of persons or structures to seismic ground shaking and unstable soils, due to the decreased development and resulting population that would be exposed to these geological conditions. Although slightly reduced, the Reduced Density Alternative would be neither environmentally superior nor inferior to the proposed project regarding geology and soils.

Greenhouse Gas Emissions

Implementation of the Specific Plan is expected to result in increased GHG emissions; largely due to increased VMT, as well as from construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with future developments include CO₂, N₂O, and CH₄. The total net GHG emissions that could occur as a result of project implementation are 67,349.76 MTCO₂eq/yr, which is below the 100,000 MTCO₂eq/yr AVAQMD threshold. GHG emissions associated with project implemented would be less than significant. Further, developments would be required to comply with the City of Lancaster's Zero Net Energy (ZNE) Home Ordinance. The project would also comply with AB 32, the AVAQMD *California Environmental Quality Act and Federal Conformity Guidelines*, and the most recent CBC, including the CALGreen Code (Title 24, Part 11).

Under this Alternative, impacts involving GHG emissions would be decreased, as this Alternative would result in 189 fewer dwelling units and 41,620 square feet less commercial development, when compared to the project. Thus, the overall GHG emissions would be reduced, compared to the proposed project. The Reduced Density Alternative would be environmentally superior to the proposed project regarding GHG emissions, given it would result in lower GHG emissions within the Specific Plan area.

Hazards and Hazardous Materials

The proposed project would result in the increase in use/generation, transport, and/or disposal of hazardous materials as part of future commercial uses, as well as the potential for accidental conditions during construction and operations of the proposed project. However, compliance with regulatory requirements and implementation of recommended mitigation measures, would reduce potential hazards and hazardous materials impacts to less than significant levels. Under this Alternative, similar less than significant impacts involving hazards and hazardous materials during construction would occur, as this Alternative would result in similar construction activities within the site. However, the long-term operations involving storage and handling of hazardous materials and maintenance of potential

underground and aboveground storage tanks would result in slightly reduced impacts, as this Alternative would result in 41,620 square feet fewer commercial development. Thus, the Reduced Density Alternative would be environmentally superior to the proposed project regarding hazards and hazardous materials.

Hydrology and Water Quality

Implementation of the proposed project would facilitate the continued urbanization of the area, and would involve increased development, including infrastructure and hardscapes, which could result in hydrology and water quality impacts associated with construction activities and long-term impacts associated with a reduction of permeable surface within the project site and surrounding area. Development of the Avanti South Specific Plan area would increase storm water runoff from the project site. The project would be required to construct drainage facilities to convey and retain runoff within the project site. The proposed development would convey the on-site 25-year design storm via storm drain pipes and convey the remainder of the 50-year design storm via street gutters. The 50-year design storm would be routed to on-site basins to either retain the design volume or detain 85 percent of the pre-development peak flow rate. The proposed storm drain facilities would also provide water quality functions.

Under this Alternative, similar less than significant impacts to hydrology and water quality would occur, as development of this Alternative would be required to convey and retain/detain stormwater consistent with the pre-development peak flow rate. However, it is acknowledged that potential water quality impacts may be slightly decreased as a result of the decreased development potential, which includes a decrease in commercial square footage, associated with this Alternative. The Reduced Density Alternative would be neither environmentally superior nor inferior to the proposed project regarding hydrology and water quality.

Land Use and Planning

Implementation of the Specific Plan would be consistent with SCAG's 2016 RTP/SCS growth projections. The project would contribute to an overall sustainable regional transportation system by providing improved transportation systems within the project area through the extension and connection of existing roadways, sidewalks, pedestrian trails, and bicycle facilities potentially improving air quality and promoting energy efficiency, which is consistent with SCAG's 2016 RTP/SCS goals. Additionally, the project would provide a bus turnout adjacent to the project site that would provide residents and patrons access to regional transportation systems, such as the Lancaster Metrolink Station.

General Plan and Zoning amendments would be required to implement the Specific Plan. The Specific Plan would serve as the regulatory document to guide development of the project site. The Specific Plan proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property.

