

County of Los Angeles

Draft Environmental Impact Report

SCH No. 2004021002

Volume I —
Introduction—Section 4.4

LANDMARK VILLAGE

Prepared By:



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NEWHALL RANCH
Newhall Ranch Company

NOVEMBER 2006

DRAFT
ENVIRONMENTAL IMPACT REPORT
for
LANDMARK VILLAGE

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Introduction–Section 4.4

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TABLE OF CONTENTS

Volume I

| Section | Page |
|--|-------|
| INTRODUCTION | I-1 |
| EXECUTIVE SUMMARY | ES-1 |
| 1.0 Project Description..... | 1.0-1 |
| 2.0 Environmental and Regulatory Setting | 2.0-1 |
| 3.0 Cumulative Impact Analysis Methodology | 3.0-1 |
| 4.0 Environmental Impact Analysis | 4.0-1 |
| 4.1 Geotechnical and Soil Resources | 4.1-1 |
| 4.2 Hydrology..... | 4.2-1 |
| 4.3 Water Quality | 4.3-1 |
| 4.4 Biota | 4.4-1 |

Volume II

| | |
|--|--------|
| 4.5 Floodplain Modifications..... | 4.5-1 |
| 4.6 Visual Qualities | 4.6-1 |
| 4.7 Traffic/Access | 4.7-1 |
| 4.8 Noise..... | 4.8-1 |
| 4.9 Air Quality..... | 4.9-1 |
| 4.10 Water Service..... | 4.10-1 |
| 4.11 Wastewater Disposal..... | 4.11-1 |
| 4.12 Solid Waste Services..... | 4.12-1 |
| 4.13 Sheriff Services..... | 4.13-1 |
| 4.14 Fire Protection Services..... | 4.14-1 |
| 4.15 Education | 4.15-1 |
| 4.16 Parks and Recreation..... | 4.16-1 |
| 4.17 Library Services..... | 4.17-1 |
| 4.18 Agricultural Resources..... | 4.18-1 |
| 4.19 Utilities | 4.19-1 |
| 4.20 Mineral Resources | 4.20-1 |
| 4.21 Environmental Safety | 4.21-1 |
| 4.22 Cultural/Paleontological Resources | 4.22-1 |
| 5.0 PROJECT ALTERNATIVES | 5.0-1 |
| 6.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES..... | 6.0-1 |
| 7.0 GROWTH-INDUCING IMPACTS | 7.0-1 |
| 8.0 MITIGATION MONITORING PLAN | 8.0-1 |
| 9.0 LIST OF EIR PREPARERS, AND ORGANIZATIONS AND PERSONS CONSULTED | 9.0-1 |
| 10.0 REFERENCES..... | 10.0-1 |

Volume III

Appendix ES Initial Study, Notice of Preparation, and Responses

Initial Study and Notice of Preparation

Responses to the Initial Study and Notice of Preparation

Appendix 1.0 Project-Level Exhibits

Selected Exhibits and Tables from the Newhall Ranch Specific Plan

Appendix 2.0 Environmental and Regulatory Exhibits

Consistency Analysis

Appendix 3.0 Development Monitoring System Database

DMS Service Provider Reports

Appendix 4.1 Geotechnical and Soil Resources

Geologic and Geotechnical Report, Vesting Tentative Tract 53108, September 27, 2000

EIR-Level Review of Adobe Canyon and Chiquito Canyon Preliminary Bulk Grading Study,
November 14, 2003

Geologic and Geotechnical Report – Addendum No. 1, Response to Comments,
Dated February 10, 2001

Appendix 4.2 Hydrology

Pace Flood Technical Report, August 8, 2006

Newhall Ranch LADPW and County Updated Floodplain and Floodway Studies, May 8, 2006

LADPW Review of NR Santa Clara River HEC-RAS and Fluvial Study, May 9, 2006

Newhall Ranch Santa Clara River Phase I River Fluvial Study, March 2006

Landmark Village Tentative Tract Map 53108, Drainage Concept, Dated September 21, 2005

Off-Site Borrow Areas, Dated September 21, 2005

Off-Site Chiquito Landfill Drainage Concept, Dated September 21, 2005

Volume IV

Appendix 4.3 Water Quality

Water Quality Technical Report

Appendix 4.4 Biological Resources

First Annual Western Spadefoot Toad Habitat Monitoring Report

Bird Surveys Along the Santa Clara River, 2003 Mouth of Castaic Creek Downstream to
Just Below Las Brisas Crossing

Bird Surveys Along a Portion of Castaic Creek Within the Proposed Castaic Mesa Project

Bird Surveys Along a Portion of the Santa Clara River and its Tributaries Upstream from the
Castaic Creek Confluence, Near Valencia, California, 2003

Bird Surveys Along a Portion of the Santa Clara River and its Tributaries Upstream from the
Castaic Creek Confluence, Near Valencia, California, 2002

Landmark Village Oak Tree Report

Landmark Village Oak Tree Report Attachment – Oversize Maps

Results of Focused Surveys for Unarmored Threespine Stickleback and other Special-Status
Fish Species

Bird Surveys Along the Santa Clara River, 2004 Mouth of the Castaic Creek Downstream to
Just Below Las Brisas Crossing

Volume IV (continued)

Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak valley, and
Onion Fields Development Areas, Near Valencia, California
Bird Observations in the Proposed Homestead and Chiquito Areas, Near Valencia, California, 2004
Bird Observations During 2004 at Castaic Junction, an Area on the north Side of the Santa Clara
River at the Junction of SR-126 and I-5
Bird Surveys along a Portion of the Santa Clara River and its Tributaries Upstream from the
Castaic Creek Confluence, Near Valencia California, 2004
Bird Observations for Spring 2004 in the Proposed Mesa East and West Development Near
Valencia, California
Bird Observations in the Proposed Magic Mountain Entertainment Project Area, Near Valencia,
California, 2004
Impact Sciences, Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles
and Amphibians
Compliance Biology, Results of Focused Western Spadefoot Toad Surveys
Compliance Biology, Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic
Reptiles and Amphibians
Ecosciences, Arroyo Toad Letter Report
RECON, Survey for Arroyo Southwestern Toad
Compliance Biology and Bruyera, Results of Butterfly Surveys on the Newhall Ranch Project Site
DUDEK, Sensitive Plant Survey Results 2002
DUDEK, Sensitive Plant Survey Results 2004
DUDEK, Sensitive Plant Survey Results 2005
FLx Sensitive Plant Species Surveys 2002
FLx Sensitive Plant Species Surveys 2004
Rare Plant Surveys
Plant Species Occurring or Potentially Occurring on the Project Site
California Natural Diversity Data Base
DUDEK, Newhall Ranch High Country Specific Management and Salt Creek Area Biological
Resources Technical Report

Appendix 4.5 Floodplain Data

ENTERIX, Focused Special-Status Aquatic Species Assessment

Appendix 4.7 Traffic and Access

Austin-Foust Traffic Impact Analysis, Sept 2004
Austin-Foust SR-126 Traffic Analysis for Piru, April 11, 2006
Austin-Foust Fillmore Traffic Impacts, April 11, 2006
ICU Worksheet for 2006 volumes
Austin-Faust Fire Station Memorandum

Volume V

Appendix 4.7 Traffic and Access (continued)

Land Use Trip Generation Comparison

Long-Range Cumulative (Buildout) Conditions Traffic Forecasts

Appendix 4.8 Noise

Noise Calculations

Appendix 4.9 Air Quality

Localized Significance Threshold Analysis, May 2006

Construction Health Risk Assessment

Newhall Ranch Specific Plan FEIR Air Quality Mitigation Measures

2002 Annual Average Daily Truck Traffic on the California State Highway System

ENVIRON Assessment of the Contributions of Local Emissions Versus Transport to Ozone and Particulate Matter Air Quality in the Santa Clarita Valley, July 19, 2004

Appendix 4.10 Water Service

SB 610 Water Supply Assessment

2005 Urban Water Management Plan

Los Angeles Superior Court Decision on Riverpark

Santa Barbara Superior Court Decision on West Creek

Newhall Ranch Revised Additional Analysis, Vol VIII

Volume VI

Appendix 4.10 Water Service (continued)

Nickel Water Contract Documentation

Nickel Environmental Documentation

The State Water Project Deliverability Reliability Report, Public Review Draft, November 16, 2005

The State Water Project Deliverability Reliability Report 2005, Final April 2006

Water Supply Contracts Between the State of California Department of Water Resources and CLWA including Amendment No. 18 (41,000 Acre-Feet Water Transfer)

Valencia Water Company Water Management Program Approved November 29, 2001, and Related CPUC Decisions

2002 Point of Delivery Agreement (Semitropic Groundwater Banking Program) February 13, 2004

California's Groundwater Bulletin 118, Update 2003, October 2003

CLWA Data Document Providing Economic Justification for Proposed Facility Capacity Fees, April 19, 2003

2004 Santa Clarita Valley Water Report, Dated May 2005

2005 Santa Clarita Valley Water Report, Dated April 2006

Results of Laboratory Testing of Valencia Water Company Wells

CH2MHill Memorandum, Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley, February 22, 2004

CH2MHill Final Report, Regional Groundwater Flow Model for the Santa Clarita Valley (Model Development and Calibration), April 2004

Volume VII

Appendix 4.10 Water Service (continued)

CH2MHill Final Report, Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, December 2004

CH2MHill Memorandum , Analysis of Near-Term Groundwater Capture Areas for Production Wells Located near the Whittaker-Bermite Property, December 21, 2004

Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin Dated August 2005

Volume VIII

Appendix 4.10 Water Service (continued)

CLWA Draft and Final EIRs, Supplemental Water Project Transfer of 41,000 Acre-Feet of State Water Project Table A Amount, Dated June 2004

CLWA Draft Report, Recycled Water Master Plan, May 2002 and CLWA Resolution Regarding Availability of Recycled Water, Approved May 28, 2003

Impact and Response to Perchlorate Contamination, Valencia Water Company Well Q2, Dated April 2005

Groundwater Management Plan, Santa Clara River Valley Groundwater Basin, Dated December 2003

Memorandum of Understanding Between the Santa Clara River Valley Upper Basin Water Purveyors and United Water Conservation District, August 2001

Newhall Ranch Litigation, Statement of Decision, August 1, 2000

Slade, 2001 Update Report Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems Dated July 2002

Interim Remedial Action plan Dated December 2005

Valencia Water Company Letter to Impact Sciences, March 8, 2006

Luhdorf & Scalmanini Technical Memorandum: Evaluation of Groundwater Recharge Methods for the Saugus Formation in the Newhall Ranch Specific Plan Area, March 8, 2006

Luhdorf & Scalmanini Technical Memorandum: Potential Capture of Perchlorate Contamination, Valencia Water Company Wells E14-E17 April 26, 2006

Final Report, Reclaimed Water System Master Plan, CLWA September 1993

CPUC Decision Dated November 29, 2001

CPUC Decision Dated October 16, 2003

CPUC Decision Dated August 24, 2006

2003 Point of Delivery Agreement (Semitropic Groundwater Banking Program) February 13, 2004

CLWA Resolution Regarding Availability of Recycled Water, Approved May 28, 2003

Volume IX

Appendix 4.11 Wastewater Disposal

Written Correspondence with Basil Hewitt, August 15, 2005

Wastewater Generation

Appendix 4.12 Solid Waste

Solid Waste Information/Calculations

Appendix 4.13 Police Services

Correspondence from Leroy Baca, January 14, 2003

Correspondence from the Department of California Highway Patrol, July 30, 2004

Volume IX (continued)

Appendix 4.14 Fire Protection Services

Correspondence from David R. Leninger, August 2, 2004

Correspondence from David R. Leninger, December 31, 2002

Appendix 4.15 Education

School Facilities Funding Agreement Between the Castaic Union School District
and Newhall Land and Farming

School Facilities Funding Agreement Between the William S. Hart School District
and Newhall Land and Farming

DMS Inventory Information

Student Generation Calculations

Appendix 4.17 Library Services

Written Correspondence from Malou Rubio, Head of Staff Services County of Los Angeles Public
Library, Library Headquarters, August 11, 2004

Library Calculations

Appendix 4.21 Environmental Safety

Phase I Environmental Site Assessment (ESA), September 27, 2004

ESA Addendum Letter - Water Tank Locations and UC Easements, September 2004

ESA Addendum Letter - Historical Documents and Site Reconnaissance, May 6, 2004

Waste Discharge Requirements

Districts 26/32 Sludge Disposal Study – Progress Report No. 1

Health Services Letter, April 14, 2006

Third Party Review of Environmental Documents

Potable and Reclaimed Water Tank Site

Phase II Subsurface Investigation, September 2006

Appendix 4.22 Cultural and Paleontological Resources

Intensive Phase I Archeological Survey

Map Box

Figures

- 4.1-1 Geologic/Geotechnical Map
- 4.1-2 Adobe Canyon Geologic/Geotechnical Map
- 4.1-3 Chiquito Canyon Geologic/Geotechnical Map
- 4.4-3 On-Site Plant Communities
- 4.4-5 Special-Status Plants
- 4.4-8 Impacted Jurisdictional Resources

Appendix Maps

- 4.1-A Major Land Division Tentative Tract Map No. 53108 – Plate I
- 4.1-B Major Land Division Vesting Tentative Tract Map No. 53108 – Plate II
- 4.1-C Major Land Division Vesting Tentative Tract Map No. 53108 – Plate III
- 4.1-D Hydrogeologic Cross Sections – Plate IV
- 4.1-E Adobe Canyon Preliminary Bulk Grading Study – Plate I
- 4.1-F Chiquito Canyon Preliminary Bulk Grading Study – Plate II
- 4.2-A Off-Site Tributary Area Drainage Concept Plan for Vesting Tentative Tract Map No. 53108
- 4.2-B Project Area Drainage Concept Vesting Tentative Tract Map No. 53108
- 4.2-C SUSMP Plan – Drainage Concept SUSMP Plan Vesting Tentative Tract Map No. 53108
- 4.2-D Existing Areas Off Site – Existing Drainage Plan for Vesting Tentative Tract Map No. 53108
- 4.2-E Existing Areas On Site – Existing Drainage Plan for Vesting Tentative Tract Map No. 53108
- 4.2-F Flood Limits Exhibit – Drainage Concept Plan for Vesting Tentative Tract Map No. 53108
- 4.4-A Landmark Village Planning Area Trees Impacted by Onion Field Bank Stabilization
- 4.4-B Off Site Grading – Landmark Village TR 53108 Oak Tree Exhibit
- 4.4-C Landmark Village TR 53108 Oak Tree Exhibit
- 4.4-D Off-Site Grading for Trunk Sewer to Newhall Ranch WRP – Landmark Village TR 53108 Oak Tree Exhibit
- 4.4-E Appendix G: Landmark Village CNDDDB Special-Status Species Records
- 4.4-F Newhall Ranch High Country – Vegetation Communities and Sensitive Plant Locations
- 4.4-G Newhall Ranch High Country – Wildlife Survey
- 4.10-A Castaic Lake Water Agency Recycled Water Master Plan – Potential Recycled Water Users
- 4.10-B Castaic Lake Water Agency Recycled Water Master Plan – Proposed Recycled Water Users
- 4.10-C Castaic Lake Water Agency Recycled Water Master Plan – Proposed Recycled Water System
- 4.10-D Castaic Lake Water Agency Recycled Water Master Plan – Proposed Recycled Water System Pressure Zones
- 4.10-E Castaic Lake Water Agency Recycled Water Master Plan – Phasing Plan

LIST OF FIGURES

| Figure | Page |
|--------|---|
| 1.0-1 | Regional Location..... 1.0-5 |
| 1.0-2 | Vicinity Map 1.0-6 |
| 1.0-3 | Project Boundary/Environmental Setting 1.0-7 |
| 1.0-3a | Planning Areas of Riverwood Village..... 1.0-14 |
| 1.0-4 | Existing Secondary Highway Designation – General Plan 1.0-17 |
| 1.0-5 | Los Angeles County General Plan – Highway Policy Map – Proposed Amendment..... 1.0-18 |
| 1.0-6 | Santa Clarita Valley Areawide Plan – Circulation Plan..... 1.0-19 |
| 1.0-7 | Santa Clarita Valley Areawide Plan – Circulation Plan – Proposed Amendment..... 1.0-20 |
| 1.0-8 | Existing Secondary Highway Designation – Master Circulation Plan of Newhall Ranch Specific Plan 1.0-21 |
| 1.0-9 | Proposed Collector Street Designation – Master Circulation Plan of Newhall Ranch Specific Plan 1.0-22 |
| 1.0-10 | Landmark Village Vesting Tentative Tract Map No. 53108 1.0-29 |
| 1.0-11 | Residential Land Uses 1.0-32 |
| 1.0-12 | Single-Family Residential (Detached) Typical Building Elevations 1.0-33 |
| 1.0-13 | Multi-Family (Attached) Conceptual Building Elevations..... 1.0-34 |
| 1.0-14 | Location of Village Quad and Village Center 1.0-35 |
| 1.0-15 | Conceptual Site Plan – Village Quad Area 1.0-36 |
| 1.0-16 | Conceptual Site Plan – Village Center Area 1.0-37 |
| 1.0-17 | Elementary School/Community Park 1.0-40 |
| 1.0-18 | Conceptual Site Plan – Community Park..... 1.0-41 |
| 1.0-19 | Landmark Village Portion of Specific Plan Master Trails Plan..... 1.0-42 |
| 1.0-20 | Landmark Village Trails Plan..... 1.0-43 |
| 1.0-21 | Landmark Village Portion of Specific Plan Master Circulation..... 1.0-46 |
| 1.0-22 | Cross-Section Comparison – Specific Plan Secondary Highway vs. Landmark Village Collector..... 1.0-47 |
| 1.0-23 | Location of Long Canyon Road Bridge and Proposed Bank Stabilization..... 1.0-50 |
| 1.0-24 | Landmark Village Portion of Specific Plan Conceptual Backbone Drainage Plan 1.0-51 |
| 1.0-25 | Landmark Village Drainage and Water Quality Plan..... 1.0-52 |
| 1.0-26 | Bank Stabilization, Typical Cross Section 1.0-55 |
| 1.0-27 | Bank Stabilization Techniques..... 1.0-56 |
| 1.0-28 | Landmark Village Portion of Specific Plan – Conceptual Backbone Water Plan..... 1.0-57 |
| 1.0-29 | Landmark Village Potable Water System Infrastructure and Off-Site Connection 1.0-60 |
| 1.0-30 | On-Site Reclaimed Water Improvements 1.0-63 |
| 1.0-31 | Landmark Village Portion of Specific Plan – Conceptual Backbone Sewer Plan..... 1.0-64 |
| 1.0-32 | Sewer Key Map – Off-Site Connection..... 1.0-65 |
| 1.0-33 | Off-Site Improvements 1.0-68 |
| 2.0-1 | Existing Land Use 2.0-5 |
| 2.0-2 | Mineral Resource Zones 2.0-8 |
| 2.0-3 | On-Site Topography..... 2.0-9 |
| 2.0-4 | Existing Specific Plan Land Use Designations 2.0-14 |
| 3.0-1 | Cumulative Impact Analysis Methodology 3.0-9 |
| 4.1-1 | Geologic/Geotechnical Map..... (Map Box) 4.1-3 |
| 4.1-2 | Adobe Canyon Geologic/Geotechnical Map (Map Box) 4.1-4 |

LIST OF FIGURES (continued)

| Figure | | Page |
|--------|--|------------------|
| 4.1-3 | Chiquito Canyon Geologic/Geotechnical Map..... (Map Box) | 4.1-5 |
| 4.2-1 | Existing Tributary Drainage Areas | 4.2-17 |
| 4.2-2 | Existing County Capital Flood Plain Boundaries | 4.2-22 |
| 4.2-3 | Existing FEMA Flood Plain Boundaries..... | 4.2-23 |
| 4.2-4 | Existing Drainage Patterns – Adobe Canyon Borrow Site | 4.2-26 |
| 4.2-5 | Existing Drainage Patterns – Chiquito Canyon Grading Site..... | 4.2-27 |
| 4.2-6 | Landmark Village Drainage Concept..... | 4.2-30 |
| 4.2-7 | Existing FEMA 100-Year and Capital Floodplain Delineations..... | 4.2-31 |
| 4.2-8 | Post-Development Drainage Patterns – Adobe Canyon Borrow Site..... | 4.2-50 |
| 4.2-9 | Post-Development Drainage Patterns – Chiquito Canyon Grading Site..... | 4.2-51 |
| 4.3-1 | Project Location Map | 4.3-25 |
| 4.3-2 | Project Design Features | 4.3-50 |
| 4.3-3 | Examples of Bioretention Facilities..... | 4.3-53 |
| 4.3-4 | Conceptual Illustration of a Vegetated Swale | 4.3-54 |
| 4.3-5 | Conceptual Illustration of a Water Waste Basin | 4.3-55 |
| 4.4-1 | Project Vicinity Map..... | 4.4-9 |
| 4.4-2 | Site Soils..... | 4.4-12 |
| 4.4-3 | On-Site Plant Communities | (Map Box) 4.4-19 |
| 4.4-4 | Potential Wildlife Movement Corridors | 4.4-28 |
| 4.4-5 | Special Status Plants..... | (Map Box) 4.4-31 |
| 4.4-6 | Jurisdictional Resources | 4.4-52 |
| 4.4-7 | Riparian Habitat Buffer | 4.4-63 |
| 4.4-8 | Impacted Jurisdictional Resources..... | (Map Box) 4.4-86 |
| 4.5-1 | Study Area Locations..... | 4.5-7 |
| 4.5-2a | Existing Conditions Santa Clara River 2-Year Flood Event | 4.5-18 |
| 4.5-2b | Existing Conditions Santa Clara River 5-Year Flood Event | 4.5-19 |
| 4.5-2c | Existing Conditions Santa Clara River 10-Year Flood Event | 4.5-20 |
| 4.5-2d | Existing Conditions Santa Clara River 20-Year Flood Event | 4.5-21 |
| 4.5-2e | Existing Conditions Santa Clara River 50-Year Flood Event | 4.5-22 |
| 4.5-2f | Existing Conditions Santa Clara River 100-Year Flood Event | 4.5-23 |
| 4.5-3 | Habitats in the Santa Clara River | 4.5-26 |
| 4.5-4 | Channel Conditions Following Severe Flooding..... | 4.5-39 |
| 4.5-5 | Bank Stabilization – Typical Cross Section | 4.5-44 |
| 4.5-6 | Location of Long Canyon Road Bridge and Proposed Bank Stabilization Locations..... | 4.5-45 |
| 4.5-7a | Proposed Conditions – Area Inundated by 2-Year Storm Event..... | 4.5-50 |
| 4.5-7b | Proposed Conditions – Area Inundated by 5-Year Storm Event..... | 4.5-51 |
| 4.5-7c | Proposed Conditions – Area Inundated by 10-Year Storm Event..... | 4.5-52 |
| 4.5-7d | Proposed Conditions – Area Inundated by 20-Year Storm Event..... | 4.5-53 |
| 4.5-7e | Proposed Conditions – Area Inundated by 50-Year Storm Event..... | 4.5-54 |
| 4.5-7f | Proposed Conditions – Area Inundated by 100-Year Storm Event..... | 4.5-55 |
| 4.5-8a | Proposed 2-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-56 |
| 4.5-8b | Proposed 5-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-57 |
| 4.5-8c | Proposed 10-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-58 |
| 4.5-8d | Proposed 20-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-59 |

LIST OF FIGURES (continued)

| Figure | Page |
|--|--------|
| 4.5-8e Proposed 50-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-60 |
| 4.5-8f Proposed 100-Year Flood Plain Locations with WSE Greater than 1 Ft. | 4.5-61 |
| 4.6-1 Existing Visual Characteristics of the Santa Clara River/SR-126 Corridor | 4.6-7 |
| 4.6-2 Representative View of Site Interior as Observed along Santa Clara River/ SR-126 Corridor | 4.6-8 |
| 4.6-3 Representative View of Adobe Canyon Borrow Site as Observed along SR-126..... | 4.6-9 |
| 4.6-4 Representative View of Chiquito Canyon Grading Site as Observed along SR-126 | 4.6-10 |
| 4.6-5 Representative View of Tract Map Site..... | 4.6-13 |
| 4.6-6 Representative View of Tract Map Site from Wolcott Way | 4.6-14 |
| 4.6-7 Representative View of Valencia Commerce Center Water Tank..... | 4.6-15 |
| 4.6-8 Degree of Visual Impact..... | 4.6-22 |
| 4.7-1 Project Study Area..... | 4.7-5 |
| 4.7-2 Related Project Location Map..... | 4.7-8 |
| 4.7-3 Interim Year Transportation System | 4.7-13 |
| 4.7-4 Existing Roadway Network..... | 4.7-14 |
| 4.7-5 AM Peak Hour Turning Movement Volumes – Existing (2003) Conditions | 4.7-17 |
| 4.7-6 PM Peak Hour Turning Movement Volumes – Existing (2003) Conditions..... | 4.7-18 |
| 4.7-7 Average Daily Traffic Volumes – Existing (2003) Conditions | 4.7-19 |
| 4.7-8 Project Distribution – Phase 1 | 4.7-32 |
| 4.7-9 AM Peak Hour Volumes – Project Phase 1 Trips Only..... | 4.7-33 |
| 4.7-10 PM Peak Hour Volumes – Project Phase 1 Trips Only | 4.7-34 |
| 4.7-11 Project Distribution – Project Phase 2..... | 4.7-35 |
| 4.7-12 AM Peak Hour Volumes – Project Phase 2 Trips Only..... | 4.7-36 |
| 4.7-13 PM Peak Hour Volumes – Project Phase 2 Trips Only | 4.7-37 |
| 4.7-14 AM Peak Hour Volumes – Project Buildout Trips Only..... | 4.7-38 |
| 4.7-15 PM Peak Hour Volumes – Project Buildout Trips Only | 4.7-39 |
| 4.7-16 Peak Hour Volume Signal Warrant – Rural | 4.7-48 |
| 4.7-17 Peak Hour Volume Signal Warrant – Urban..... | 4.7-49 |
| 4.7-18 On-Site ADT and Peak Hour Volumes – Landmark Village Phase 2 | 4.7-60 |
| 4.7-19 On-Site ADT and Peak Hour Volumes – Landmark Village Buildout and Newhall Ranch Buildout | 4.7-61 |
| 4.7-20 On-Site Lane Configurations | 4.7-62 |
| 4.7-21 Off-Site Improvement Program..... | 4.7-81 |
| 4.7-22 ADT Volumes – Long Range Cumulative (Constrained)..... | 4.7-82 |
| 4.7-23 Intersection Locations | 4.7-95 |
| 4.7-24 Intersection Configurations – Existing and Year 2020 Circulation Systems Improvements | 4.7-98 |
| 4.8-1 Noise Attenuation by Barriers and Elevation Differences..... | 4.8-7 |
| 4.8-2 Land Use Compatibility Guidelines for Noise..... | 4.8-14 |
| 4.8-3 On-Site Noise Monitoring Locations | 4.8-15 |
| 4.8-4 Noise Levels of Typical Construction Equipment..... | 4.8-22 |
| 4.8-5 Recommended Noise Wall Locations..... | 4.8-45 |
| 4.9-1 South Coast Air Basin | 4.9-5 |
| 4.9-2 Dominant Wind Patterns..... | 4.9-42 |

LIST OF FIGURES (continued)

| Figure | Page |
|--|---------|
| 4.10-1 Castaic Lake Water Agency Service Area | 4.10-13 |
| 4.10-2 Valencia Water Company Service Area | 4.10-16 |
| 4.10-3 Santa Clara River Valley East Groundwater Basin – East Subbasin | 4.10-19 |
| 4.10-4 Municipal Alluvial Well Locations; Santa Clara River Valley, East Groundwater Subbasin..... | 4.10-26 |
| 4.10-5 Saugus Well Locations, Santa Clara River Valley, East Groundwater Subbasin | 4.10-31 |
| 4.10-6 Forecasted Two-Year Groundwater Capture Zones for Active Alluvial Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California | 4.10-38 |
| 4.10-7 Forecasted Two-Year Groundwater Capture Zones for Active Saugus Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California | 4.10-39 |
| 4.10-8 Landmark Village Potable Water System Infrastructure..... | 4.10-58 |
| 4.10-9 Preliminary Reclaimed Water Storage System..... | 4.10-61 |
| 4.10-10 Preliminary Implementation Schedule | 4.10-66 |
| 4.11-1 Existing Water Reclamation Plants and Sanitation Districts..... | 4.11-5 |
| 4.12-1 Locations of Major Los Angeles County Landfill Sites..... | 4.12-11 |
| 4.13-1 Santa Clarita Valley Sheriff Stations..... | 4.13-5 |
| 4.14-1 Existing Fire Station Locations | 4.14-5 |
| 4.14-2 Proposed Fire Station Location | 4.14-12 |
| 4.16-1 Existing and Proposed City of Santa Clarita Parks | 4.16-7 |
| 4.16-2 County and State Park Facilities | 4.16-12 |
| 4.16-3 Los Angeles County Trails..... | 4.16-15 |
| 4.16-4 City of Santa Clarita Backbone Trails | 4.16-18 |
| 4.16-5 Private Recreation Areas | 4.16-23 |
| 4.17-1 Library Locations..... | 4.17-5 |
| 4.18-1 Current Agricultural Uses..... | 4.18-5 |
| 4.18-2 On-Site Important Farmland | 4.18-6 |
| 4.18-3 On-Site USDA Soil Suitability | 4.18-7 |
| 4.20-1 Mineral Resource Zones..... | 4.20-5 |
| 4.21-1 Abandoned Oil Wells | 4.21-9 |
| 4.21-2 Locations of Above Ground Storage Tanks..... | 4.21-12 |
| 4.21-3 Existing Pipelines | 4.21-15 |
| 4.21-4 Soil Sample Locations | 4.21-18 |
| 4.21-5 Existing Water Well Locations | 4.21-21 |
| 5.0-1 FEMA Floodplain Avoidance Alternative..... | 5.0-7 |
| 5.0-2 Cluster Alternative..... | 5.0-22 |

LIST OF TABLES

| Table | Page |
|--|--------|
| ES-1 Summary of Significant Impacts and Mitigation Measures | ES-7 |
| 1.0-1 Newhall Ranch Specific Plan – Landmark Village Maximum Allowed Land Use by Land Use Designation and Project Planning Areas..... | 1.0-15 |
| 1.0-2 Future Agency Actions | 1.0-25 |
| 1.0-3 Landmark Village Statistical Summary..... | 1.0-30 |
| 2.0-1 Newhall Ranch Specific Plan – Maximum Allowed Land Use by Type-Project Planning Areas | 2.0-16 |
| 3.0-1 DMS Build-Out Scenario – Santa Clarita Valley Planning Area With and Without Project..... | 3.0-3 |
| 3.0-2 DMS Implementation..... | 3.0-4 |
| 3.0-3 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario (Project Option)..... | 3.0-6 |
| 4.2-1 Percent Imperviousness for Selected Land Uses | 4.2-10 |
| 4.2-2 Existing Santa Clara River Conditions – Discharge by Return Period | 4.2-12 |
| 4.2-3 Existing Drainages and Runoff Discharge – VTTM 53108 | 4.2-20 |
| 4.2-4 Existing Drainages and Runoff Discharge – Adobe Canyon Borrow Site..... | 4.2-25 |
| 4.2-5 Existing Drainages and Runoff Discharge – Chiquito Canyon Grading Site | 4.2-28 |
| 4.2-6 Post-Development Drainages and Runoff Discharge – VTTM 53108..... | 4.2-45 |
| 4.2-7 Post-Grading Drainages and Runoff Discharge – Adobe Canyon Borrow Site | 4.2-49 |
| 4.2-8 Post-Grading Drainages and Runoff Discharge – Chiquito Canyon Borrow Site | 4.2-52 |
| 4.3-1 2002 CWA Section 303(d) Listings for the Santa Clara River Main Stem..... | 4.3-12 |
| 4.3-2 TMDL Waste Load Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5 | 4.3-14 |
| 4.3-3 Beneficial Uses of Receiving Waters..... | 4.3-26 |
| 4.3-4 Existing Modeled Pollutant Loads and Concentrations | 4.3-31 |
| 4.3-5 Existing Modeled Metals..... | 4.3-32 |
| 4.3-6 Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall between 0.1 and 1.0 Inch..... | 4.3-33 |
| 4.3-7 Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall of > 1 Inch..... | 4.3-35 |
| 4.3-8 Beneficial Uses of Groundwaters | 4.3-39 |
| 4.3-9 Comparison of Mineral Basin Plan Objectives with Mean Measured Values in Los Angeles County | 4.3-45 |
| 4.3-10 Comparison of Basin Plan Mineral Groundwater Objectives with Mean Measured Values in Los Angeles County and SWP Water Quality at Castaic Lake | 4.3-48 |
| 4.3-11 Project Drainage Areas and Treatment Control BMPs | 4.3-52 |
| 4.3-12 SUSMP Requirements and Corresponding Project Design Features | 4.3-68 |
| 4.3-13 Predicted Average Annual Stormwater Runoff Volumes | 4.3-77 |
| 4.3-14 Predicted Average Annual TSS Concentration and Load | 4.3-78 |
| 4.3-15 Comparison of Predicted TSS Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5 | 4.3-78 |

LIST OF TABLES (continued)

| Table | Page |
|--|---------|
| 4.3-16 Predicted Average Annual Total Phosphorous Concentration and Annual Load | 4.3-79 |
| 4.3-17 Comparison of Predicted Total Phosphorous Concentration with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5..... | 4.3-80 |
| 4.3-18 Predicted Average Annual Nitrate-N + Nitrite-N Concentration and Load | 4.3-80 |
| 4.3-19 Predicted Average Annual Ammonia-N Concentration and Load | 4.3-81 |
| 4.3-20 Predicted Average Annual Total Nitrogen Concentration and Load..... | 4.3-81 |
| 4.3-21 Comparison of Predicted Nitrogen Compound Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5..... | 4.3-82 |
| 4.3-22 Predicted Average Annual Dissolved Copper Concentration and Load | 4.3-83 |
| 4.3-23 Predicted Average Total Lead Concentration and Annual Load | 4.3-84 |
| 4.3-24 Predicted Average Annual Dissolved Zinc Concentration and Load | 4.3-84 |
| 4.3-25 Predicted Average Annual Total Aluminum Concentration and Load | 4.3-84 |
| 4.3-26 Comparison of Predicted Trace Metal Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5 | 4.3-86 |
| 4.3-27 Predicted Average Annual Chloride Concentration and Load | 4.3-87 |
| 4.3-28 Comparison of Predicted Chloride Concentrations with Water Quality Objective, TMDL, and Observed Concentrations in Santa Clara River Reach 5..... | 4.3-87 |
| 4.3-29 Predicted Dry Weather Water Balance..... | 4.3-104 |
| 4.3-30 Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the NRSP, Legacy Village, Entrada, and Valencia Commerce Center Projects..... | 4.3-109 |
| 4.3-31 Predicted Average Annual Combined Pollutant Concentrations for the NRSP, Legacy Village, Entrada, and Valencia Commerce Center Projects | 4.3-109 |
| 4.3-32 Comparison of Predicted Pollutant Concentrations for the NRSP, Entrada, Legacy Village, and Commerce Center Projects with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5 | 4.3-110 |
| 4.4-1 Significant Biological Impacts – Newhall Ranch Specific Plan and WRP | 4.4-3 |
| 4.4-2 On-Site Soils | 4.4-10 |
| 4.4-3 Biological Surveys Conducted on the Landmark Village Site and Technical Reports Incorporated into EIR | 4.4-14 |
| 4.4-4 Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site..... | 4.4-33 |
| 4.4-5 Special-Status Wildlife Species Observed on or Adjacent to the Project Site | 4.4-38 |
| 4.4-6 Special-Status Wildlife Species with Potential to Occur on the Project Site..... | 4.4-43 |
| 4.4-7 Special-Status Wildlife Species Not Expected on the Project Site..... | 4.4-47 |
| 4.4-8 Plant Community/Land Use Impact Summary | 4.4-56 |

LIST OF TABLES (continued)

| Table | Page |
|---|--------|
| 4.5-1 Discharge, Velocity and Flow Area Changes by Cross Section – 2- and 100-Year Interval Storm Events | 4.5-12 |
| 4.5-2 Existing On-Site Drainages | 4.5-16 |
| 4.5-3 Existing Conditions River Discharge Stations – 32265 to 22195 Downstream of Castaic Creek Confluence | 4.5-17 |
| 4.5-4 Summary of Dominant Wetland and Riparian Habitat Types in the River at the Specific Plan Site | 4.5-25 |
| 4.5-5 Summary of Flood Disturbance Frequencies for Dominant Wetland and Riparian Habitat Types in the River | 4.5-27 |
| 4.5-6 Summary of Aquatic Habitats in the Santa Clara River | 4.5-28 |
| 4.7-1 Related Projects Summary | 4.7-6 |
| 4.7-2 Level of Service of Arterial Roads..... | 4.7-9 |
| 4.7-3 Level of Service Descriptions – Freeway Segments..... | 4.7-10 |
| 4.7-4 Planned Roadway Improvement Projects..... | 4.7-12 |
| 4.7-5 Roadway Volume Summary – Existing (2003) Conditions | 4.7-15 |
| 4.7-6 ICU and LOS Summary – Existing (2003) Conditions | 4.7-16 |
| 4.7-7 ICU and LOS Summary – Existing (2003 & 2004) Conditions Piru..... | 4.7-21 |
| 4.7-8 Volume/Capacity Ratio Level of Service Ranges..... | 4.7-25 |
| 4.7-9 Arterial Intersection Performance Criteria | 4.7-26 |
| 4.7-10 Project Land Use and Trip Generation Summary..... | 4.7-28 |
| 4.7-11 Project Tripend and Trip Summary – Phase 2..... | 4.7-31 |
| 4.7-12 ICU and LOS Summary – Year 2007 Traffic Conditions without Project..... | 4.7-40 |
| 4.7-13 ICU and LOS Summary – Year 2007 Traffic Conditions with Project Phase 1 | 4.7-41 |
| 4.7-14 ICU and LOS Summary – Year 2008 Traffic Conditions with Project Phases 1 and 2..... | 4.7-42 |
| 4.7-15 ICU and LOS Summary – Year 2010 Traffic Conditions with and without Project Buildout | 4.7-44 |
| 4.7-16 ICU and LOS Summary – Year 2010 Traffic Conditions with Project Buildout and Related Projects..... | 4.7-45 |
| 4.7-17 Traffic Signal Peak Hour Volume Warrant | 4.7-46 |
| 4.7-18 ICU and LOS Summary – CMP Monitoring Intersections | 4.7-51 |
| 4.7-19 Comparison of Traffic Volumes to LOS..... | 4.7-52 |
| 4.7-20 Freeway V/C and LOS Summary – CMP Monitoring Locations..... | 4.7-52 |
| 4.7-21 Project Volumes on State Highways..... | 4.7-54 |
| 4.7-22 2007 Ventura County ADT Traffic Volumes | 4.7-55 |
| 4.7-23 2008 Ventura County ADT Traffic Volumes | 4.7-56 |
| 4.7-24 2010 Ventura County ADT Traffic Volumes | 4.7-57 |
| 4.7-25 Internal Mix of Trip Ends..... | 4.7-59 |
| 4.7-26 Intersection Average Control Delay with Mitigation..... | 4.7-76 |
| 4.7-27 ICU and LOS Summary With Project Mitigation | 4.7-77 |
| 4.7-28 Long-Range Tripend Comparison | 4.7-80 |
| 4.7-29 Long-Range ADT Volume Summary, Arterial Highway Network | 4.7-83 |