Development under this Alternative would also be consistent with SCAG's 2016 RTP/SCS growth projections and would not directly conflict with SCAG's 2016 RTP/SCS goals. This Alternative would support the multi-modal transportation goals, similar to the proposed project.

The General Plan and Zoning amendments required for the project, would also be required for this Alternative. The Specific Plan, also being considered as part of this Alternative, proposes a master-planned community and provides a development plan, including a land use plan, parks and open space plan, mobility plan, and infrastructure and public services plan, as well as development standards and design guidelines to guide future development of the property, similar to the proposed project.

The Reduced Density Alternative would be considered neither environmentally inferior nor superior to the proposed project in this regard.

Noise

The proposed project would result in less than significant short-term construction-related noise and vibration impacts with compliance with the Lancaster Municipal Code and recommended mitigation. Future development would generate increased mobile noise impacts in the project area and surrounding roadways. The traffic noise levels associated with buildout of the Specific Plan would likely exceed the “normally acceptable” land use compatibility thresholds (65 dB CNEL at residential land uses and school classrooms) for Planning Areas 1, 3 to 6, 9 to 11, 13 to 15, 18, 19, 22, 24, 25, and 28. Mobile noise impacts would be significant unless mitigated with construction of noise barriers, which would reduce these impacts to less than significant levels. Operational stationary noise sources associated with the proposed project would be below the City’s noise level standards at the nearby sensitive residential receptors.

Under this Alternative, short-term and operational (stationary and mobile) noise impacts would be reduced, as development of this Alternative would result in 189 fewer dwelling units and 41,620 square feet less commercial development, when compared to the project. When compared to the proposed project, the Reduced Density Alternative would be environmentally superior regarding noise impacts, given it would result in fewer construction-related, mobile, and stationary noise sources within the project area.

Public Services and Utilities

Implementation of the proposed project would result in increased development, placing greater demand on public services and utilities. Development of the Specific Plan would involve future development of a fire station facility, or payment of fair share fees should the fire station not be developed. Project implementation would also include a 12.8-acre elementary school site within the Avanti South portion of the Specific Plan to serve the project area and would be offered to Westside Union School District (Westside). Provision of the school site and/or payment of school mitigation fees in compliance with SB 50, would ensure that project implementation would result in a less than significant impact to schools serving the project area.

The Avanti South SP also proposes 31.5 acres of neighborhood parks, pocket parks, an amenity center, and open space, as well as an Equestrian/Class I trail and multipurpose trail incorporated into the edge of the proposed drainage facilities to serve residents of the project site. In addition to parkland, open space areas would be incorporated throughout the project area. Promenade areas (widened and enhanced medians) would be provided in some of the project streets. The promenades would be 60 feet wide and include a multipurpose trail, seating, landscaping, and fitness course stations. An Equestrian/Class I trail would be located on 70th Street. The 1.4-acre easement would be located outside of the road right-of-way and incorporate the City’s planned equestrian and Class I multipurpose trail. Drainage facilities totaling 8.6 acres would serve drainage, water quality, and trail functions. The edge of the facilities would incorporate a

multipurpose trail and interpretive signage. Further, Lancaster Municipal Code Section 15.64.090, Park Acquisition Fee, and Section 15.64.100, Park Development Fee, impose a fee on all new residential development to mitigate the impacts on the availability of open space land and park and recreational facilities and ensure adequate park, recreation and open space facilities are provided throughout the City.

Development of the Specific Plan would also result in the construction of appropriate water infrastructure, water supplies, wastewater infrastructure and treatment facilities, and solid waste services (including adequate landfill capacity).

This Alternative involves less development when compared to the proposed project. Therefore, this Alternative would result in a decrease in impacts to fire and police protection services, schools, libraries and parks and recreational facilities when compared to the proposed project. Notwithstanding, this Alternative would still provide the option for development of a new school and fire station within the Specific Plan area. Additionally, the decrease in development with this Alternative would result in reduced demand for water and wastewater and solid waste generation when compared to the proposed project. Development under this Alternative would be required to comply with the Lancaster General Plan and Municipal Code to ensure adequate services and utilities are available to serve the development being proposed and payment of any mitigation fees. Since the overall impacts would be slightly decreased under this Alternative, the Reduced Density Alternative would be considered environmentally superior the proposed project in this regard.

Transportation/Traffic

Existing peak hour traffic conditions were evaluated in the *Traffic Study*; refer to [Section 5.12, Transportation/Traffic](#). All study intersections are currently operating at an acceptable LOS except for (#10) SR-14 NB Ramp/Avenue K, which is currently operating at a LOS E in both the AM and PM peak hours. All roadway segments are operating at an acceptable LOS except for Avenue L from 45th Street to 40th Street West, which is currently operating at an LOS F. CMP intersections are currently operating at an acceptable LOS except for (#11) SR-14 NB ramps and Avenue K, which is currently operating at LOS D. Additionally, four freeway segments are operating at an unacceptable LOS under existing conditions: North of SR-14 NB On-Ramps North of Avenue K (PM peak hour); North of SR-14 SB Off-Ramps North of Avenue K (AM peak hour); South of SR-14 SB On-Ramps South of Avenue L (PM peak hours); and South of SR-14 NB Off-Ramps South of Avenue L (AM peak hour). With the addition of project-generated trips several additional intersections and roadway segments would operate at an unacceptable LOS and result in a significant impact. The project's fair share contribution to recommended improvements would mitigate the project impacts. However, the addition of project-generated trips to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would result in a significant and unavoidable impact.

The project would provide transit, pedestrian, and bicycle facilities within the project area. More specifically, the project proposes a bus turn-out of Avenue L at 65th Street West. Thus, project implementation would provide improved opportunities for people to access the project area and utilize public transportation. Further, proposed and existing Class II bike lanes would connect the Specific Plan area with the bus route. The Specific Plan would also incorporate a network of on- and off-street trails to promote access and walkability throughout the project site. The system provides for bicycles, pedestrians, and equestrians. Sidewalks and traffic calming measures would also be incorporated to improve pedestrian safety and accessibility throughout the site and surrounding areas.

This Alternative would involve less development when compared to the proposed project. Although less development would occur, traffic impacts would be similar to the proposed project, as this Alternative would result in greater medium-density residential development and would not provide for a mix of land uses that encourage trip reductions to the extent of the project. The significant and unavoidable impact to the south of SR-14 SB On-Ramps south of Avenue L freeway segment would occur under this Alternative, similar to the project. The Reduced Density Alternative would incorporate pedestrian and bicycle facilities, similar to the project.

The Reduced Density Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

ABILITY TO MEET PROJECT OBJECTIVES

The Reduced Density Alternative would meet most, but not all of the project objectives. With this Alternative, development of a master planned community would occur. Consideration of neighborhood design with balancing land uses, increased vehicular and pedestrian mobility, and preservation/enhancement of recreation and open spaces would be made. A circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts would be implemented. A network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development would be created. A variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas would be developed. The existing drainage patterns would be retained and would be used as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance. Green building practices and sustainable development methods would be promoted throughout the project. Community design and landscaping elements would still be implemented that complement and are responsive to the Lancaster environment. Residential uses would be located in proximity to commercial uses, and active adult communities would be sited adjacent to existing single-family neighborhoods.

Although this Alternative would provide a range of residential, commercial, recreational, and business activities and services to the City, this would not occur to the extent of the proposed project (as no high density residential uses would be proposed). Commercial uses would be somewhat distributed throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation. However, this Alternative would result in 41,620 square feet less commercial development to serve the community.

7.4 “ENVIRONMENTALLY SUPERIOR” ALTERNATIVE

The determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the project objectives and how the alternative either reduces significant, unavoidable impacts or substantially reduces the impacts to the surrounding environment. As stated above, CEQA Guidelines Section 15126.6(e), “No Project” Alternative, indicates that “if the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

Table 7-3, Comparison of Alternatives, provides a comparison of the alternatives to the proposed project. Based on the analysis provided above, the No Project/No Development Alternative is the environmentally

superior alternative because it would avoid or lessen most the impacts associated with development of the proposed project.