LIST OF TABLES (continued)

| Table | Page |
|--|--------|
| 4.7-30 State Highway and Freeway Long-Range Volume Summary Peak Hour Cumulative Analysis | 4.7-85 |
| 4.7-31 ICU Summary – Long-Range (Year 2020) Traffic Conditions Including Specific Plan Buildout-Piru | 4.7-91 |
| 4.7-32 Buildout Signal Warrant Volumes | 4.7-92 |
| 4.7-33 Peak Hour Newhall Ranch Buildout Volumes – City of Fillmore | 4.7-93 |
| 4.7-34 2020 PM Peak Hour ICU Values – City of Fillmore | 4.7-94 |
| 4.8-1 Outside to Inside Noise Attenuation (dB(A))..... | 4.8-5 |
| 4.8-2 County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources | 4.8-10 |
| 4.8-3 County of Los Angeles Construction Equipment Noise Restrictions..... | 4.8-11 |
| 4.8-4 On-Site Noise Levels..... | 4.8-16 |
| 4.8-5 On-Site Noise Levels Under Proposed Plan at Santa Clarita Valley Buildout | 4.8-27 |
| 4.8-6 On-Site Uses Potentially Impacted By On-Site Commercial and Recreational Activities..... | 4.8-33 |
| 4.8-7 On-Site Noise Levels With Recommended Sound Wall Mitigation at Santa Clarita Valley Buildout..... | 4.8-41 |
| 4.9-1 Average Monthly Temperatures and Precipitation for Los Angeles International Airport, CA, 1961–1990..... | 4.9-17 |
| 4.9-2 Ambient Air Quality Standards | 4.9-22 |
| 4.9-3 2001 Maximum 1-Hour Ozone Concentrations by County..... | 4.9-25 |
| 4.9-4 2001 Maximum 8-Hour Ozone Concentrations by County..... | 4.9-25 |
| 4.9-5 2001 Maximum Carbon Monoxide Concentrations by County | 4.9-26 |
| 4.9-6 2001 Maximum 24-Hour Average PM10 Concentrations by County | 4.9-27 |
| 4.9-7 2001 Maximum Annual Average PM10 Concentrations by County..... | 4.9-28 |
| 4.9-8 2001 Maximum 24-Hour Average PM2.5 Concentrations by County | 4.9-29 |
| 4.9-9 2001 Maximum Annual Average PM2.5 Concentrations by County..... | 4.9-29 |
| 4.9-10 2001 Maximum Nitrogen Dioxide Concentrations by County | 4.9-30 |
| 4.9-11 2001 Maximum Sulfur Dioxide Concentrations by County | 4.9-31 |
| 4.9-12 2001 Maximum Sulfate Concentrations by County..... | 4.9-32 |
| 4.9-13 2001 Maximum Lead Concentrations by County | 4.9-33 |
| 4.9-14 Annual Average Emissions by Major Source Type for Baseline Year 1997 (ton/day)..... | 4.9-35 |
| 4.9-15 1998 Annual Average Day Toxic Emissions for the South Coast Air Basin (lbs/day)..... | 4.9-37 |
| 4.9-16 Ambient Pollutant Concentrations Registered in SRA 13 | 4.9-41 |
| 4.9-17 Estimated Unmitigated Construction Emissions | 4.9-51 |
| 4.9-18 Peak Background Concentrations for SRA 13 for the Period of 2003 to 2005..... | 4.9-54 |
| 4.9-19 Localized Significance Criteria | 4.9-55 |
| 4.9-20 Estimated Construction Emissions Associated with the Proposed Project..... | 4.9-55 |
| 4.9-21 Modeling Results – Maximum Impacts at Residential Receptors | 4.9-56 |
| 4.9-22 Modeling Results – Maximum Impacts at Workplace Receptors..... | 4.9-56 |
| 4.9-23 Modeling Results – Maximum Impacts at Sensitive Receptors | 4.9-57 |
| 4.9-24 Estimated Operational Emissions Without Mitigation | 4.9-60 |

LIST OF TABLES (continued)

| Table | Page |
|---|---------|
| 4.9-25 Estimated Mitigated Construction Emissions | 4.9-83 |
| 4.9-26 Operational Emissions Reductions | 4.9-86 |
| 4.10-A Actual (2005) Plus Project Demand and Supply for the Santa Clarita Valley | 4.10-7 |
| 4.10-1 Retail Water Service Connections | 4.10-15 |
| 4.10-2 Groundwater Operating Plan for the Santa Clarita Valley | 4.10-22 |
| 4.10-3 Historical Groundwater Production by the Retail Water Purveyors..... | 4.10-23 |
| 4.10-4 Projected Groundwater Production (Normal Year) | 4.10-24 |
| 4.10-5 Active Municipal Groundwater Source Capacity – Alluvial Aquifer Wells..... | 4.10-27 |
| 4.10-6 Active Municipal Groundwater Source Capacity – Saugus Formation Wells | 4.10-30 |
| 4.10-7 Perchlorate Treatment Summary | 4.10-41 |
| 4.10-8 Summary of Current Water Supplies and Banking Programs (Average/Normal Years) | 4.10-48 |
| 4.10-9 SWP Table A Supply (in Percent of Maximum CLWA Table A Amount) for Single-Dry and Multiple-Dry Years..... | 4.10-49 |
| 4.10-10 CLWA's Projected Water Demands..... | 4.10-51 |
| 4.10-11 Summary of Landmark Village Water Demand (acre-feet) | 4.10-70 |
| 4.10-12 Existing Plus Project Demand and Supply for the Santa Clarita Valley | 4.10-72 |
| 4.10-13 Projected Average/Normal Year Supplies and Demands | 4.10-74 |
| 4.10-14 Projected Single-Dry Year Supplies and Demands | 4.10-76 |
| 4.10-15 Projected Multiple-Dry Year Supplies and Demands..... | 4.10-78 |
| 4.10-16 Scenario 1: DMS Build-Out Scenario Demand and Supply for the Santa Clarita Valley | 4.10-80 |
| 4.10-17 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Supplies | 4.10-83 |
| 4.10-18 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply | 4.10-84 |
| 4.11-1 Landmark Village Wastewater Generation | 4.11-8 |
| 4.11-2 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario..... | 4.11-13 |
| 4.11-3 Wastewater Generation Impact Analysis – Santa Clarita Valley Cumulative Build-Out Scenario | 4.11-14 |
| 4.12-1 Existing Landfill Capacity and Regional Needs Analysis for Los Angeles County | 4.12-12 |
| 4.12-2 Daily Project Solid Waste Generation for Project (No Recycling) | 4.12-16 |
| 4.12-3 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario..... | 4.12-20 |
| 4.13-1 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario..... | 4.13-18 |
| 4.14-1 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario..... | 4.14-26 |

LIST OF TABLES (continued)

| Table | Page |
|--|---------|
| 4.15-1 Existing Design Capacities and Enrollments for the Castaic District | 4.15-3 |
| 4.15-2 Existing Design Capacity and Enrollments for the Hart District Schools | 4.15-4 |
| 4.15-3 Student Generation Rates | 4.15-7 |
| 4.15-4 Summary of Cumulative Projects by School District – DMS Build-Out Scenario (Pending, Approved, and Recorded Projects) | 4.15-11 |
| 4.15-5 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario | 4.15-13 |
| 4.15-6 Student Generation as a Result of Cumulative Projects – Santa Clarita Valley Cumulative Build-Out | 4.15-14 |
| 4.16-1 Existing and Proposed County Parks and Recreation Facilities in Portions of Park Planning Area 35A near Landmark Village | 4.16-6 |
| 4.16-2 Existing and Proposed City of Santa Clarita Parks | 4.16-9 |
| 4.16-3 Existing and Proposed County Trails | 4.16-14 |
| 4.16-4 Existing and Proposed City Trails | 4.16-17 |
| 4.16-5 Landmark Village Estimated Quimby Requirements and Credits | 4.16-26 |
| 4.16-6 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario | 4.16-31 |
| 4.17-1 DMS Build-Out Scenario – Santa Clarita Valley Planning Area I | 4.17-12 |
| 4.17-2 Cumulative Supply and Demand – DMS Build-Out Scenario | 4.17-13 |
| 4.17-3 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario (Project Option) | 4.17-15 |
| 4.18-1 On-Site USDA Soil Suitability | 4.18-8 |
| 4.19-1 Electrical Demand – Landmark Village | 4.19-6 |
| 4.19-2 Natural Gas Demand – Landmark Village | 4.19-8 |
| 4.21-1 Oil Wells Located in Site Vicinity | 4.21-8 |
| 4.21-2 Pesticides Used on Newhall Ranch Site – The Newhall Land and Farming Company December 1994 | 4.21-17 |
| 4.21-3 Magnetic Field Levels for Common Household Appliances | 4.21-22 |
| 4.21-4 Typical Magnetic Field Levels for Electrical Power Lines | 4.21-23 |
| 4.22-1 Paleontologic Sensitivity Classification | 4.22-8 |
| 4.22-2 Paleontologic Potential by Geologic Unit | 4.22-8 |
| 5.0-1 Estimated Alternative 3 Operational Emissions | 5.0-12 |
| 5.0-2 Estimated Alternative 4 Operational Emissions | 5.0-26 |
| 5.0-3 Alternatives Impact Comparison Matrix | 5.0-32 |

INTRODUCTION

1. PURPOSE

This introduction provides the reader with important information regarding (1) project background; (2) purpose of an environmental impact report (EIR); (3) standards for assessing EIR adequacy; (4) the format and content of this EIR; (5) processing requirements for this EIR; and (6) other EIRs and documents incorporated by reference in this document. An EIR is an informational document, which will inform public agencies and the public of the significant environmental effects of a proposed project, identify possible ways to minimize or mitigate the significant effects and describe reasonable alternatives to the proposed project.

The public agency that has the principal responsibility for carrying out or approving a project is designated as the “lead agency.” For this project, the County of Los Angeles (County) is the lead agency, which requires that the EIR be prepared in accordance with the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (CEQA Guidelines) and the County’s Environmental Document Reporting Procedures and Guidelines (County Guidelines).¹

2. PROJECT BACKGROUND

The proposed Landmark Village project is the first development phase of the Riverwood Village Planning Area of the Newhall Ranch Specific Plan, located in northwestern unincorporated Los Angeles County, within the County’s Santa Clarita Valley Planning Area. The tract map site is located south of State Route 126 (SR-126), near the intersection of Chiquito Canyon Road, north of the Santa Clara River and west of Interstate 5 (I-5).

a. Newhall Ranch Planning and Environmental Review Process

By way of background, from 1996 through 1999, both the County’s Regional Planning Commission and Board of Supervisors conducted numerous public hearings regarding the proposed development of the Newhall Ranch Specific Plan and Water Reclamation Plant (WRP), related project approvals, and environmental documentation. The planning and environmental review process culminated in approval of the Newhall Ranch Specific Plan and WRP in 1999.

¹ CEQA is found in the Public Resources Code Section 21000 et seq. The *CEQA Guidelines* are found in Title 14 of the California Code of Regulations Section 15000 et seq. The *County Guidelines* are available for public review and inspection at the County’s Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California 90012-3225.

On March 23, 1999, the County's Board of Supervisors unanimously (a) certified the adequacy of the Final Program EIR for the Newhall Ranch Specific Plan and WRP, State Clearinghouse (SCH) No. 1995011015 (Newhall Ranch Specific Plan Program EIR); (b) adopted CEQA Findings and Statement of Overriding Considerations; (c) approved the Mitigation Monitoring Plans for both the Specific Plan and WRP; and (d) adopted the various project approvals for the Specific Plan and WRP, including General Plan and Sub-Plan Amendments, Zone Change, Vesting Tentative Parcel Map No. 24500, Newhall Ranch Specific Plan and Conditional Use Permit. The County's approvals were then challenged in court by various parties in a consolidated legal action.

On August 1, 2000, the trial court issued a writ of mandate and judgment ordering the County to partially set aside the Newhall Ranch Specific Plan Program EIR and project approvals, and to conduct additional analyses of certain specified environmental and planning issues (see **Appendix 4.10**). In its decision, the trial court also determined that a vast majority of the County's environmental determinations for the Newhall Ranch Specific Plan and WRP had been lawfully made and declined to set aside approval of the entire Specific Plan and Newhall Ranch Specific Plan Program EIR.

In response to the trial court's decision, the County's Board of Supervisors adopted a resolution partially setting aside certification of the Newhall Ranch Specific Plan Program EIR and related project approvals, and directed County staff to oversee preparation of additional environmental analyses with respect to the issues identified by the court. Thereafter, the County oversaw completion of the Newhall Ranch Final Additional Analysis (SCH No. 1995011015).²

After numerous public hearings, on May 27, 2003, the Board of Supervisors (a) certified the adequacy of the Newhall Ranch Final Additional Analysis in conjunction with the previously certified Newhall Ranch Specific Plan Program EIR; (b) reapproved the General Plan and Sub-Plan Amendments, the Newhall Ranch Specific Plan (as revised), Zone Change and Conditional Use Permit; (c) adopted additional CEQA Findings and Statement of Overriding Considerations; and (d) approved revised Mitigation Monitoring Plans for the Specific Plan and WRP. The Board of Supervisors also found that the Newhall Ranch Final Additional Analysis was completed in compliance with CEQA and the terms of the trial court's decision and writ.

In August 2003, the County and the project applicant filed a "return" to the trial court, requesting a discharge of the court's writ based on the County's compliance with CEQA and the trial court's prior decision. On October 22, 2003, after a court hearing, the trial court issued an order discharging the writ as requested. On December 18, 2003, certain parties filed an appeal of the trial court's order, and on

² The documents comprising the Newhall Ranch Final Additional Analysis" are described under **heading 8**.

March 29, 2004, a settlement was reached, resulting in dismissal of the pending appeal on April 1, 2004. As a result, the Newhall Ranch Specific Plan Program EIR and Final Additional Analysis are conclusively presumed to comply with CEQA, and constitute the “program” environmental documentation, which will be used to implement the Newhall Ranch Specific Plan and WRP.

b. Newhall Ranch Specific Plan

The Specific Plan will guide the long-term development of the 11,963-acre Newhall Ranch community, comprising a broad range of residential, mixed-use, and non-residential land uses within five village areas. The Specific Plan contains the land use plan, development regulations, design guidelines, and implementation program consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan. The Specific Plan is regulatory in nature and serves as the zoning for the Newhall Ranch community.³ Subsequent development plans and tentative subdivision maps must be consistent with the adopted General Plan, Areawide Plan, and Specific Plan.

As approved by the Board of Supervisors, the Specific Plan allows for up to 21,308 dwelling units, including 423 second units; 629 acres of mixed-use development; 67 acres of commercial uses; 249 acres of business park land uses; 37 acres of visitor-serving uses; 1,014 acres of open space, including 181 acres of community parks and 833 acres in other open spaces; 5,157 acres in special management areas, 55 acres in 10 neighborhood parks; a 15-acre lake; a public trail system; an 18-hole golf course; two fire stations; a public library; an electrical station; reservation of five elementary school sites, one junior high school site and one high school site; a 6.8 million gallon per day (mgd) WRP; and other associated community facilities. The buildout of the Specific Plan is projected to occur over approximately 25 to 30 years, depending upon economic and market conditions.

c. Newhall Ranch Water Reclamation Plant

The WRP is an approved part of the Newhall Ranch Specific Plan. The WRP is located in one of the “business park” designations within the Riverwood Village Planning Area, near the western edge of the Specific Plan area, along the south side of SR-126, adjacent to the Santa Clara River, and near the Los Angeles/Ventura County boundary. The plant’s treatment capacity will be 6.8 mgd of wastewater generated by the Specific Plan, all of which would be treated at the WRP and, upon tertiary treatment, reclaimed for landscape irrigation purposes (except for wet winters when irrigation demands would be

³ The Specific Plan was prepared pursuant to the provisions of the California Planning and Zoning Law, Title 7, Division 1, Chapter, Article 8, Government Code Sections 65450–65457. This law authorizes local jurisdictions, like the County, to adopt a Specific Plan by resolution. On May 27, 2003, the County’s Board of Supervisors adopted a Resolution approving General Plan Amendments, Sub-Plan Amendments, and the Newhall Ranch Specific Plan.

lower, requiring the discharge of unused reclaimed water to the Santa Clara River). A new sanitation district would be formed to maintain and operate the WRP within the Specific Plan site.

d. Certified Newhall Ranch Specific Plan Final EIR

Both the certified Newhall Ranch Specific Plan Program EIR and the Final Additional Analysis (SCH No. 1995011015), together, constitute the final “program” environmental impact report for the Newhall Ranch Specific Plan, and the final “project” environmental impact report for construction and operation of the WRP. In this EIR, both environmental documents will be collectively referred to as the “Newhall Ranch Specific Plan Program EIR” or the “certified Newhall Ranch Specific Plan Final EIR.”

Consistent with the provisions of CEQA, the County’s Department of Regional Planning has determined that a tiered project EIR is required for the Landmark Village project.⁴ Therefore, this EIR will be tiering from the certified Newhall Ranch Specific Plan Final EIR in accordance with Public Resources Code Section 21093(a) and *CEQA Guidelines* Section 15168(c). This EIR will concentrate on the issues specific to the Landmark Village project. This EIR also will incorporate by reference the discussion, analysis, mitigation measures, and alternatives contained in the certified Newhall Ranch Specific Plan Final EIR in accordance with *CEQA Guidelines* Section 15385.

3. PURPOSE OF AN ENVIRONMENTAL IMPACT REPORT

As stated, an EIR is an informational document, which will inform public agency decision makers and the public of the significant environmental effects of a proposed project, identify possible ways to minimize or mitigate the significant effects, and describe reasonable alternatives to the project (*CEQA Guidelines* Section 15121[a]). While the information in an EIR does not control the public agency’s ultimate discretion on the proposed project, the public agency must respond to each significant effect identified in the EIR by making findings under *CEQA Guidelines* Section 15091 and, if necessary, by making a statement of overriding considerations under *CEQA Guidelines* Section 15093 (*CEQA Guidelines* Section 15121[b]).

An EIR must contain the information required by Sections 15122 through 15131 of the *CEQA Guidelines*, but the format of the document may vary (*CEQA Guidelines* Section 15120). The required “contents” of an EIR include a table of contents or an index to assist readers in finding the analysis of different subjects and issues, and a brief summary of the proposed project and its consequences (*CEQA Guidelines* Sections 15122–15123). The summary must also identify each significant environmental effect, along with

⁴ Please refer to **heading 5**, for a description of a “tiered” EIR under CEQA.

proposed mitigation measures and alternatives that would reduce or avoid the identified effects; areas of controversy known to the lead agency; and issues to be resolved (*CEQA Guidelines* Section 15123[a], [b]).

In addition, an EIR must contain a description of both the proposed project and the environmental setting (*CEQA Guidelines* Sections 15124–15125). An EIR must also consider all phases of a project when evaluating its impact on the environment, including consideration and discussion of significant environmental effects; growth-inducing impacts; mitigation measures proposed to minimize significant effects; and alternatives to the proposed project (*CEQA Guidelines* Sections 15126–15127).

In addition, an EIR must contain a statement describing the project effects not found to be significant; discuss the cumulative impacts of a project; identify the agencies, organizations, and persons consulted in preparing the Draft EIR; and may include economic or social information, if applicable (*CEQA Guidelines* Sections 15128–15131).

A “Final” EIR must consist of the Draft EIR, or a revision of the Draft EIR; public comments on the Draft EIR (either verbatim or in summary); a list of persons, organizations, and agencies commenting on the Draft EIR; the lead agency’s written responses to significant environmental points raised in the public review and consultation process; and any other information desired by the lead agency (*CEQA Guidelines* Section 15132). In this regard, the “comments and responses” are a critical component of the Final EIR, because they bring focus to the environmental analysis of different subjects and issues. Another critical component is the “appendices” to an EIR. CEQA encourages placement of technical supporting analyses and information in “appendices” to an EIR. The appendices may be prepared in volumes separate from the EIR, but must be readily available for agency and public review (*CEQA Guidelines* Section 15147).

This EIR has been prepared by the County in accordance with the “purpose” and “content” requirements of CEQA, the *CEQA Guidelines* and the *County Guidelines*. Please refer to this EIR’s **Table of Contents** to locate the required analysis of different subjects and issues.

4. EIR ADEQUACY

The standards for adequacy of an EIR, as defined in Section 15151 of the *CEQA Guidelines*, are as follows:

“An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.”

This EIR has been prepared by the County in accordance with the above legal standards for adequacy of an EIR under CEQA, the *CEQA Guidelines*, and the *County Guidelines*.

5. TYPE OF EIR AND LEVEL OF ENVIRONMENTAL REVIEW

CEQA provides a lead agency with the flexibility to prepare different types of EIRs, and to employ different procedural means to focus environmental analysis on the issues appropriate for decision at each level of environmental review (Public Resources Code Section 21093[a]). CEQA provides that the "...degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR" (*CEQA Guidelines* Section 15146).

As stated, the certified Newhall Ranch Final EIR addressed the Specific Plan at the "program" level of detail, acknowledging that further environmental review would be required in connection with preparation of project-specific tentative subdivision maps. The Newhall Ranch Final EIR also contained a separate project-level environmental analysis for the WRP, so the County could issue final approval of the WRP.

Because the Landmark Village project implements a part of the Newhall Ranch Specific Plan, and because the certified Newhall Ranch Final EIR assessed the significant environmental effects associated with development of the entire Specific Plan area, this Draft EIR will be tiering from the certified Newhall Ranch Specific Plan Final EIR in accordance with Public Resources Code Section 21093(a) and *CEQA Guidelines* Section 15168(c). Public Resources Code Section 21093 encourages a lead agency to "tier" from a previously certified program EIR, whenever feasible. In this way, the Draft EIR can focus on site-specific issues relating to the Landmark Village project and allows the County, as the lead agency, to concentrate on issues, which are ripe for decision and exclude from consideration issues already decided or not ripe for decision (*CEQA Guidelines* Sections 15168[c], 15385).

The "tiering" of an EIR is intended to "...promote construction of needed housing and other development projects by (1) streamlining regulatory procedures; (2) avoiding repetitive discussions of the same issues in successive [EIRs]; and (3) ensuring that [EIRs] prepared for later projects which are consistent with a previously approved policy, plan, program or ordinance concentrate upon environmental effects which may be mitigated or avoided in connection with the decision on each later project." (Public Resources Code Section 21093[a]) The tiered or site-specific EIR may incorporate by reference discussions, mitigation measures and alternatives developed in the previously certified program EIR, and concentrate on the issues specific to the "project" analyzed in the tiered EIR (Public Resources Code Section 21094; *CEQA Guidelines* Sections 15168(c), 15385).

A “Project EIR” is typically prepared for a specific construction-level project, such as a tentative subdivision map. A Project EIR “...should focus primarily on the changes in the environment that would result from the development project...[and] examine all phases of the project including planning, construction and operation” (*CEQA Guidelines* Section 15161). In this instance, the Draft EIR for the Landmark Village project includes, among other discretionary entitlements, tentative subdivision map approval.

Consistent with the above legal principles, the County’s Department of Regional Planning prepared an Initial Study/Notice of Preparation (IS/NOP) (refer to **Appendix I**), and determined that a tiered project EIR is required for the Landmark Village project. Accordingly, the Draft EIR will be tiered from the certified Newhall Ranch Specific Plan Final EIR, including the adopted Mitigation Monitoring Plans for both the Specific Plan and WRP (*CEQA Guidelines* Section 15168[d]).

6. EIR FORMAT AND CONTENT

Preliminary environmental review of the Landmark Village project was conducted by the County’s Department of Regional Planning. In the IS/NOP, the County determined that the proposed project may have potentially significant effects on several environmental impact categories, including (a) hazards (geotechnical, flood and noise); (b) resources (water quality, air quality, biota, cultural resources, agricultural resources and visual resources/aesthetics); (c) services (traffic/access, sewage disposal, education, fire/sheriff and utilities); and (d) other categories (general, environmental safety/hazardous materials, land use and demand for new recreation facilities).

On January 30, 2004, the County circulated the IS/NOP to responsible agencies, trustee agencies, regional agencies, County reviewing agencies, and other agencies, organizations, and interested persons for the 30-day review period required under CEQA. The IS/NOP requested that the agencies, organizations, and others provide the County with specific details about the scope and content of the environmental information to be contained in this Draft EIR, as it related to each entity’s area of statutory responsibility. The IS/NOP is found in **Appendix I** to this EIR.

In addition, to facilitate local participation, the County held a scoping meeting to present the Landmark Village project and to solicit suggestions from the public and other agencies on the scope and content of this Draft EIR. The meeting took place at the Castaic Union School District, located in Valencia, California, on February 12, 2004.

In response to the IS/NOP and scoping meeting, comment letters and other input were received from interested agencies, organizations, and others, copies of which are presented in **Appendix I** to this EIR.

Based on the results of the County's IS/NOP and scoping efforts, the following topics will be evaluated in this EIR:

- | | |
|------------------------------|---|
| (1) Geology and Soils | (12) Solid Waste Disposal |
| (2) Hydrology | (13) Sheriff Services |
| (3) Water Quality | (14) Fire Services/Hazards |
| (4) Biota | (15) Education |
| (5) Floodplain Modifications | (16) Parks and Recreation |
| (6) Visual Qualities | (17) Libraries |
| (7) Traffic/Access | (18) Agricultural Resources |
| (8) Noise | (19) Utilities |
| (9) Air Quality | (20) Mineral Resources |
| (10) Water Service | (21) Environmental Safety |
| (11) Wastewater Disposal | (22) Cultural/Paleontological Resources |

This EIR is organized into 10 sections. **Sections 1.0** and **2.0** contain detailed descriptions of the proposed project and the environmental setting in which the project occurs. **Section 3.0** identifies the cumulative impact analysis/methodology. **Section 4.0** analyzes the existing conditions, project impacts, cumulative impacts, mitigation measures, and unavoidable significant impacts of the proposed project for the environmental impact categories identified above. **Section 5.0** identifies and analyzes project alternatives. **Section 6.0** describes the significant irreversible environmental changes associated with the proposed project. **Section 7.0** identifies the project's growth-inducing impacts. **Section 8.0** includes the project's Mitigation Monitoring Plan. **Section 9.0** provides a list of EIR preparers and a list of the organizations and persons consulted in preparing this EIR. **Section 10.0** contains the list of documents referred to, referenced, or cited in this EIR. Such documents are incorporated by reference and are available for public review and inspection at the County's Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California 90012-3225.

7. EIR PROCESSING REQUIREMENTS

The Los Angeles County Department of Regional Planning directed and supervised preparation of this Draft EIR. During the Draft EIR's preparation, many informal documentation reviews were held with County Department of Regional Planning staff, Department of Public Works staff, and other County agency staff (e.g., the Office of the Sheriff, the Fire Department). County policy provides that the Draft EIR be made available for a 30-day Los Angeles County internal agency review and comment period and, subsequently, an additional 45-day public review and comment period mandated by CEQA. During the

public review and comment period, interested public agencies, organizations, and others may submit written comments concerning the adequacy of the Draft EIR to:

Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012
Attention: Mr. Daniel Fierros

Public hearing(s) will be held before the Los Angeles County Regional Planning Commission and the Board of Supervisors regarding the proposed project and the adequacy of the Draft EIR, at which time public comments will also be heard. Following the public hearing(s) on the Draft EIR by the Regional Planning Commission, written responses to all comments will be compiled into a Final EIR. As required by CEQA, the Regional Planning Commission will distribute responses to comment letters submitted by responsible public agencies for review 10 days prior to consideration of the Final EIR. At the conclusion of the EIR public hearing process, the Regional Planning Commission will vote on whether to recommend approval of the proposed project, and other related entitlement changes, and whether to recommend certification of the adequacy of the EIR to the County's Board of Supervisors. If a recommendation for certification is made by the Regional Planning Commission, the Board of Supervisors will be asked to certify the adequacy of the EIR, and will then adopt findings relative to the proposed project's environmental effects after implementation of mitigation measures and the consideration of alternatives, and will take action to provide its outright approval, conditional approval, or denial of the proposed project, and other related entitlement requests.

8. NEWHALL RANCH DOCUMENTATION (INCORPORATED BY REFERENCE)

Although several documents are referred to, referenced, or cited throughout this EIR, certain Newhall Ranch-related documents were extensively relied upon in preparing this EIR. They constitute the regulatory documents governing long-term implementation of the approved Newhall Ranch Specific Plan and WRP, and all such documents were previously distributed or made available for public review and inspection during the Newhall Ranch Specific Plan planning and environmental review process. The documents listed below are incorporated by this reference and are available for public review and inspection at the County's Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California 90012-3225.

- (1) Resolution of the Board of Supervisors of the County of Los Angeles Relating to Adoption of Los Angeles County General Plan Amendment 94-087-(5) Santa Clarita Valley Area Plan Amendment 94-087-(5) Newhall Ranch Specific Plan (May 27, 2003);

- (2) Zoning Case No. 94-087-(5)/Ordinance No. 2003-0031Z (May 27, 2003);
- (3) Vesting Tentative Parcel Map No. 24500;
- (4) Newhall Ranch Specific Plan, Volumes I and II (adopted May 27, 2003);
- (5) Conditional Use Permit No. 94-087-(5)/Findings Of The Board Of Supervisors and Order (May 27, 2003);
- (6) Conditional Use Permit No. 94-087-(5)/Conditions of Approval (May 27, 2003);
- (7) Additional CEQA Findings and Statement of Overriding Considerations Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan And Water Reclamation Plant (May 2003);
- (8) Mitigation Monitoring Plan for the Newhall Ranch Specific Plan (May 2003);
- (9) Mitigation Monitoring Plan for the WRP (May 2003);
- (10) 2000–2003 Newhall Ranch Final Additional Analysis (SCH No. 1995011015) consisting of the following additional environmental documents to the previously certified Newhall Ranch Final EIR for the Specific Plan and WRP:
 - (a) Draft Additional Analysis, Volume I (Text, Figures/Tables) and Volumes II–III (Appendices), dated April 2001;
 - (b) Final Additional Analysis, Volume I (Comments and Responses, etc.) and Volume II (Appendix), dated October 2001;
 - (c) Revised Draft Additional Analysis, Volume I (Text, Figures/Tables/Appendix) and Volume II (Appendix), dated November 2002;
 - (d) Final Additional Analysis, Volume III (Comments and Responses, etc.) and Volume IV (Appendix), dated March 2003;
 - (e) Revised Additional Analysis, Volume V (Revised Text, Figures, and Tables), dated March 2003;
 - (f) Final Additional Analysis, Volume VI (Comments and Responses, etc.) and Volume VII (Appendix), dated May 2003; and
 - (g) Revised Additional Analysis, Volume VIII (Final Revised Text, Figures, and Tables), dated May 2003.
- (11) 1996–1999 Newhall Ranch Specific Plan and WRP Final EIR (SCH No. 1995011015), consisting of the following documents:
 - (a) Draft EIR for the Newhall Ranch Specific Plan and WRP (Text, Figures/Tables), Volumes I and II (Appendices), and Geotechnical Appendix 4.1 (oversized maps), dated July 1996;

- (b) Final EIR for the Newhall Ranch Specific Plan and WRP, Volumes I-IV (Comments, Responses, etc.), dated November 1997, and Volumes V-VI (Comments, Responses, etc.), dated March 1999; and
- (c) Revised Draft EIR for the Newhall Ranch Specific Plan and WRP, dated March 8, 1999.

EXECUTIVE SUMMARY

1. PURPOSE

The intent of the Executive Summary is to provide the reader with a clear and simple description of the proposed project and its potential environmental impacts. Section 15123 of the California Environmental Quality Act (CEQA) Guidelines requires that the summary identify each significant effect, recommended mitigation measure(s), and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved, including the choice among alternatives and whether or how to mitigate significant effects. This section focuses on the major areas of the proposed project that are important to decision makers and utilizes non-technical language to promote understanding.

2. BACKGROUND

In May 2003, the Board of Supervisors of the County of Los Angeles approved the Newhall Ranch Specific Plan and certified the Newhall Ranch Specific Plan Program Environmental Impact Report (EIR) as adequate under CEQA. The Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with development of the entire Newhall Ranch Specific Plan. The proposed Landmark Village project is located within the Riverwood Village area of the approved Specific Plan. This EIR has been prepared at the project level and tiers from the previously certified Specific Plan Program EIR.

3. SITE LOCATION AND DESCRIPTION

The Landmark Village project site is located in unincorporated Los Angeles County, within the Santa Clarita Valley Planning Area, and within the approved Newhall Ranch Specific Plan boundary. The Santa Clarita Valley Planning Area is generally surrounded by the Los Padres and Angeles National Forest areas to the north; Agua Dulce and the Angeles National Forest to the east; the major ridgeline of the Santa Susana Mountains, which separates the Santa Clarita Valley from the San Fernando and Simi Valleys, to the south; and the County of Ventura to the west. The project site is located immediately west of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the southern boundary of the project site, while the northern project boundary is defined by State Route 126 (SR-126). The eastern tract map boundary abuts Castaic Creek. The City of Santa Clarita is located further east of the project site, just beyond Interstate 5 (I-5).

4. PROJECT DESCRIPTION

The project applicant proposes to develop the 292.6-acre Landmark Village tract map site, located in the first phase of the Riverwood Village within the boundary of the approved Newhall Ranch Specific Plan. The land uses proposed as part of the Landmark Village tract map site are consistent with the approved Specific Plan. The Specific Plan's approved Land Use Plan designates the tract map site for single- and multi-family residential, mixed-use, and commercial land uses.¹ The Landmark Village tract map site proposes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units), 1,033,000 square feet of mixed-use/commercial uses, a 9-acre elementary school, a 16-acre community park, public and private recreational facilities, trails, and road improvements.

To facilitate development of the Landmark Village tract map site, several off-site project-related components would be developed on an additional 679.2 acres of land that, for the most part, is within the approved Specific Plan boundary.² These project-related components include the following:

- A cut and fill grading operation, which includes fill imported to the tract map site from a 215-acre borrow site located south of the Santa Clara River (the Adobe Canyon borrow site), and grading to accommodate improvements to SR-126 and debris basins for stormwater flows collected by the tract map's storm drainage system on approximately 120 acres of land, located directly north of SR-126 within Chiquito Canyon (Chiquito Canyon grading site);
- A 110-acre utility corridor, which would run parallel to SR-126 from the western boundary of the tract map site to the approved Newhall Ranch Water Reclamation Plant (WRP) near the Los Angeles County/Ventura County line, and from the eastern boundary of the tract map site to I-5, and then south to the existing Valencia District 32 WRP, which would extend municipal services to and from the tract map site;
- Two separate water tank sites, one within the existing Valencia Commerce Center and another within either the Chiquito Canyon grading site or, alternatively, the Adobe Canyon borrow site, to convey potable water to the tract map site;
- Two reclaimed water tanks to implement a portion of the Specific Plan's reclaimed water storage and distribution system; and
- Construction of the Long Canyon Road Bridge, bank stabilization and storm drainage improvements.

For purposes of this EIR, the "tract map site" refers to the proposed location of the Landmark Village development site itself, and the "project site" generally includes the tract map site, the Adobe Canyon

¹ See, Newhall Ranch Specific Plan (May 2003), Exhibit 2.3-1, Land Use Plan, Table 2.3-1, Specific Plan Overall Land Use Plan Statistical Table, and Exhibit 2.3-2, Village Plan (see **Appendix 1.0**).

² Portions of the proposed utility corridor and the proposed potable water tank site (located within the Valencia Commerce Center business park) are outside the boundary of the Newhall Ranch Specific Plan.

borrow site, the Chiquito Canyon grading site, the utility corridor, the water tank sites, the Long Canyon Road Bridge, bank stabilization, drainage improvements and related haul routes. The entire project site comprises approximately 1,043.5 gross acres.

The project applicant is requesting approval of the following discretionary entitlements to allow for construction of the proposed Landmark Village project site: (a) General Plan, Sub-Plan and Specific Plan Amendments; (b) Vesting Tentative Tract Map No. 53108; (c) Significant Ecological Area (SEA) Conditional Use Permit (CUP) for project-level development within the Specific Plan's River Corridor Special Management Area (SMA)/SEA 23 boundaries; (d) Oak Tree Permit; (e) Off-Site Soil Transport Approval; (f) CUP for off-site grading in excess of 100,000 cubic yards, and; (g) Modification to adopted County Floodway limits (collectively, "Project Approvals").

Additional ministerial actions, such as grading permits, building plan review and building permits, would be required by the County prior to actual grading and construction of the proposed Landmark Village project site.

5. TOPICS OF KNOWN CONCERN

Issues relative to the scope of the Landmark Village EIR were identified by the County of Los Angeles through input received from state and local agencies, private organizations, and members of the public.

County Department of Regional Planning staff circulated an Initial Study and Notice of Preparation (NOP) on January 30, 2004 in order to receive input from interested public agencies and private parties. A copy of the NOP is presented in **Appendix ES** of this EIR, along with a copy of the Initial Study. Copies of all written letters submitted in response to the NOP are presented in **Appendix ES** of this EIR. In addition to preparation and circulation of the NOP, the County held a Public Scoping Meeting on February 12, 2004, in nearby Valencia, to present the proposed project to the public and to solicit comments from interested public agencies and the public on the content of the Draft EIR. The meeting was attended by approximately 20 people, including public agency representatives, private organizations, and members of the public.

In the comments submitted on the NOP and at the Public Scoping Meeting, several subject areas of concern were raised. These subject areas include biological resources in and adjacent to the Santa Clara River, bank stabilization, traffic effects on local roadways, air emissions from project traffic, water availability, and cumulative development in the Santa Clarita Valley. These concerns are addressed in this EIR under one or more of the topics shown on the following page:

- | | |
|------------------------------|---|
| (1) Geology and Soils | (12) Solid Waste Disposal |
| (2) Hydrology | (13) Sheriff Services |
| (3) Water Quality | (14) Fire Services/Hazards |
| (4) Biota | (15) Education |
| (5) Floodplain Modifications | (16) Parks and Recreation |
| (6) Visual Qualities | (17) Libraries |
| (7) Traffic/Access | (18) Agricultural Resources |
| (8) Noise | (19) Utilities |
| (9) Air Quality | (20) Mineral Resources |
| (10) Water Resources | (21) Environmental Safety |
| (11) Wastewater Disposal | (22) Cultural/Paleontological Resources |

6. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Areas of controversy raised in the NOP and Public Scoping Meeting comments concern the potential impacts of the Landmark Village project on biological resources (including Santa Clara River resources), traffic and circulation, and public services, including water availability. Copies of all written comments submitted in response to the NOP are presented in **Appendix ES** of this EIR.

Issues to be resolved include whether to approve the proposed project, whether or how to mitigate the identified significant project and cumulative impacts, and whether to select one of the project alternatives.

7. ALTERNATIVES

The certified Newhall Ranch Specific Plan Program EIR evaluated six on-site alternatives to the Specific Plan along with three alternative site locations. The alternatives evaluated were selected based on the significant impacts created by the Specific Plan, the comments received in response to the Notice of Preparation, discussions with County staff and its Significant Ecological Area Technical Advisory Committee, discussions at 26 Community Task Force meetings, and many discussions with members of the community and community groups.

The Specific Plan EIR concluded a reduced density 8,000-unit alternative was environmentally superior with respect to on-site alternatives, while none of the off-site alternatives were considered superior to the Specific Plan. However, the Board of Supervisors did not choose the 8,000-unit alternative, and instead approved the Newhall Ranch Specific Plan and adopted the Mitigation Measures identified in both the

Final EIR and Mitigation Monitoring Plan. Because the Newhall Ranch Specific Plan EIR determined that the Specific Plan would result in significant and unavoidable impacts, in accordance with *CEQA Guidelines* Section 15093, a Statement of Overriding Considerations was adopted to substantiate the Board's decision to reject the environmentally superior alternative because of the benefits afforded by the Specific Plan, as well as other reasons set forth in the CEQA Findings and Statement of Overriding Considerations.

Several additional alternatives to those considered as part of the Newhall Ranch Specific Plan Program EIR were evaluated as part of the Landmark Village Project EIR and are described below:

No Project/No Development Alternative – This alternative considered the circumstances under which the proposed project does not proceed. Here, the discussion compares the environmental effects of the property remaining in its current state against the environmental effects that would occur if the project were approved.

No Project/Future Site Development Alternative – This alternative considers the circumstances under which the proposed project is not approved and another development proposal based on the current land use designations and existing infrastructure support is approved.

Federal Emergency Management Agency (FEMA) Floodplain Avoidance Alternative – The Floodplain Avoidance Alternative retains the overall layout of the proposed Landmark Village project, except this alternative would not place development within the existing 100 year FEMA floodplain, thereby reducing the amount of imported soil needed to raise portions of the Landmark Village site. This alternative would reduce development by 286 dwelling units along with 828,000 square feet of commercial space when compared to the proposed project, for a total of 1,158 dwelling units and 205,000 square feet. The Floodplain Avoidance Alternative would retain the 9-acre elementary school, 16-acre community park, and three of the four private recreation areas proposed as part of the Landmark Village project, but would not construct the Long Canyon Road Bridge over the Santa Clara River. Bank stabilization would continue to be required along the perimeter of development areas and along the south side of the utility corridor extending to the WRP Site.

Cluster Alternative – This alternative retains the overall layout of the proposed Landmark Village project, except no development would occur on the westernmost 106 acres of the property. This alternative would reduce development by 507 dwelling units along with 828,000 square feet of commercial space when compared to the proposed project, for a total of 937 dwelling units and 205,000 square feet. The Cluster Alternative would retain the 9-acre elementary school, 16-acre community park, and two of the four private recreation areas proposed as part of the Landmark Village project. However,

the Long Canyon Road Bridge and associated bank protection would not be included in the site design under this alternative scenario. Bank stabilization/erosion protection would continue to be required along the perimeter of development areas and along the south side of the utility corridor extending to the WRP site.