**Table 7-3
Comparison of Alternatives**

Sections	No Project/ No Development Alternative	No Project/ Existing General Plan and Zoning Alternative	Reduced Density Alternative
Aesthetics	∨	=	=
Air Quality	∨	∨	∨
Biological Resources	∨	=	=
Cultural and Tribal Cultural Resources	∨	=	=
Geology and Soils	∨	=	=
Greenhouse Gas Emissions	∨	∨	∨
Hazards and Hazardous Materials	∨	∨	∨
Hydrology and Water Quality	∧	=	=
Land Use and Planning	=	∨	=
Noise	∨	∨	∨
Public Services and Utilities	∧	=	∨
Transportation/Traffic	∨*	=*	=*
∧ Indicates an impact that is greater than the proposed project (environmentally inferior). ∨ Indicates an impact is less than the proposed project (environmentally superior). = Indicates an impact that is equal to the proposed project (neither environmentally superior nor inferior). * Indicates a significant and unavoidable impact.			

As discussed above, if the “No Project” Alternative is identified as the environmentally superior alternative, an environmentally superior alternative must also be selected amongst the other alternatives. Accordingly, an environmentally superior alternative among the other alternatives is identified and discussed below.

The Reduced Density Alternative would achieve most of the project goals and reduce many of the environmental impacts (although the project’s significant and unavoidable traffic impact would not be avoided). Development of this Alternative would still develop a master planned community. Consideration of neighborhood design with balancing land uses, increased vehicular and pedestrian mobility, and preservation/enhancement of recreation and open spaces would be made. A circulation plan that enhances connectivity with existing General Plan Circulation Element roadways and provides for traffic calming elements such as roundabouts would still be implemented. A network of non-vehicular multi-purpose pathways throughout the development that promotes connectivity to schools, commercial areas, active adult neighborhoods, and recreational facilities, allows for greater mobility for residents, and reduces the use of motor vehicles within the development would be created. A variety of recreational opportunities incorporating a comprehensive trail system, parks, and recreational areas would be developed. The existing drainage patterns would be retained and would be used as open space connections for pedestrian and non-motorized mobility along their edges and for water quality and storm flow conveyance. Green building practices and sustainable development methods would be promoted throughout the project. Community design and landscaping elements would still be implemented that complement and are responsive to the Lancaster environment. Residential uses would be located in

proximity to commercial uses, and active adult communities would be sited adjacent to existing single-family neighborhoods.

Although this Alternative would provide a range of residential, commercial, recreational, and business activities and services to the City, this would not occur to the extent of the proposed project (as no high density residential uses would be proposed). Commercial uses would be somewhat distributed throughout the site to promote the ability to access retail services through non-vehicular modes of travel and de-emphasizes an auto-centric orientation. However, this Alternative would result in 41,620 square feet less commercial development to serve the community.

SECTION 8.0

Effects Found Not To Be Significant

8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

An analysis of the proposed project's effect on specific environmental topic areas, included as part of the Environmental Checklist form presented in CEQA Guidelines Appendix G, was conducted as part of the preparation of this EIR. During this evaluation, certain impacts of the project were found to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. In accordance with CEQA Guidelines Section 15128, the following section provides a brief description of potential impacts found to be less than significant.

AESTHETICS. *Would the project:*

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

No Impact. No designated State scenic highways are present in or near the City of Lancaster.¹ The nearest officially designated State scenic highway is State Route (SR-2) (Angeles Crest Scenic Highway), located on the north side of the San Gabriel Mountains, approximately 9.75 miles to the south of the City. As such, the proposed project would not be visible from SR-2. No impact would occur in this regard.

AGRICULTURE AND FORESTRY RESOURCES. *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The project site is not zoned for agricultural use and is not currently in agricultural production. The Department of Conservation, California Important Farmland Map identifies the project site as Grazing Land, which is described as land on which the existing vegetation is suited to the grazing of livestock.² The project site is not identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

¹ California Department of Transportation, *California Scenic Highway Mapping System*, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed on September 21, 2016.

² California Department of Conservation, *California Important Farmland: 1984-2016, Most Recent*, <https://maps.conservation.ca.gov/dlrp/ciftimeseries/>, accessed on November 2, 2017.

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

No Impact. The project site is not zoned for agricultural use and according to the City of Lancaster 2030 General Plan Master Environmental Assessment (General Plan MEA), there are no properties located within the General Plan study area under Williamson Act Contracts.

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

No Impact. The project site is not zoned as forest land, timberland, or timberland production and does not meet the requirements of a timberland zone as defined by Public Resources Code Section 4526. Therefore, the project would not result in the rezoning of forest land or timberland and no impacts would occur.

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

No Impact. There are no forests within the City of Lancaster. The project site consists of former agricultural lands or undeveloped desert. Therefore, no potential impacts associated with the loss or conversion of forest land would occur.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. Refer to Responses (a) through (d), above.

AIR QUALITY. Would the project:

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

Less Than Significant Impact. Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding.³ The proposed project does not include any uses identified as being associated with odors. In addition, the project would be required to comply with AVAQM Rule 402 (Nuisance), which would reduce odorous emissions from project operations.

Construction activities associated with the proposed project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon construction completion. Any impacts to existing adjacent land uses would be short-term and are considered less than significant.

³ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, revised November 1993.

BIOLOGICAL RESOURCES. *Would the project:*

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

Less Than Significant Impact. The Lancaster 2030 General Plan's Plan for the Natural Environment considers biological resources including objectives, policies, and specific actions for the preservation and maintenance of biological systems. Further, Lancaster Municipal Code Chapter 15.66, Biological Impact Fee, establishes a fee to mitigate biological impacts on a regional basis. As discussed in Section 5.3, *Biological Resources*, the project would not result in a significant impact to biological resources. In addition, the project would be required to pay the applicable fee to mitigate regional impacts to biological resources associated with new development in compliance with the Municipal Code. Thus, the proposed project would not conflict with any local policies or ordinances protecting biological resources. Impacts would be less than significant in this regard.

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

No Impact. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State Habitat Conservation Plans that are applicable to the project site. Therefore, no potential impacts would occur with respect to the proposed project conflicting with the provisions of adopted plans.

GEOLOGY AND SOILS. *Would the project:*

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

i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Less Than Significant Impact. Based on the *Report for Royal Investors Group, LLC Avanti South Project in the Vicinity of Ave. K-8 and 70th St. West, Lancaster, Los Angeles County, California* (Geotechnical Investigation) prepared by Bruin Geotechnical Services, Inc., (February 24, 2016) and included in Appendix F, *Preliminary Geotechnical Investigation*, there are no active faults known to cross the site and the site is not located in an Earthquake Fault Zone. The active San Andreas Fault Zone is located approximately 4.0 miles southwest of the site. Due to the distance of the site from a known active fault zone, impacts associated with potential rupture of a known earthquake fault would be less than significant.

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

Less Than Significant Impact. Regional geologic maps and the exploratory borings conducted during the Geotechnical Investigation indicate that sandy soils, which are generally low in expansion potential, are present at the project site. Laboratory testing further indicated that the soils encountered at the boring

locations were sandy and non-expansive. Thus, expansive soils are not anticipated to be present at the project site and impacts would be less than significant in this regard.

e) *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.*

No Impact. The proposed project would not involve the construction of septic tanks or alternative wastewater disposal systems. Thus, no impact would occur in this regard.

HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*

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

No Impact. According to the *Avanti South Specific Plan Preliminary Hazardous Materials Assessment* (Preliminary Hazardous Materials Assessment), prepared by Michael Baker International (Michael Baker), dated October 3, 2016 (Appendix G, Preliminary Hazardous Materials Assessment), no regulatory properties are reported within the boundaries of the project site. Thus, the project site is not listed per Government Code Section 65962.5 and no impacts would occur in this regard.

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

No Impact. The nearest airport to the project site is the General William J. Fox Airfield, located approximately 4.5 miles to the north and Palmdale Regional Airport, located greater than 6.5 miles to the east. The project site is not located within the airport influence areas for either airport. Thus, no impact would result in this regard.