8. SIGNIFICANT IMPACTS/MITIGATION MEASURES

This EIR has been prepared to assess each potentially significant impact to the environment that could result with implementation of the proposed Landmark Village project. For a detailed discussion regarding potential impacts, refer to **Section 4.0, Environmental Impact Analysis**, of this EIR.

A summary of the proposed project's significant impacts is provided in **Table ES-1**. Also provided in the summary table is a list of those mitigation measures previously adopted by the County as part of the Specific Plan approvals that are applicable to the Landmark Village project, a list of the additional mitigation measures proposed by this EIR, and a determination of the level of significance of each impact after implementation of the identified Specific Plan and project-specific mitigation measures. The reader should note that only those Specific Plan mitigation measures applicable to the Landmark Village project are shown on **Table ES-1**. For a complete listing of all Specific Plan mitigation measures and whether each measure is applicable to the proposed project, please refer to EIR **Sections 4.1** through **4.22** under the "**Mitigation Measures**" subsection.

**Table ES-1
Summary of Significant Impacts and Mitigation Measures**

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|--|---|
| 4.1 GEOTECHNICAL AND SOIL RESOURCES | | |
| <p>Based on the analysis presented in the Geotechnical and Soil Resources section of this EIR, there are no active faults, landslides, or surficial failures on or in close proximity to the Landmark Village project site, and the potential for earthquake-induced slope failures is considered negligible. Impacts associated with liquefaction and seismically induced settlement are considered less than significant. Due to the relative flatness of the project site, low liquefaction potential, subsurface soil stratigraphy, and proposed improvements in the river channel area, there would be no impacts relative to lateral spreading due to liquefaction. In addition, there would be no impacts relative to hydroconsolidation. However, unless mitigated, specific project-related significant geologic, soil, and geotechnical impacts could occur in the following areas:</p> <ul style="list-style-type: none"> • Along cut/fill and bedrock/alluvium contacts, there is a future potential hazard due to the combination of dynamic compaction and differential settlement, along with differential materials response; • Development of lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.); • The clay-rich bedding planes of the Saugus Formation may represent a potential hazard from secondary seismogenic movement along bedding planes; • Construction and development within areas of high groundwater; • Soil conditions on the project site that would affect construction practices on future site development include expansive soils, soils with shrink-swell potential, corrosive soils, and low cohesion soils; • Shallow weak soils; | <p>SP 4.1-1 The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-2 The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-3 In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable.</p> <p>SP 4.1-4 The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project geotechnical engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)</p> <p>SP 4.1-5 Not applicable.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|--|--|
| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| <ul style="list-style-type: none"> • High water tables requiring dewatering; • Low cohesion sands; and <p>Landslide potential at the Edison access road at the Chiquito Canyon grading site.</p> <p>Applicable mitigation measures to address these impacts were identified in the certified Newhall Ranch Specific Plan Program EIR. This EIR recommends additional mitigation measures specific to the Landmark Village project site. In summary, with implementation of the mitigation measures set forth in the Geotechnical and Soil Resources section of this EIR, the proposed project will not result in significant unavoidable geologic, soil or geotechnical impacts.</p> <p>In compliance with Section 111 of the Los Angeles County Building Code, and according to the project geotechnical engineer (Seward), the site designated on the Geological/Geotechnical Maps, EIR Figures 4.1-1 through 4.1-3, is feasible for development, would be safe against hazards from landslide, settlement or slippage, and development of the site would not affect off-site property, provided the mitigation measures identified in this section are adopted and implemented during project construction. With implementation of the identified mitigation measures, the proposed project’s geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> | <p>SP 4.1-6 Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-7 If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the “finished” or “subgrade” surface and the excavated area backfilled with non-expansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-8 At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project geotechnical engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-9 Subdrains are to be placed in areas of high ground water conditions or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan geotechnical engineer.</p> <p>SP 4.1-10 Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the geotechnical engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-11 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-12 The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-13 Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-14 Not applicable.</p> <p>SP 4.1-15 Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer, and to the satisfaction of the Los Angeles County Department of Public Works.</p> <p>SP 4.1-16 Not applicable.</p> <p>SP 4.1-17 Not applicable.</p> <p>SP 4.1-18 Not applicable.</p> <p>SP 4.1-19 Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-20 All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)</p> <p>SP 4.1-21 Not applicable.</p> <p>SP 4.1-22 Not applicable.</p> <p>SP 4.1-23 Not applicable.</p> <p>SP 4.1-24 Not applicable.</p> <p>SP 4.1-25 Not applicable.</p> <p>SP 4.1-26 Not applicable.</p> <p>SP 4.1-27 Not applicable.</p> <p>SP 4.1-28 Not applicable.</p> <p>SP 4.1-29 Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan engineering geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-30 All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by American Society for Testing and Materials (ASTM) Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-31 No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the geotechnical engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-32 Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-33 Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the geotechnical engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-34 Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-35 Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-36 The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-37 When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-38 When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-39 Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-40 Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-41 When placing fills over slopes, sidewall benching is to extend into competent material, approved by the geotechnical engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing, or compressive soils.</p> <p>SP 4.1-42 When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-43 The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)SP 4.1-44 All artificial fill associated with past petroleum activities, as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision and/or grading plan stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan geotechnical engineer.</p> <p>SP 4.1-45 Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p> <p>SP 4.1-46 Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>SP 4.1-47 Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p> <p>SP 4.1-48 Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)</p> <p>SP 4.1-49 If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.</p> <p>SP 4.1-50 The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12).</p> <p>LV 4.1-1 Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (Caf), loose alluvium, and other unsuitable materials. The geotechnical engineer and/or his representatives shall observe the excavated areas prior to placing compacted fill.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-2 After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to 90 percent per the latest American Society for Testing and Materials (ASTM) D1557 laboratory maximum density.</p> <p>LV 4.1-3 Removal depths for alluvium, older alluvium, and overlying soil/plow pan materials range from 4 to 16 feet and shall be as indicated on the approved Geologic/ Geotechnical Map.</p> <p>LV 4.1-4 Soil removals on the southwestern portion of the site shall be scheduled if possible during the summer or fall months, to minimize impacts to Grading from shallow groundwater. The contractor shall be prepared to implement dewatering systems, if necessary.</p> <p>LV 4.1-5 Pico and Saugus Formation bedrock shall be over-excavated 5 feet below proposed grade to eliminate cut-fill or bedrock-alluvium transitions in building pads. Expansive materials in the bedrock shall be over excavated 8 feet in building pad areas.</p> <p>LV 4.1-6 Slopewash that is locally present on the site adjacent to slope areas on the northern margin of the site shall be removed and recompact prior to the placement of compacted fill.</p> <p>LV 4.1-7 Compacted artificial fill along the northern margin of the site shall be assessed for building suitability at the grading plan stage.</p> <p>LV 4.1-8 Concrete, asphalt concrete and other debris stockpiled on the site shall be removed, and either ground up for use as sub-base material, or reduced into fragments small enough to be buried in the deeper portions of the fill.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-9 Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric data for planning dewatering measures.</p> <p>LV 4.1-10 On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on-site or imported fill shall be necessary for use in fill slopes.</p> <p>LV 4.1-11 The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-12 Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5 to 1 (horizontal to vertical [h:v]). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will expose fill-over-bedrock or alluvium-over-bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering geologist.</p> <p>LV 4.1-13 Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.</p> <p>LV 4.1-14 Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.</p> <p>LV 4.1-15 All drainage devices shall be properly installed and observed by the geotechnical engineer and/or owner's representative(s) prior to placement of backfill.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-16 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the geotechnical engineer. The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.</p> <p>LV 4.1-17 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.</p> <p>LV 4.1-18 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.</p> <p>LV 4.1-19 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the soils engineer in areas designated as suitable for rock disposal.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-20 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.</p> <p>LV 4.1-21 The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.</p> <p>LV 4.1-22 The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.</p> <p>LV 4.1-23 Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be removed or treated to the satisfaction of the soils engineer and/or the controlling agency for the project.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-24 The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.</p> <p>LV 4.1-25 The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.</p> <p>LV 4.1-26 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.</p> <p>LV 4.1-27 Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.</p> <p>LV 4.1-28 Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.</p> <p>LV 4.1-29 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-30 No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.</p> <p>LV 4.1-31 Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.</p> <p>LV 4.1-32 The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing improvements, or completed work.</p> <p>LV 4.1-33 Observations and field tests shall be carried on during construction by the geotechnical engineer to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-34 Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.</p> <p>LV 4.1-35 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.</p> <p>LV 4.1-36 Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in Sections 7018 and 7019 of the 1997 Los Angeles County Uniform Building Code.</p> <p>LV 4.1-37 Modification of the existing pad grades after approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-38 Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.</p> <p>LV 4.1-39 Permanent erosion control measures shall be initiated immediately following completion of grading.</p> <p>LV 4.1-40 All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. A qualified engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.</p> <p>LV 4.1-41 Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.</p> <p>LV 4.1-42 The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Pondered water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-43 Slope surficial soils may be subject to water induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s).</p> <p>LV 4.1-44 Short-term, non-plant erosion-control measures shall be implemented during construction delays, adverse climate/ weather conditions, and when plant growth rates do not permit rapid vegetation of graded areas. Examples of short-term, non-plant erosion-control measures include matting, netting, plastic sheets, deep (5 feet) staking, etc.</p> <p>LV 4.1-45 All possible precautions shall be taken to maintain a moderate and uniform soil moisture to avoid high and/or fluctuating water content in slope materials. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.</p> <p>LV 4.1-46 A program of aggressive rodent control shall be implemented to control burrowing on slope areas.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-47 Bank protection is proposed to consist of a soil cement, gunite or rip-rap liner, which is buried/concealed behind a 4:1 (h:v) fill slope. Construction of the liner will involve the excavation of a 20-foot-deep slot as shown in the details on the tentative map. Where the toe of the 4:1 slope extends beyond the removals for the slot, the alluvium shall be over-excavated 3 feet prior to placement of overlying fill.</p> <p>LV 4.1-48 Groundwater will likely be encountered between a depth of 5 and 10 feet; therefore dewatering shall be undertaken to complete the lower 10 to 15 feet of the proposed slot excavation.</p> <p>LV 4.1-49 All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscape vegetation requiring excessive watering shall be avoided adjacent to the building foundations. Should landscaping be constructed, an effective water-tight barrier shall be provided to prevent water from affecting the building foundations.</p> <p>LV 4.1-50 Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.</p> <p>LV 4.1-51 Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-52 Overexcavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap is recommended to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.</p> <p>LV 4.1-53 Stability Fills shall be analyzed at the grading plan stage based on testing of the actual materials proposed for the fill.</p> <p>LV 4.1-54 Most of the alluvium and older Alluvium on the site are coarse-grained and have low cohesion. These materials shall not be used within the outer 4 feet of fill slopes and Stability Fills.</p> <p>LV 4.1-55 Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the California Occupational Health and Safety Administration (CAL OSHA). Temporary excavations no higher than 12 feet shall be no steeper than 1:1 (h:v). For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion between 3.5 and 20 feet shall be no steeper than 1.5:1 (h:v). Excavations not complying with these requirements shall be shored. It is strongly recommended that excavation walls in sands and dry soils be kept moist, but not saturated at all times.</p> <p>LV 4.1-56 Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-57 The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method. Recommended specifications for placement of trench backfill are presented in Appendix C of the September 27, 2000 geologic and geotechnical report.</p> <p>LV 4.1-58 The structural design shall include seismic geotechnical parameters in accordance with UBC requirements for Seismic Zone 4. These parameters shall be provided at the grading plan stage.</p> <p>LV 4.1-59 Shallow spread footings for foundation support of up to three-story residential, commercial or light industrial developments can adequately be derived from non-organic native soils, processed as necessary, and bedrock or engineered fill compacted as previously recommended. The composition of footings for heavier structures, if applicable, shall be addressed at the grading plan stage. Tentatively, an allowable bearing capacity of 2,500 pounds per square foot can be used for shallow foundations constructed in certified compacted fill originated from existing, near-surface soils (except vegetative soils). Lateral resistance of footing walls shall be provided at the grading plan stage.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-60 Figure C4 (Appendix C), “Cut Lot (Transitional)” and “Cut-Fill Lot (Transitional)” of the September 27, 2000, geologic and geotechnical report provides a foundation grading detail for locations where foundations will straddle transition zones between cut and fill materials. If the remaining cut-fill transition is steep at depth below the building area, the geometry of the transition shall be reviewed during grading operations by the soils engineer on a site-specific basis to evaluate the need for additional over-excavation removals and/or additional foundation reinforcement. Based on this review, appropriate action shall be taken as deemed necessary by the engineer. As a general guideline, steep cut/fill transitions would include slope gradients steeper than 4:1 (h:v) and overall variations in fill thickness of greater than 15 feet, which occur within 20 feet of final pad grade. Transitions between differing material types, such as bedrock and alluvium, also shall be over-excavated 5 feet as recommended in Section 1.2 of Appendix E of the September 27, 2000 Geologic and Geotechnical Report.</p> <p>LV 4.1-61 To minimize significant settlements, upper soils in areas to receive fills shall be removed and recompacted to competent materials. Specific foundation design loads shall be provided at the grading plan stage.</p> <p>LV 4.1-62 Whenever seepage of groundwater is observed, the condition shall be evaluated by the engineering geologist and geotechnical engineer prior to covering with fill material.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-63 Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which is to discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided to control erosion and to create sheet flow.</p> <p>LV 4.1-64 Fill slopes and stability fills, as applicable, shall be provided with subsurface drainage as necessary for stability.</p> <p>LV 4.1-65 Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.</p> <p>LV 4.1-66 Testing for soil corrosivity shall be undertaken at additional locations within the project site at the grading plan stage. Final recommendations for concrete shall be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals.</p> <p>LV 4.1-67 Retaining wall geotechnical design parameters and pavement design(s) shall be provided at the grading plan stage.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-68 If the proposed fills over alluvium and slopewash at either the Adobe Canyon or Chiquito Canyon sites are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.</p> <p>LV 4.1-69 Where possible, removals that impact the mapped landslides shall be completed so as to not remove the existing landslide stability. If this is not possible, the conditions shall be geotechnically evaluated on a case-by-case basis at the Grading Plan stage in order to safely complete the necessary removals.</p> <p>LV 4.1-70 Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.</p> <p>LV 4.1-71 If the proposed fills over alluvium and slopewash at either Adobe Canyon or Chiquito Canyon are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.1 GEOTECHNICAL AND SOIL RESOURCES (continued) | | |
| | <p>LV 4.1-72 If future development is proposed within either Adobe Canyon or Chiquito Canyon, subsurface exploration and analyses shall be conducted to determine landslide stability. Means to mitigate the potential effects of landslides, including complete or partial removal, buttressing, avoidance, or building setbacks shall be identified at that time.</p> <p>LV 4.1-73 Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.</p> <p>LV 4.1-74 The natural slopes surrounding the proposed water tank site within the Adobe Canyon borrow site shall be evaluated to determine the gross stability of the natural slopes. This study shall include subsurface investigation to determine the specific geologic conditions. Corrective measures such as avoidance, cutting back to a shallower angle, or buttressing with compacted fill shall be implemented if the natural slopes do not meet the minimum required factor of safety.</p> <p>LV 4.1-75 A study shall be conducted to evaluate potential debris flows in the vicinity of the proposed water tank located in the Adobe Canyon borrow site. Corrective measures such as the construction of debris walls and/or basins, control of runoff or removal of loose surficial materials shall be implemented to reduce this threat.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.2 HYDROLOGY | | |
| <p>Site clearing and grading operations within the Landmark Village tract map site would have the potential to discharge sediment in the Santa Clara River during storm events. Temporary erosion control measures in disturbed areas of the project site during the construction phase (including grading in Adobe Canyon and Chiquito Canyon, and construction of the utility corridor) are recommended to reduce this potential impact to less than significant levels. Once developed, the Landmark Village project would reduce post-development stormwater flows during a capital storm event, as compared to existing conditions. Specifically, the amount of discharge from the project site (including the tributary watershed in which the project site lies) would decrease from 1,117 cubic feet per second (cfs) to 850 cfs. This 24 percent reduction in rainfall runoff would be due to the reduction in erosive areas on the project site that contribute sediment and debris to the runoff, as well as to one existing and three proposed upstream debris basins north of State Route 126 (SR-126). The proposed storm drainage improvements would meet the flood control requirements of the Flood Control and Watershed Management Divisions of the Los Angeles County Department of Public Works (LACDPW) and reduce flood impacts to less than significant levels.</p> <p>Discharge from the Adobe Canyon borrow site after grading would be reduced from 450 to 352 cfs during a capital storm event, which represents a 22 percent reduction. Discharge from the Chiquito Canyon grading site after grading would be reduced from 283 cfs to 197 cfs, which is a 30 percent reduction. These reductions in discharge would result from a reduced rate of runoff from the grading sites allowing for greater infiltration. They would also result from the proposed debris basins that would capture sediment and debris in runoff before it discharges to the river. As a result of the grading and the debris basins, discharge from the off-site grading areas would not result in downstream flooding or an exceedance of river capacity, and impacts relative to upstream and/or downstream flooding would be less than significant. Discharge and debris flow from the utility corridor would be equal to or less than that under existing conditions.</p> | <p>Please refer to 4.3, Water Quality, of this summary table for a listing of Program EIR mitigation measures pertaining to hydrology.</p> <p>LV 4.2-1 The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed for either the 25-year or 50-year capital storm.</p> <p>LV 4.2-2 Debris basins shall be constructed pursuant to LACDPW requirements to intercept flows from undeveloped areas entering into the developed portions of the site.</p> <p>LV 4.2-3 Energy dissipaters consisting of either rip-rap or larger standard impact type energy dissipaters shall be installed as required by LACDPW at outlet locations to reduce velocities of runoff into the channel where necessary to prevent erosion.</p> <p>LV 4.2-4 The project is required to comply with the RWQCB Municipal Permit (General MS4 Permit) Order No. 01-182, National Pollutant Discharge Elimination System (NPDES) No. CAS004001 (adopted December 13, 2001), and with the state’s General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, NPDES No. CAS000002, reissued on April 17, 1997, as amended.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s hydrology impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.2 HYDROLOGY (continued) | | |
| <p>Approximately 169 acres of the Landmark Village tract map site would be elevated above the capital floodplain (<i>the remaining portions of the tract map site are already above the capital floodplain</i>) and, therefore, none of the improvements proposed on the tract map site would be subject to flood hazard from the river or other nearby drainages. By elevating 167 acres of the site above the 50-year capital floodplain, no housing or structures would be exposed to flood hazards.</p> <p>The proposed project would not result in risk of loss, injury, or death due to flooding, mudflow, tsunami, or seiche.</p> <p>Project water quality impacts are discussed in this EIR in Section 4.3, Water Quality. Project impacts on biological resources in the Santa Clara River as a result of changes to river hydraulics associated with proposed site grading, bank stabilization, and other floodplain modifications are addressed in this EIR in Section 4.5, Floodplain Modifications.</p> | <p>LV 4.2-5 During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site, within the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor right-of-way, and the bank stabilization areas, as follows:</p> <ul style="list-style-type: none"> • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.; • Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/ or other erosion resistant soil coverings or treatments; • Stabilize construction entrances/exits with aggregate underdrain with filter cloth or other comparable method; | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.2 HYDROLOGY (continued) | | |
| | <p>LV 4.2-5 (continued)</p> <ul style="list-style-type: none"> • Place sediment control best management practices (BMPs) at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins); and/or Eliminate or reduce, to the extent feasible, non-stormwater discharges (e.g., pipe flushing, and fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down) from the construction site through the use of appropriate sediment control BMPs. <p>LV 4.2-6 All necessary permits, agreements, letters of exemption from the Army Corps of Engineers (ACOE) and/or the California Department of Fish and Game (CDFG) for project-related development within their respective jurisdictions must be obtained prior to the issuance of grading permits.</p> <p>LV 4.2-7 By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.2 HYDROLOGY (continued) | | |
| | <p>LV 4.2-8 A final developed condition hydrology analysis shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis will be done to confirm that the final project design is consistent with this analysis. Those final calculations shall establish design features for the project that satisfy the criterion that post-development peak stormwater runoff discharge rates, velocities, and duration in natural drainage systems mimic pre-development conditions. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.</p> <p>LV 4.2-9 Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.</p> <p>LV 4.2-10 To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control to intercept flows from undeveloped areas entering into the developed portions of the site.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY | | |
| <p>The Landmark Village tract map site is presently under agricultural cultivation, and runoff is channeled via agricultural ditches to ultimately discharge into the river. Construction and operation of the Landmark Village project would replace agricultural runoff with urban runoff. The following is a summary of the determinations regarding the significance of impacts for the pollutants of concern under wet- and dry-weather conditions in the post-developed conditions:</p> <ul style="list-style-type: none"> Sediments: Municipal Separate Storm Sewer System (MS4) Permit, General Construction Permit, Dewatering General Permit, and Standard Urban Stormwater Mitigation Plan (SUSMP)-compliant BMPs will be incorporated into the project to address sediment in both the construction phase and post-development. Mean total suspended solids concentration and load are predicted to be less in the post-development condition than under existing conditions. Turbidity in stormwater runoff will be controlled through implementation of a Construction Storm Water Pollution Prevention Plan (SWPPP) and will be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on sediments is considered less than significant. | <p>SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.</p> <p>SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game, and the Regional Water Quality Control Board (RWQCB) for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.4, Biota, Mitigation Measures 4.4-1 through 4.4-10 (restoration) and 4.4-11 through 4.4-16 (enhancement).</p> <p>SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.4, Biota, Mitigation Measures 4.4-1 through 4.4-10 (restoration) and 4.4-11 through 4.4-16 (enhancement).</p> <p>SP 4.2-4 Letters of Map Revision (LOMR) relative to adjustments to the 100-year FIA flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.</p> | <p>With implementation of the identified mitigation measures, the proposed project's water quality impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> Nutrients (Phosphorus and Nitrogen [Nitrate+Nitrite-N and Ammonia-N]): MS4 Permit, General Construction Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address nutrients in both the construction phase and post-development. Nitrate-nitrogen plus nitrite-nitrogen concentrations and loads are predicted to decrease in the post-developed condition. Total phosphorus concentration is predicted to be below the minimum observed value in the Santa Clara River. Nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to be well below Los Angeles RWQCB Basin Plan objectives and below or in the low range of observed values in the Santa Clara River Reach 7E.¹ The predicted nutrient concentrations are not expected to cause increased algae growth. On this basis, the impact of the project on nutrients is considered less than significant. Trace Metals: MS4 Permit, General Construction Permit, General Dewatering Permit, and SUSMP-compliant BMPs will be incorporated into the project to address trace metals in both the construction phase and post-development. The mean loads of dissolved copper and dissolved zinc are predicted to increase with project development, while all trace metal concentrations and the mean load of total lead are predicted to decrease. Mean concentrations of dissolved copper, total lead, and dissolved zinc are below benchmark Basin Plan objectives and California Toxic Rule (CTR) criteria. Cadmium is not expected to be present in runoff discharges from the project. On this basis, the impact of the project on trace metals is considered less than significant. | <p>SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.</p> <p>SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.</p> | |

¹ The Santa Clara River is divided into reaches for purposes of establishing beneficial uses and water quality objectives. This EIR will utilize the U.S. Environmental Protection Agency (U.S. EPA) reach designations.