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

Less Than Significant Impact. The nearest private airstrip (Bohunk's Airpark) is located approximately 1.7-miles northwest of the project site and is no longer an active airfield. Impacts would be less than significant in this regard.

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

Less Than Significant Impact. The project site is not located within an area identified as having high wildland fire potential. The project site is currently undeveloped and there are no wildlands adjacent to the project site or within the surrounding area. The project would not expose people or structures to significant risk involving wildland fires. Future development for the Specific Plan would expose people and structures to potential fire hazards in general. Per the Specific Plan's Development Plan, future development would be required to design all road widths and circulation, as well as the placement of fire hydrants and installation of automatic sprinkler systems, in compliance with the guidance of the Los

Angeles County Fire Department (LACFD). The Specific Plan would also include development of a road system that allows unhindered LACFD access and maneuvering during emergencies. The water systems for all future development would be required to be designed to maintain a minimum fire flow, as required by the LACFD. Compliance with the Specific Plan's Development Plan and LACFD laws and regulations pertaining to fire safety would reduce impacts pertaining to fire hazards to a less than significant level.

HYDROLOGY AND WATER QUALITY. *Would the Project:*

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

Less Than Significant Impact. The project does not propose to install a levee or dam and would have no physical effects on any existing levee or dam as there are no levees or dams in the immediate vicinity. The California Aqueduct is located approximately two miles south of the project site. FEMA reports that the Aqueduct could experience an overflow condition or breach from a major earthquake and spill millions of gallons of water. The distance between the California Aqueduct and the project site would ensure that the proposed project would not be exposed to substantial risk of flooding in the event of such a breach.

The Little Rock Dam is located approximately 17.5 miles southeast of the project site. Failure of the Little Rock dam could result in the inundation of a large area north of the dam, but due to the distance and intervening topography, the project site would not be subject to inundation. As such, the project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding because of the failure of a levee or a dam.

- j) *Result in inundation by seiche, tsunami, or mudflow?*

No Impact. The project site is not located near any steep slopes that could indirectly impact the project by a mudslide. The project site is not located near any large water bodies, including reservoirs, that could result in potential indirect impacts associated with a seiche. The closest water body that has the potential to produce a seiche is the California Aqueduct. Due to the distance to the California Aqueduct from the project site and given the relatively small cross section of the California Aqueduct, the project would not be subject to inundation by seiches associated with the California Aqueduct. Due to the project's distance from the ocean, it would not be subject to a tsunami. Therefore, the project would not be subject to inundation by seiches, tsunami, or mudflow and no impact would occur in this regard.

LAND USE AND PLANNING. *Would the project:*

- a) *Disrupt or physically divide an established community?*

Less Than Significant Impact. The project site is comprised of two sites (Avanti West and Avanti South), both of which are undeveloped and located along the urban edge of the City. The site is located within an area that includes single-family residential, school, commercial, and cemetery uses, as well as large areas of undeveloped land primarily designated for urban residential and non-urban residential uses. Existing roadways provide access to the project site with 70th Street West, serving as the eastern boundary of Avanti West and Avenue L and 70th Street West serving as the southern and western boundaries of Avanti South, respectively. The project proposes a mix of residential uses at varying densities, commercial, and open space/parks uses. A 12.8-acre school site and 1.3-acre fire station site are also proposed along with internal streets. The proposed project would not disrupt or physically divide

an established community, as the project site is currently vacant and primarily surrounded by vacant land. Existing residential development to the south is separated from the project site by Avenue L. Although Avenue K-8 would be extended west from its current terminus to form the northern boundary of Avanti South, Avenue K-8 is already an improved roadway extending through and providing access to the existing residential development east of Avanti South. Thus, the proposed project would not disrupt or physically divide an established community and impacts would be less than significant.

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

No Impact. There are no Habitat Conservation Plans or Natural Community Conservation Plans that are applicable to the project site. Therefore, no potential impacts would occur with respect to the proposed project conflicting with the provisions of these plans.

MINERAL RESOURCES. *Would the project:*

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?*

b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

No Impact. The project site does not contain any known mineral deposits or active mineral extraction operations. The City of Lancaster, and the project site, are not considered likely to have large, valuable mineral and aggregate deposits according to the City of Lancaster 2030 General Plan Master Environmental Assessment (April 2009).

NOISE. *Would the project:*

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

No Impact. The nearest airport to the project site is the General William J. Fox Airfield, located approximately 4.5 miles to the north and Palmdale Regional Airport, located greater than 6.5 miles to the east. The project site is not located within the airport influence areas for either airport. Thus, no impact would result in this regard.

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

Less Than Significant Impact. The nearest private airstrip (Bohunk's Airpark) is located approximately 1.7-miles northwest of the project site and is no longer an active airfield. Impacts would be less than significant in this regard.

POPULATION AND HOUSING. *Would the project:*

- a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*
- b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. The project site does not contain any residential uses. Therefore, the proposed project would not have the potential to displace people or housing and would not require the construction of housing elsewhere.

TRANSPORTATION/TRAFFIC. *Would the project:*

- 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.*

No Impact. The nearest airport to the project site is the General William J. Fox Airfield, located approximately 4.5 miles to the north and Palmdale Regional Airport, located greater than 6.5 miles to the east. The project site would not result in a change in traffic patterns. Thus, no impact would result in this regard.

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

Less Than Significant Impact. The project would result in the construction of new roadways and extension of existing roadways to serve the project site and connect to the surrounding area. The proposed Avanti South Specific Plan includes a Mobility Plan that identifies the proposed vehicular circulation and street hierarchy, including proposed cross sections, to serve the development. Traffic calming measures are also proposed throughout the site including roundabouts to slow traffic. Roadway design, including roundabouts, would be required to comply with the City's design standards and would be reviewed by the Los Angeles County Fire Department to ensure adequate emergency equipment access is provided. Project implementation would not substantially increase hazards due to a design feature or incompatible uses. Impacts would be less than significant in this regard.

- e) *Result in inadequate emergency access.*

Less Than Significant Impact. The project would not result in inadequate emergency access. As discussed above, the project would result in the construction of new roadways and extension of existing roadways to serve the proposed development. All roadways would be designed in accordance with City standards and reviewed by the Los Angeles County Fire Department to ensure adequate emergency access is provided. Further, specific development within the Specific Plan area would be reviewed to ensure that the proposed design allows for adequate access to structures within the site. Impacts would be less than significant in this regard.

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SECTION 9.0

Organizations and Persons Consulted

9.0 ORGANIZATIONS AND PERSONS CONSULTED

LEAD AGENCY

City of Lancaster

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Ms. Jocelyn Swain, Principal Planner

PROJECT APPLICANT

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Mr. Jim Powers, Project Management Consultant
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Ms. Starla Barker, AICP, Project Manager
Ms. Kristen Bogue, Senior Environmental Analyst
Mr. Ryan Chiene, Environmental Analyst
Ms. Jessica Ditto, Environmental Analyst
Mr. Eddie Torres, INCE, Air Quality, Greenhouse Gas Emissions, and Noise
Mr. Achilles Malisos, Air Quality Greenhouse Gas Emissions, and Noise
Mr. Travis McGill, Biologist
Mr. Tom Huang, Senior Traffic Engineer
Ms. Linda Bo, Document Production/Graphics

Cultural and Paleontological Resources Peer Review

SWCA Environmental Consultants

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Mr. John Dietler, Ph.D., RPA, Cultural Resources Principal Investigator

Ms. Alyssa Bell, Ph.D., Paleontology Principal Investigator

Mr. Matthew Wetherbee, MSc., RPA, Cultural Resources Senior Archaeologist

Geotechnical Investigation Peer Review

Ninyo & Moore Geotechnical and Environmental Sciences Consultants

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Mr. Michael Rogers, PG, CEG, Senior Geologist

Mr. Soumitra Guha, PhD, PE, GE, Principal Engineer

SECTION 10.0

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