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> Pesticides: Pesticides in runoff may or may not increase with development as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in infiltration basins, and advanced irrigation controls in compliance with the requirements of the MS4 Permit and the SUSMP, will minimize the presence of pesticides in runoff. During the construction phase of the project, erosion, and sediment control BMPs implement per general Permit and general De-Watering Permit requirements will prevent pesticides associated with sediment from being discharged. Final site stabilization will limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant. Pathogens: Pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. A reduction in open space within the project area will reduce the bacteria produced by wildlife. The project will not include septic systems and the sewer system will be designed to current standards, minimizing the potential for leaks. Thus, pet wastes are the primary source of concern. The Project Design Features (PDFs) will include source controls and treatment controls, which in combination should help to reduce pathogen indicator levels in stormwater runoff. Pathogens are not expected to occur at elevated levels during the construction phase of the project. On this basis, the project's impact on pathogen and pathogen indicators is considered less than significant. | <p>SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.</p> <p>LV 4.3-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs) (the "PDFs"), identified in this Section 4.3, which PDFs shall be designed to meet the standards set forth in this Section 4.3, including the sizing, capacity, and volume reduction performance standards set forth herein, all as summarized in Table 4.3-17.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> Hydrocarbons: Hydrocarbon concentrations will likely increase with development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed infiltration basins and vegetated swales. Source control BMPs incorporated in compliance with the MS4 Permit, the General Construction Permit, and the SUSMP will also minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the General Construction Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards. On this basis, the impact of the project on hydrocarbons is considered less than significant. | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> Trash and debris: Trash and debris in runoff are likely to increase with development if left unchecked. However, the project PDFs, including source control and treatment BMPs incorporated in compliance with the MS4 Permit and the SUSMP requirements will minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering, covered trash receptacles and storm drain stenciling are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris will be captured in catch basin inserts in the commercial area parking lot and in the treatment control PDFs. During the construction phase of the project, PDFs implemented per General Permit and General De-Water Permit requirements will remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters due to the implementation of the project PDFs. Chloride: MS4 Permit, General Construction Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address chloride in both the construction phase and post-development. The mean concentration and load of chloride is predicted to decrease with development, the predicted concentration is well below the Los Angeles Basin Plan objective and is near the low range of observed values in the Santa Clara River Reach 7E. On this basis, the impact of the project on chloride is considered less than significant. | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> • Methylene Blue Activated Substances (MBAS): The presence of soap in runoff from the project will be controlled through the source control PDFs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer in the multi-family residential areas. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing will not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project. • Bioaccumulation: In the literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. However, selenium and mercury are not of concern in this watershed, so bioaccumulation of selenium and mercury is also not expected. On this basis, the potential for bioaccumulation in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant. | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.3 WATER QUALITY (continued) | | |
| <ul style="list-style-type: none"> • Construction Impacts: Construction impacts on water quality are generally caused by soil disturbance and subsequent suspended solids discharge. These impacts will be minimized through implementation of construction BMPs that will meet or exceed measures required by the General Construction Permit, as well as BMPs that control the other potential construction-related pollutants Polycyclic Aromatic Hydrocarbons (PAHs) and metals. A SWPPP will be developed as required by, and in compliance with, the General Construction Permit and Los Angeles County Standard Conditions. Erosion control BMPs, including but not limited to hydro-mulch, erosion control blankets and energy dissipaters will be implemented to prevent erosion, whereas sediment controls, including but not limited to silt fencing, sedimentation ponds and secondary containment on stockpiles will be implemented to trap sediment once it has been mobilized. On this basis, the construction-related impact of the project on water quality is considered less than significant. • Regulatory Requirements: The proposed project satisfies MS4 Permit requirements for new development, including SUSMP requirements and SQMP requirements, and satisfies construction-related requirements of the General Construction Permit and General Dewatering Permit and, therefore, complies with water quality regulatory requirements applicable to stormwater runoff. <p>Finally, the proposed Landmark Village project will not substantially alter the existing drainage pattern of the Santa Clara River in a manner that would cause substantial erosion, siltation, or channel instability; or substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows in a manner that causes channel instability or in a manner that harms sensitive habitats or species in the river. Therefore, the impact of the project on hydromodification is considered less than significant.</p> | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA | | |
| <p>The Landmark Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 387.76 acres of land currently used for agricultural purposes, 120.95 acres of non-native grassland, 4.45 acres of coast live oak woodland, 11.94 acres of coastal sage chaparral scrub, 19.58 acres of mulefat scrub, 21.59 acres of southern cottonwood willow riparian forest, 271.01 acres of coastal sage scrub, 7.77 acres of southern willow scrub, 6.72 acres of river wash, 0.16 acre of alluvial scrub, 3.05 acres of great basin scrub, 7.74 acres of elderberry scrub, 6.61 acres of arrow weed scrub, 1.03 acre of freshwater marsh, 126.41 acres of ruderal vegetation, and 6.93 acres of scalebroom scrub.</p> <p>Significant impacts would occur with respect to the loss of mulefat scrub, coast live oak woodland, coastal sage scrub, elderberry scrub, southern willow scrub, southern cottonwood willow riparian forest, great basin scrub, scalebroom scrub, valley freshwater marsh, wildlife habitat, special-status bird nests, special-status plant species, protected oaks, special-status wildlife species, and CDFG and ACOE jurisdictional resources. Significant indirect impacts would occur with respect to increased light and glare, increased non-native plant species and increased human and domestic animal presence.</p> | <p>SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly endangered or threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species.</p> <p>SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase.</p> <p>SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:</p> <ul style="list-style-type: none"> • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met. • The identification of restoration/ mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency. | <p>Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, significant unavoidable impacts would occur with respect to the loss of sensitive animal species, loss of coastal sage scrub, the overall loss of wildlife habitat and increased human and domestic animal presence.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| <p>The direct and indirect impacts associated with development and operation of the project is consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999) and Revised Additional Analysis (May 2003). Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan RMP, as well as the additional mitigation measures required by this EIR, would mitigate some, but not all, of the identified project-specific impacts to less than significant levels. However, consistent with the findings of the Newhall Ranch Specific Plan Program EIR, significant unavoidable impacts would occur due to the loss of many sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence. The project would also contribute to a significant unavoidable cumulative impact related to the ongoing loss of biological resources in the project region.</p> | <p>SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any.</p> <p>SP 4.6-5 Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies.</p> <p>SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/ layout.</p> <p>SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting state and/or federal agency.</p> <p>SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting state and/or federal agency.</p> <p>SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.</p> <p>SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (<i>Arundo donax</i>) and tamarisk (<i>Tamarix</i> sp.).</p> <p>SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1).</p> <p>SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid “natural” re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values.</p> <p>SP 4.6-15 Removal of non-native species such as giant cane (<i>Arundo donax</i>), salt cedar or tamarisk (<i>Tamarix</i> sp.), tree tobacco (<i>Nicotiana glauca</i>), castor bean (<i>Ricans communis</i>), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards:</p> <ul style="list-style-type: none"> • First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly endangered or threatened species. • All non-native species removals shall be conducted according to a resource agency approved exotics removal program. • Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.</p> <p>SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan.</p> <ul style="list-style-type: none"> • The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8. • Access to the River Corridor SMA will be limited to daytime use of the designated trail system. • Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA. • No hunting, fishing, or motor or off-trail bike riding shall be permitted. • The trail system shall be designed and constructed to minimize impacts on native habitats. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village).</p> <p>SP 4.6-19 The following are the standards for design of transition areas:</p> <ul style="list-style-type: none"> • In all locations where there is no steep grade separation between the River Corridor and development, a trail shall be provided along this edge. • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]). | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-19 (continued)</p> <ul style="list-style-type: none"> • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures. • Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection. <p>A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river-side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as: flood control access; sewer, water and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA:</p> <ul style="list-style-type: none"> • Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. • The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources. <p>SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.</p> <p>SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable conservation and public access easement shall be offered to the County of Los Angeles pursuant to Mitigation Measure 4.6-23 below over the portion of the River Corridor SMA within that subdivision.</p> <p>SP 4.6-23 The River Corridor SMA Conservation and Public Access Easement shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26 below.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-24 The River Corridor SMA Conservation and Public Access Easement shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.</p> <p>Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first.</p> <p>SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-26 Prior to the recordation of the River Corridor SMA Conservation and Public Access Easement as specified in Mitigation Measure 4.6-23 above, the landowner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members).</p> <p>SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: 1) riparian revegetation activities principally in Salt Creek Canyon; and 2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs.</p> <ul style="list-style-type: none"> • Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16 above. • Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48 below. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b) 4. Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.</p> <p>SP 4.6-28 Not applicable.</p> <p>SP 4.6-29 Not applicable.</p> <p>SP 4.6-30 Not applicable.</p> <p>SP 4.6-31 Not applicable.</p> <p>SP 4.6-32 Not applicable.</p> <p>SP 4.6-33 Not applicable.</p> <p>SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.</p> <p>SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.</p> <p>SP 4.6-36 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows:</p> <ol style="list-style-type: none"> 1) The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch; 2) The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and 3) The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch. 4) The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number. <p>SP 4.6-38 Prior to dedication of the High Country SMA, a conservation and public access easement shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA Conservation and Public Access Easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies that may have been granted as part of mitigation or mitigation banking activities.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system.</p> <p>SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies that may have been granted as part of mitigation or mitigation banking activities.</p> <p>SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The joint powers authority will have overall responsibility for recreation within and conservation of the High Country.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to \$24 per single family detached dwelling unit per year and \$15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the joint powers authority for the purposes of recreation, maintenance, construction, conservation and related activities within the High Country Special Management Area.</p> <p>SP 4.6-43 Suitable portions of Open Area may be used for mitigation of riparian, oak resources, or elderberry scrub. Mitigation activities within Open Area shall be subject to the following requirements, as applicable.</p> <ul style="list-style-type: none"> • River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and • High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42, and • Mitigation Banking — Mitigation Measure 4.6-16. <p>SP 4.6-44 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-45 Not applicable.</p> <p>SP 4.6-46 Not applicable.</p> <p>SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the Open Area land use designations, subject to the following requirements:</p> <ul style="list-style-type: none"> • Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above. • Mitigation banking for oak resources shall be conducted pursuant to 4.6-48 below. • Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <p>SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, Mainland cherry trees, and Mainland cherry shrubs):</p> <ul style="list-style-type: none"> • To mitigate the impacts to oak resources which may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time. • Oak resource species obtained from the local gene pool shall be used in restoration or enhancement. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-48 (continued)</p> <ul style="list-style-type: none"> • Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program. <p>All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.</p> <p>SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance.</p> <p>SP 4.6-51 In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list which shall be reviewed by the County Forester.</p> <p>SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be rare, threatened or endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur.</p> <p>The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell’s vireo, the San Fernando Valley spineflower and any other rare, sensitive, threatened, or endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any rare, sensitive, threatened, or endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the USFWS or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-53 (continued)</p> <p>All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the rare, threatened or endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with CEQA (<i>Guidelines</i> §15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts.”</p> <p>SP 4.6-54 Prior to development within or disturbance to occupied Unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform with the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats.</p> <p>SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.</p> <p>SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete.</p> <p>SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California RWQCB.</p> <p>SP 4.6-59 Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones:</p> <ol style="list-style-type: none"> 1) Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-59 (continued)</p> <ol style="list-style-type: none"> 2) After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work. 3) Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-59 (continued)</p> <p>4) Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by rare, threatened, or endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the federal and state permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on endangered, rare or threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level.</p> <p>SP 4.6-60 Not applicable.</p> <p>SP 4.6-61 Not applicable.</p> <p>SP 4.6-62 Not applicable.</p> <p>SP 4.6-63 Not applicable.</p> <p>SP 4.6-64 Not applicable.</p> <p>SP 4.6-65 Not applicable.</p> <p>SP 4.6-66 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-67 (continued)</p> <p>Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-67 (continued)</p> <p>For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "Review of Potential Edge Effects on the San Fernando Valley Spineflower," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-67 (continued)</p> <p>Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s).</p> <p>The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris or anything associated with construction activities.</p> <p>Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.</p> <p>The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.</p> <p>Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.</p> <p>The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-1 Construction activities in the riverbed shall be restricted to the following areas of temporary disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap gunite or soil cement bank protection from where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) 50-foot-wide corridor for all utility lines; and (4) 20-foot-wide temporary access ramps and roads to reach construction sites. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the Verification Request Letter submitted to the ACOE and CDFG for individual project approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed and the post-construction activities to facilitate natural revegetation of the temporarily disturbed areas.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-2 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, and/or bank protection, all construction sites and access roads within the riverbed, as well as all riverbed areas within 300 feet of the construction site and access road, shall be inspected by a qualified biologist for the presence of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker and arroyo chub. The ACOE, USFWS and the CDFG shall be notified of the inspection and shall have the option of attending. If any of the above agencies is not represented, the biologist shall file a written report of the inspection with the agency not in attendance within 14 days of the survey and no sooner than 30 days prior to any construction work in the riverbed.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-3 Construction work areas and access roads shall be cleared of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker, and arroyo chub immediately before the prescribed work is to be carried out, immediately before any equipment is moved into or through the stream or habitat areas, and immediately before diverting any stream water. The removal of such species shall be conducted by a qualified biologist using procedures approved by the ACOE, USFWS and CDFG, and with the appropriate collection and handling permits. Species shall be relocated to nearby suitable habitat areas. A plan to relocate these species shall be submitted to the ACOE, USFWS and CDFG for review and approval no later than 30 days prior to construction. Under no circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.</p> <p>LV 4.4-4 A qualified biologist shall be present when any stream/river diversion takes place, or when blocking nets and seines are used (see also EIR Mitigation Measure 4.6-57), and shall patrol the areas both within, upstream and downstream of the work area to rescue any species stranded by the diversion of the stream water or trapped by the nets/seines. Species that are collected shall be relocated to suitable locations downstream of the work area. Under no circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-5 Blocking nets, or fences with 0.125-inch-square mesh, 18 inches high and buried 6 inches, shall be placed downstream of the work area to assure that none of the species move into the construction area.</p> <p>LV 4.4-6 Installation of bridges, culverts or other structures shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade.</p> <p>LV 4.4-7 The riparian revegetation plan to be developed by the applicant shall demonstrate the feasibility of creating the required mitigation acreage (see Mitigation Measure 4.6-63). The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the riparian creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of CDFG, ACOE, and the County, and approved prior to issuance of the grading permit.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-8 Within 30 days of ground disturbance activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. The surveys shall continue on a weekly basis with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-8 (continued)</p> <p>If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur. The results of the surveys, and any avoidance measures taken, shall be submitted to the County of Los Angeles within 30 days of completion of the pre-construction surveys and/or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-9 A pre-ground disturbance survey shall be conducted by a qualified biologist (subject to approval by the County) within 14 days or any disturbance activities in all areas on the project site containing suitable habitat for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, southwestern pond turtle, two-striped garter snake, American badger, San Diego black-tailed jackrabbit and San Diego desert woodrat. If any of these species are observed within the disturbance zone, they shall be relocated to a suitable area outside of the disturbance zone. Results of the surveys and relocation efforts shall be provided to CDFG and the County. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-9 (continued)</p> <p>If active San Diego desert woodrat nests (stick houses) with young are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site with a 100-foot-minimum buffer from construction activities. This buffer may be greater, if determined to be appropriate by the biologist. At the discretion of the biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If San Diego desert woodrats are observed within the grading footprint outside of the breeding period, individuals shall be relocated to a suitable location on or in proximity to the project site by a qualified biologist in possession of a scientific collecting permit.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-10 No earlier than 20 days prior to any grading activity that would occur during the breeding season of native bat species potentially utilizing the site (April 1 through August 31), a field survey shall be conducted by a qualified biologist (retained by the applicant, with selection reviewed by the County) to determine if active roosts of special-status bats such as pallid bat, western mastiff bat, fringed myotis and yuma myotis are present in areas of the project site containing suitable roosting habitat, such as woodlands and buildings. If active maternity roosts are found, construction within 200 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. Implementation of this measure would ensure that no loss of active maternity roosts of special-status species will occur and, therefore, will reduce impacts on bat species to a less than significant level.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-11 Prior to the issuance of a grading permit, the applicant shall prepare a landscaping plan. This plan will be subject to review and approval by the County and CDFG and will include a plant palette composed of native, non-invasive species that are adapted to the conditions found on the Landmark Village site, without requiring high irrigation rates. Irrigation of perimeter landscaping shall be limited to temporary (i.e., until plants become established) drip irrigation. The landscaping plan will also include a list of invasive plant species prohibited from being planted on the project site. This list of prohibited plants will be compiled in cooperation with a qualified restoration specialist and will be distributed to future occupants of the Landmark Village site.</p> <p>LV 4.4-12 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark Village site.</p> <p>LV 4.4-13 The Landmark Village Home Owners Association shall supply educational information to future residents of the Landmark Village site regarding the importance of not feeding wildlife, ensuring that trash (containing food) is not accessible to wildlife, keeping the ground free of fallen fruit from trees and not leaving pet food outside.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-14 All oaks with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or half again as large as the distance from the trunk to the drip line, whichever distance is greater). No parking or storage of equipment, solvents or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project biologist confirms the health of preserved trees.</p> <p>LV 4.4-15 Prior to use and placement on the Landmark Village site, all landscaping materials (including organic mulches) shall be inspected and certified "free" of Argentine ants.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-16 A mitigation plan for elderberry scrub shall be developed and implemented by the applicant. The plan shall demonstrate the feasibility of replacing the acreage of this plant community to be removed at a 1:1 ratio. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of grading permits.</p> <p>LV 4.4-17 Prior to the issuance of a grading permit for ground disturbance, construction or site preparation activities, the applicant shall retain the services of a qualified biologist, approved by the CDFG and Los Angeles County, to conduct appropriately timed focused surveys for spadefoot toad within all portions of the project site containing suitable breeding habitat. If western spadefoot are not identified on the project site, no further measures would be required. Should western spadefoot be identified on the project site, the following measures would be implemented:</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-17 (continued)</p> <p>(a) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Newhall Ranch Specific Plan area, outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Landmark Village project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG and consist of a shallow excavated pond(s) utilizing an artificial rubber pond liner as a base. The location shall be as far away as possible from any of the homes and roads to be built. The relocation pond(s) shall be designed such that it only supports standing water for several weeks following seasonal rains in order that aquatic predators (i.e., fish, bullfrogs, crayfish, etc.) cannot become established. The size and number of ponds shall be determined by CDFG. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as possible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and the relocation of all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat to the satisfaction of the monitoring biologist and CDFG.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-17 (continued)</p> <p>(b) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct a series of surveys in all appropriate habitats within the development envelope prior to the initiation of construction activities. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified relocation pond(s) described above.</p> <p>(c) The qualified biologist shall monitor the relocation site for a minimum period of five years, or as otherwise directed by CDFG. Specific monitoring requirements and success criteria shall be approved by CDFG. It is expected that minimum requirements will include annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses, larval and post larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-18 For all grading and construction activities a qualified biologist shall be retained by the applicant (with selection reviewed by the County) to ensure that incidental construction impacts on special-status wildlife species are avoided or minimized. The biologist shall be in possession of a Scientific Collecting permit and relocate any wildlife species (for which they are permitted to handle) that may be destroyed or adversely affected as a result of construction and/or site preparation activities. Should a state or federally listed species be encountered, construction shall be halted until a permitted biologist can relocate the animal(s). Responsibilities of the construction biological monitor include the following:</p> <ul style="list-style-type: none"> • Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds). Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. • Discuss procedures for minimizing harm/harassment of wildlife encountered during construction. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-18 (continued)</p> <ul style="list-style-type: none"> • Review/designate the construction area in the field with the contractor in accordance with the final grading plan. Haul roads, access roads, and on-site staging and storage areas shall be sited within grading areas to minimize degradation of habitat adjacent to these areas. If activities outside these limits are necessary, they shall be evaluated by the biologist to ensure no special-status species or habitat will be affected. • Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity. Any construction activity areas immediately adjacent to riparian areas or other special-status resources (such as large trees or bird nests) may be flagged or temporarily fenced by the monitor, at his/her discretion. • Periodically visit the site during construction to coordinate and monitor compliance with the above provisions. • Submit to the County an immediate report of any conflicts or errors resulting in impacts to special-status resources as well as a final report on the results of construction and any recommendations for improving the process. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-19 A mitigation plan for slender mariposa lily shall be developed prior to the issuance of a grading permit and implemented by the applicant. The plan shall incorporate the findings of the <i>Biological Resources Technical Report, Newhall Ranch High Country Specific Management Area</i> (Dudek & Associates 2006) (see Appendix 4.4), and areas identified in the technical report as “high suitability” for slender mariposa lily shall be used as receptor sites for transplanted bulbs. The plan shall demonstrate the feasibility of replacing the number of individual plants to be removed at a 1:1 ratio and/or enhancing and protecting existing populations of the species. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites in protected/preserved areas within the Newhall Ranch Specific Plan area; (2) methods for harvesting seeds and salvaging and transplantation of individual bulbs/plants to be impacted; (3) site preparation procedures for the mitigation site; (4) a schedule and action plan to maintain and monitor the mitigation area; (5) a list of criteria and performance standards by which to measure success of the mitigation site; (6) measures to exclude unauthorized entry into the mitigation areas; and (7) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-20 Appropriately timed focused surveys for the undescribed species of Gnaphalium (Special-Status Plant Species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities within suitable habitat (primarily river terraces) of the species to determine if plants have established within potential impacted areas since the time of the 2005 survey. No longer than one year shall elapse between completion of the survey and commencement of construction activities. Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize impacts to individual plants. These measures shall include adjusting the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then available methods for salvaging seeds and/or transplantation of individual plants to be impacted will be evaluated and implemented. All seed collection and/or transplantation methods, as well as the location of the receiver site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated and approved by the County prior to the issuance of a grading permit.</p> <p>LV 4.4-21 The Oak Resource Replacement Plan to be prepared (as described in Mitigation Measure 4.6-48) shall include measures to create, enhance, and/or restore 4.45 acres of coast live oak woodland within the High Country SMA. The plan shall be subject to the requirements outlined in Mitigation Measure 4.6-48.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.4 BIOTA (continued) | | |
| | <p>LV 4.4-22 In addition to the arroyo toad survey areas specified in Mitigation Measures LV 4.4-2 and LV 4.4-3, clearance surveys for arroyo toad shall be conducted within portions of the Landmark Village project site containing agricultural fields. Should arroyo toad be identified, the USFWS shall be contacted immediately and construction activities shall be halted. Under no circumstances shall arroyo toad be collected or relocated unless approved by, and under the supervision of, the USFWS.</p> <p>LV 4.4-23 A mitigation plan for <i>Artemisia tridentata</i> ssp. <i>parishii</i> shall be developed prior to the issuance of a grading permit and implemented by the applicant. The plan shall <i>specify</i>, at a minimum, the following: (1) the location of mitigation sites in protected/preserved areas within the Newhall Ranch Specific Plan area; (2) methods for harvesting seeds of plants to be impacted; (3) site preparation procedures for the mitigation site; (4) a schedule and action plan to maintain and monitor the mitigation area; (5) a list of criteria and performance standards by which to measure success of the mitigation site; (6) measures to exclude unauthorized entry into the mitigation areas; and (7) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.5 FLOODPLAIN MODIFICATIONS | | |
| <p>The hydraulic impacts on sensitive aquatic/riparian resources in the Santa Clara River corridor due to floodplain modifications associated with construction and operation of the proposed Landmark Village project site would be localized, and not cause significant hydrological impacts adjacent to or downstream from the Landmark Village site. On that basis, and given the limited amount of riparian habitat permanently altered by Landmark Village site development, project construction and operation would not significantly impact the unarmored threespine stickleback (<i>Gasterosteus aculeatus williamsoni</i>), arroyo toad (<i>Bufo californicus</i>), California red-legged frog (<i>Rana aurora draytonii</i>), southwestern pond turtle (<i>Clemmys marmorata pallida</i>), or two-striped garter snake (<i>Thamnophis hammondi</i>). "Floodplain modifications" associated with the proposed project include the Long Canyon Road Bridge crossing over the river, bank stabilization along portions of the banks of the river, and importing soils from off-site grading areas to remove mostly agricultural land and non-native grasslands by raising these land areas from the floodplain to allow for development and placement of bank protection.</p> | <p>Please refer to 4.2, Hydrology, of this summary table for a listing of Program EIR mitigation measures pertaining to flood control.</p> <p>No additional mitigation beyond that contained in the Biota section of this EIR (Section 4.4, Biota) is required because no significant impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications. Please refer to 4.4, Biota, of this summary table for a listing of the recommended Biota mitigation measures.</p> | <p>With implementation of the identified mitigation measures, the proposed project's floodplain modification impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.5 FLOODPLAIN MODIFICATIONS (continued) | | |
| <p>Three distinct habitat types are found in the river corridor including: (1) aquatic habitats, consisting of flowing or ponded water; (2) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the flowing water; and (3) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. Wildlife species associated with these habitats include: (1) the endangered unarmored threespine stickleback (known to be present adjacent to Landmark Village project site); least Bell’s vireo (<i>Vireo bellii pusillus</i>) (known to occur within Specific Plan), southwestern arroyo toad (known to occur upstream of the Landmark Village project site), southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) (not known to be present on Landmark Village project site), and California red-legged frog (not known to be present on Landmark Village project site); and (2) other sensitive, but not endangered, species such as the arroyo chub (<i>Gila orcutti</i>), Santa Ana sucker (<i>Catostomus santaanae</i>), two-striped garter snake, western spadefoot toad (<i>spea hammondi</i>), and southwestern pond turtle (with the exception of the spadefoot toad, all are known to occur within the Specific Plan). The focus of this analysis is on five sensitive species: unarmored threespine stickleback, arroyo toad, California red-legged frog, southwestern pond turtle, and two-striped garter snake.</p> | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.6 VISUAL QUALITIES | | |
| <p>The Landmark Village project would significantly alter the visual characteristics of the Santa Clara River/SR-126 corridor. Views in Chiquito Canyon would also be significantly altered due to project implementation. While the Landmark Village project, for the most part, is not replacing prominent visual features, such as river vegetation or river bluffs, the images of residential development, roadways, bridges and other human activity would be a significant change from the existing site characteristics. Such development would also introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that involve new streets and intersections, and cannot be eliminated if the proposed project is implemented. Chapters 3 and 4 of the Specific Plan contain Development Regulations and Design Guidelines, respectively, that apply to the Landmark Village project. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, the identified significant visual impacts would still result from the change in the visual character of the site from rural to urban. Consequently, such significant visual impacts would remain significant and unavoidable, as found in the Newhall Ranch Specific Plan Program EIR.</p> | <p>SP 4.7-1 In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan, Chapter 3) and Design Guidelines (Specific Plan Chapter 4), and the design themes and view considerations listed in the Specific Plan.</p> <p>SP 4.7-2 In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along SR-126, the following Design Guidelines shall be utilized:</p> <ul style="list-style-type: none"> • Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126. • The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs and ridge lines to the south of the river. | <p>After implementation of the recommended mitigation measures, visual quality impacts would remain significant and unavoidable.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.6 VISUAL QUALITIES (continued) | | |
| | <p>SP 4.7-2 (continued)</p> <ul style="list-style-type: none"> • Residential Site Planning Guidelines set forth in Section 4.3.1, Residential and Architectural Guidelines, set forth [in] Section 4.4.1, Residential, shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs and ridge lines south of the river are preserved to the extent practicable. • Mixed-Use and the Commercial Site Planning Guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river. • Landscape improvements along SR-126 shall incorporate the Landscape Design Guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS | | |
| <p>The proposed project would buildout in three phases. Phase 1 is estimated to generate approximately 4,950 average daily traffic (ADT) with approximately 375 tripends occurring in the AM peak hour and approximately 505 tripends occurring in the PM peak hour. Phase 2 (including Phase 1) is estimated to generate approximately 20,700 total ADT with approximately 1,400 tripends occurring in the AM peak hour and approximately 1,900 tripends occurring in the PM peak hour. Finally, Phase 3 is estimated to generate an additional 21,200 ADT for a total of 41,900 ADT at project buildout. At buildout, the project would generate approximately 2,900 tripends in the AM peak hour and 4,100 tripends in the PM peak hour. Approximately 30 percent of the Phase 1 and 2 tripends would be internal tripends. The remaining tripends would be for trips off site.</p> | <p>SP 4.8-1 The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicants' ability to seek local, state or federal funding for these facilities.</p> | <p>With implementation of the identified mitigation measures, the proposed project's traffic/access impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| <p>The traffic impact analysis, using the County of Los Angeles performance standards, found that the project at buildout would result in a significant impact at the following intersections:</p> <p>Phases 1 and 2 Combined</p> <ul style="list-style-type: none"> • Wolcott/SR-126 • Commerce Center Drive/SR-126 <p>Phase 3 (Project Buildout)</p> <ul style="list-style-type: none"> • Interstate 5 (I-5) Southbound Ramps/SR-126 • Wolcott/SR-126 • Commerce Center Drive/SR-126 • Chiquito-Long Canyon/SR-126 <p>A traffic signal warrant is met at the Chiquito Canyon Road/Long Canyon Road/SR-126 intersection during Phase 1 of the project, and at the Long Canyon Road/"A" Street intersection for project buildout conditions, thereby necessitating a traffic signal at these locations.</p> <p>Mitigation measures are recommended that would reduce the level of impact at all of these intersections to less than significant.</p> <p>No significant impact to CMP intersections or freeways, or on SR-126 or State Route 23 (SR-23) in Ventura County would occur.</p> <p>Significant cumulative traffic impacts in the project study area would occur at the following locations absent mitigation:</p> <p>Year 2010 Project Buildout and Related Projects</p> <ul style="list-style-type: none"> • I-5 Southbound Ramps/SR-126 • I-5 Northbound Ramps/SR-126 • Wolcott/SR-126 • Chiquito-Long Canyon/SR-126 <p>Long Range Cumulative Forecast</p> <ul style="list-style-type: none"> • I-5 south of Magic Mountain Parkway • I-5 south of Rye Canyon Road | <p>SP 4.8-2 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision.</p> <p>SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled "B" through "P" in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation 4.8-2 [of the Newhall Ranch Specific Plan Final EIR].</p> <p>SP 4.8-4 All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| <p>In addition, year 2020 buildout of the entire Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the following SR-126 intersections in the community of Piru and City of Fillmore in Ventura County:</p> <ul style="list-style-type: none"> • Center Street and Telegraph Road (SR-126) • E Street and Ventura Street (SR-126) • El Dorado Road and Ventura Street <p>Identified mitigation measures would reduce the project’s contribution to the cumulative impacts in Los Angeles County to a level below significant. Mitigation measures also are proposed that would reduce the Specific Plan buildout traffic’s contribution to potentially significant cumulative impacts at SR-126 intersections in Piru and Fillmore in Ventura County to a level below significant.</p> | <p>SP 4.8-5 The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant.</p> <p>SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. The applicants total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal or local funding for these facilities.</p> <p>SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the <i>Congestion Management Program</i> in effect at the time that subdivision map is filed.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: "A," "B," "C," "D," and "E" Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>SP 4.8-10 The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. Each future transportation performance evaluation required by Mitigation 4.8-2 [of the Newhall Ranch Specific Plan Final EIR] which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure 4.8-6 above shall be made.</p> <p>SP 4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an Interstate 5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley.</p> <p>SP 4.8-12 The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>SP 4.8-13 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County’s Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6 [of the Newhall Ranch Specific Plan Final EIR]. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development.</p> <p>LV 4.7-1 The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations.</p> <p>LV 4.7-2 The main access for River [Landmark] Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the NRSP will provide access to and from south via Long Canyon Road. Unless an updated long range study is prepared which demonstrates that the intersections will adequately handle the area buildout traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-3 80. Wolcott/SR-126 - The project applicant shall add a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane and 1 northbound right turn lane) and convert a shared southbound left turn lane/southbound through lane to a dedicated southbound through lane (for 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-4 110. Chiquito Canyon-Long Canyon/SR-126 – The project applicant shall add a northbound left turn lane and a northbound right turn lane (for 1 northbound left turn lane, 1 northbound through lane, and 1 northbound right turn lane), add a southbound left turn lane (for 1 southbound left turn lane and 1 shared southbound through lane/southbound right turn lane), and add a westbound left turn lane (for 1 westbound left turn lane, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-5 The study is based on the Santa Clarita Valley Consolidated Traffic Model and assumes the following roadway improvements will be in place with Phase I of the project. In accordance with our Traffic Impact Analysis Report Guidelines (TIARG), these improvements shall be made a condition of approval for the project to be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed:</p> <ul style="list-style-type: none"> - Reconstruct the Golden State (I-5) Freeway/SR-126 Freeway interchange by adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126, direct access to northbound I-5 from westbound SR-126, and widening bridge to 8 lanes. - Construct Newhall Ranch Road segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road. <p>LV 4.7-6 Although the traffic study prepared for the project determined that a traffic signal is not warranted at the school, the project applicant shall be required to monitor for the possible installation of a traffic signal once the school is fully occupied.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-7 80. Wolcott/SR-126 – The project applicant shall add a northbound left turn lane and 2 northbound right turn lanes (for 1 northbound left turn lane, 1 northbound through lane, and 2 northbound right turn lanes), add a eastbound right turn lane (for 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane), and add a second westbound left turn lane (for 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.</p> <p>LV 4.7-8 7. I-5 Southbound Ramps/SR-126 – The project applicant shall finance its fair share to add a third westbound through lane (for 3 westbound through lanes and a free flow westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|--|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-9 80. Wolcott & SR-126 – The project applicant shall add a third east bound through lane (for one east bound left turn lane, three east bound through lanes, and one east bound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-10 110. Chiquito Canyon/Long Canyon & SR-126 – The project applicant shall add a second northbound through lane and a second northbound right turn lane (for one northbound left turn lane, two northbound through lanes, and two northbound right turn lanes). Also add a southbound right turn lane (for one southbound left turn lane, one southbound through lane, and one southbound right turn lane) one eastbound right turn lane (for one eastbound left turn lane, two eastbound through lanes, and one eastbound right turn lane), and a second westbound left turn lane (for two westbound left turn lanes, two westbound through lanes, and one westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-11 7. I-5 Southbound Ramps & SR-126 –The project applicant shall fund a fair share of the cost to add a third southbound lane (for two southbound lanes, one shared southbound left turn lane/one southbound right turn lane, and one dedicated southbound right turn lane), a third and fourth eastbound through lane (for four eastbound through lanes and one free flow eastbound right turn lane), and a fourth westbound through lane (for four westbound through lanes and one free flow westbound right turn lane). (Project share = 38.3 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent)² Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]</p> | |

² Percentage pro-rata calculation figures were determined by the County of Los Angeles, Department of Public Works, written communication of December 9, 2004.

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-12 8. I-5 NB Ramps & SR-126 –The project applicant shall fund a fair share of the cost to add a third northbound left turn lane (for three northbound left turn lanes and one northbound right turn lane), a third and fourth eastbound through lane (for four eastbound through lanes and one free flow eastbound right turn lane), and a third westbound through lane (for three westbound through lanes and one free flow westbound right turn lane). (Project Share = 20.8 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent)³ Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]</p> | |

³ Ibid.

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--------------------------------|--|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-13 80. Wolcott & SR-126 –The project applicant shall fund a fair share of the cost to add a second southbound left turn lane (for two southbound left turns, one southbound through lane, and one southbound right turn lane), add a second eastbound left turn lane (for two eastbound left turn lanes, three eastbound through lanes, and one eastbound right turn lane), and a third westbound through lane (for two westbound left turn lanes, three westbound through lanes, and one westbound right turn lane). (Project Share = 62.1 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 12.2 percent, Phase II= 19.3 percent and Phase III= 30.6 percent)⁴ Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-14 81, 82, 83 and 94. Commerce Center/SR-126 – The project applicant shall finance its fair share to construct a Grade Separated Interchange (Project Share = 33.8 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent) Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> | |

⁴ Ibid.

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-15 110. Chiquito Canyon/Long Canyon Road & SR-126 –The project applicant shall fund its fair share to add a second northbound left turn lane (for two northbound left turn lanes, two northbound through lanes and two northbound right turn lanes), add a second southbound left turn lane, and second and third southbound through lanes (for two southbound left turn lanes, three southbound through lanes and one southbound right turn lane), add a second eastbound left turn lane and third eastbound through lane (for two eastbound left turn lanes, three eastbound through lanes, and one eastbound right turn lane), and add a third westbound through lane (for two westbound left turn lanes, three westbound through lanes, and one westbound right turn lane). (Project Share = 62 percent) or construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-16 Prior to issuance of occupancy permits for the elementary school, a painted school pedestrian crossing with associated signing shall be installed across "A" Street and across "U" Street at the elementary school access from "A" Street. Driver behavior shall be monitored as the community develops and, if necessary, additional treatments shall be installed to further enhance the pedestrian crossing. These may include crossing guards at an intersection, such as the "A" Street/"U" Street intersection, and pedestrian activated in-pavement warning lights or overhead flashing lights to identify the pedestrian crossing. These warnings can be configured with automated detection units that would activate the lights automatically given the presence of a pedestrian rather than relying on the children to manually engage the system.</p> <p>LV 4.7-17 Applicable transit mitigation fees shall be paid at the time of final map recordation, unless modified by an approved development agreement.</p> <p>LV 4.7-18 Prior to the commencement of project construction activities, the applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-19 The traffic signals shall be installed at the following intersections. The design and the construction of the traffic signals shall be the sole responsibility of the project. The signals shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>Phase I: Wolcott Way at Henry Mayo Drive (SR-126)</p> <p>Phase II: Chiquito Canyon Road and Long Canyon Road (Future) at Henry Mayo Drive (SR-126)</p> <p>Phase III: Long Canyon Road at "Y" Street and "A" Street (TT 53108)</p> <p>LV 4.7-20 The developer shall coordinate with and notify the Castaic Union School District (CUSD) that traffic circulation plan and the drop-off/pick-up procedures shall be prepared and submitted to Traffic and Lighting Division for review and approval. We recommend a mechanism for enforcement and levying of noncompliance penalties be included in the plan. The CUSD shall prepare informational packets containing the approved drop-off/pick-up procedures and provide to the parents/guardians of students of the school. The recordation of the phase containing Lot 345 where the school is proposed shall be withheld until the student drop-off/pick-up procedures, the informational packets or brochures, and the revised school site plan have been received and approved by Public Works.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---------------------------------------|---|--|
| 4.7 TRAFFIC/ACCESS (continued) | | |
| | <p>LV 4.7-21 The project applicant shall fund fair share capacity augmentation of the segment of I-5 through the Santa Clarita Valley following the examples shown on Table 4.7-31. All other development that would impact the affected freeway segments shall also pay a fair share of required funding.</p> <p>LV 4.7-22 Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of \$300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City.</p> <p>LV 4.7-23 Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development’s pro-rata share of the entire Newhall Ranch Specific Plan’s fair-share (nine percent) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) Re-stripe the Center Street southbound approach lane resulting in separate left and right turn lanes; (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.8 NOISE | | |
| <p>Development of the Landmark Village site over a 54-month period would involve clearing and grading of the ground surface, trucks importing approximately 5.8 million cubic yards of fill material, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both continuous and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of the off-site Travel Village Recreational Vehicle (RV) Park when construction activities occur.</p> <p>Grading operations at the site and the off-site borrow sites would occur over a 46-week period. Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise impact. The construction noise would not be audible within the community of Val Verde due to intervening distances and topography.</p> | <p>SP 4.9-1 All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the "County of Los Angeles Construction Equipment Noise Standards," County of Los Angeles Ordinance No. 11743, §12.08.440 as identified in [Newhall Ranch Specific Plan Program EIR] Table 4.9-3.</p> <p>SP 4.9-2 Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.</p> <p>SP 4.9-3 When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p> <p>SP 4.9-4 Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas.</p> | <p>Should pile driving be required to construct the Long Canyon Road bridge, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on-site noise-sensitive uses within 5,000 feet of the pile driving, a short-term significant and unavoidable significant construction noise impact would occur. Furthermore, construction within the utility corridor immediately north of Travel Village RV Park could expose occupants of the RV Park to excessive noise levels during its construction. Even with the mitigation measures in place the resulting noise levels may continue to exceed the applicable thresholds, resulting in a significant and unavoidable impact.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--|---|--|
| 4.8 NOISE (continued) | | |
| <p>On-site occupants who would have an uninterrupted line of sight to the construction noise sources could be exposed to increased noise levels during construction, resulting in potentially significant impacts unless mitigated. Noise impacts from these construction activities would be less than significant at the Travel Village RV Park. However, occupants of the RV Park could be exposed to excessive noise levels during utility corridor construction, resulting in significant impacts as construction activity occurs adjacent to the Park. Although mitigation is recommended to reduce these impacts, the resulting noise levels may continue to exceed the applicable thresholds, resulting in a significant and unavoidable impact. On-site construction noise would not be audible at the community of Val Verde due to distances between the site and the community of Val Verde, the intervening topography that would attenuate on-site noise, and traffic noise along SR-126 that would “drown out” on-site construction noise to the north. In the event construction of the Long Canyon Road Bridge requires pile driving into the bed of the Santa Clara River, the noise levels associated with these activities would be audible to occupants of on-site uses constructed prior to the bridge, and would exceed County noise thresholds within 5,000 feet of the pile-driving activities. Therefore, if it is not feasible to complete the pile driving prior to occupancy of on-site noise sensitive residential uses located within 5,000 feet of the pile-driving activities, a short-term significant and unavoidable construction noise impact would occur. If pile drilling were utilized instead of pile driving, short-term noise impacts would be significant and unavoidable at noise sensitive uses located within 1,600 feet of the pile-drilling activities.</p> | <p>SP 4.9-5 Where new single-family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) CNEL or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL.</p> <p>SP 4.9-6 For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying technical report presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.8 NOISE (continued) | | |
| <p>Sound levels from long-range traffic volumes along SR-126 and on proposed "A" Street would exceed the thresholds of significance for noise sensitive uses proposed along these roadways within the project boundaries. With implementation of the recommended mitigation measures, noise impacts at these noise sensitive uses would be reduced to levels below significant.</p> <p>Upon buildout, the project would not result in point-source noise impacts to off-site locations. However, future traffic along SR-126, with and without the project, would cause mobile source noise levels at the Travel Village RV Park to exceed 70.0 decibels on an A-weighted scale (dB(A)) community noise equivalent level (CNEL) by 2010. Pursuant to Mitigation Measure 4.9-14 from the Newhall Ranch Specific Plan Program EIR, once noise levels reach 70 dB(A) CNEL at certain locations on the RV Park site, the project applicant will be required to mitigate highway noise levels at Travel Village to 70 dB(A) or less.</p> <p>Point sources of noise from the proposed on-site parks would include ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.</p> | <p>SP 4.9-7 For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying technical report presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p> <p>SP 4.9-8 For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying technical report presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p> <p>SP 4.9-9 All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards, County of Los Angeles Ordinance No. 11743, §12.08.530.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>SP 4.9-10 All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, §12.08.390 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.</p> <p>SP 4.9-11 Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, §12.08.460.</p> <p>SP 4.9-12 Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in §12.08.460 of the Ordinance No. 11743.</p> <p>SP 4.9-13 Not applicable.</p> <p>SP 4.9-14 After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.8 NOISE (continued) | | |
| | <p>SP 4.9-15 Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of ADTs on SR-126 at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126 from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the Santa Clara Elementary School District the pro-rata share of the cost to construct the subject sound wall. See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2010 would generate 105 ADTs on SR-126 at the Little Red School House (EIR Table 4.7-22). Section 4.5 also determined that the 2010 ADT on SR-126 at the Little Red School House would be 35,000 (EIR Table 4.7-22).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of ADTs on SR-23 north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the City of Moorpark noise attenuation program the project's pro rata share of the estimated cost of attenuation. See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2010 would generate 10 ADTs on SR-23 north of Casey Road (EIR Table 4.7-22). Section 4.5 also determined that the 2010 ADT on SR-23 at north of Casey Road would be 8,000 (EIR Table 4.7-22).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.8 NOISE (continued) | | |
| | <p>SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. (Section 4.8 of this EIR and the accompanying technical report (Appendix 4.8) provide the acoustical analysis required by this mitigation measure.)</p> <p>In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions. (This measure is not applicable to the Landmark Village project because the project does contribute significant unmitigated cumulative noise impacts and no jurisdiction-wide noise programs have been adopted by the County.)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays or legal holidays.</p> <p>LV 4.8-2 When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant or its designee shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-3 Prior to construction of the utility corridor north of the Travel Village RV Park, the project applicant or its designee shall erect solid construction and continuous temporary noise barriers south of the utility corridor north of the RV Park without blocking ingress/egress at the Park. Prior to issuance of the construction permit for the utility corridor, a qualified acoustic consultant shall be retained to specify the placement and height of the noise barriers in order to maximize their effectiveness in attenuating noise levels. Construction activities north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County’s Noise Ordinance for the duration of the construction.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-4 To the extent feasible, the project developer shall utilize cast-in-drilled-hole piles in lieu of pile driving if residential units are constructed within 5,000 feet of the Long Canyon Bridge prior to any pile driving activity.</p> <p>Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) Equivalent Continuous Noise Level (L_{eq}) compared to 90 to 105 dB(A) L_{eq} of conventional pile driving.⁵ Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving.</p> <p>LV 4.8-5 To mitigate noise impacts on Lots 8 to 12 and Lots 20 to 24 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 6-foot wall along the northern property lines of these lots.</p> <p>LV 4.8-6 To mitigate noise impacts on Lots 115 to 128, 146 to 152, 188, and 313 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 5-foot wall along the northern property lines of these lots. The 5-foot wall shall wrap around the entire length of the eastern boundary of Lot 152.</p> | |

⁵ U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-7 To mitigate noise impacts on Lots 325, 326, 349, and 350 (condominiums and apartments east of Wolcott Road) from traffic along SR-126, the project applicant or its designee shall, prior to occupancy, construct a 7-foot berm/solid wall at top of slope along northern edge of Lots 326, 325, 349 and 350, to the northwestern corner of Lot 349. The berm/wall shall be continuous with no breaks or gaps.</p> <p>LV 4.8-8 To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the northern edge of Lots 380, 381, 379, and 360. The berm/wall shall be continuous with no openings or gaps.</p> <p>LV 4.8-9 Prior to occupancy of Lot 346 (condominium west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-10 To mitigate noise impacts on Lot 346 (condominiums west of Wolcott Road) from SR-126 the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern edge of Lot 346 from its northeastern corner to a point approximately 325 feet to the west along the lot line. From this point, a 10-foot berm/solid wall shall be constructed through Lot 383 (open space) to the edge of the Caltrans right-of-way where the wall shall continue westerly to the northwestern corner of Open Space Lot 383. The wall shall be continuous with no openings or gaps.</p> <p>LV 4.8-11 Prior to occupancy of Lot 346 (condominium west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial).</p> <p>LV 4.8-12 To mitigate delivery truck and other noises from the commercial center west of Long Canyon Road on Lot 354 (apartments west of Long Canyon Road), the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the eastern perimeter of Lot 354.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-13 To mitigate noise impacts on Lot 354 (apartments west of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 9-foot berm/solid wall along the northern boundary of Lot 354, and along the northern 200 feet of the western lot line. To preserve views of the Santa Clara River, 0.625-inch Plexiglas or transparent material with equivalent or better acoustic value may be incorporated into the wall design. In lieu of constructing the 9-foot berm/solid wall, the parcel shall be developed so that frequent use areas, including balconies, are placed toward the interior of the lot and fully shielded from noise from SR-126 by the apartment structure.</p> <p>LV 4.8-14 To mitigate noise impacts on Lot 376 (apartments east of Long Canyon Road) from delivery truck and other noise from the commercial center proposed east of Long Canyon Road, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the western boundary of Lot 376.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|---|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-15 Residences within mixed-use commercial areas shall be discouraged within 500 feet of the centerline of SR-126. Residences that do occur within mixed use commercial lots shall be set back as far as possible from SR-126, Wolcott Road, Long Canyon Road, and "A" Street in order to minimize the need for acoustic insulation of the units. When the plot plan for the commercial center is complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial center can be feasibly reduced to 45 dB(A).</p> <p>LV 4.8-16 Balconies with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 0.375-inch glass or 0.625-inch Plexiglas to a height specified by a qualified noise consultant.</p> <p>LV 4.8-17 All single-family and multi-family structures, including multi-family units incorporated into commercial centers, within 500 feet of SR-126 and all residential units with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall incorporate the following into the exterior wall that faces onto those roadways:</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------|--|--|
| 4.8 NOISE (continued) | | |
| | <p>LV 4.8-17 (continued)</p> <ul style="list-style-type: none"> (a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level. <p>LV 4.8-18 Air conditioning units shall be installed to serve all living areas of all residences incorporated into commercial centers, and those with direct lines of sight to SR-126, and/or "A" Street so that windows may remain closed without compromising the comfort of the occupants.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|---|--|
| 4.9 AIR QUALITY | | |
| <p>Implementation of the Landmark Village project would generate both construction and operational air pollutant emissions. Construction-related emissions would be generated by on-site stationary sources, on- and off-road heavy-duty construction vehicles, and construction worker vehicles. Operation-related emissions would be generated by on-site and off-site stationary sources and by mobile sources. During project construction, emissions of carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) would exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) for all but one construction subphase. The analysis of local significance threshold (LST) impacts suggests that PM₁₀ emissions could exceed the limitations in SCAQMD Rule 403. While the nitrogen dioxide (NO₂) concentrations exceed the LST thresholds, the California Ambient Air Quality Standards (CAAQS) would be exceeded only if (1) the actual background concentrations were as high as those on which the LSTs thresholds are based during the worst-case construction day;; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred;; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day. At project buildout, operational emissions of CO, VOC, NO_x, and PM₁₀ would exceed SCAQMD thresholds, primarily due to mobile source emissions in the summertime and to mobile source and wood-burning fireplace emissions in the wintertime.</p> | <p>SP 4.10-1 The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. (The Landmark Village project provides Commercial and Service Uses in close proximity to residential subdivisions).</p> <p>SP 4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. (The Landmark Village project locates residential uses in close proximity to Commercial Uses and Mixed Uses).</p> <p>SP 4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site. (The Landmark Village project provides for bus pull-ins at designated locations).</p> <p>SP 4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. (Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout the Landmark Village project, with future connections to other on-site and off-site future developments and designated trails).</p> <p>SP 4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. (Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Landmark Village project site with future connections to future developments within Newhall Ranch).</p> | <p>No feasible mitigation exists that would reduce construction and operational emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related emissions of VOC, NO_x, and PM₁₀, and operation-related emissions of CO, VOC, and NO_x are considered significant and unavoidable.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|---|--|
| 4.9 AIR QUALITY (continued) | | |
| <p>No project land use would be exposed to CO hotspots and the project would not cause a CO hotspot at other locations of sensitive receptors in the project study area. In addition, population growth attributed to the project is consistent with the approved Newhall Ranch Specific Plan and is within growth forecasts contained in the 2001 Regional Transportation Plan (2001 RTP) prepared by the Southern California Association of Governments (SCAG). The 2001 RTP forms the basis for the land use and transportation control portions of the 2003 AQMP. Because the project is within the growth forecasts for the region, it would, consequently, be consistent with the 2003 AQMP, indicating that it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley or throughout the South Coast Air Basin (the Basin).</p> | <p>SP 4.10-5 (continued)</p> <p>Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision:</p> <p><i>Grading</i></p> <ol style="list-style-type: none"> a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more). b. Replace groundcover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content. d. Water active sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to district-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|--|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-5 (continued)</p> <p><i>Paved Roads</i></p> <ul style="list-style-type: none"> h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. <p><i>Unpaved Roads</i></p> <ul style="list-style-type: none"> j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less. l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|---|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's <i>CEQA Air Quality Handbook</i>, as amended) shall be implemented if found applicable and feasible for that subdivision:</p> <p>On-Road Mobile Source Construction Emissions</p> <ol style="list-style-type: none"> a. Configure construction parking to minimize traffic interference. b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours). c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM). d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. e. Implement a shuttle service to and from retail services and food establishments during lunch hours. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|--|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-7 (continued)</p> <p>On-Road Mobile Source Construction Emissions (continued)</p> <p>f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:</p> <ul style="list-style-type: none"> - Rerouting construction traffic off congested streets; - Consolidating truck deliveries; and - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site. <p>g. Prohibit truck idling in excess of two minutes.</p> <p>Off-Road Mobile Source Construction Emissions</p> <p>d. Use methanol-fueled pile drivers.</p> <p>e. Suspend use of all construction equipment operations during second stage smog alerts.</p> <p>f. Prevent trucks from idling longer than two minutes.</p> <p>g. Use electricity from power poles rather than temporary diesel-powered generators.</p> <p>h. Use electricity from power poles rather than temporary gasoline-powered generators.</p> <p>i. Use methanol- or natural gas-powered mobile equipment instead of diesel.</p> <p>j. Use propane- or butane-powered on-site mobile equipment instead of gasoline.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|--|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 461 – Gasoline Transfer And Dispensing, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 – Control Of Emissions From Restaurant Operations, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|---|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD’s CEQA <i>Air Quality Handbook</i>, as amended) shall be implemented if found applicable and feasible for that subdivision.</p> <p>On Road Mobile Source Operational Emissions</p> <p><i>Residential Uses</i></p> <ul style="list-style-type: none"> b. Establish shuttle service from residential subdivision to commercial core areas. c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks. e. Include retail services within or adjacent to residential subdivisions. f. Provide shuttles to major rail transit centers or multi-modal stations. g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|------------------------------------|---|--|
| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 (continued)</p> <p><i>Commercial Uses</i></p> <ul style="list-style-type: none"> j. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. k. Implement on-site circulation plans in parking lots to reduce vehicle queuing. l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup. m. Provide video-conference facilities. n. Set up resident worker training programs to improve job/housing balance. s. Implement a lunch shuttle service from a worksite(s) to food establishments. w. Establish a home-based telecommuting program. x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders. z. Provide on-site employee services such as cafeterias, banks, etc. aa. Establish a shuttle service from residential core areas to the worksite. ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 (continued)</p> <p><i>Commercial Uses (continued)</i></p> <p>ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.</p> <p>ad. Include residential units within a commercial project.</p> <p>ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.</p> <p>af. Any two of the following:</p> <ul style="list-style-type: none"> - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use. <p>ag. Any two of the following:</p> <ul style="list-style-type: none"> - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. - Include showers for pedestrian employees' use. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 (continued)</p> <p><i>Commercial Uses (continued)</i></p> <ul style="list-style-type: none"> ah. Provide shuttles to major rail transit stations and multi-modal centers. ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). aj. Charge visitors to park. ak. Synchronize traffic lights on streets impacted by development. al. Reschedule truck deliveries and pickups to off-peak hours. am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles. an. Require on-site truck loading zones. ao. Implement or contribute to public outreach programs. ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 (continued)</p> <p>Stationary Source Operational Emissions</p> <p>Residential</p> <ul style="list-style-type: none"> br. Use solar or low emission water heaters. bs. Use central water heating systems. bt. Use built-in energy-efficient appliances. bu. Provide shade trees to reduce building heating/cooling needs. bv. Use energy-efficient and automated controls for air conditioners. bw. Use double-paned windows. bx. Use energy-efficient low-sodium parking lot lights. by. Use lighting controls and energy-efficient lighting. bz. Use fuel cells in residential subdivisions to produce heat and electricity. (This measure is not yet considered technically or economically feasible. There are presently no commercially available fuel cell applications for individual home use at a reasonable cost.) | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-9 (continued)</p> <p>Stationary Source Operational Emissions (continued)</p> <p><i>Residential (continued)</i></p> <ul style="list-style-type: none"> ca. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). cb. Use light-colored roofing materials to reflect heat. cc. Increase walls and attic insulation beyond Title 24 requirements <p><i>Commercial Uses</i></p> <ul style="list-style-type: none"> cd. Use solar or low emission water heaters. ce. Use central water heating systems. cf. Provide shade trees to reduce building heating/cooling needs. cg. Use energy-efficient and automated controls for air conditioners. ch. Use double-paned windows. ci. Use energy-efficient low-sodium parking lot lights. cj. Use lighting controls and energy-efficient lighting. ck. Use light-colored roofing materials to reflect heat. cl. Increase walls and attic insulation beyond Title 24 requirements. cm Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County’s Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan’s non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10.</p> <p>SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.</p> <p>SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.</p> <p>SP 4.10-13 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.</p> <p>LV 4.9-1 Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.</p> <p>LV 4.9-2 All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>LV 4.9-3 All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles.</p> <p>Cooled exhaust gas recirculation (EGR) reduces CO, VOC, NO_x, and PM₁₀ emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NO_x. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NO_x emissions by 40 percent and PM₁₀ emissions by 85 percent.</p> <p>LV 4.9-4 All on-road and off-road construction equipment shall employ diesel particulate filters, which can reduce PM₁₀ emissions from construction equipment by as much as 80 percent based on information provided in the URBEMIS2002 model.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>LV 4.9-5 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village.</p> <p>LV 4.9-6 The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.</p> <p>LV 4.9-7 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.</p> <p>LV 4.9-8 Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Codes & Restrictions (CC&Rs).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES | | |
| <p>The proposed Landmark Village project would generate a total water demand of 1,038 acre-feet per year (afy), 702 afy of potable water demand, and 336 afy of non-potable demand. The proposed project's potable water demand (702 afy) would be met by the Valencia Water Company through the use of the project applicant's rights to 7,038 afy of groundwater from the Alluvial aquifer. Non-potable water demand (336 afy) would be met through the use of recycled (reclaimed) water from the initial phase of the Newhall Ranch Water Reclamation Plant (WRP), with build-out of the WRP occurring over time as demand for treatment increases with implementation of the Newhall Ranch Specific Plan. Alternatively, if the Newhall Ranch WRP is not operating at the time of project occupancy, the non-potable water demand would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site. Based on the project-level analysis, an adequate supply of water is available to serve the Landmark Village project, in addition to existing and planned future uses in the Santa Clarita Valley. No significant water supply or water quality impacts are expected from supplying available water to meet the demands of both the project and cumulative development in the valley.</p> | <p>SP 4.11-1 The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. (Consistent with this measure, the Project Description section of this EIR discusses the fact that the Landmark Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.)</p> <p>SP 4.11-2 Landscape concept plans shall include a palette rich in drought-tolerant and native plants. (Consistent with this measure, the Landmark Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.)</p> <p>SP 4.11-3 Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. (Consistent with this measure, the Landmark Village project's grading/ landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.)</p> | <p>With implementation of the identified mitigation measures, the proposed project's water resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.9 AIR QUALITY (continued) | | |
| | <p>SP 4.11-4 Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. (Consistent with this measure, the Landmark Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California.)</p> <p>SP 4.11-5 Not applicable.</p> <p>SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan Development Monitoring System (DMS), as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. (Consistent with this measure, Valencia Water Company, the retail water purveyor for the Landmark Village project, has issued its SB 610 water supply assessment for the project, confirming the availability of water to serve the project concurrent with need.)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-7 Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services. (Consistent with this measure, the Landmark Village project’s recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.)</p> <p>SP 4.11-8 Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). (Consistent with this measure, prior to issuance of building permits, the applicant for the Landmark Village project shall finance the required water service extension/expansion costs to the Landmark Village subdivision through the payment of connection fees to the appropriate water agency or agencies.)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-9 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of Castaic Lake Water Agency (CLWA) and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues. This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. (To date, four such water reports have been prepared (1998, 1999, 2000 and 2001) and provided to both the County of Los Angeles and the City of Santa Clarita.) (As an update, a total of seven annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita and other interested persons and organizations from 1998 through 2004. The latest 2004 Santa Clarita Valley Water Report is included in Appendix 4.10 of this EIR.)</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-10 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that CLWA, in cooperation with other Santa Clarita Valley retail water providers, continue to update the Urban Water Management Plan (UWMP) for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated UWMP in connection with the County's future local land use decision-making process. The County will also consider the information contained in the updated UWMP in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (CLWA and other local retail water purveyors are expected to complete the 2005 Urban Water Management Plan (2005 UWMP) for the CLWA service area in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Landmark Village project.)</p> <p>SP 4.11-11 Not applicable.</p> <p>SP 4.11-12 Not applicable.</p> <p>SP 4.11-13 Not applicable.</p> <p>SP 4.11-14 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-15 Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 AFY. This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley. To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County’s Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. (Consistent with this measure, the applicant will provide the County with the required annual report.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-16 The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (Consistent with this measure, the agricultural groundwater used to meet the needs of the Landmark Village project shall meet the drinking water quality standards required under Title 22 prior to use.)</p> <p>SP 4.11-17 In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County’s subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. (This measure has been satisfied by the County requiring preparation of this EIR for the Landmark Village project.)</p> <p>SP 4.11-18 Not applicable.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-19 A Memorandum of Understanding (MOU) and Water Resource Monitoring Program have been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program.</p> <p>As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an on-going process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following:</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-19 (continued)</p> <p>“4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.</p> <p>4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU’s monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU’s monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act.”</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-19 (continued) (Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors (CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company) have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.)</p> <p>SP 4.11-20 Not applicable.</p> <p>SP 4.11-21 The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.10 WATER RESOURCES (continued) | | |
| | <p>SP 4.11-22 Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision. (Consistent with this measure, the applicant of the Landmark Village project has provided the County with the required documentation. As a condition of approval of the Landmark Village tract map, the applicant will provide proof to the County that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Landmark Village subdivision.)</p> <p>SP Condition of Approval</p> <p>Prior to approval of the first subdivision map which permits construction, a report will be provided by the applicant which evaluates methods to recharge the Saugus Aquifer within the Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.11 WASTEWATER DISPOSAL | | |
| <p>Construction impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities. The proposed Landmark Village project would generate a worst-case average total of 0.41 million gallons per day (mgd) of wastewater that would be treated by the Newhall Ranch WRP. The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with build-out of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, of which Landmark Village is a part, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation of 0.41 mgd. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on County Sanitation Districts of Los Angeles County (CSDLAC) future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.41 mgd. For these reasons, wastewater disposal impacts would be less than significant.</p> | <p>SP 4.12-1 The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (This measure has been implemented by the Board of Supervisors' approval of the Newhall Ranch WRP within the boundary of the Specific Plan.)</p> <p>SP 4.12-2 A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, state and federal design standards, to serve the Newhall Ranch Specific Plan. (This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.)</p> <p>SP 4.12-3 The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, state and federal design standards.</p> <p>SP 4.12-4 Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision.</p> <p>SP 4.12-5 All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements.</p> | <p>With implementation of the identified mitigation measures, the proposed project's wastewater disposal impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.11 WASTEWATER DISPOSAL (continued) | | |
| | <p>SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit.</p> <p>SP 4.12-7 Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.12 SOLID WASTE DISPOSAL | | |
| <p>Site preparation (vegetation removal and grading activities) and construction activities would generate a total of approximately 20,556 tons, or an average of approximately 4,111 tons per year of construction wastes over the 5-year buildout of the project assuming no recycling, or approximately 10,278 total tons assuming a 50 percent diversion rate. The Landmark Village project would generate approximately 20,858 pounds per day, or approximately 3,807 tons per year, of solid waste upon buildout assuming no solid wastes from the project would be recycled (a worst-case scenario). The project may also generate household type hazardous wastes. Cumulative development within the Santa Clarita Valley would generate 395,452 tons per year of solid waste, as well as hazardous waste, assuming no recycling. The project's share of 3,807 tons per year would represent 0.96 percent of this total. Mitigation has been identified to reduce construction and operation wastes to the extent feasible. Los Angeles County's landfills have approved adequate capacity to service the existing population and planned growth until the year 2017. Capacity is projected to extend beyond the year 2017, when combined with other events that have expanded landfill capacity within the County. However, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. This is not to say, though, that alternative solid waste disposal technologies that could substantially reduce landfill disposal will not be developed and legislatively approved in the future; given the market forces that drive the solid waste industry, it seems reasonable to assume they will. Nevertheless, until other disposal alternatives that will be adequate to serve existing and future uses for the foreseeable future are found and because landfill space is a finite resource, the potential project and cumulative solid and hazardous waste impacts are considered significant unavoidable impacts.</p> | <p>SP 4.15-1 Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are:</p> <ul style="list-style-type: none"> • compatible with nearby structures; • secured and protected against adverse environmental conditions; • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials. <p>SP 4.15-2 Future multi-family, commercial, and industrial projects within the Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.</p> | <p>Even with mitigation, the project's solid and hazardous waste impacts would be considered significant and unavoidable. In addition, cumulative solid and hazardous waste impacts would be considered significant and unavoidable.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.12 SOLID WASTE DISPOSAL (continued) | | |
| | <p>SP 4.15-3 The first purchaser of each residential unit within the Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.</p> <p>SP 4.15-4 The applicant of all subdivision maps which allow construction within the Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.</p> <p>LV 4.12-1 The project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also provide a Waste Management Plan to recycle, at a minimum, 50 percent of the construction and demolition debris. Reports shall be submitted to the Los Angeles County Environmental Programs Division.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.13 SHERIFF SERVICES | | |
| <p>The Los Angeles County Sheriff’s Department provides primary police protection service for the Newhall Ranch Specific Plan site and the surrounding Santa Clarita Valley. Additionally, the Department of California Highway Patrol provides traffic regulation enforcement; emergency incident management; and service and assistance on I-5, SR-126, State Route 14 (SR-14), and other major roadways in the unincorporated portions of the Santa Clarita Valley area. The Sheriff’s Department current officer to population ratio is less than the desired level of service set by the department. The California Highway Patrol (CHP) protection service for the project site and other unincorporated areas within the Santa Clarita Valley at the time of this writing is considered less than adequate.</p> <p>Buildout of the Landmark Village project would significantly increase the demand for police protection and traffic-related services on the project site and the local vicinity in terms of personnel and equipment needed to adequately serve the project. The project would require the services of an additional four sworn Sheriff’s Department officers, based on Department ideal deputy to resident ratio. However, the Department has indicated that the proposed project would require 15 additional deputies. These increased service demands can be met through the provision of increased Sheriff’s Department personnel paid for by new tax revenues generated by the project as it builds out. Therefore, any potential impacts to the Sheriff’s Department would less than significant. Additionally, although not made necessary by the project, the applicant has entered into negotiations with the Sheriff’s Department for the provision of a Sheriff station site within the Newhall Ranch Specific Plan that would serve the buildout of all uses within the Newhall Ranch Specific Plan boundary.</p> | <p>SP 4.17-1 As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff’s Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff’s service to the subdivisions and which will help ensure adequate public safety features within the tract designs.</p> <p>LV 4.13-1 Construction signs shall be posted with a reduced construction zone speed limit. These signs shall be posted to the satisfaction of the California Highway Patrol.</p> <p>LV 4.13-2 Prior to the commencement of construction activities, the project applicant, or its designee, shall retain the services of a private security company to patrol the construction site, as necessary, to minimize, the potential for trespass, theft and other unlawful activity associated with construction-related activities.</p> <p>LV 4.13-3 Prior to the commencement of construction activities, the project applicant, or its designee shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of the California Department of Transportation (Caltrans) and the Los Angeles County Department of Public Works.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s Sheriff services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.13 SHERIFF SERVICES (continued) | | |
| <p>Construction of the proposed project would increase the incidence of petty crimes on the site and also would increase construction traffic on SR-126 that may potentially delay emergency vehicles traveling through the area. However, by retaining the services of a private security company to patrol the project construction site, and by implementing a construction traffic control plan, any potentially significant construction-related impacts to law enforcement services would be reduced to a level below significant.</p> <p>The proposed project also would increase demands for CHP services in the project area. Through increased revenues generated by the project as it builds out (via motor vehicle registration and drivers license fees paid by new on-site residents and businesses), the funding for additional staffing and equipment would be made available to the CHP for allocation by the state CHP office to the Santa Clarita Valley station to meet future demands. Therefore, project-related impacts to the CHP would be less than significant.</p> | <p>LV 4.13-4 A long-term funding agreement with the California Highway Patrol shall be explored to supplement the personnel assigned to the Newhall California Highway Patrol Area commensurate with the increased growth generated by the Landmark Village project.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES | | |
| <p>Fire protection and emergency medical response services for the Landmark Village project and the surrounding area are provided by the County’s Fire District. Nine fire stations and three fire camps provide fire protection services for the Santa Clarita Valley area. Fire Station 76, located at 27223 Henry Mayo Drive in Valencia is the closest station to the project site. The closest available district response units would provide fire protection services. Should a significant incident occur, the entire resources of the Fire Department, not just the stations closest to the site, would serve the project. The County’s Fire Department and a franchise private ambulance company also provide paramedic services to the area.</p> <p>The Landmark Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County’s Fire Department, which denotes the County Forester’s highest fire hazard potential.</p> <p>The applicant is currently in discussions with the County’s Fire Department with respect to the required MOU for Newhall Ranch. At this time, it is expected that the permanent off-site fire station to be constructed at the Del Valle Training Facility would ultimately provide the fire protection services for the Landmark Village project. As part of this negotiation the MOU process, The general locations of three fire stations within the Newhall Ranch Specific Plan have been agreed upon at this time. One station would be located within the Landmark Village site. In addition, stations are planned for within both the Mission Village and Potrero Village sites to the west and southwest of the Landmark Village project site, respectively. Until such time as the Del Valle first of the fire stations is completed, existing Fire Station No. 76 would serve the project site.</p> | <p>SP 4.18-1 At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone.</p> <p>SP 4.18-2 Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a two hour duration for single family residential units, and 5,000 gpm at 20 psi residual pressure for a five-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s fire protection services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| <p>The proposed project would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project. As a result, the project would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Therefore, by implementing the adopted Specific Plan mitigation measures in combination with the recommended project-specific mitigation, the proposed project would not have a significant project or cumulative impact on fire protection services or fire hazards in Santa Clarita Valley</p> | <p>SP 4.18-3 Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval.</p> <p>SP 4.18-4 The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of one acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing 3-engines, 1 paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>SP 4.18-4 (continued)</p> <p>Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District, will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>SP 4.18-4 (continued)</p> <p>The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements (“fire protection plan”) and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly. <i>(This measure has been superceded by the ongoing MOU negotiations process. Mitigation Measure LV 4.14-2 contains the updated requirements.)</i></p> <p>LV 4.14-1 Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a fuel modification plan, a landscape plan and an irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-2 The applicant will construct three fully equipped and furnished fire stations (including all ancillary requirements such as landscaping, parking, fuel tanks, storage rooms, etc., required for normal fire station operations). Such stations are to be conveyed to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The Fire District shall approve all plans and designs for the three fire stations. The applicant will dedicate fire station sites for all three fire stations within Newhall Ranch. Two fire station sites will have a building pad consisting of a minimum net buildable area of 1.25 acres, and one fire station site will have a building pad consisting of a minimum net buildable area of 1.5 acres; the locations and configurations of each site shall be approved by the Fire District.</p> <p>Two of the three fire stations to be constructed by the applicant will not exceed 11,000 square feet; the third fire station to be constructed by the applicant will not exceed 13,500 square feet. Future changes in federal, state or local requirements may affect these station minimum sizes.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-2 (continued)</p> <p>One of the three fire stations will be located within the Landmark project, at a location approved by the Fire District. Such station shall be 11,000 square feet constructed upon a minimum 1.25 net building pad. The fully constructed, equipped and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark project. Additionally, the applicant shall provide funding for the purchase of one Fire District standard, fully equipped fire pumper engine and paramedic squad prior to the issuance of the 723rd certificate of occupancy.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-2 (continued)</p> <p>For the remaining two fire stations, the Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving 5-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan") and the criteria for timing the development of each of the fire stations, which will be defined in a Memorandum of Understanding between the applicant and the Fire Chief of the Fire District. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent stations, which will be located within the Newhall Ranch development. The use of such temporary fire stations must be approved by the Fire District and detailed in the Memorandum of Understanding. The applicant and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly.</p> <p>LV 4.14-3 If the project applicant alters the Fire District's road access, it must provide paved access acceptable to the Fire District from Chiquito Canyon Road to the Del Valle facility.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-4 The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.</p> <p>LV 4.14-5 The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.</p> <p>LV 4.14-6 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.</p> <p>LV 4.14-7 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.</p> <p>LV 4.14-8 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-9 Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.</p> <p>LV 4.14-10 The maximum allowable grade shall not exceed 15 percent except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20 percent will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17 percent. Grade breaks shall not exceed 10 percent in 10 feet.</p> <p>LV 4.14-11 When involved with a subdivision in unincorporated areas within the County of Los Angeles, Fire Department, requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.</p> <p>LV 4.14-12 Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-13 Prior to construction, the following items shall be addressed:</p> <ul style="list-style-type: none"> a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building penult issuance. b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction. <p><u>INSTITUTIONAL:</u></p> <p>LV 4.14-14 The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a four-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used.</p> <p>LV 4.14-15 Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.</p> <p>LV 4.14-16 All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16, Los Angeles County Fire Department Regulation #5.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p><u>COMMERCIAL/HIGH-DENSITY RESIDENTIAL:</u></p> <p>LV 4.14-17 The development may require fire flows up to 5,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-18 Fire hydrant spacing shall be 300 feet and shall meet the following requirements:</p> <ul style="list-style-type: none"> a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. c. Additional hydrants will be required if hydrant spacing exceeds specified distances. d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block. e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use. <p>LV 4.14-19 Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p> <p>LV 4.14-20 All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-21 Driveway width for non-residential developments shall be increased when any of the following conditions will exist:</p> <ul style="list-style-type: none"> a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure. b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway. c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three inch high letters. Driveway labeling is necessary to endure access for Fire Department use. | |
| | <p><u>SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS:</u></p> <p>LV 4.14-22 Single-family detached homes shall require a minimum fire flow of 1,250 gpm at 20 psi residual pressure for a 2-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gpm at 20 psi residual pressure for a 2-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gpm at 20 psi residual pressure for a 2-hour duration.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-23 Fire hydrant spacing shall be 600 feet and shall meet the following requirements:</p> <ul style="list-style-type: none"> a. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant. b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid-block. d. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.14 FIRE PROTECTION SERVICES (continued) | | |
| | <p>LV 4.14-24 Streets or driveways within the development shall be provided with the following:</p> <ul style="list-style-type: none"> a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. <p>LV 4.14-25 A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.15 EDUCATION | | |
| <p>The Castaic Union School District (Castaic District) and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high/middle school and senior high school education in the Landmark Village project area. The Castaic District provides elementary school service (Kindergarten [K] and grades 1–6) and middle school service (grades 7 and 8) to the project site. The Hart District provides junior high school (grades 7 and 8) and senior high school (grades 9–12) service. The Landmark Village project would generate an estimated 336 new elementary students, 93 new middle school students, and 161 new senior high school students for the two Districts at build-out.</p> <p>The “School Facilities Funding Agreement Between the Castaic Union School District and Newhall Land and Farming Company” (Castaic School Funding Agreement), effective November 20, 1997, and included in this EIR (Appendix 4.15), would mitigate Landmark Village impacts on the Castaic District. Under the Castaic School Funding Agreement, the applicant and the Castaic District have provided a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment to house grades K–5 and 6–8 students who will reside in the Riverwood Village Planning Area of the Newhall Ranch Specific Plan. The proposed Landmark Village project is part of the Riverwood Village Planning Area. Once implemented, the Castaic School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Castaic District’s educational facilities.</p> | <p>SP 4.16-1 The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements.</p> <p>SP 4.16-2 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District.</p> <p>SP 4.16-3 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District.</p> <p>SP 4.16-4 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land & Farming Company and the Castaic Union School District.</p> <p>SP 4.16-5 In the event that School District boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/ industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the District.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s education impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.15 EDUCATION (continued) | | |
| <p>Project-specific impacts on the Hart District would be mitigated through the separate “School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company” (Hart School Funding Agreement), effective October 1998, and included in this EIR (Appendix 4.15). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Hart District’s educational facilities.</p> <p>Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or planned facilities within the school facilities that serve the valley; therefore, cumulative impacts on the school districts would be significant. Compliance, as appropriate, with existing School Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements) would reduce cumulative development impacts on the school districts to below a level of significance and no significant unavoidable cumulative impacts to educational services are anticipated.</p> <p><i>No significant unavoidable impacts would result from implementation of the proposed Landmark Village project.</i></p> | | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.16 PARKS AND RECREATION | | |
| <p>The proposed Landmark Village project includes a 16-acre Community Park, consistent with the Specific Plan's Land Use Overlay Community Park designation for the area, 3.13 acres of the Specific Plan's Regional River Trail, and 4.10 acres of community trails. The basic Quimby park land obligation for the subdivision is 11.34 net acres of park land and the project will provide an improved 9.74 net acre Community park. The remaining park obligation will be fulfilled by the subdivision providing a 6.39-acre private park; 5.23 net acres in recreational centers, and a 3.10 net-acre trail easement. Pursuant to the Newhall Ranch Specific Plan, the 13.12 acres by which the subdivision exceeds its Quimby obligation will be credited against other subdivisions within the Newhall Ranch Specific Plan area. Implementation of these project components results in a parkland dedication equivalent to approximately 7.1 acres per 1,000 persons, which is greater than the County and Quimby Act requirements of 3.0 acres per 1,000 persons. The proposed project includes a hierarchy of community, local and other trails connecting to the Specific Plan's Regional River Trail, which traverses the Santa Clara River. Measured against the identified significance thresholds, the proposed Landmark Village project meets County parkland requirements, exceeds Quimby Act parkland standards, and would not result in significant impacts to local parks and recreation facilities.</p> <p>Implementation of cumulative projects would incrementally increase demand for local park facilities. However, the proposed project would meet County parkland requirements and exceed the Quimby Act parkland standards. Further, future development projects would be subject to the Quimby Act and County requirements, which would mitigate the demand associated with each future project. As a result, no significant cumulative impacts on County parks and recreation facilities would occur with implementation of the proposed project.</p> | <p>SP 4.20-1 Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and open area:</p> <ul style="list-style-type: none"> • Ten public Neighborhood Parks totaling 55 acres, • Open Areas totaling 1,106 acres of which 186 acres are Community Parks, • High Country Special Management Area of 4,214 acres, • River Corridor Special Management Area of 819 acres, • A 15-acre lake, • An 18-hole golf course, and • A trail system consisting of: <ul style="list-style-type: none"> - Regional River Trail, - Salt Creek Corridor, - Community trails, and - Unimproved trails. <p>SP 4.20-2 Prior to the construction of the proposed trail system, the Specific Plan applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.</p> <p>SP 4.20-3 Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards.</p> <p>Because the proposed Landmark Village project meets the County parkland requirements and exceeds the Quimby Act requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.</p> | <p>With implementation of the identified mitigation measures, the proposed project's parks and recreation impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.17 LIBRARY SERVICES | | |
| <p>The project site of the proposed Landmark Village project is located in the Valencia Library Service area of the County of Los Angeles Public Library (County Library). In addition to the Valencia library, the Santa Clarita Valley area is served by three County libraries (Newhall Library, and Canyon Country Jo Anne Darcy Library) and the Santa Clarita Valley Bookmobile. Existing library space in the Santa Clarita Valley does not meet the County Library’s service Level Guidelines.</p> <p>Based on the County Library’s service level guidelines of 0.50 square foot of library facilities per capita and a collection size of 2.75 items (books, magazines, periodicals, audio, video, etc.) per the development of the proposed project would require a total of 1,840 square feet of library facilities and 10,120 items. As part of the County’s approval of the Newhall Ranch Specific Plan, the County adopted a library mitigation measure requiring that the developer provide funding for the construction and development of library facilities on the Specific Plan site. The mitigation measure provides that, prior to issuance of the first residential building permit on Newhall Ranch, the County Librarian and the developer must develop a mutually acceptable “Library Construction Plan.” The plan must outline the library construction requirements and define elements such as location, size, funding, and timing of facilities. The Library Construction Plan, a completion schedule, land dedication criteria and a funding plan must be defined and set forth in a MOU between the developer and the County Librarian. Revenues collected by the County library over the course of buildout of the project would partially fund library services in the new library. With mitigation, any potential impacts to library services caused by project construction and occupancy would be reduced to less than significant levels.</p> | <p>SP 4.19-1 The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County’s library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules.</p> <p>The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer’s funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).</p> | <p>With implementation of the identified mitigation measures, the proposed project’s library services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.17 LIBRARY SERVICES (continued) | | |
| <p>With respect to cumulative impacts, new development occurring within the Santa Clarita Valley would increase demand for books and library space. However, the payment of the Library Developer Fee, \$737.00 per residential unit as of July 1, 2006, would mitigate potentially significant cumulative impacts on the County Library to less than significant levels.</p> | <p>SP 4.19-1 (continued) Prior to County’s issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements (“Library Construction Plan”) and the criteria for timing the completion of the library(s) will be defined in a MOU between the developer and the County Librarian. Such MOU shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer’s funding for library facilities shall not exceed the developer’s fee obligation at the time of construction under the developer fee schedule.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.17 LIBRARY SERVICES (continued) | | |
| | <p>SP 4.19-1 (continued)</p> <p>If two libraries are to be constructed, the first library will be completed and operational by the time of County’s issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County’s issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County’s issuance of the 10,000th residential building permit of Newhall Ranch.</p> <p>No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.</p> | |
| 4.18 AGRICULTURAL RESOURCES | | |
| <p>Development of the Landmark Village tract map and related off-site improvements would convert to non-agricultural land uses 194 acres of Prime Farmland, 7 acres of Farmland of Statewide Importance, 126 acres of Unique Farmland, and 18 acres of Farmland of Local Importance, for a total of 338 acres of prime agricultural land. Additionally, site development would disturb 647 acres of Grazing Land. No feasible mitigation exists to reduce the impacts resulting from the conversion of prime agricultural land to a less than significant level. The irreversible loss of 338 acres of prime agricultural land as a result of the Landmark Village project is considered a significant impact consistent with the findings of the Newhall Ranch Specific Plan Program EIR. Based on the applicable significance thresholds, the loss of Grazing Land is not considered a significant impact.</p> | <p>SP 4.4-1</p> <p>Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.</p> | <p>The project-specific impacts resulting from the loss of prime agricultural land are considered significant and unavoidable. In addition, the cumulative conversion of prime agricultural land to non-agricultural uses constitutes a loss of an irreplaceable resource and is considered a significant and unavoidable cumulative impact.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| 4.19 UTILITIES | | |
| <p>Uses proposed by the Landmark Village project are within those allowed by the Newhall Ranch Specific Plan and that were previously analyzed in the Newhall Ranch Specific Plan Program EIR. The Landmark Village project would require energy resources and infrastructure to serve the project site. Projections for energy supply and demand by Southern California Edison and the Southern California Gas Company indicate that the agencies would have sufficient electricity and natural gas supply to serve the project site. Consistent with the Newhall Ranch Specific Plan Program EIR, providing electricity and natural gas to the Landmark Village project site would not require considerable extension of infrastructure. In addition, the Landmark Village project would be required to comply with Title 24 and Assembly Bill (AB) 970 energy conservation measures. With implementation of the mitigation measures from the certified Newhall Ranch Specific Plan Program EIR, no significant impacts to electricity and natural gas resources or infrastructure would occur as a result of the Landmark Village project.</p> | <p>SP 4.14-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the <i>California Code of Regulations</i>).</p> <p>SP 4.14-2 Southern California Edison or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.</p> <p>SP 4.14-3 All future tract maps are to comply with Southern California Edison or other energy provider guidelines for grading, construction and development within SCE easements.</p> <p>SP 4.14-4 Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and Southern California Edison or other energy provider as each tract is designed and constructed.</p> <p>SP 4.14-5 All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to Edison or other energy provider facilities as a condition of their approvals.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s utilities impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|-----------------------------------|--|--|
| 4.19 UTILITIES (continued) | | |
| | <p>SP 4.13-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the <i>California Code of Regulations</i>).</p> <p>SP 4.13-2 A letter from the Southern California Gas Company or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under construction.</p> <p>SP 4.13-3 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.</p> <p>SP 4.13-4 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|----------------------|--|
| 4.20 MINERAL RESOURCES | | |
| <p>The Landmark Village project site, utility corridor, and borrow site are located within an MRZ-2 zone, which indicates that information exists which identifies the area as a location with significant mineral deposits present, or a location with a high likelihood of the presence of mineral deposits. The water tank sites are located in the MRZ-3 zone, which indicates that mineral deposits are expected to occur in this area, but the extent of such deposits is unknown at the present time. However, neither the tract map site, utility corridor, borrow site, nor water tank sites are the subjects of active mineral extraction operations. Further, the tract map site, utility corridor, borrow site, and water tank sites are not identified as a “locally-important mineral resource recovery site” or a “regionally significant construction aggregate resource area” by the County of Los Angeles General Plan or the Santa Clarita Valley Area Plan. In addition, at the time the Newhall Ranch site was designated by the County of Los Angeles as “Specific Plan,” which serves as the zoning designation for the property, there were no areas within Newhall Ranch used for mineral extraction. Under the Specific Plan designation, the area currently is zoned for development of various Specific Plan land uses and not long-term mineral extraction activities.</p> | <p>None required</p> | <p>Less Than Significant</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|----------------------|--|
| 4.20 MINERAL RESOURCES (continued) | | |
| <p>The Specific Plan zoning designation allows for the development of a mixed-use planned community, with sand and gravel extraction activities allowed during tract grading and construction phases on the sites to be developed. Additionally, extraction activities are permitted in the Visitor-Serving (VS) and Open Area (OA) zones under a conditional use permit, which is not proposed. Thus, the current zoning designation for the entire Newhall Ranch site allows the area to be available for mineral extraction uses on a limited basis in areas that are already proposed for, and in association with, development (i.e., on tentative tract map sites). Furthermore, the majority of mineral resources of value are expected to be located in the River Corridor and not on the project site, and, therefore, the continued availability of these resources would not be significantly affected by the proposed project. Therefore, project implementation will not result in a significant impact in relation to the loss of availability of a known mineral resource or a locally important mineral resource recovery site.</p> | <p>None required</p> | <p>Less Than Significant</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|---|--|
| 4.21 ENVIRONMENTAL SAFETY | | |
| <p>The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Hazardous materials generally include petroleum products (including oil and gasoline), automotive fluids (antifreeze, hydraulic fluid), paint, cleaners (dry cleaning solvents, cleaning fluids), and pesticides from agricultural uses (at higher concentrations). Byproducts generated as a result of activities using hazardous materials (such as dry cleaning solvents, oil and gasoline) are considered hazardous waste. Contamination usually takes the form of a hazardous materials or waste spill in soil. Such contamination can penetrate soils into the groundwater table, resulting in the pollution of a local water supply. Commercial uses, particularly those using underground storage tanks (UST), are most common in causing such contamination.</p> | <p>SP 4.5-1 Not applicable. SP 4.5-2 Only non-habitable structures shall be located within SCE easements. SP 4.5-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region). SP 4.5-4 Not applicable. SP 4.5-5 The Specific Plan is to meet the requirements of Southern California Gas Company (SCGC) in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage.</p> | <p>With implementation of the identified mitigation measures, the proposed project’s environmental safety impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--|---|--|
| 4.21 ENVIRONMENTAL SAFETY (continued) | | |
| <p>Potential environmental safety impacts associated with the project site involve observed soil (including possible petroleum hydrocarbon contamination) near abandoned oil wells and pipelines, aboveground storage tanks (ASTs) and equipment storage areas. Unless mitigated, these potentially contaminated soils could result in significant impacts, especially if construction utilizing these soils, or contamination within these soils, was permitted without proper monitoring and testing. When remediated to local, state and federal standards, including re-abandonment procedures for previously abandoned wells and pipelines, any potentially significant impacts relative to these conditions would be reduced to below a level of significance and, therefore, would not result in environmental safety hazards to Landmark Village residents, employees and/or visitors or to adjacent properties.</p> <p>Another potential safety impact associated with the project site relates to the disposal of on-site debris, including asbestos-containing materials (ACMs). Unless appropriately disposed of, ACMs could result in safety hazards to project construction workers.</p> | <p>SP 4.5-6 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line’s presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p> <p>SP 4.5-7 In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas.</p> <p>SP 4.5-8 In accordance with the provisions of the Los Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system.</p> <p>SP 4.5-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.21 ENVIRONMENTAL SAFETY (continued) | | |
| <p>The presence of pesticides in the soils from historic agricultural operations, and the continuing use of pesticides in connection with ongoing agricultural activities, constitutes a potential impact, although the impact does not rise to a significant level. Soil sampling has been conducted to determine on-site concentrations of pesticides. The results showed no concentration of hazardous pesticides exceeding the residential or industrial use Preliminary Remediation Goals. Additionally, no Proposition 65 pesticides have been used on the Landmark Village project site. With respect to the future use of pesticides, due to the regulation of those pesticides used by agricultural activities occurring on Newhall Ranch, including the chemical and physical properties of those pesticides used, the requirement to use the pesticides in accordance with manufacturer specifications, and the mode of application of the pesticides, it is not expected that humans would be subject to either acute overexposure or chronic exposure to any of the pesticides used. Therefore, the on-site use of pesticides would not create a potential public health hazard, and would create no significant impact to the development property or its residents.</p> | <p>LV 4.21-1 Prior to the issuance of grading permits, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004)(see Appendix 4.21), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region).</p> <p>LV 4.21-2 Prior to the issuance of grading permits, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--|---|--|
| 4.21 ENVIRONMENTAL SAFETY (continued) | | |
| | <p>LV 4.21-3 Prior to the issuance of grading permits, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within grading operations or development areas shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.</p> <p>LV 4.21-4 Prior to the issuance of grading permits, all scattered suspect asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state and local requirements.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.21 ENVIRONMENTAL SAFETY (continued) | | |
| | LV 4.21-5 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria. | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
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| 4.22 CULTURAL/PALEONTOLOGICAL RESOURCES | | |
| <p>Phase I and II archaeological surveys of all cultural resources were undertaken within the Newhall Ranch Specific Plan, including the Landmark Village tract map site. The Phase I survey resulted in the discovery and recording of two prehistoric archaeological sites. Subsequently, Phase II archaeological studies were conducted at these sites. One site (CA-LAN-2233) was found to contain two components: a northern component containing a subsurface archaeological deposit and intact artifacts; and a southern component consisting solely of a surface scatter of stone artifacts. The northern component contains scientific information that may contribute to the reconstruction of local prehistory; therefore, development of this northern area has the potential to result in significant impacts to cultural resources. The second component represented lithic scatter that had been extensively disturbed and did not contribute to the knowledge of prehistoric pathways. The Phase II testing determined that the second site (CA-LAN-2234) did not represent an extant archaeological site. Inadvertent direct and/or indirect disturbance during construction to any sensitive cultural resource found on the project site would be considered a significant impact absent mitigation.</p> | <p>SP 4.3-1 Any adverse impacts to California-LAN-2133, -2235, and the northern portion of -2233 are to be mitigated by avoidance and preservation. Should preservation of these sites be infeasible, a Phase III data recovery (salvage excavation) operation is to be completed on the sites so affected, with archaeological monitoring of grading to occur during subsequent soils removals on the site. This will serve to collect and preserve the scientific information contained therein, thereby mitigating all significant impacts to the affected cultural resource.</p> <p>SP 4.3-2 Any significant effects to California-LAN-2241 are to be mitigated through site avoidance and preservation. Should this prove infeasible, an effort is to be made to relocate, analyze, and reinter the disturbed burial at some more appropriate and environmentally secure locale within the region.</p> <p>SP 4.3-3 In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds.</p> | <p>With implementation of the identified mitigation measures, the proposed project's cultural/paleontological resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p> |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|---|--|--|
| 4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (continued) | | |
| <p>A Phase I paleontologic report was prepared to determine the likelihood of encountering paleontologic resources on the project site. This report focused on a literature and records search, as well as an extensive field survey of the area proposed for development. The proposed project would occur in geologic formations with high and moderate potential for the discovery of fossil remains. Therefore, grading activities associated with the proposed project could have significant impacts on the region's paleontological resources absent mitigation.</p> | <p>SP 4.3-4 As part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions. Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions.</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--|--|--|
| 4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (continued) | | |
| | <p>SP 4.3-4 (continued) The report shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in those rock units. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.</p> <p>LV 4.22-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).</p> | |

| Environmental Impact | Mitigation Measures | Level of Significance After Mitigation |
|--|---|--|
| 4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (continued) | | |
| | LV 4.22-2 For archeological sites accidentally discovered during construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i). | |

1.0 PROJECT DESCRIPTION

1. PURPOSE

The purpose of this section is to describe the proposed Landmark Village project in a manner that will be meaningful to the public, reviewing agencies and decision makers. For purposes of the California Environmental Quality Act (CEQA), a complete project description must contain the following information: (a) the precise location and boundaries of the proposed project, shown on a detailed map, along with a regional map of the project's location; (b) a statement of the objectives sought by the proposed project, which should include the underlying purpose of the project; (c) a general description of the project's technical, economic, and environmental characteristics; and (d) a statement briefly describing the intended uses of the EIR, including a list of the agencies that are expected to use the EIR in their decision making, a list of permits and other approvals required to implement the project, and a list of related environmental review and consultation requirements imposed by federal, state, or local laws, regulations or policies (CEQA Guidelines Section 15124). An adequate project description need not be exhaustive, but should supply the information necessary for the evaluation and review of the project's significant effects on the environment.

This section describes the proposed project, as well as its location and characteristics, and it includes statements describing the project's objectives and the intended uses of this EIR.

2. LEAD AGENCY

Under CEQA, the public agency that has the principal responsibility for carrying out or approving a proposed project is referred to as the "lead agency" (CEQA Guidelines Section 15367). The County of Los Angeles (County) acted as the lead agency for certification of the Newhall Ranch Program EIR, and approval of the Newhall Ranch Specific Plan and Water Reclamation Plant (WRP). Because the proposed Landmark Village project would implement the first phase of the Riverwood Village area of the approved Newhall Ranch Specific Plan, and because the County remains the public agency principally responsible for carrying out and approving proposed projects consistent with the Newhall Ranch Specific Plan, the County continues to act as the lead agency. Contact information for the County is as follows:

County of Los Angeles
320 West Temple Street
Los Angeles, California 90012
Contact: Daniel Fierros, Department of Regional Planning
(213) 974-6461

3. RESPONSIBLE AGENCIES

Under CEQA, a public agency, other than a lead agency, that has discretionary approval power over the proposed project is considered a “responsible agency” (*CEQA Guidelines* Section 15381). No public agency, other than the County of Los Angeles, has discretionary approval power over the proposed Landmark Village project; however, if the County approves this project, subsequent implementation of various project components could require discretionary approval authority from responsible agencies including, among others:

- (a) California Department of Transportation (Caltrans);
- (b) California Regional Water Quality Control Board (RWQCB);
- (c) California Department of Fish and Game (CDFG);
- (d) California Public Utilities Commission (CPUC);
- (e) South Coast Air Quality Management District (SCAQMD);
- (f) U.S. Fish and Wildlife Service (USFWS); and
- (g) U.S. Army Corps of Engineers (Corps).

This section is not intended to provide a complete and final listing of all subsequent discretionary actions or approvals that are needed, or may be needed, to implement the proposed project. This section is intended only to identify the responsible agencies, which may have subsequent discretionary approval authority over implementation of various project components in the future.

4. PROJECT APPLICANT

The applicant of the proposed project is described below:

The Newhall Land and Farming Company
23823 Valencia Boulevard
Valencia, California 91355
Contact: Glenn Adamick
(661) 255-4003

5. PROJECT SUMMARY

The project applicant proposes to develop the 292.6-acre Landmark Village tract map site, located in the first phase of the Riverwood Village within the boundary of the approved Newhall Ranch Specific Plan. To facilitate development of the Landmark Village tract map site, several off-site project-related

components would be developed on an additional 750.9 acres of land that, for the most part, is within the approved Specific Plan boundary (**Figure 1.0-3, Project Boundary/Environmental Setting**, shown later in this section).¹ These project-related components include the following:

- A cut and fill grading operation, which includes fill imported to the tract map site from a 215-acre borrow site (and related haul routes), located south of the Santa Clara River (the Adobe Canyon borrow site), and grading to accommodate roadway improvements to SR-126, and debris basins for stormwater flows collected by the tract map's storm drainage system on approximately 120 acres of land, located directly north of SR-126 within Chiquito Canyon (Chiquito Canyon grading site);
- 225.5-acre utility corridor, which would run parallel to SR-126, from the western boundary of the tract map site to the approved Newhall Ranch WRP near the Los Angeles County/Ventura County line, from the eastern boundary of the tract map site to the Old Road/Interstate 5 (I-5), and then south to the existing Valencia WRP, which would extend municipal services to and from the tract map site;
- Potable water tank(s);
- Reclaimed water tank(s); and
- Construction of the Long Canyon Road Bridge, bank stabilization and storm drainage improvements.

For purposes of this EIR, the "tract map site" refers to the proposed location of the Landmark Village development site itself, and the "project site" generally includes the tract map site, and the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor, the water tank sites, the Long Canyon Road Bridge, bank stabilization, drainage improvements and related haul routes. The entire project site comprises approximately 1,044 gross acres.

The land uses proposed as part of the Landmark tract map site are consistent with the approved Newhall Ranch Specific Plan. The Specific Plan's approved Land Use Plan designates the tract map site for single- and multi-family residential, mixed-use, and commercial land uses.² The tract map site proposes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units), up to 1,033,000 square feet of mixed-use/commercial uses, a 9-acre elementary school, a 16-acre Community Park, a fire station, public and private recreational facilities, trails, and road improvements (**Table 1.0-3, Landmark Village Statistical Summary**, shown later in this section).

The project applicant is requesting approval of the following discretionary entitlements to allow for construction of the proposed Landmark Village project site: (a) General Plan Amendment PA 00-196, Sub-

¹ Portions of the proposed utility corridor and the proposed potable water tank site (located within the Valencia Commerce Center business park) are outside the boundary of the Newhall Ranch Specific Plan.

² See, Newhall Ranch Specific Plan (May 2003), Exhibit 2.3-1, Land Use Plan, Table 2.3-1, Specific Plan Overall Land Use Plan Statistical Table, and Exhibit 2.3-2, Village Plan (**Appendix 1.0**).

Plan Amendment LP 00-197 and Specific Plan Amendment SP 00-198; (b) Vesting Tentative Tract Map No. 53108; (c) Significant Ecological Area (SEA) Conditional Use Permit (CUP) RCUP 200500112 for project-level development within the Specific Plan's River Corridor Special Management Area (SMA)/SEA 23 boundaries; (d) Oak Tree Permit OTP 00196; (e) Off-Site Soil Transport Approval (part of CUP 00196 entitlement request); (f) CUP 00-196 for off-site grading in excess of 100,000 cubic yards and construction of the off-site water tanks; and (g) Modification to adopted County Floodway limits (collectively, "Project Approvals"). These Project Approvals are discussed in further detail later in this section.

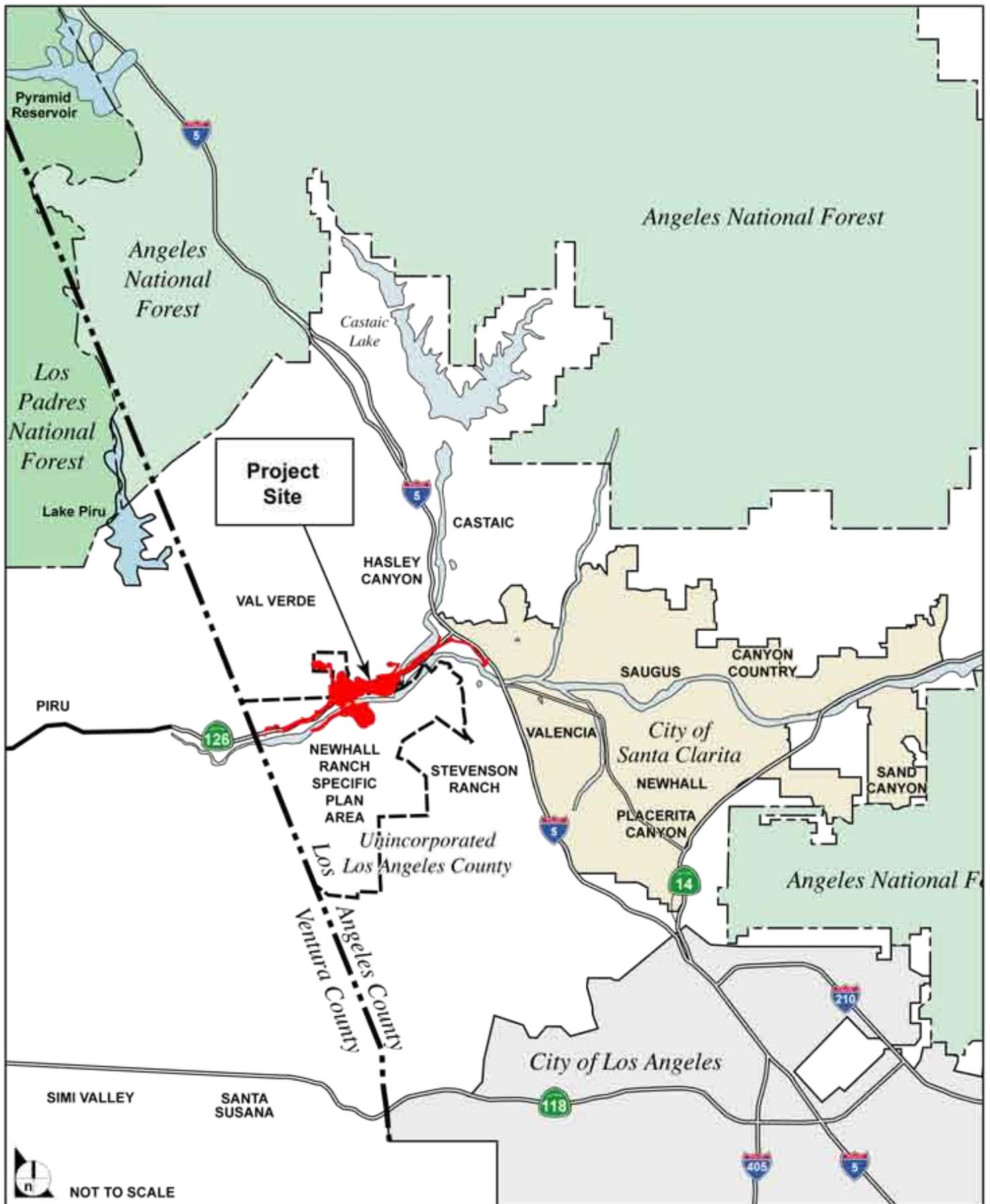
Additional subsequent ministerial actions, such as grading permits, building plan review and building permits, would be required by the County prior to actual grading and construction of the proposed Landmark Village project site.

6. PROJECT LOCATION

Figure 1.0-1, Regional Location, illustrates the location of the Landmark Village project site within a regional context. **Figure 1.0-2, Vicinity Map**, shows that the project site, located in unincorporated Los Angeles County, Santa Clarita Valley Planning Area, within the approved Newhall Ranch Specific Plan boundary. The Santa Clarita Valley Planning Area is generally surrounded by the Los Padres and Angeles National Forest areas to the north; Agua Dulce and the Angeles National Forest to the east; the major ridgeline of the Santa Susana Mountains, which separates Santa Clarita Valley from the San Fernando and Simi Valleys to the south; and the County of Ventura to the west.

Figure 1.0-3, Project Boundary/Environmental Setting, depicts the Landmark Village project boundary in relation to the approved Newhall Ranch Specific Plan. The tract map site is located immediately west of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the southern boundary of the tract map site, while the northern tract map boundary is defined by SR-126. The eastern tract map boundary abuts Castaic Creek. The City of Santa Clarita is located further east of the project site, just beyond I-5.

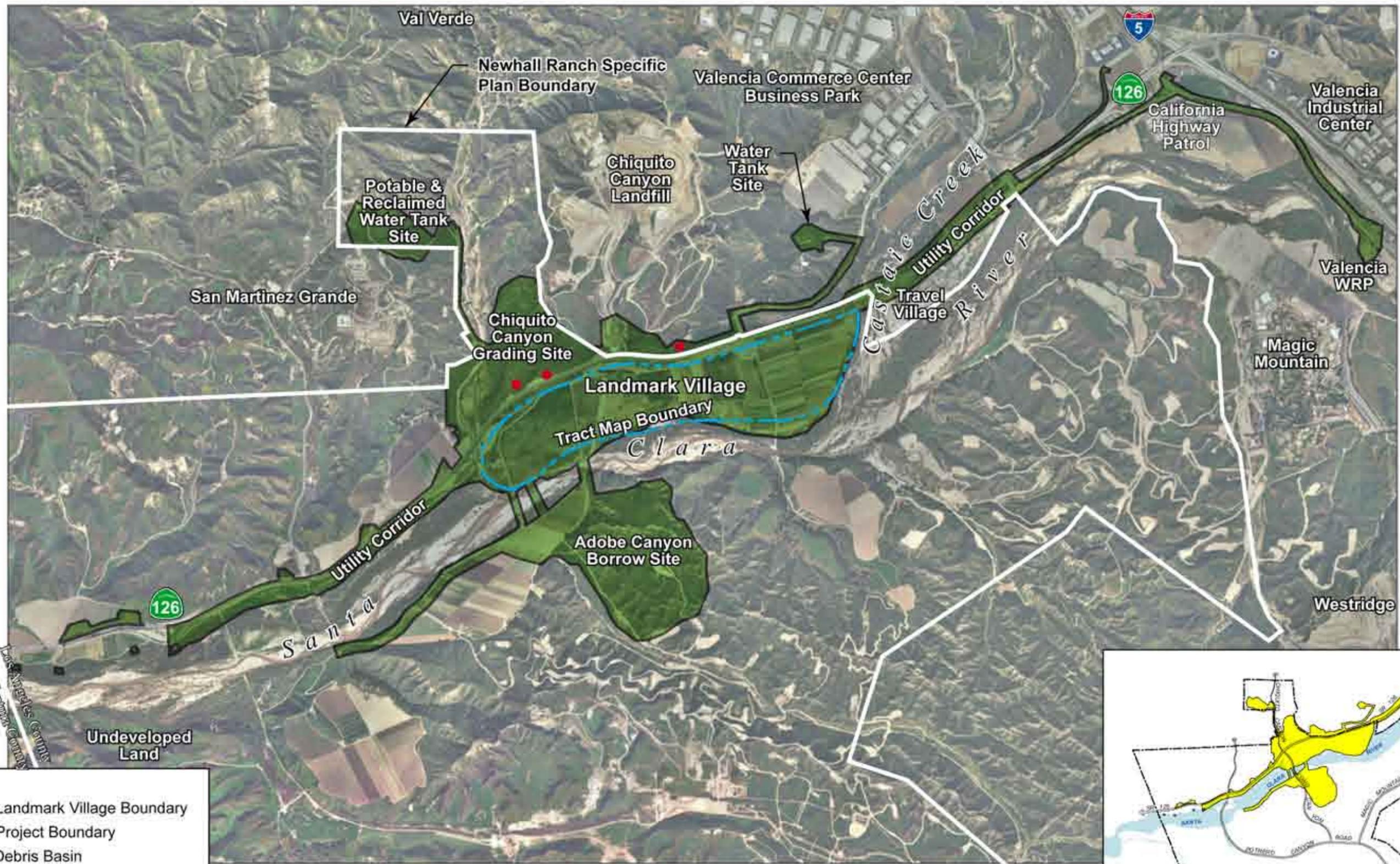
Land uses surrounding the proposed project site include: (a) to the north, relatively sparse rural residential uses (the community of Val Verde and San Martinez Grande), the Chiquita Canyon Landfill, and high intensity business park uses (Valencia Commerce Center); (b) to the east, an existing water reclamation plant (Valencia WRP), a California Highway Patrol station, high intensity commercial/recreational uses (Magic Mountain Theme Park), hotels, restaurants and service stations adjacent to I-5; and (c) to the south and west, currently undeveloped land, which is part of the approved Newhall Ranch Specific Plan (**Figure 1.0-2, Vicinity Map**).



SOURCE: Impact Sciences, Inc. – May 2006

FIGURE 1.0-2

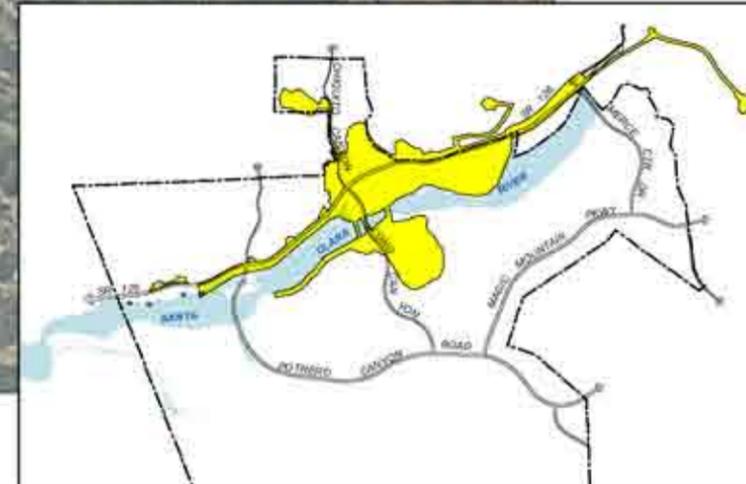
Vicinity Map



Legend:

- - - - - Landmark Village Boundary
- Project Boundary
- Debris Basin

2250 1125 0 2250
 APPROXIMATE SCALE IN FEET



SOURCE: Impact Sciences, Inc. - May 2006

FIGURE 1.0-3

Project Boundary/Environmental Setting

7. LAND USE DESIGNATIONS AND ZONING

a. Newhall Ranch Specific Plan

The Newhall Ranch Specific Plan was adopted by the Los Angeles County Board of Supervisors on May 27, 2003. The Specific Plan will guide the long-term development of the 11,963-acre Newhall Ranch community, comprising a broad range of residential, mixed-use, and non-residential land uses within five village areas. The Specific Plan contains the approved land use plan, development regulations, design guidelines, and corresponding implementation program, which would create a mixed-use community consistent with the goals, policies, and objectives of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan. The Specific Plan is regulatory in nature and serves as the zoning for Newhall Ranch.³ Subsequent development plans and tentative subdivision maps must be consistent with the adopted General Plan, Areawide Plan, and Specific Plan.

Furthermore, the Specific Plan establishes the regulations and standards for the protection of Open Areas adjacent to development and the two large River Corridor and High Country Special Management Areas, totaling approximately 6,170 acres. These regulations and standards are part of the Newhall Ranch “Resource Management Plan,” contained in Section 2.6 of the adopted Specific Plan.

As approved by the Board of Supervisors, the Specific Plan allows up to 21,308 dwelling units (including 423 second units); 629 acres of mixed-use development; 67 acres of commercial uses; 249 acres of business park land uses; 37 acres of visitor-serving uses; 1,014 acres of open space, including 181 acres of Community Parks and 833 acres in other open spaces; 5,157 acres in special management areas; 55 acres in 10 neighborhood parks; a 15-acre lake; a public trail system; an 18-hole golf course; three fire stations; land for a sheriff sub-station; a public library; an electrical station; reservation of five elementary school sites, one junior high school site, and one high school site; a 6.8 million gallon per day (mgd) WRP; and other associated community facilities. Buildout of the Specific Plan is projected to occur over approximately 25 to 30 years, depending upon economic and market conditions.

As discussed above, as a part of project approval on the Specific Plan in 2003, the Board of Supervisors required that three fire stations be constructed on the Newhall Ranch Specific Plan site. In summary, mitigation measures required that the project applicant and Fire Department enter into a Memorandum of Understanding (MOU) outlining the agreements, timing, and parameters by which fire stations would

³ The Specific Plan was prepared pursuant to the provisions of the California Planning and Zoning Law, Title 7, Division 1, Chapter 3, Article 8, Government Code Sections 65450-65457. This law authorizes local jurisdictions, like the County, to adopt a Specific Plan by resolution. On May 27, 2003, the County’s Board of Supervisors adopted a Resolution approving General Plan Amendments, Sub-Plan Amendments, and the Newhall Ranch Specific Plan.

be developed on the Specific Plan site. Initially, it was assumed that the Landmark Village site would be served by a new fire station at the existing Del Valle fire training site. Since that time, Newhall Land and the Fire Department have agreed to relocate the station into the Landmark Village tract map site. The locations for the two remaining fire stations within Newhall Ranch will be finalized in the MOU between Newhall Land and the Fire Department.

The Specific Plan's adopted Land Use Plan (Specific Plan Exhibit 2.3-1) and the Overall Land Use Plan Statistical Table (Specific Plan Table 2.3-1) provide the framework for development of the Specific Plan area. The adopted Land Use Plan describes the Newhall Ranch Specific Plan land use designations. The designations include five types of Residential uses (estates, low density, low-medium density, medium density and high density); Mixed-Use; Commercial; Business Park; Visitor-Serving; Open Area uses; two SMAs; and the Spineflower Conservation Easement area, all linked by a comprehensive system of roadways, trails and utility easements. Land use overlays are also included on the approved Land Use Plan to show approximate locations of public facility and recreation uses, such as parks, schools, library, golf course, fire stations, and the WRP. The Specific Plan contains an approved Village Plan (Specific Plan Exhibit 2.3-2), which identifies the five distinct villages within the Newhall Ranch Specific Plan. The five Specific Plan villages are:

- (a) **Riverwood** – situated north of the Santa Clara River and along SR-126;
- (b) **Oak Valley** – located in the westerly portion of Potrero Canyon;
- (c) **Potrero Valley** – occupying the central and easterly portions of Potrero Canyon;
- (d) **Long Canyon** – situated in the valley and hills adjacent to the Sawtooth Ridge, south of the Santa Clara River; and
- (e) **The Mesas** – overlooking the Santa Clara River in the northeast portion of the Specific Plan site.

b. Specific Plan Land Use Designations – Landmark Village

The land use designations delineated on the Newhall Ranch Specific Plan Land Use Plan (Specific Plan Exhibit 2.3-1) are described in Sections 2.3 and 3.3 of the Specific Plan. The land use designations within the Landmark Village project site are summarized below.

- (a) **Low-Medium Residential (LM)**. The LM land use designation provides for single-family detached, single-family attached, clustered single-family attached, and clustered single-family detached residential development. The Specific Plan contains additional regulations for this land use designation in the "Site Development Standards," which are set forth in Section 3.4 and summarized in Table 3.4-1, Site Development Standards Matrix, and Table 3.4-2, Permitted Uses Matrix.

Landmark Village. The project contains LM planning areas.

- (b) **Medium Residential (M).** The M land use designation provides for single-family detached, single-family attached, clustered single-family attached, clustered single-family detached, and multi-family development. The attached and multi-family types include townhomes, stacked flats, and apartments. The small-lot single-family units may include clustered attached and detached homes. The Specific Plan contains additional regulations for this land use designation in the “Site Development Standards,” which are set forth in Section 3.4 and summarized in Table 3.4-1, Site Development Standards Matrix, and Table 3.4-2, Permitted Uses Matrix.

Landmark Village. The project contains M planning areas.

- (c) **Mixed-Use (MU).** The MU land use designation permits the coordinated development of commercial, office, and Medium Residential and High Residential uses. Provisions in the Specific Plan permit the mixing of land uses, including combining residential uses with commercial and/or office use on one building site or within a building. Where commercial and residential uses occur on the same building site, the primary access for residential portion for the project shall be a separate entrance.

The Specific Plan contains additional regulations for this land use designation in the “Site Development Standards,” which are set forth in Specific Plan Section 3.4 and summarized in Table 3.4-1, Site Development Standards Matrix, and Table 3.4-2, Permitted Uses Matrix.

There are four community-sized MU areas in the Newhall Ranch Specific Plan Land Use Plan. They are strategically placed within Newhall Ranch and, depending upon their location and amenities, are designed to serve an area larger than the immediate village.

Landmark Village. The project contains the MU land use designation, which includes a “Village Quad,” with multi-family, commercial, office and public facility uses; all connected by a vehicular and pedestrian network of streets, traffic circles, courtyards, and paseos; and a “Village Center,” with commercial, office and residential apartment uses, all flanked by the Regional River Trail.

- (d) **Commercial (C).** The C land use designation provides for the development of uses to serve the office and retail needs of the community. The location of commercial sites on urban arterial highways also permits these sites to provide commercial services to the surrounding regional area and to highway travelers.

Landmark Village. The project contains C planning areas.

- (e) **River Corridor SMA (RC).** This land use designation provides for the preservation, enhancement, public use, and management of the Santa Clara River, which flows east-west through the Specific Plan area. The boundaries of the River Corridor SMA generally correspond to the boundaries of the General Plan SEA 23 and have been realigned to reflect the areas of significant biological resources. Development standards are specifically structured to help ensure compatibility of uses within this special resource area. The County’s General Plan SEA 23 designation is retained for this area.

The Specific Plan’s Development Regulations (Chapter 3) set forth regulations and standards specifically focused on the special regulatory needs of the River Corridor SMA, and the adopted Resource Management Plan (Chapter 2, Section 2.6) has established a framework for the ongoing management of the River Corridor SMA.

Landmark Village. The River Corridor SMA forms the southern boundary of the proposed project.

c. Specific Plan Land Use Overlays – Landmark Village

The land use overlays delineated on the approved Newhall Ranch Specific Plan Land Use Plan (Exhibit 2.3-1) are described in Sections 2.3 and 3.3 of the Specific Plan. The land use overlays within the Landmark Village project site are summarized below.

- (a) **Community Park (CP).** Three Community Park sites are shown on the approved Newhall Ranch Specific Plan Land Use Plan. Each park site is located in or adjacent to other Open Areas or SMAs to maximize recreational uses. Community Park improvements may include tot lots, playground equipment, ball fields, tennis/basketball courts, swimming pool, picnic facilities, turf areas, vehicular parking, restrooms, gyms, and indoor recreation centers. Community Parks are also accessed by the Specific Plan's bike and pedestrian trail network.

Landmark Village. The project includes one of the three Community Park overlays within the Newhall Ranch Specific Plan.

- (b) **Elementary School (ES).** Five Elementary School sites have been designated on the approved Newhall Ranch Specific Plan Land Use Plan, one in each village. Each school site is typically located adjacent to a Neighborhood Park.

Landmark Village. The project includes one of the five Elementary School sites within the Newhall Ranch Specific Plan. The proposed elementary school on the Landmark Village site is adjacent to, and integrated with, the active uses of the Landmark Village Community Park. Once constructed, the Castaic Union School District will operate the elementary school on the Landmark Village site.

d. Specific Plan Phasing and Monitoring – Landmark Village

(1) Phasing

The Newhall Ranch Specific Plan contains an approved phasing program (Chapter 5, Section 5.3). The primary purpose of the phasing program is to correlate appropriate infrastructure requirements with site development. To allow for a flexible phasing program, the five individual Specific Plan villages have been planned so that each village may be developed independently, in any order. The villages may also be developed concurrently to allow for maximum efficiency of infrastructure implementation and to meet market demand. Development within each of the five Specific Plan villages may be phased as long as infrastructure, including the roads, water, sewer, and drainage systems, is in place as development occurs.

The basic phasing mechanism of the Specific Plan is the tentative subdivision map. As each tentative subdivision map is processed, infrastructure requirements for that subdivision will be established. The infrastructure requirements for each tentative subdivision map must be substantially consistent with the

Specific Plan's Master Circulation Plan (Exhibit 2.4-2), Master Trails Plan (Exhibit 2.4-5), and Public Services and Facilities Plan, including conceptual infrastructure plans for drainage and flood control (Exhibit 2.5-1), water (Exhibit 2.5-2), and sewer (Exhibit 2.5-3).

Landmark Village. The project represents the first phase of the Specific Plan implementation.

(2) Monitoring

The Specific Plan contains an approved monitoring program (Chapter 5, Section 5.4). The monitoring program contains provisions to ensure that Newhall Ranch is developed in a manner consistent with the development plans, development regulations, and design guidelines of the Specific Plan. The monitoring program's primary function is to establish a record of progress in the phasing of development and the implementation of required infrastructure. Concurrent with the submittal of each tentative subdivision map, the Specific Plan requires an updated and/or revised:

- (a) Annotated Land Use Plan (Exhibit 5.4-1);
- (b) Annotated Land Use Plan Statistical Summary Table (Table 5.4-1);
- (c) Park and Recreation Improvements Summary (Table 5.4-2); and
- (d) Infrastructure, Community Amenities, and Entitlements Status Summary (Table 5.4-3).

The monitoring program also divides the Specific Plan into Planning Areas within each of the five Specific Plan villages, and lists the land use as well as the allowable number of housing units, or the allowable amount of non-residential building square footage, within each village.⁴

Landmark Village. As required by the Specific Plan monitoring program, the project application includes both an updated Annotated Land Use Plan and Annotated Land Use Plan Statistical Summary Table. In addition, the project application includes updated tables for the Park and Recreation Improvement Summary, and the Infrastructure, Community Amenities and Entitlements Status Summary. Please refer to **Appendix 1.0, Newhall Ranch Specific Plan Land Use Tables**, of this EIR for copies of the above-referenced Newhall Ranch Specific Plan Annotated Land Use Plan, Annotated Land Use Plan Statistical Summary, and other updated monitoring tables.

⁴ Please refer to the Newhall Ranch Specific Plan's Annotated Land Use Plan (Exhibit 5.4-1) and Annotated Land Use Plan Statistical Table (Table 5.4-1).

The tract map portion of the Landmark Village site is located within the following Planning Areas of Riverwood Village, as shown in **Figure 1.0-3a, Planning Areas of Riverwood Village**:

- (a) RW-27, RW-29, and RW-30 (Mixed Use);
- (b) RW-31, RW-32, and RW-33 (Medium);
- (c) RW-34 (Low-Medium);⁵
- (d) RW-35 (Commercial);
- (e) RW-36-a (Commercial); and
- (f) RW-36-b (Mixed-Use).⁶

Under the Specific Plan, within the Landmark Village Planning Areas, a maximum of 1,444 dwelling units is allowed within Planning Areas RW-27, and RW-29 through RW-34, along with 1,549,500 square feet of allowable mixed-use/commercial development within Planning Areas RW-27, RW-29 and RW-30, RW-35, RW-36-a and RW-36-b. For purposes of comparison, the Landmark Village project contains a maximum of 1,444 dwelling units and up to 1,033,000 square feet of mixed-use/commercial development (including a fire station), along with supporting parks, trails, an elementary school, and all required public facilities and infrastructure. As shown in **Table 1.0-1**, the Landmark Village project has been designed to be consistent with the land use designations within the applicable Planning Areas of the Riverwood Village area of the Specific Plan.

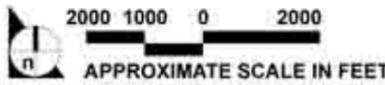
⁵ According to the Specific Plan, the total number of residential dwelling units within the Planning Areas of the Indian Dunes portion of the Specific Plan (i.e., RW-27 and RW-29 through RW-34) shall not exceed 1,444 dwelling units.

⁶ Planning Area RW-36 has been identified as a potential site for a transit station, and has been divided into two sub-areas as part of the Landmark Village project: Planning Area RW-36-a (Commercial) and Planning Area RW-36-b (Mixed Use).

Legend:

- PV-17 PLANNING AREA
 - E ESTATE RESIDENTIAL
 - L LOW RESIDENTIAL
 - LM LOW-MEDIUM RESIDENTIAL
 - M MEDIUM RESIDENTIAL
 - H HIGH RESIDENTIAL
 - MU MIXED-USE
 - C COMMERCIAL (RETAIL/OFFICE)
 - BP BUSINESS PARK
 - VS VISITOR SERVING
 - OA OPEN AREA
 - RC RIVER CORRIDOR SPECIAL MANAGEMENT AREA
 - HC HIGH COUNTRY SPECIAL MANAGEMENT AREA
 - ROADS * ROADS *
 - SCE/UTILITY EASEMENTS SCE/UTILITY EASEMENTS
 - CDFG SPINEFLOWER CONSERVATION EASEMENTS CDFG SPINEFLOWER CONSERVATION EASEMENTS
- LAND USE OVERLAYS (POTENTIAL LOCATIONS):**
- CP COMMUNITY PARK
 - NP NEIGHBORHOOD PARK
 - ES ELEMENTARY SCHOOL
 - JH JUNIOR HIGH SCHOOL
 - HS HIGH SCHOOL
 - LIB LIBRARY
 - GC GOLF COURSE
 - LK COMMUNITY LAKE
 - FS FIRE STATION
 - S ELECTRICAL SUBSTATION
 - WR WATER RECLAMATION PLANT

Roads/road rights of way within CDFG spineflower conservation easements and all other spineflower preserves are subject to realignment prior to subdivision approval pursuant to Board motion (March 25, 2003).



SOURCE: Newhall Ranch Specific Plan - May 2003

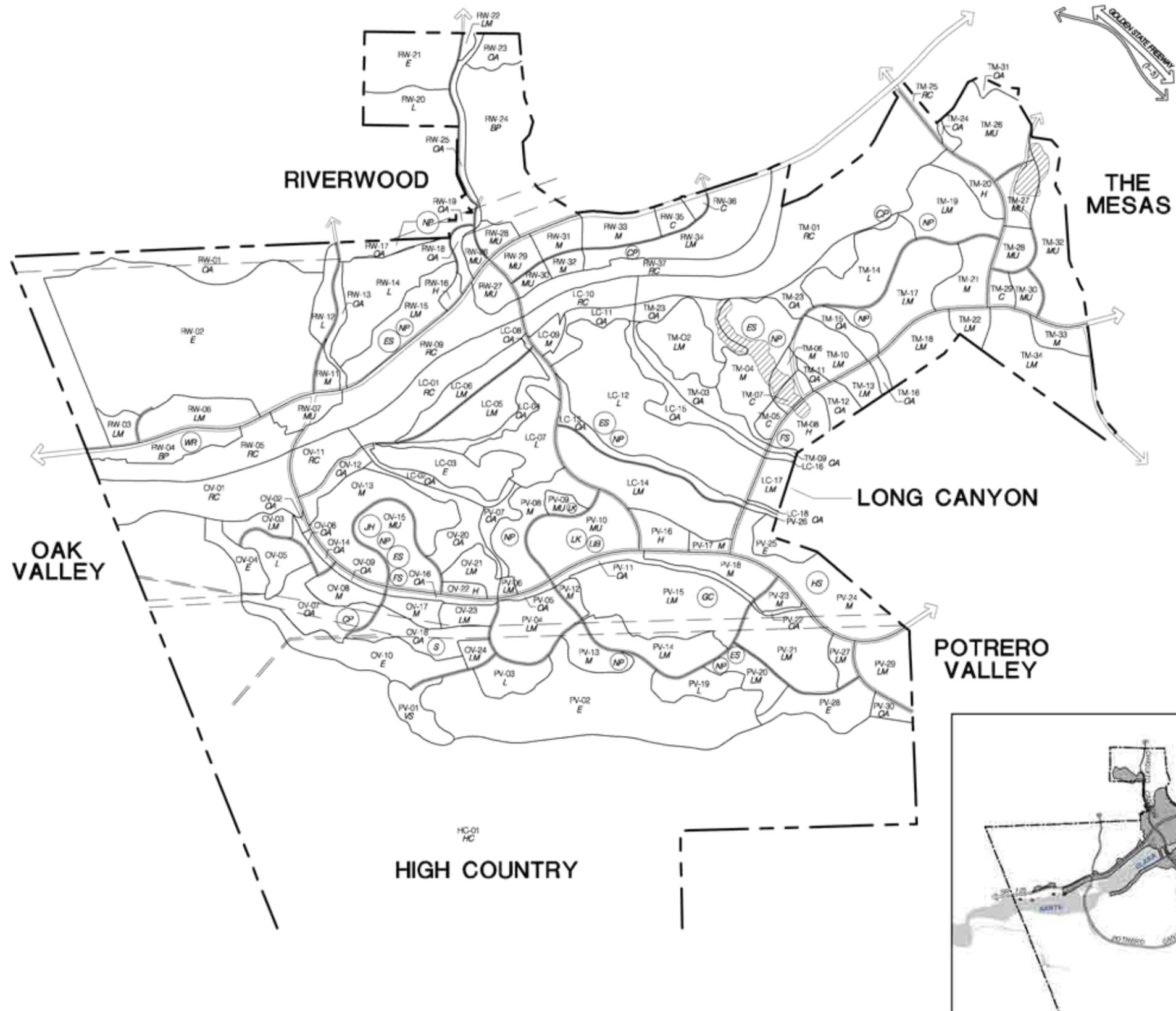


FIGURE 1.0-3a

Planning Areas of Riverwood Village

**Table 1.0-1
Newhall Ranch Specific Plan – Landmark Village
Maximum Allowed Land Use by Land Use Designation and Project Planning Areas**

| Approved Specific Plan Riverwood Village ³ | | | | | Proposed Landmark Village | |
|--|--------------------|-------------|------------------------------------|---|---------------------------|---|
| Land Use Designation | Planning Area | Gross Acres | Planned Units ¹ (du) | Mixed-Use ¹ / Commercial (max sq.ft.). | Proposed Units (du) | Proposed Mixed-Use/ Commercial Space (sq.ft.) |
| MU | RW-27 | 27.8 | No Cap | 594,000 | 144 | 322,900 |
| MU | RW-29 | 25.0 | No Cap | 475,500 | - | 317,000 |
| MU | RW-30 | 12.5 | No Cap | 283,500 | 50 | 189,000 |
| M | RW-31 | 26.5 | 456 | - | 221 | - |
| M | RW-32 | 14.1 | 309 | - | 92 | - |
| M | RW-33 | 39.5 | 600 | - | 218 | - |
| LM | RW-34 | 116.6 | 801 | - | 719 | - |
| C | RW-35 | 15.6 | -- | 196,500 | - | 131,000 |
| C | RW-36 ² | 6.7 | -- | - | - | 73,100 |
| Total | | | 1,444 du¹ | 1,549,500 | 1,444 | 1,033,000 |

¹ The total number of residential units within the Planning Areas RW-27 and RW-29 through RW-34 shall not exceed 1,444 dwelling units (du) according to footnote 3 of Table 5.4-1, Annotated Land Use Plan Statistical Table, of the Newhall Ranch Specific Plan.

² Planning Area RW-36 has been identified as a potential site for a transit station, and can be divided into two sub-areas: Planning Area RW-36-a (Commercial) and Planning Area RW 36-b (Mixed Use).

³ Only those Planning Areas applicable to Landmark Village are depicted.
du = dwelling units; sq.ft. = square feet

8. REQUESTED PROJECT APPROVALS

Consistent with the Specific Plan (Chapter 5), implementation of the Specific Plan is to be carried out through the application and processing of County entitlements, including tentative subdivision maps, conditional use permits, oak tree permits, and other discretionary approvals or permits. In addition, the Specific Plan calls for all land subdivision maps of any type (e.g., tentative or final, vesting or non vesting, tract or parcel) to be submitted, reviewed, and approved in accordance with the Los Angeles County Subdivision Ordinance and the California Subdivision Map Act.⁷

The project applicant is requesting the Project Approvals described below, which would govern development of the proposed Landmark Village project. Prior to adopting the Project Approvals, the County must certify that (a) this EIR has been reviewed and considered; (b) the EIR has adequately analyzed the potential impacts of the proposed project; (c) it has been completed in compliance with

⁷ Where the provisions or procedures of the Los Angeles County Subdivision Ordinance conflict with the provisions of the approved Specific Plan, the Specific Plan applies (see Specific Plan, Chapter 5, Section 5.2).

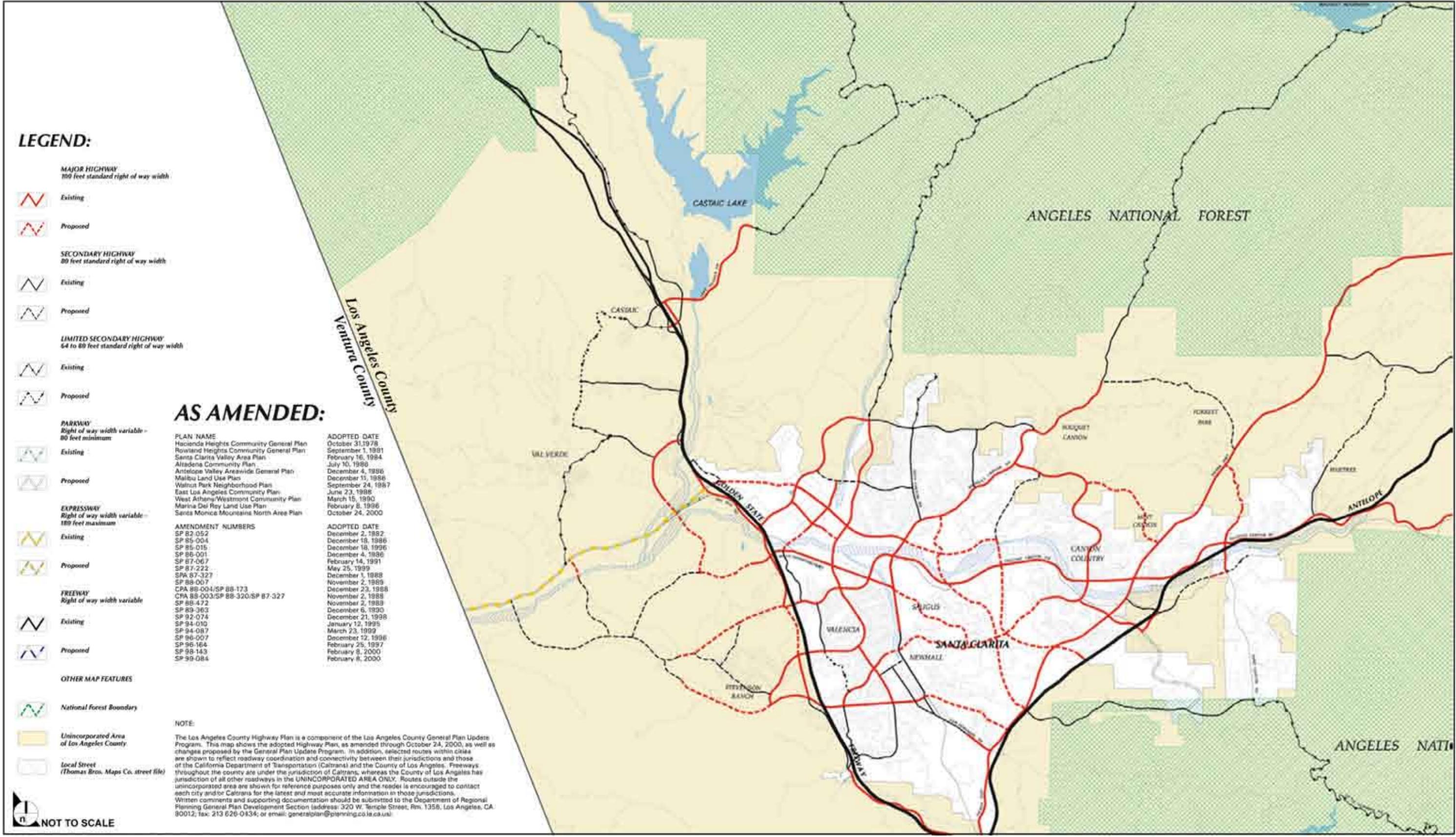
CEQA, the *CEQA Guidelines*, and the County's *Environmental Document Reporting Procedures and Guidelines*; and (d) it reflects the independent judgment of the Board of Supervisors. The requested Project Approvals are described in further detail below:

- (a) **General Plan Amendment.** An amendment is requested to the County's Master Plan of Highways within the Transportation Element of the Los Angeles Countywide General Plan for a highway located within the Landmark Village project area of the Newhall Ranch Specific Plan. Within the Landmark Village project site, the circulation plan is characterized by a system of local streets that would access the site to and from a curvilinear road identified as "A" Street on the Vesting Tentative Tract Map No. 53108. This street traverses the site in an east-west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect "A" Street to the off-site highway system. The primary function of "A" Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system.

The project applicant is requesting that "A" Street be downgraded from a four-lane Secondary Highway in the current General Plan to a two-lane Collector Street. While "A" Street is an integral component of the Landmark Village circulation system, it is not critical to the overall Specific Plan and areawide circulation system and, consequently, the applicant is requesting that the Secondary Highway designation be changed to a Collector Street.

The forecasted traffic volumes on "A" Street support the change in designation of "A" Street from a Secondary Highway to a Collector Street. A Collector Street can typically accommodate approximately 10,000 average daily trips (ADT) at a Level of Service (LOS) C. "A" Street would have traffic volumes substantially less than 10,000 ADT for the entire length of the roadway, except for the short segment between future Long Canyon Road and the roundabout near the future "A" Street/Long Canyon Road intersection. For that segment, which would have volumes ranging from 16,000 ADT to 20,000 ADT, two travel lanes in each direction are proposed. Accordingly, based on the traffic volumes forecasted for "A" Street, the roadway designation can change to a Collector Street. **Figure 1.0-4** depicts the existing Secondary Highway designation from the General Plan, and **Figure 1.0-5** shows the proposed amended plan requested for approval by the project applicant.

- (b) **Sub-Plan Amendment.** The applicant is also proposing an amendment to the Santa Clarita Valley Areawide Plan, Circulation Plan, to downgrade "A" Street from a Secondary Highway to a Collector Street for the reasons outlined above. **Figure 1.0-6** depicts the existing Circulation Plan from the Santa Clarita Valley Areawide Plan, and **Figure 1.0-7** shows the proposed amended plan requested for approval by the project applicant.
- (c) **Specific Plan Amendment.** The applicant is proposing an amendment to the Specific Plan Master Circulation Plan (Exhibit 2.4-2) to change "A" Street from a Secondary Highway to a Collector Street for the reasons outlined above. Furthermore, the applicant is proposing an amendment to provide a modified street design for "A" Street within the Landmark Village project site. **Figure 1.0-8** depicts the existing Secondary Highway designation from the Specific Plan Master Circulation Plan, and **Figure 1.0-9** shows the proposed new Collector Street designation.



LEGEND:

- MAJOR HIGHWAY**
100 feet standard right of way width
- Existing
- Proposed
- SECONDARY HIGHWAY**
80 feet standard right of way width
- Existing
- Proposed
- LIMITED SECONDARY HIGHWAY**
64 to 80 feet standard right of way width
- Existing
- Proposed
- PARKWAY**
Right of way width variable - 80 feet minimum
- Existing
- Proposed
- EXPRESSWAY**
Right of way width variable - 180 feet maximum
- Existing
- Proposed
- FREEWAY**
Right of way width variable
- Existing
- Proposed
- OTHER MAP FEATURES**
- National Forest Boundary
- Unincorporated Area of Los Angeles County
- Local Street (Thomas Bros. Maps Co. street file)

AS AMENDED:

| PLAN NAME | ADOPTED DATE |
|---|--------------------|
| Hacienda Heights Community General Plan | October 31, 1978 |
| Rowland Heights Community General Plan | September 1, 1981 |
| Santa Clarita Valley Area Plan | February 16, 1984 |
| Altadena Community Plan | July 30, 1988 |
| Antelope Valley Area-wide General Plan | December 4, 1988 |
| Malibu Land Use Plan | December 15, 1988 |
| Walnut Park Neighborhood Plan | September 24, 1988 |
| East Los Angeles Community Plan | June 23, 1988 |
| West Athens/Westmont Community Plan | March 15, 1990 |
| Marina Del Rey Land Use Plan | February 8, 1996 |
| Santa Monica Mountains North Area Plan | October 24, 2000 |

| AMENDMENT NUMBERS | ADOPTED DATE |
|--------------------------------|-------------------|
| SP 82-052 | December 2, 1982 |
| SP 85-004 | December 18, 1986 |
| SP 85-015 | December 18, 1986 |
| SP 86-001 | December 4, 1986 |
| SP 87-067 | February 14, 1991 |
| SP 87-222 | May 25, 1993 |
| SPA 87-327 | December 1, 1988 |
| SP 88-007 | November 2, 1988 |
| CPA 88-004/SP 88-173 | December 23, 1988 |
| CPA 88-003/SP 88-320/SP 87-327 | November 2, 1988 |
| SP 88-472 | November 2, 1988 |
| SP 89-363 | December 6, 1989 |
| SP 92-074 | December 21, 1998 |
| SP 94-010 | January 12, 1995 |
| SP 94-087 | March 23, 1999 |
| SP 96-007 | December 12, 1996 |
| SP 96-164 | February 25, 1997 |
| SP 98-143 | February 8, 2000 |
| SP 99-084 | February 8, 2000 |

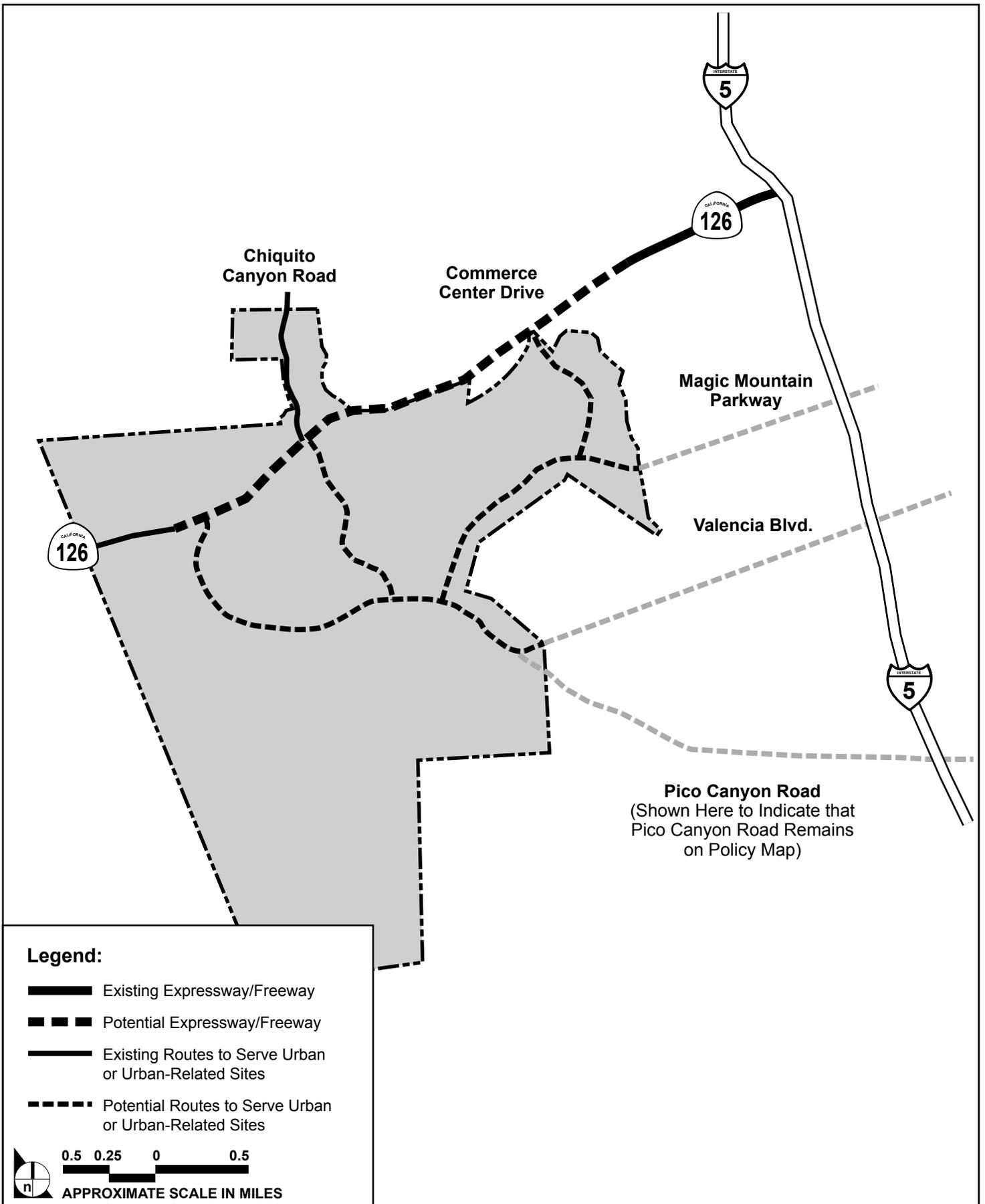
NOTE:

The Los Angeles County Highway Plan is a component of the Los Angeles County General Plan Update Program. This map shows the adopted Highway Plan, as amended through October 24, 2000, as well as changes proposed by the General Plan Update Program. In addition, selected routes within cities are shown to reflect roadway coordination and connectivity between their jurisdictions and those of the California Department of Transportation (Caltrans) and the County of Los Angeles. Freeways throughout the county are under the jurisdiction of Caltrans, whereas the County of Los Angeles has jurisdiction of all other roadways in the UNINCORPORATED AREA ONLY. Routes outside the unincorporated area are shown for reference purposes only and the reader is encouraged to contact each city and/or Caltrans for the latest and most accurate information in those jurisdictions. Written comments and supporting documentation should be submitted to the Department of Regional Planning General Plan Development Section (address: 320 W. Temple Street, Rm. 1358, Los Angeles, CA 90012; fax: 213 626-0434; or email: generalplan@planning.co.la.ca.us).

SOURCE: Los Angeles County Department of Regional Planning - June 2004

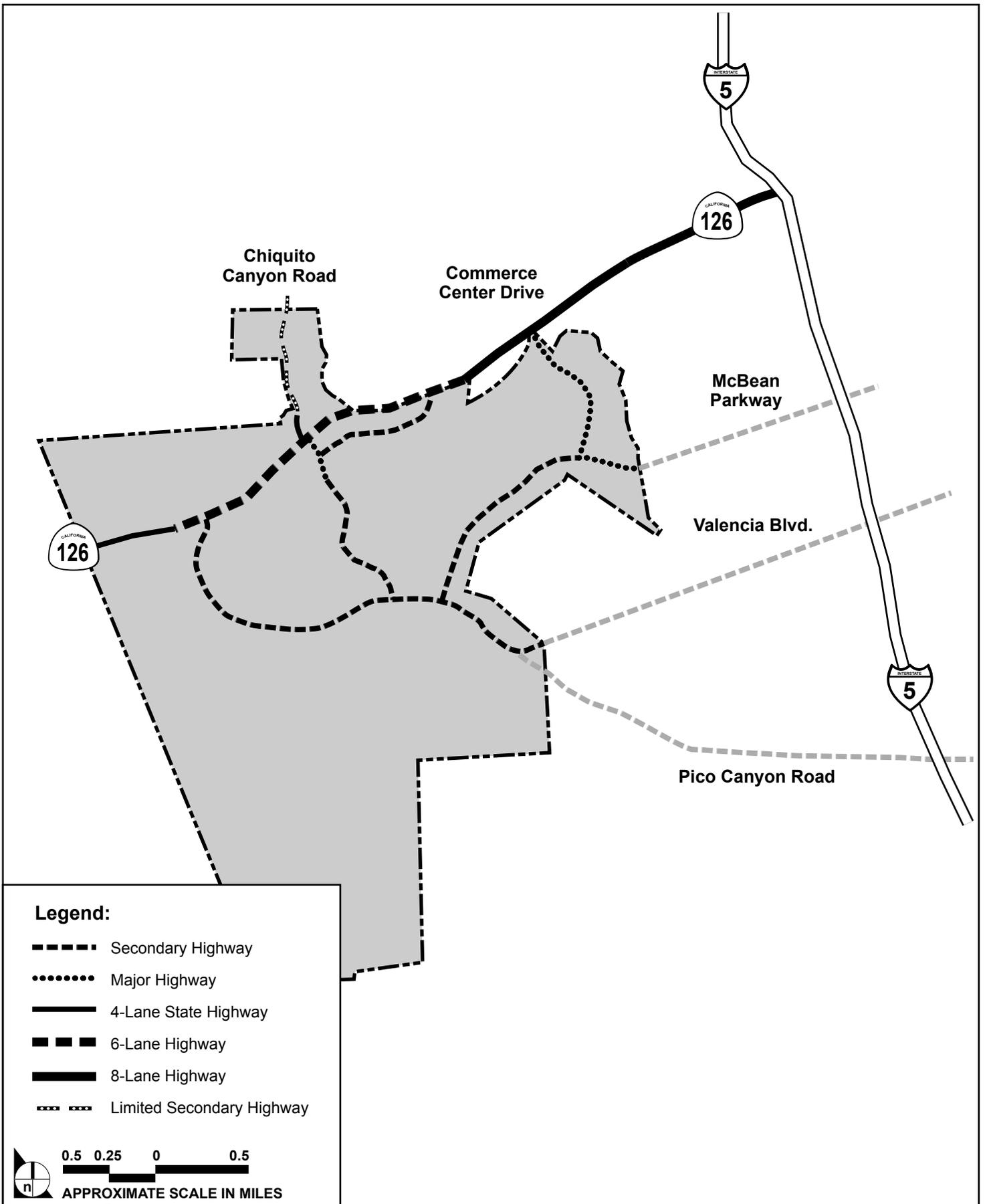
FIGURE 1.0-4

Existing Secondary Highway Designation - General Plan



SOURCE: Newhall Ranch Specific Plan, Resolutions and Findings – March 1999

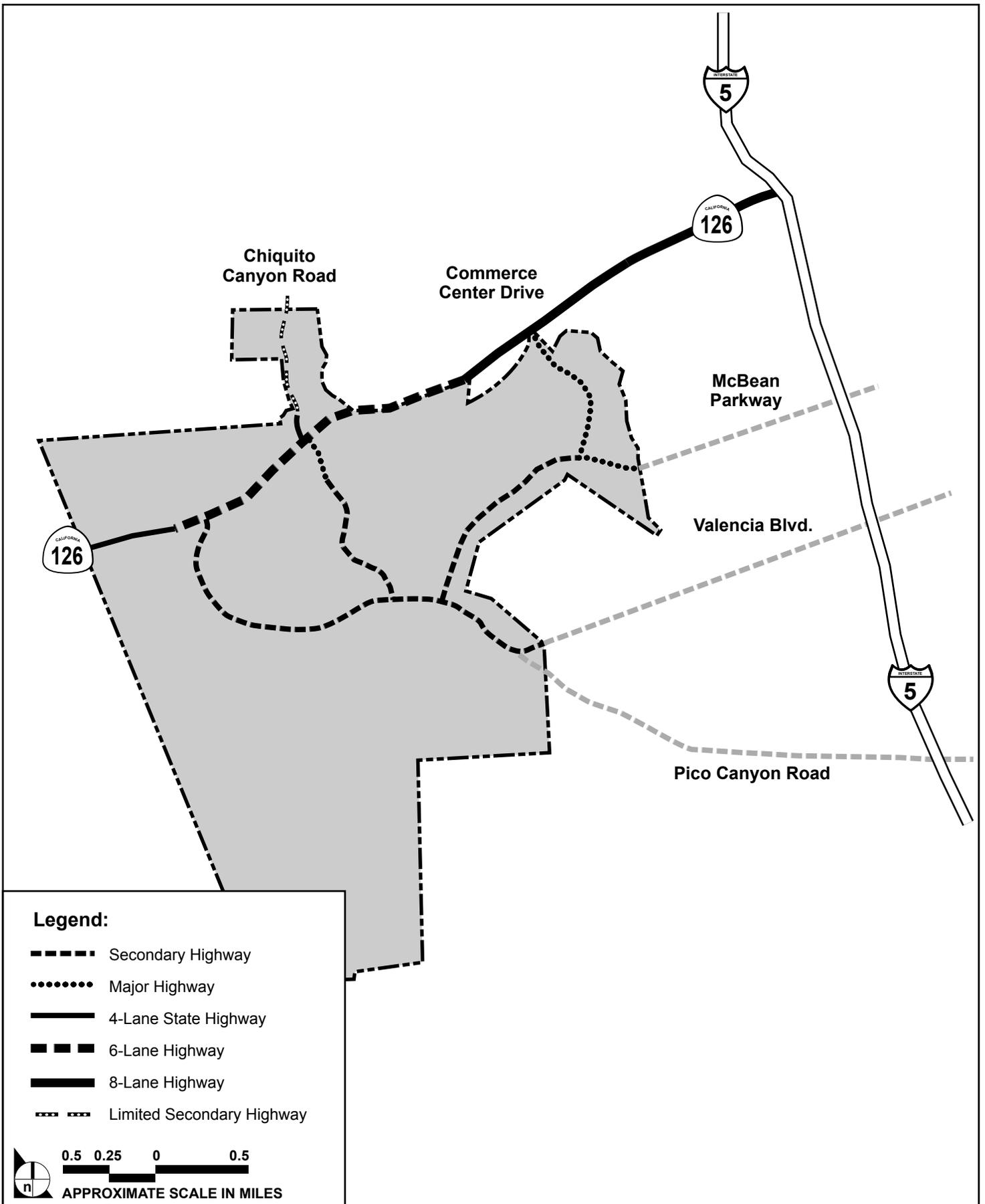
FIGURE 1.0-5



SOURCE: Newhall Ranch Specific Plan, Resolutions and Findings – March 1999

FIGURE 1.0-6

Santa Clarita Valley Areawide Plan – Circulation Plan



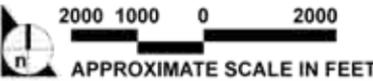
SOURCE: Newhall Ranch Specific Plan, Resolutions and Findings – March 1999

FIGURE 1.0-7



Legend:

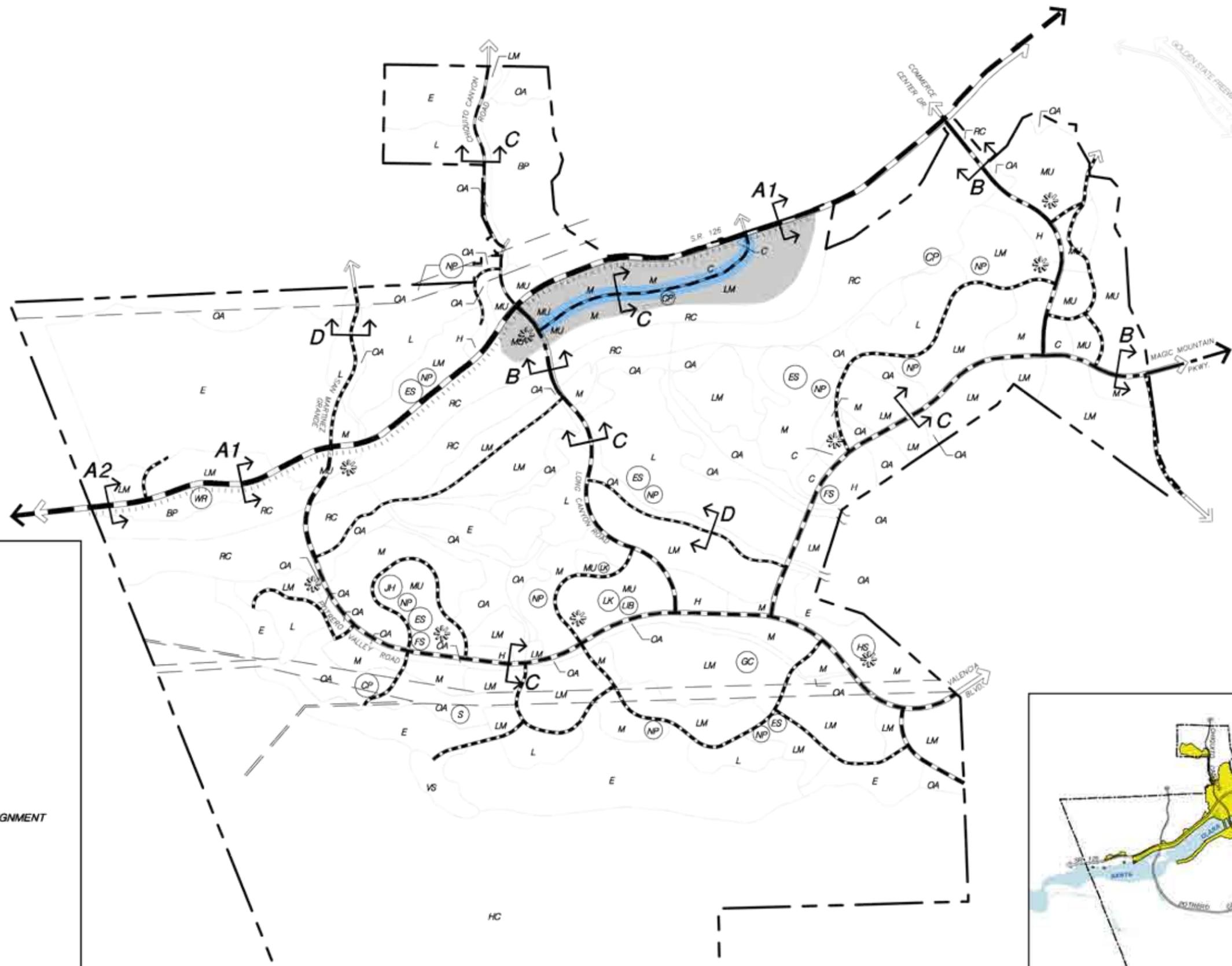
-  STATE HIGHWAY
-  MAJOR HIGHWAY
-  SECONDARY HIGHWAY
-  COLLECTOR
-  POSSIBLE FUTURE COLLECTOR ALIGNMENT
-  BUS PULL-IN
-  LANDMARK VILLAGE



SOURCE: FORMA - May 2003

FIGURE 1.0-8

Existing Secondary Highway Designation- Master Circulation Plan of Newhall Ranch Specific Plan



Legend:

-  PROPOSED COLLECTOR
-  STATE HIGHWAY
-  MAJOR HIGHWAY
-  SECONDARY HIGHWAY
-  COLLECTOR
-  POSSIBLE FUTURE COLLECTOR ALIGNMENT
-  BUS PULL-IN
-  LANDMARK VILLAGE

2000 1000 0 2000
 APPROXIMATE SCALE IN FEET

SOURCE: FORMA - May 2003

FIGURE 1.0-9

Proposed Collector Street Designation – Master Circulation Plan of Newhall Ranch Specific Plan

- (d) **Vesting Tentative Tract Map No. 53108.** Approval of the Vesting Tentative Tract Map is required to subdivide the Landmark Village site into 308 single-family units, 18 multi-family lots, 26 mixed-use lots, and lots for, among other uses, recreation, parks, school site, and open space. The proposed map would subdivide the site into a total of 416 lots (with 1,444 dwelling units).
- (e) **SEA Conditional Use Permit.** On May 27, 2003, the County's Board of Supervisors approved a program-level General Plan Amendment 94-087-(5)), as part of the Board's project approvals for the Newhall Ranch Specific Plan. The prior General Plan Amendment approved (a) adjustments to the existing boundaries of SEA 23, consistent with General Plan policies requiring protection of natural resources within SEAs; and (b) Specific Plan development within the SEA boundaries, including bridge crossings (e.g., Long Canyon Road Bridge), trails, bank stabilization, and other improvements. The approved SEA boundary adjustments were found to be consistent with the adopted Specific Plan, which established a Specific Plan "Special Management Area" designation over the adjusted SEA 23 boundaries. Although the adjusted boundaries within SEA 23 were designated as the River Corridor SMA in the adopted Specific Plan, the County's underlying SEA designation remains in effect.

As part of the Landmark Village Project Approvals, the project applicant is requesting a project-level SEA CUP to provide the County with the regulatory framework for determining if the Landmark Village development within the approved River Corridor SMA/SEA 23 boundaries is consistent with both the adopted Specific Plan and previously approved program-level SEA CUP No. 94-087-(5). Specifically, the proposed project-level improvements within the River Corridor SMA/SEA 23 include the Long Canyon Road Bridge, trails, water quality basins, bank stabilization, water and sewer utility crossings, storm drain outlets and potential riparian mitigation sites.

The Los Angeles County General Plan requires that any development proposal within an SEA be reviewed for compliance with certain "design compatibility criteria." The Los Angeles County Zoning Code implements this General Plan requirement. In addition, the General Plan requires that an application for an SEA CUP must undergo an "SEA Performance Review." This process involves review of the application by the appointed Significant Ecological Area Technical Advisory Committee (SEATAC). SEATAC reviews the application and accompanying biological resources report for adequacy, and makes recommendations for final project design. Such recommendations are then considered by the Los Angeles County Regional Planning Commission and Board of Supervisors.

- (f) **Oak Tree Permit.** The County Zoning Code contains provisions protecting trees of the oak genus. As a result, the removal or damage of certain "protected" oak trees is unlawful without a permit (Los Angeles County Zoning Code, Section 22.56.2050). An Oak Tree Permit is required for the removal of 66 of the 200 oak trees located on the project site, which includes the Landmark Village Vesting Tentative Tract Map No. 53108, all proposed grading limits (including access roads and infrastructure), and the area within 200 feet of the grading line. Up to 36 of these oak trees proposed for removal would be transplanted within the Newhall Ranch Specific Plan site. A final evaluation of these trees proposed for transplanting would be completed prior to implementing the transplanting operation. In addition, 14 oak trees would be impacted by encroachment (e.g., grading, excavation) within the protective zone of those trees. The proposed project does not impact the remaining 119 oak trees identified on the site.

- (g) **Off-Site Materials Transport Approval.** Section 5.2 of the Newhall Ranch Specific Plan governs off-site transport of soil materials in conjunction with permitted grading projects. The Specific Plan allows the Planning Director, or Director of Public Works, to approve applications for the off-site transport of materials over 10,000 cubic yards within the boundaries of the Specific Plan. The application must include a map that depicts the location and nature of the grading activity, the ultimate use of the property, along with the haul route used to deliver the material to the final destination.

The Landmark Village project will import up to 5.8 million cubic yards of fill material. The fill is needed to elevate the proposed finished pads to a minimum of 1 foot above the Santa Clara River flood surface water elevation in accordance with the requirements of the Los Angeles County Department of Public Works Flood Control Division. Average fill heights will be approximately 10 feet; however, some areas will require approximately 20 feet of fill. The applicant proposes to use the Adobe Canyon area within the approved Specific Plan as the borrow site.

- (h) **Conditional Use Permit.** Grading of hillsides occurring in the Adobe Canyon borrow site meets the definition of a grading project under Section 22.08.070 of the Los Angeles County Planning and Zoning Code; and therefore, a CUP is required. In addition, the CUP is necessary to allow for the construction of the project water tanks.
- (i) **Modification to County Floodway.** The Los Angeles County Department of Public Works has developed a comprehensive system of flood-control facilities to collect and convey flows. The design of the system is based on a theoretical storm that is derived from a 50-year frequency rainfall event and includes a number of assumptions on the state of the watershed. This design event is used to predict flood patterns along the Santa Clara River.

Development of the Landmark Village project would elevate the tract map site resulting in the removal of approximately 169 acres of land from the Capital Floodplain. This action requires an adjustment to the County Floodway Boundary to account for changes to the floodplain boundary as a result of flood protection improvements for the project.

9. OTHER PERMITS AND APPROVALS

Table 1.0-2, Future Agency Actions, identifies other permits and approvals, which are known to be needed, or may be needed, in order to implement various project components in the future.

**Table 1.0-2
Future Agency Actions¹**

| Agency | Action Required |
|--|--|
| <ul style="list-style-type: none"> Regional Water Quality Control Board | National Pollutant Discharge Elimination System Permit; and Section 401 permit under the federal Clean Water Act ⁴ |
| <ul style="list-style-type: none"> California Department of Fish and Game | Streambed Alteration Agreement per Fish & Game Code Section 1602 Incidental Take Permits authorizing impacts to listed species under Section 2081 of the Fish & Game Code ² |
| <ul style="list-style-type: none"> United States Department of the Army, Corps of Engineers | Section 404 Permit under the federal Clean Water Act ³ |
| <ul style="list-style-type: none"> South Coast Air Quality Management District | Various permits for air emissions regulation found in the Air Quality Management Plan |

¹ This table is not intended to provide the complete and final listing of future actions required to implement the project. This is an attempt to identify those actions that are known at this time to be required in the future.

² The Newhall Ranch Resource Management and Development Plan EIS/EIR also will provide environmental review required by CDFG for its consideration of requested permits.

³ The Newhall Ranch Resource Management and Development Plan EIS/EIR also will provide environmental review required by the Corps for its consideration of requested permits.

⁴ The Newhall Ranch Resource Management and Development Plan EIS/EIR also will provide environmental review required by the RWQCB for its consideration of requested permits.

10. PROJECT OBJECTIVES

CEQA requires that an EIR include a statement of the objectives sought by a project applicant (*CEQA Guidelines* Section 15124(b)). The overall objective of the proposed project is to implement the first phase of the Newhall Ranch Specific Plan, including, as it relates to Landmark Village, the Specific Plan's Master Circulation Plan; Master Trails Plan; Conceptual Backbone Drainage, Water and Sewer Plans; Public Facilities/Services (e.g., fire, police/sheriff, schools, libraries); Resource Management Plan; Hillside Preservation and Grading Plan; and Parks, Recreation and Open Area Plan. The project objectives are consistent with the Specific Plan objectives, and include the following:

a. Land Use Planning Objectives

1. Implement a portion of one of the distinct villages within the Newhall Ranch Specific Plan to allow for residential, mixed-use, and commercial development, while preserving significant natural resources and open areas.
2. Consistent with the Specific Plan, accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and that avoids leapfrog development.

3. Consistent with the Specific Plan, cluster development within the site to preserve regionally significant natural resource areas and sensitive habitat.
4. Provide development and transitional land use patterns that do not conflict with surrounding communities and land uses.
5. Establish land uses that permit a wide range of housing densities, types, styles, prices, and tenancy (for sale and rental).
6. Designate sites for needed public facilities, including an elementary school, parks, trails, paseos, potable water reservoirs, and recreation areas.
7. Create a highly livable, pedestrian-friendly environment that encourages alternative means of transportation to the automobile by incorporating unique site designs and enhanced pedestrian access between land uses, trails, paseos, and streets.

b. Mobility Objectives

1. Implement the Specific Plan's Mobility Plan, as it relates to the Landmark Village project, including the design of a circulation/mobility system that encourages alternatives to automobile use.
2. Provide a safe, efficient, and aesthetically attractive street system with convenient connections to adjoining regional transportation routes.
3. Provide a walkable community through the use of innovative traffic calming techniques such as narrow streets designed to slow traffic, and pedestrian pathways.
4. Provide an efficient street circulation system that minimizes impacts on residential neighborhoods.
5. Provide a pedestrian and bicycle trails system that is segregated from vehicle traffic and that connects with supporting commercial, recreational, and other public facilities, to serve as an alternative to the automobile for surrounding residential neighborhoods.
6. Facilitate public transit options by reserving right-of-way for future Metrolink line, reserving space for a park-and-ride and/or Metrolink station, and including bus pull-ins along roadways.

c. Parks, Recreation, and Open Area Objectives

1. Provide for the recreational use of open areas that is compatible with the protection of significant natural resources.
2. Provide a range of recreational opportunities, including parks, trails and paseos, which are convenient and accessible.
3. Provide pedestrian, bicycle, and hiking trails that are consistent with the Specific Plan's Parks, Recreation, and Open Area Plan.

d. Resource Conservation Objectives

1. Implement the Specific Plan's Resource Management Plan as it relates to the Landmark Village project and adjacent areas.
2. Protect wetland, endangered or threatened species in the Santa Clara River as provided for within the Specific Plan.
3. Protect significant natural resources within the River Corridor SMA/SEA 23, consistent with the Specific Plan.
4. Preserve significant stands of oak trees, consistent with the Specific Plan.
5. Promote water conservation by encouraging the use of drought-tolerant, fire-retardant, and native plants in landscaping.
6. Provide transition and buffer zones between development and recreation areas, as well as the River Corridor SMA/SEA 23, consistent with the Specific Plan.

11. TECHNICAL, ECONOMIC, AND ENVIRONMENTAL CHARACTERISTICS

CEQA requires an EIR to provide "[a] general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals, if any, and supporting public service facilities" (*CEQA Guidelines* Section 15124(c)). Consistent with the Specific Plan, the proposed project includes a mix of single-family, multi-family, mixed-use, commercial, school, parks, recreation, and open space uses. The project would provide land uses that begin to implement the long-term development of the Specific Plan. New housing would be provided to support existing and new employment opportunities expected to occur in the local vicinity and region. The proposed trail and parks system would provide local recreational support for new and existing residents. The mixed-use/commercial uses would support the proposed residential uses, as well as the existing residents in the local vicinity.

a. Proposed Land Uses and Improvements

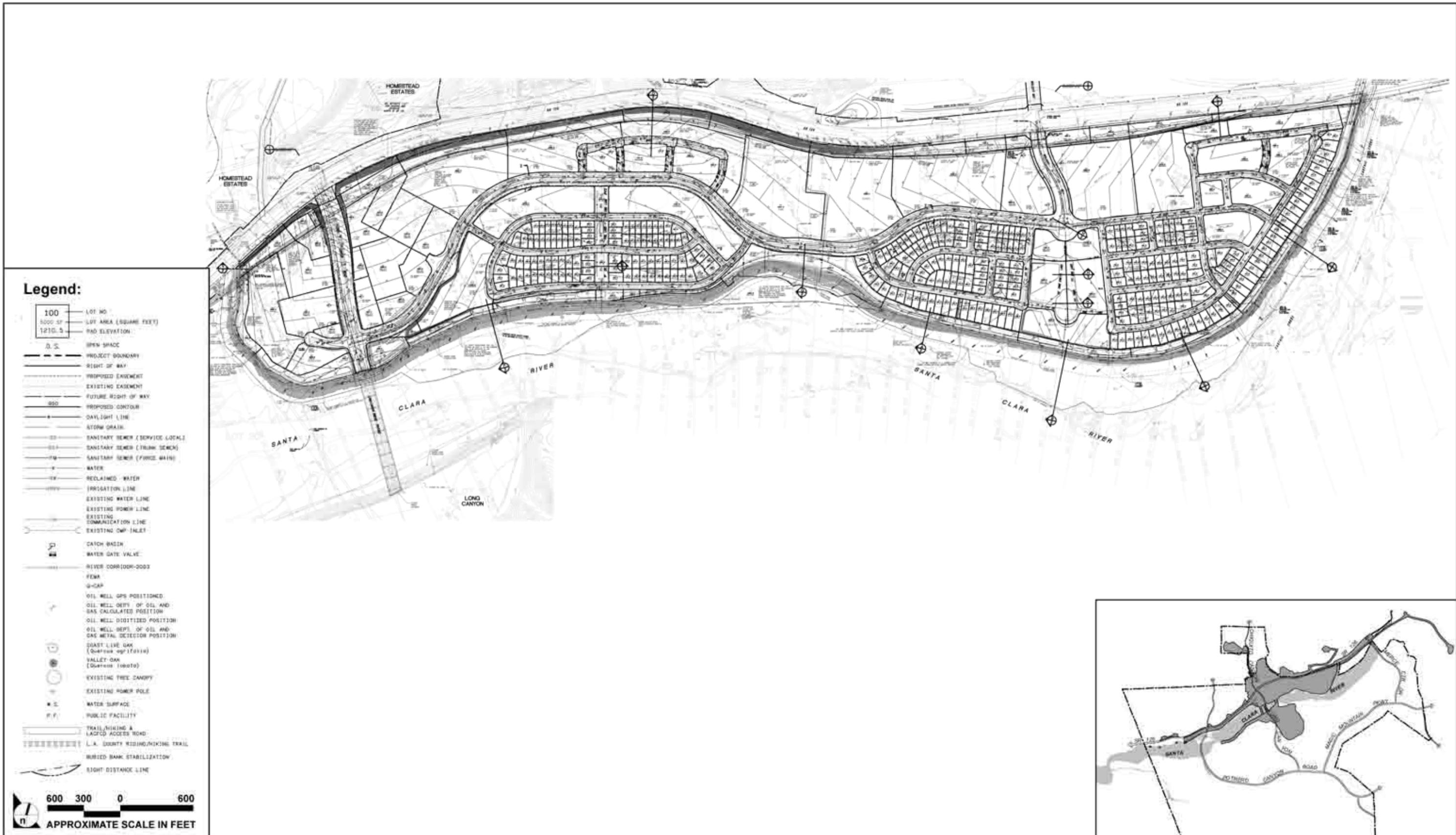
The text below describes the proposed land uses for the Landmark Village project and the improvements/infrastructure necessary to construct the project. This description is intended to provide a sufficient level of detail from which an evaluation can be made of the project's significant environmental impacts should the County approve the requested Project Approvals (e.g., General Plan, Sub-Plan and Specific Plan Amendments, Vesting Tentative Tract Map, SEA CUP, CUP, Oak Tree Permit, etc.).

(1) Technical Characteristics

The Vesting Tentative Tract Map identifies the arrangement of land uses, lots, grading limits, and supporting infrastructure/improvements on the tract map site. As depicted in **Figure 1.0-10, Landmark Village Vesting Tentative Tract Map No. 53108**, the project site is subdivided into a total of 416 lots, including the following:

- (a) 308 single-family lots/units
- (b) 18 multi-family lots (for 1,080 multi-family units)
- (c) 2 mixed-use/multi-family lots (for 56 mixed-use/multi-family units)
- (d) 23 mixed-use/commercial lots
- (e) 4 recreation lots
- (f) 2 park site lots
- (g) 1 school site lot
- (h) 1 fire station lot
- (i) 45 open space lots

The tract map design places development into two distinct areas, with an elementary school and Community Park located in the central portion of the site. On the east side, the site includes a Village Quad/Mixed-Use Center, surrounded by mixed-use, commercial, and residential land uses. On the west side, the site includes a Village Center/Mixed-Use Area, surrounded by mixed-use, commercial, residential land uses and the fire station. Wolcott Road is the primary north/south access point to the Village Quad/Mixed-Use Center and surrounding land uses to the east. The future Long Canyon Road is the primary north/south access point to the Village Center/Mixed-Use Area and surrounding land uses to the west. A significant portion of the Specific Plan's Regional River Trail is situated along the southern boundary of the site, which allows for active and passive recreational uses. The tract map site includes other recreation, trail, paseo, and open space uses.



SOURCE: PSOMAS - September 2004

FIGURE 1.0-10

Landmark Village Vesting Tentative Tract Map No. 53108

Table 1.0-3, Landmark Village Statistical Summary, provides a specific breakdown of the proposed tract map site by land use designation, area, lots, lot size, or square footage, dwelling units, and dwelling unit density per acre. Other uses that fall within the land use designations identified on **Table 1.0-1** include electric and natural gas infrastructure, telephone and cable television lines, fiber optics, potable and non-potable water conveyance systems, and sewer/wastewater conveyance systems. The project's technical characteristics are described further on the following pages.

**Table 1.0-3
Landmark Village Statistical Summary**

| Land Use | Area (gross acres) | Lots | Lot Sizes or Square Footage | Total Units or Square Footage | Avg. Density (du/acre or FAR ¹) |
|-----------------------------------|-----------------------|-----------|--------------------------------|----------------------------------|--|
| Residential | | | | | |
| Single-Family | 49.9 | 308 | 4,500/5,500/6,000 | 308 du | 6.2 |
| Multi-Family | 60.7 | 15 | -- | 629 du | 11.3 |
| Mixed-Use/Multi-Family | - | - | -- | 56 du | -- |
| Apartments/Condos | <u>21.0</u> | <u>3</u> | -- | <u>451 du</u> | <u>21.5</u> |
| Subtotal | 131.7 | 32 | | 1,444 du | 10.9 average |
| Mixed-Use/Commercial | 35.02 | 24 | -- | 1,033,000 sq. ft. ³ | 0.65 FAR |
| Elementary School | 9.0 | 1 | N/A | N/A | N/A |
| Fire Station | 1.48 | 1 | -- | N/A | N/A |
| Open Space² | | | | | |
| Parks | 16.1 | 2 | | | |
| Recreation Centers | 5.2 | 4 | | | |
| Trails and Miscellaneous | <u>38.3</u> | <u>45</u> | N/A | N/A | N/A |
| (slopes, water quality basins) | 59.6 | 51 | | | |
| Roads | 55.8 | 12 | N/A | | N/A |
| TOTAL | 292.6 ac | 416 | | 1,444 du 1,033,000 sq. ft. | |

Source: Vesting Tentative Tract Map No. 53108 (revised September 20, 2004).

¹ FAR = floor area ratio and du = dwelling unit

² The SEA/SMA lies just to the south of the tract map boundary and the acreage is not reflected in this table.

³ 902,000 of non-residential (commercial with a MU classification and 131,000 within a commercial classification).

The proposed project permits a variety of housing types ranging from single-family units with densities from 7.4 to 9.6 dwelling units per acre, to multi-family units with densities from 8.5 to 23 dwelling units per acre. Two residential housing types are proposed for the tract map site: single-family (detached) and multi-family (attached and detached). **Figure 1.0-11** shows the location of the proposed single-family units and the lot locations for the proposed multi-family units.

(a) Single-Family Residential Component

The single-family housing type is characterized by a traditional lot orientation at net densities ranging from 4.4 to 8.2 dwelling units per acre. These lots are proposed to be located along both private and public streets and lot sizes predominantly range from approximately 4,500 to 6,000 square feet. Site development would utilize alleyways and provide access to garages located at the rear of the lot, or alternate access via the street, but with recessed or side-entry garages to minimize the visual presence of the garage on the street scene. A total of 308 single-family detached units are proposed. A typical building elevation for an alley-loaded single-family detached unit is depicted in **Figure 1.0-12**.

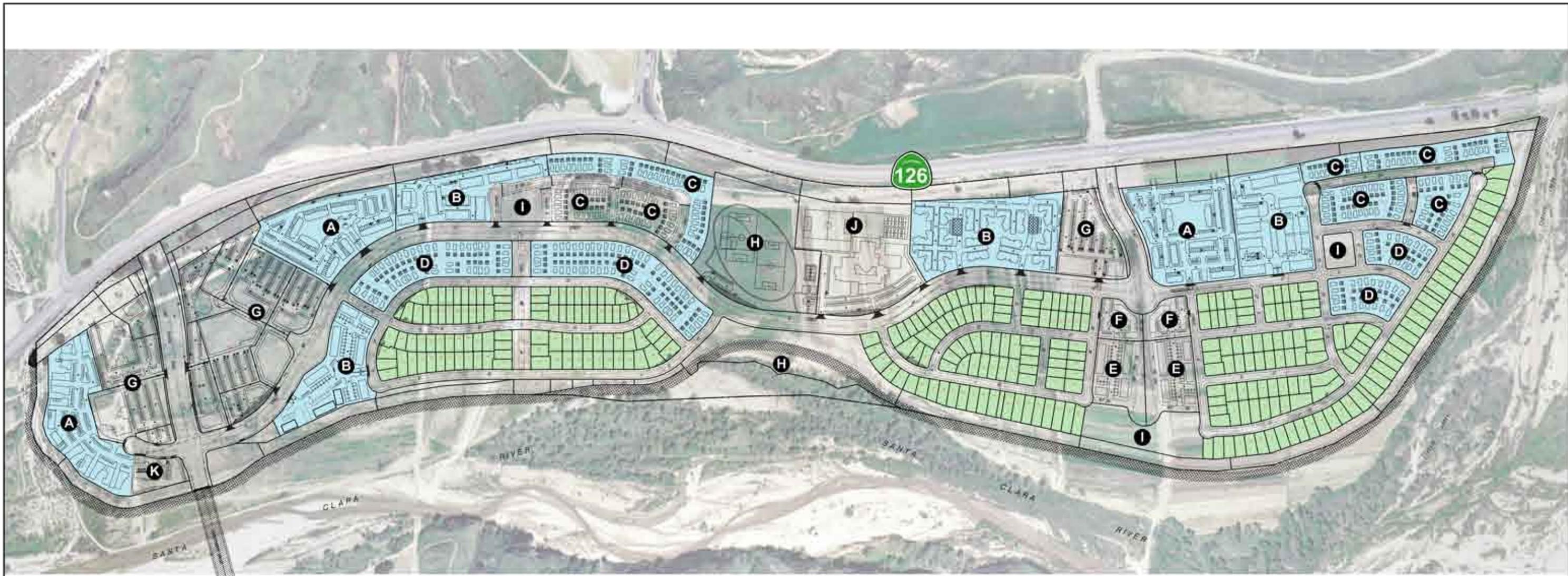
(b) Multi-Family Residential Component

The multi-family attached units provide for densities ranging from 8.5 to 23 dwelling units per acre. These units are typically characterized as townhome/duplex or condominium/apartment-style buildings. Parking may be at-grade, subterranean or structured. A total of 1,136 multi-family units are proposed. A typical building elevation for attached multi-family housing is depicted in **Figure 1.0-13**.

(c) Mixed-Use/Commercial Component

Mixed-use areas combine retail/commercial and office, and civic, public, and recreational uses, connected by a vehicular, transit, and pedestrian network of streets, traffic circles, courtyards, and paseos. Residential uses are located in the areas surrounding the mixed-use and commercial sectors.

Up to 1,033,000 square feet of mixed-use/commercial uses are planned on approximately 36.5 acres of land in two locations on the tract map site. The mixed-use/commercial areas are planned to front along Wolcott Road (Village Quad) and Long Canyon Road (Village Center). All mixed-use/commercial areas are accessible by a vehicular, transit, and pedestrian street network, trails, paseos, and sidewalk areas. Supporting commercial uses likely to be found in the mixed-use areas include food service, banking, dry cleaners, merchandise sales, food sales, and various professional offices. This area also allows for multi-family residential development. Typical housing would be multi-family attached units and may include townhomes, condominiums, stacked flats, and apartments. **Figure 1.0-14** shows the locations of the Village Quad and Village Center areas. **Figure 1.0-15** depicts the Conceptual Site Plan of the Village Quad area, and **Figure 1.0-16** depicts the Conceptual Site Plan of the Village Center area.



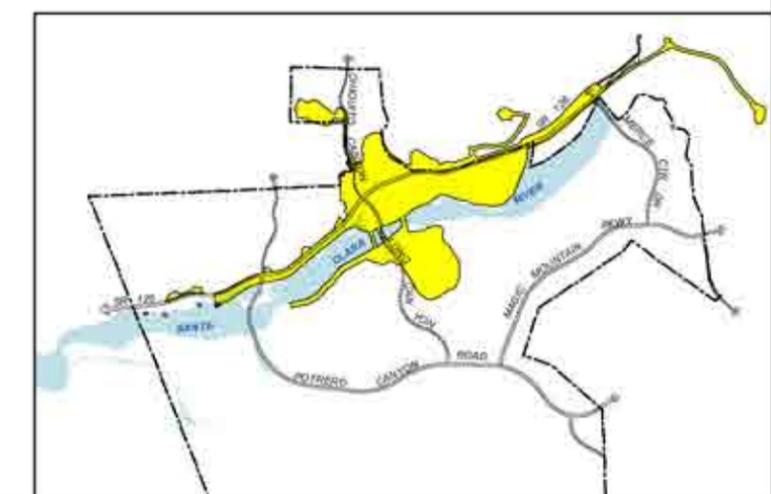
Legend:

- Single-Family Detached
- Multi-Family Attached and Detached

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station

600 300 0 600
 APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-11

Residential Land Uses



Conceptual Elevation – Smaller Lot Alley Loaded



Conceptual Elevation – Larger Lot Front Loaded and Alley Loaded

SOURCE: River Village/Newhall Ranch Planning Book – May 2002

FIGURE 1.0-12

Single Family Residential (Detached) Typical Building Elevations



Conceptual Elevation – Multiple Family Homes



Conceptual Elevation – Townhomes

SOURCE: River Village/Newhall Ranch Planning Book – May 2002

FIGURE 1.0-13

Multi-Family (Attached) Conceptual Building Elevations



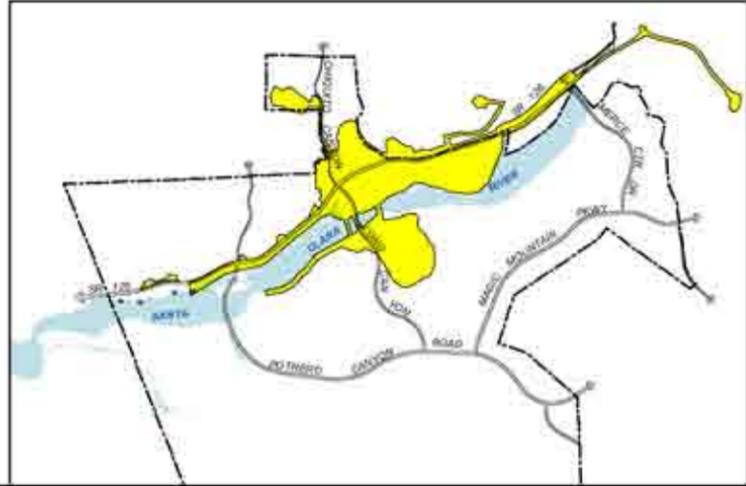
Legend:

- Village Center
- Village Quad

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station

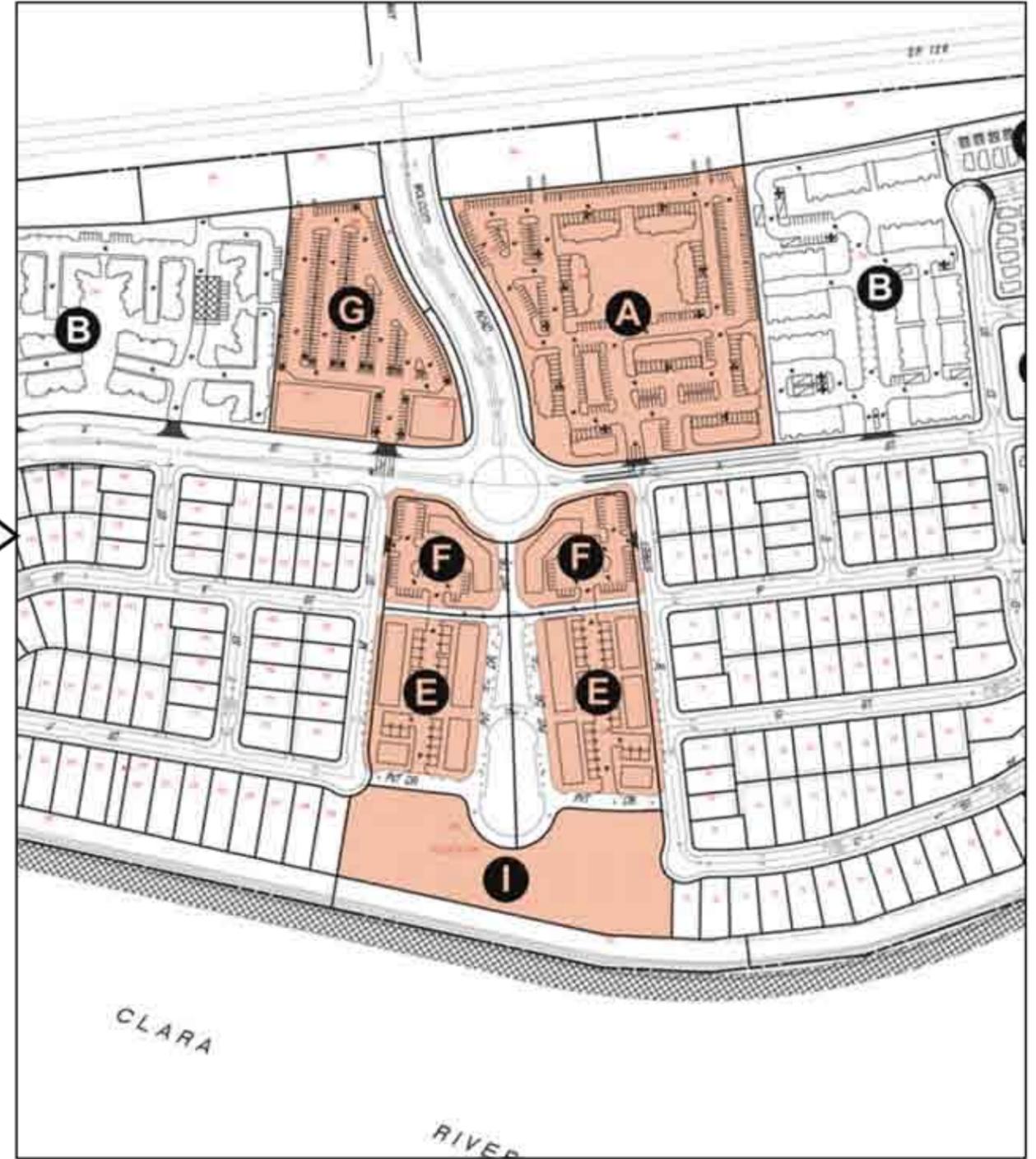
600 300 0 600
 APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-14

Location of Village Quad and Village Center

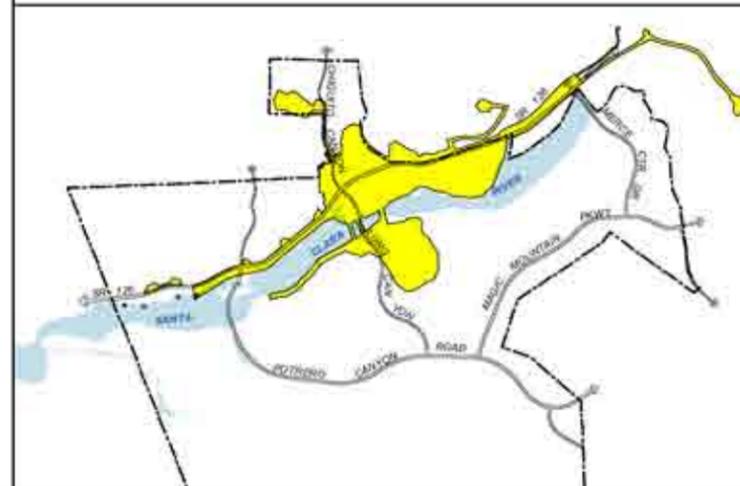


Legend:

Village Quad

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station

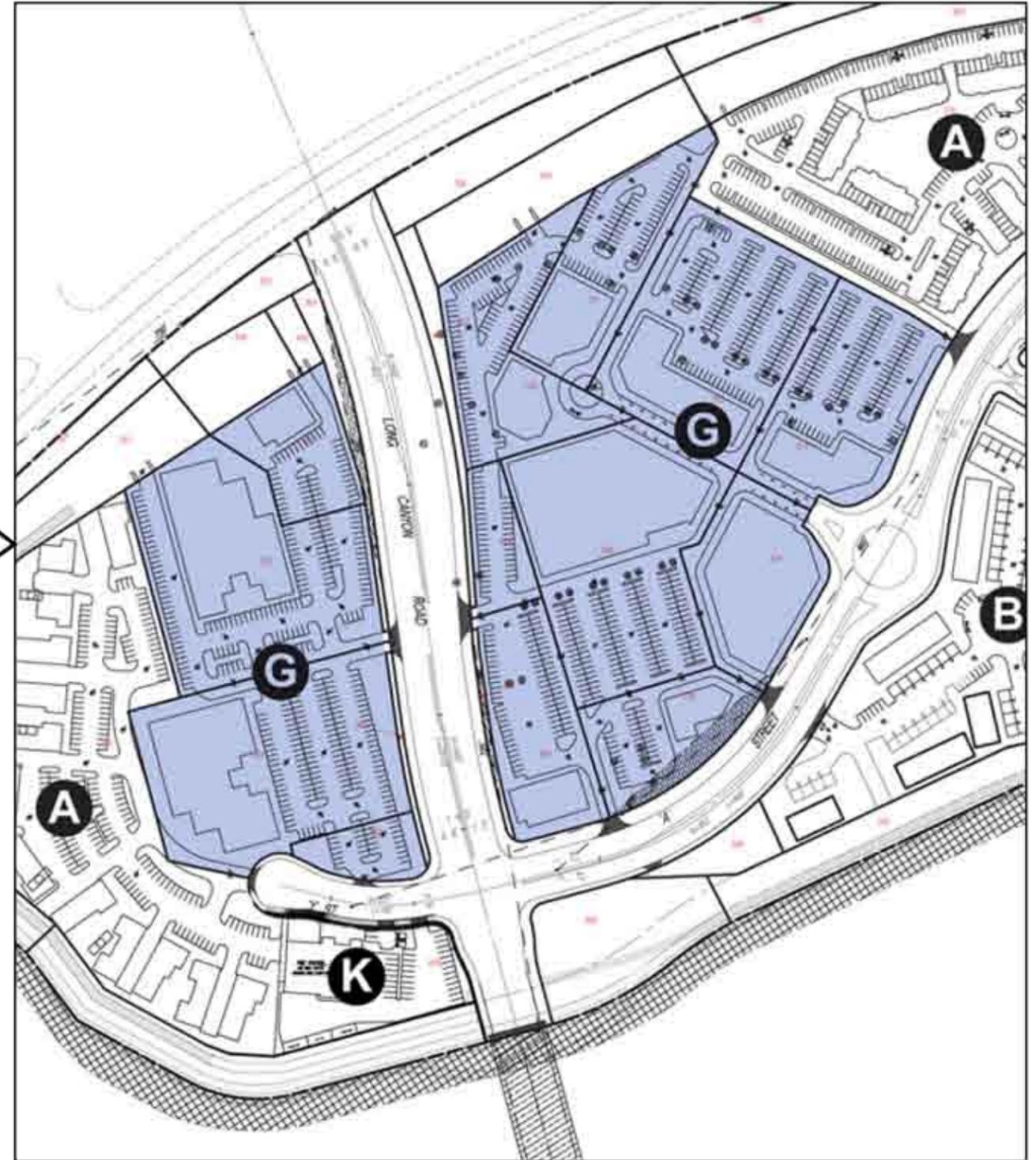


NOT TO SCALE

SOURCE: PSOMAS – August 2004

FIGURE 1.0-15

Conceptual Site Plan – Village Quad Area

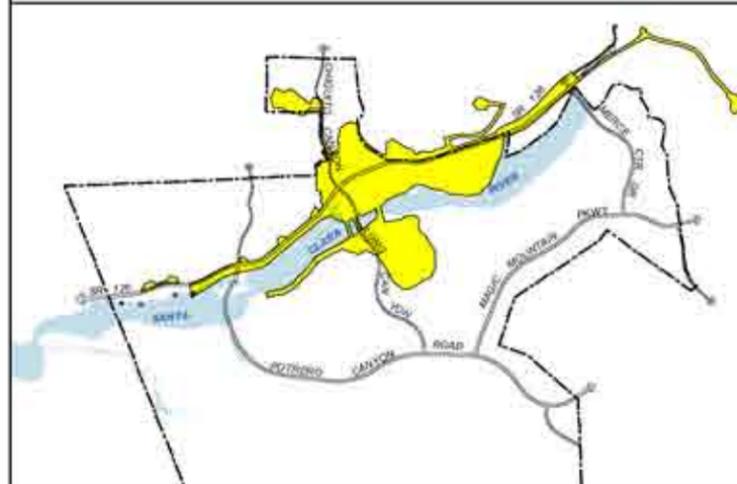


Legend:

 Village Center

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station



NOT TO SCALE

SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-16

Conceptual Site Plan – Village Center Area

(d) Elementary School Component

The project applicant has entered into a School Facilities Funding Agreement (Agreement) with the Castaic Union School District (see **Appendix 4.15**). The Agreement requires that the applicant set aside land and provide funds to construct at least one new elementary school as mitigation for buildout of uses within the Riverwood Village of the Newhall Ranch Specific Plan. Consistent with this Agreement, the Landmark Village project includes a 9-acre elementary school site located in the central portion of the tract map site. The school would consist of a main school building with modular classrooms and adjacent playing field. Parking will be provided on the school site.

The elementary school site (**Figure 1.0-17**) is integrated with the active areas of the proposed Community Park to facilitate shared play area and parking opportunities. The multi-purpose bike and walking Community Trail along “A” Street is intended to facilitate pedestrian access to this area of the project. To maximize safety for students, traffic calming components, such as traffic circles, landscaped parking bays, and crossing points have been incorporated into the “A” Street design. **Figure 1.0-18, Conceptual Site Plan – Community Park**, depicts the conceptual site plan of the elementary school/Community Park.

(e) Community Park/Recreation Components

An approximately 16-acre Community Park, consisting of 9.74 net acres for the tract map site, consistent with the Specific Plan’s Land Use Overlay designation for the area. The active areas of the Community Park are situated adjacent to the elementary school site (**Figure 1.0-17**). Community Parks typically include tot lots, playground equipment, ball fields, tennis/basketball courts, swimming pools, picnic facilities, turf areas, restrooms, and indoor recreation centers.

The portion of the Community Park located on the river side of “A” Street is proposed to be privately maintained and is planned as a passive recreation area. A river outlook point is situated in this area, which is accessed by both the Regional River Trail and the Community Trail. **Figure 1.0-18** depicts both the active and passive areas of the proposed Community Park.

(f) Recreation Areas

A total of four separate private neighborhood recreation centers are planned on a total of 5.2 acres within the proposed project. These centers are intended to focus primarily on the recreational uses for nearby residential units and are consistent with the Specific Plan. These recreation areas would contain such amenities as a pool, spa, wading pool, shade overhead structure, and/or restroom building. These facilities would not provide off-street parking, because the areas they serve would be within convenient walking distance. The areas would be fenced and maintained by one or more homeowner associations.

(g) Fire Station

Consistent with Mitigation Measure 4.18-4 of the Newhall Ranch Specific Plan Program EIR, the applicant is negotiating an MOU with the County Fire Department that would require up to three fire stations within the Specific Plan. One fire station is to be constructed within the mixed use commercial area found west of Long Canyon Road. A conceptual agreement between the Newhall Land and the Fire Department includes the construction by Newhall Land of an approximately 11,000-square-foot station within Landmark Village on a minimum 1.25-acre net building pad. In accordance with this agreement, the fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark Project. The station will house seven firefighters, 24 hours a day.

It should be noted that both the station and building pad sizes exceed the requirements of the approved Newhall Ranch Specific Plan. Additionally, the approved Specific Plan required Newhall Land to provide funding for the construction of the station, rather than constructing the station, and provide funding for its pro-rata share of equipment for the station. In summary, the Specific Plan required Newhall Land to dedicate two, 1-acre, fire station sites (the third station was to be constructed on the Del Valle Fire Department Training Facility) and provide funding to construct three stations. Two of the stations would not exceed 6,000 square feet, and the third was to not exceed 8,500 square feet.

As required by the Specific Plan, Newhall Land and the Fire Department will enter into a MOU to finalize the Newhall Ranch requirements associated with the Fire Department.

(h) Trails and Paseos

The approved Specific Plan's Master Trails Plan (Specific Plan Exhibit 2.4-5) provided broad, general trail alignments and classifications to ensure that Riverwood Village would be linked to the greater Newhall Ranch via the Regional River Trail and the Community Trail network. **Figure 1.0-19** depicts the Specific Plan's Master Trails Plan as it relates to the Landmark Village portion of Riverwood Village.

Figure 1.0-20, Landmark Village Trails Plan, depicts the trails and paseos that fulfill the intent of the Specific Plan's Master Trails Plan. It provides a tract map level of detail necessary to ensure that each residential neighborhood and community service area is linked to one or more pedestrian, bicycle or equestrian trails or paseos, with locations for river trail access points and observation/interpretive points.

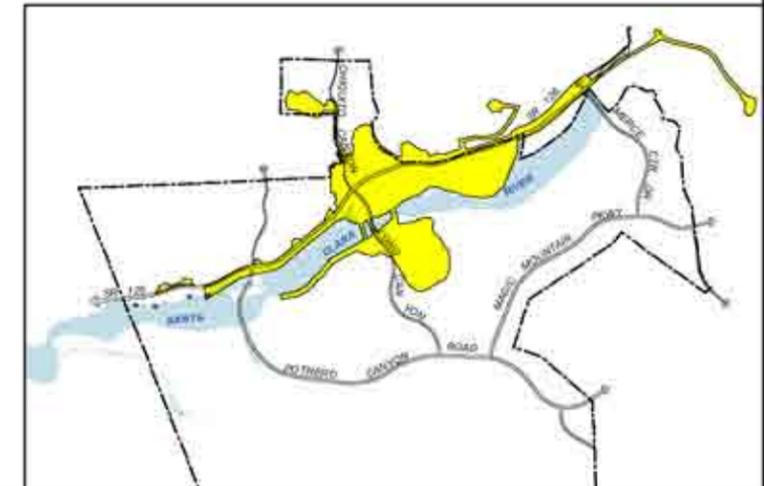
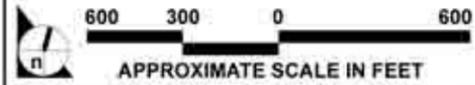


Legend:

- Community Park
- Elementary School

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
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- J** School
- K** Fire Station



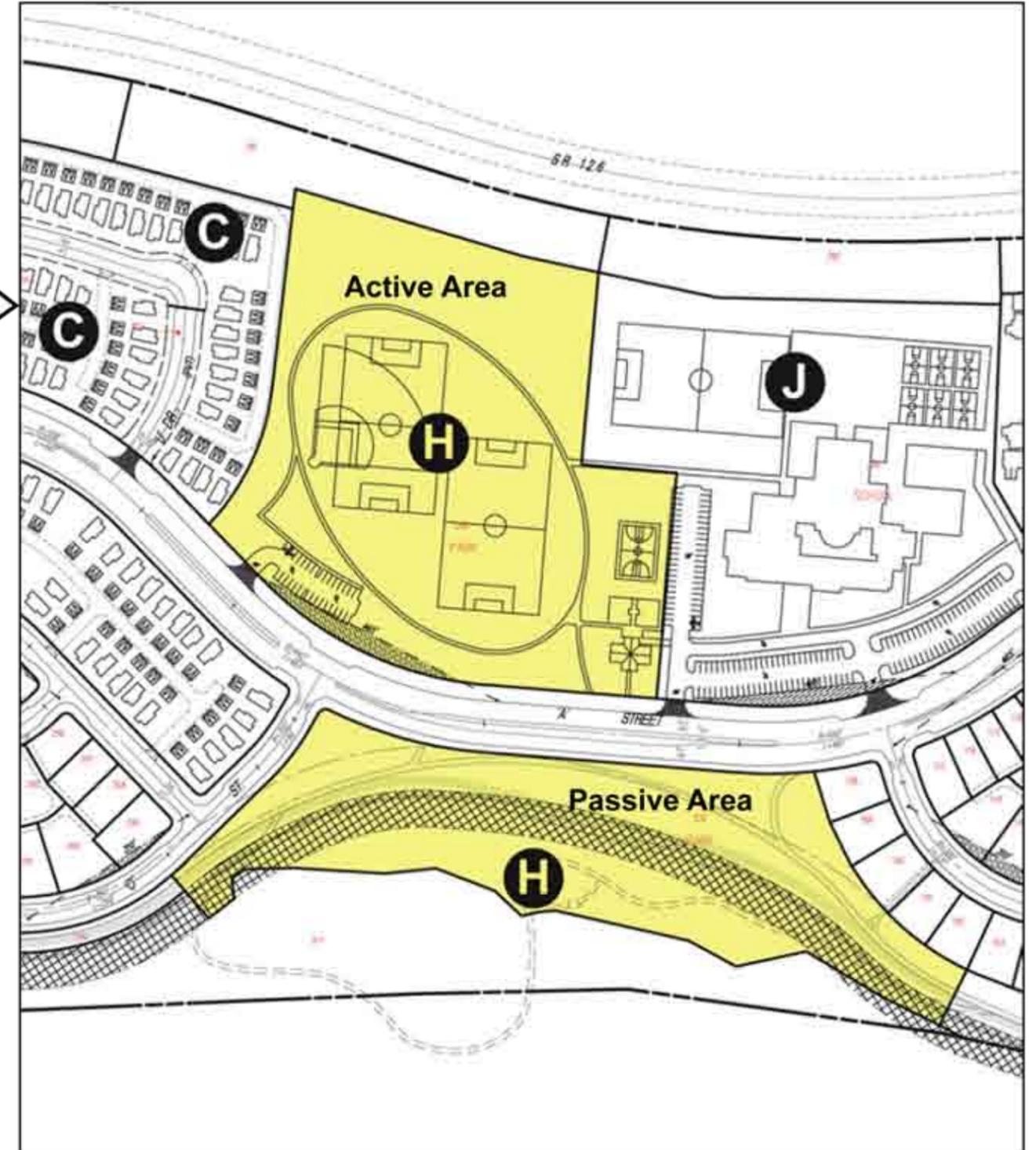
SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-17

Elementary School/Community Park



Depiction of Passive Area

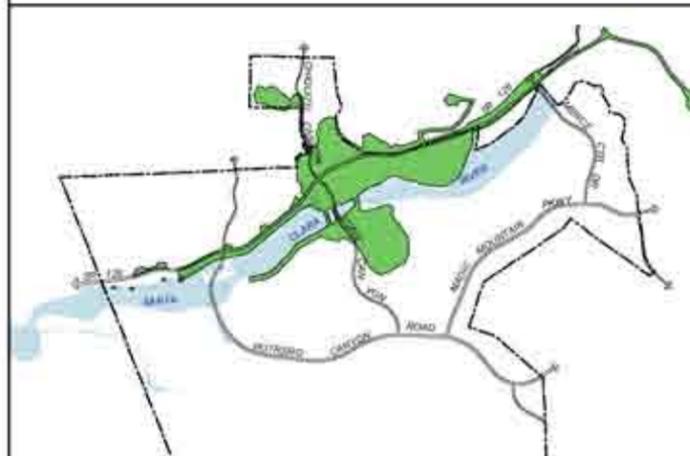


Legend:

- Community Park
- Buried Bank Stabilization

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station

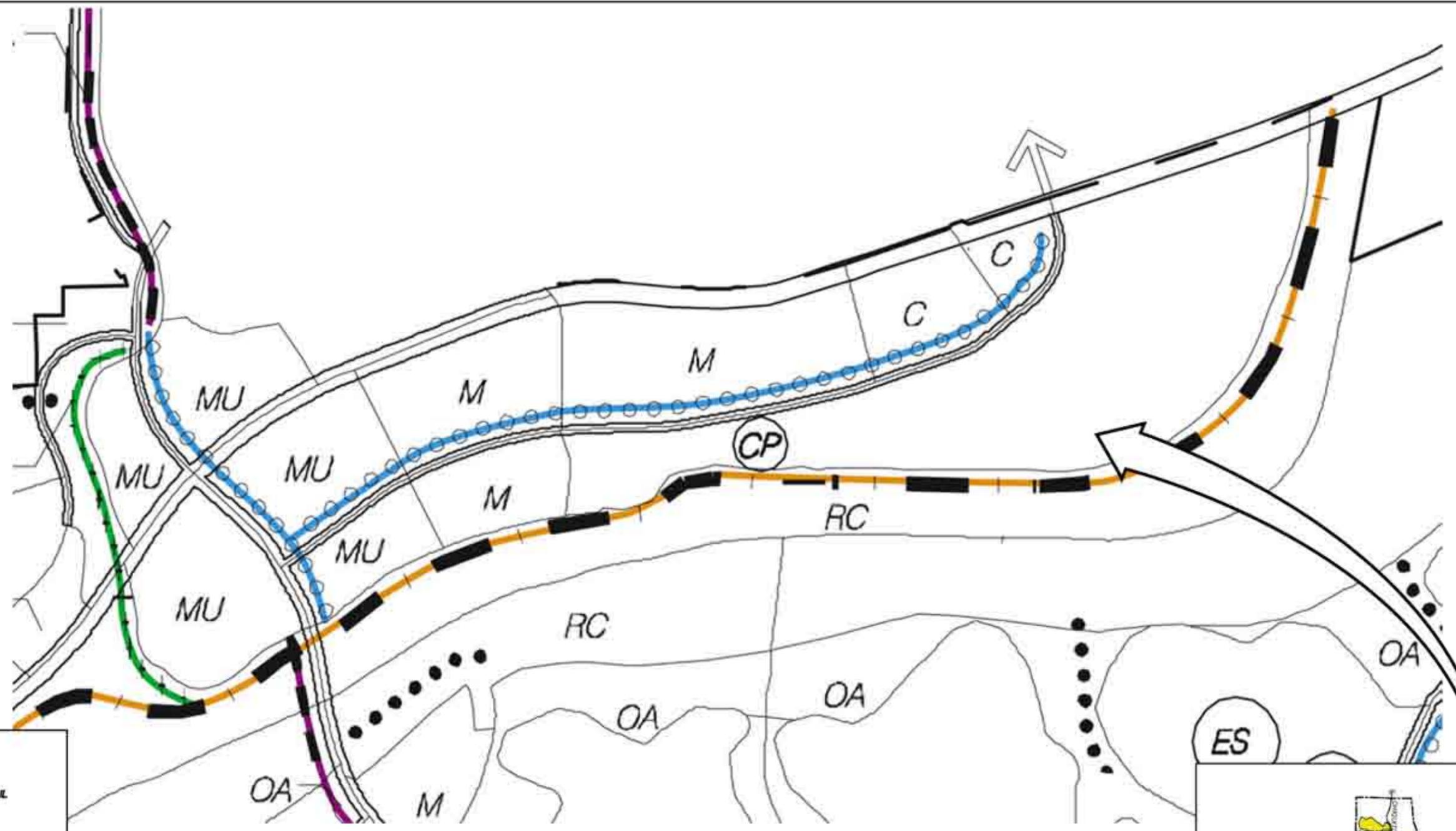


NOT TO SCALE

SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-18

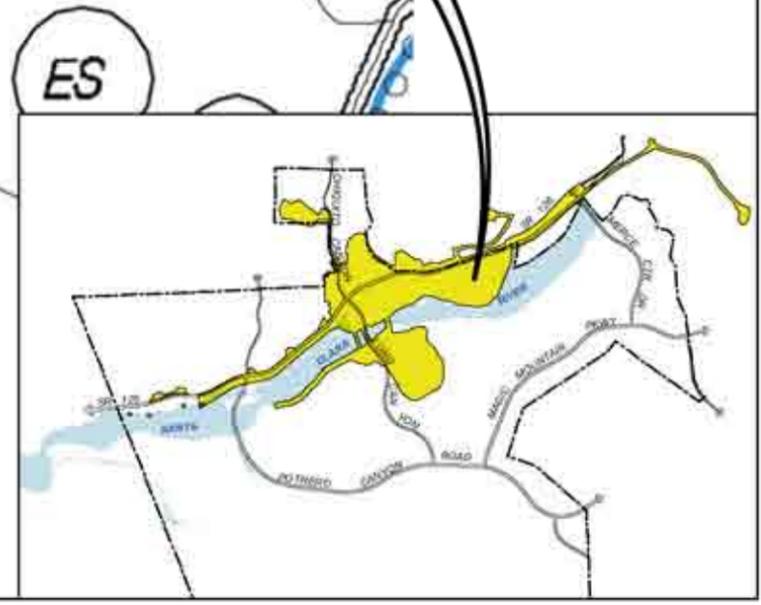
Conceptual Site Plan – Community Park



Legend:

-  REGIONAL RIVER TRAIL
-  COMMUNITY TRAIL
-  EQUESTRIAN TRAIL COMPONENT OF COMMUNITY TRAIL
-  LOCAL TRAIL
-  PATHWAY
-  UNIMPROVED TRAIL

 NOT TO SCALE



SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-19

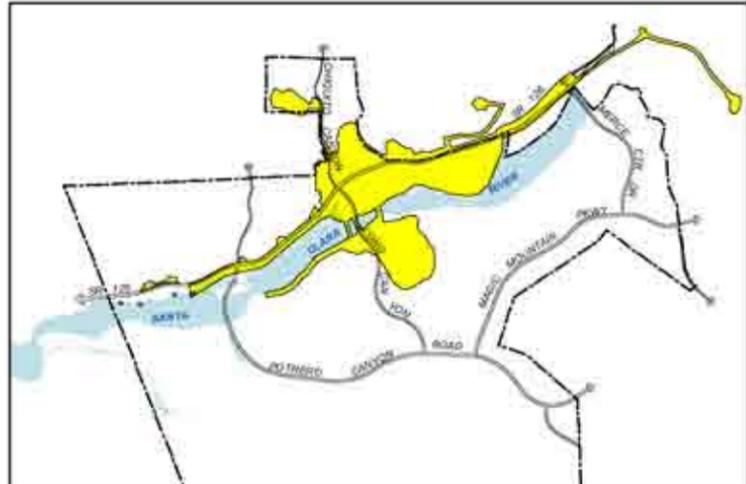
Landmark Village Portion of Specific Plan Master Trails Plan



Legend:

- Regional River Trail
- L.A. County Riding/Hiking Trail
- Paseo
- ▲ Interpretive Observation Point

600 300 0 600
 APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – August 2004. Impact Sciences, Inc. – September 2006

FIGURE 1.0-20

The Landmark Village trails plan implements the Specific Plan's objective of providing a hierarchy of trails with varying sizes and functionality. For example, the Landmark Village project would implement a significant portion of the Specific Plan's Regional River Trail system. This trail would be constructed along the Santa Clara River beginning at the northeastern tract map boundary along Castaic Creek, and extend west along the river through the entire southern boundary of the Landmark Village tract map site. Trails will be located at the top of bank stabilization. This trail corridor is approximately 35 feet wide and approximately 2 miles in length. The bike and pedestrian portion of the trail would be constructed of asphalt or similar material. Themed fencing would define the perimeter of the trail and the alignment would be landscaped with native plant materials.

As shown on **Figure 1.0-20**, the Landmark Village tract map site would provide an extensive Community Trail system throughout the residential portions of the project, which would be linked to the Regional River Trail, local trails, and paseos. Community trails are unified pedestrian and bicycle routes in landscaped parkways. They are located along highways in order to connect the Specific Plan villages.

Local trails such as paseos, or walkways, are proposed to provide a means of pedestrian access from residential neighborhoods to and from the Community Park, recreation centers, elementary school, and Mixed-Use/Commercial areas. The paseos would adjoin major roadways and certain residential collector streets, and be separated from vehicular traffic by a landscaped parkway (**Figure 1.0-20**). Trees and other landscaping materials may line local trails to make them an identifiable route, but often they follow natural drainages within Open Areas and require little or no landscaping.

(i) Site Access and Circulation

The project-level circulation system is consistent with, and implements, the mobility objectives of the Specific Plan's approved Master Circulation Plan (Specific Plan Exhibit 2.4-2). The Specific Plan's Master Circulation Plan was designed as a flexible mechanism by which necessary circulation modes of travel within the Specific Plan area could be integrated with existing regional road networks. The County found that the Specific Plan's mobility objectives were consistent with the transportation goals and objectives of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan. **Figure 1.0-21** depicts the Specific Plan's Master Circulation Plan, as it relates to the Landmark Village project site.

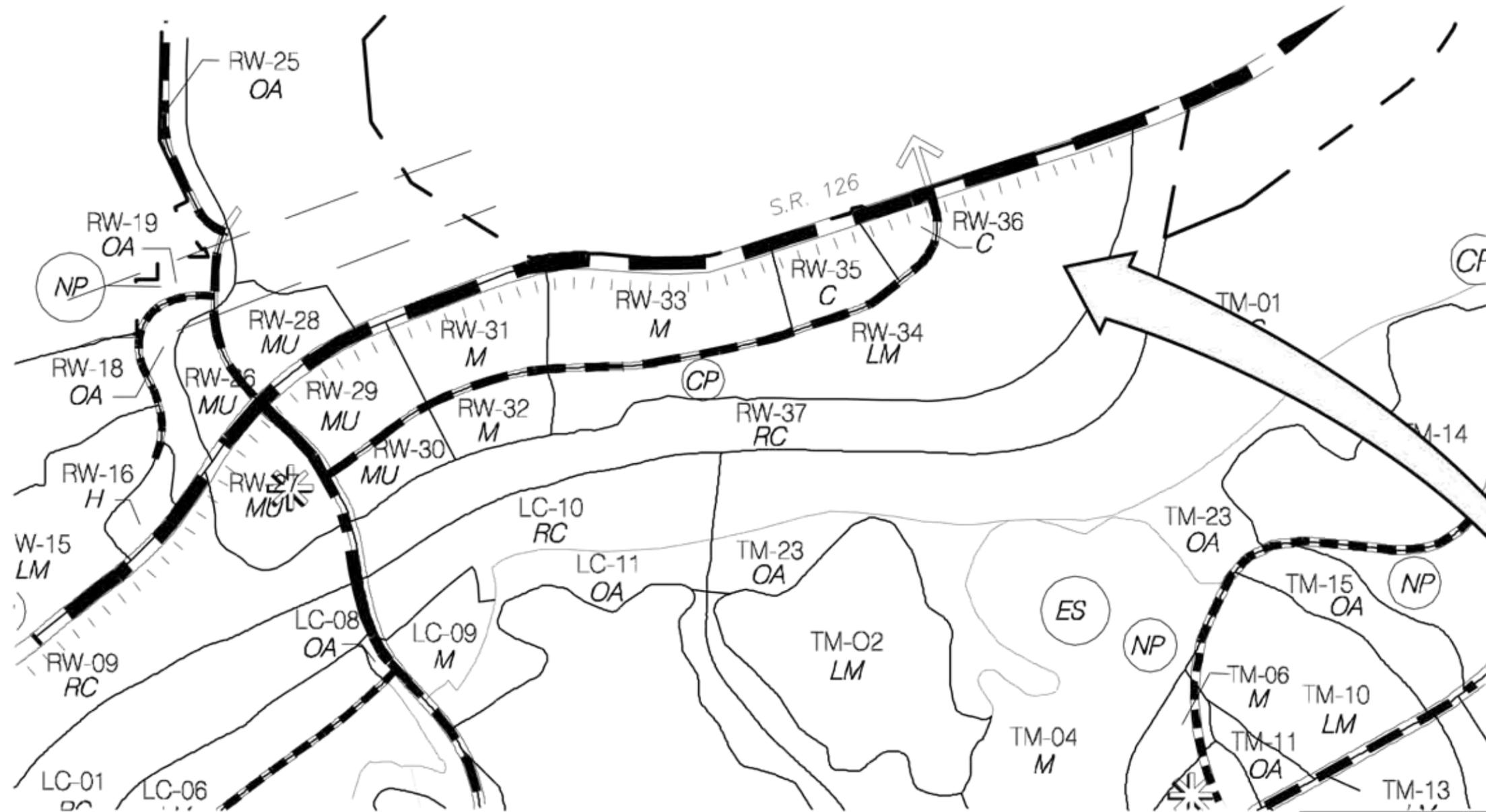
The project's circulation plan is characterized by a system of local streets with access to and from a curvilinear road ("A" Street) that traverses the site in an east/west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect "A" Street to the off-site highway system (SR-126). The primary function of "A" Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system.

The project proposes to construct Long Canyon Road and the connection to Wolcott Road, which would provide regional access to and from SR-126. The proposed project would construct temporary intersections with SR-126, which would be consistent with the project's planned potential future interchange alignments for Wolcott Road/SR-126 and Long Canyon Road/SR-126. These two potential future grade separated crossings would be constructed if future traffic volumes determine that the crossings are warranted. The environmental impacts associated with these future crossings are evaluated in this EIR. The proposed project also would construct a network of collector streets to provide local access to and from land uses associated with the project (see **Figure 1.0-10, Landmark Village Vesting Tentative Tract Map No. 53108**). These roadways would connect to "A" Street, Wolcott, and Long Canyon Roads. All roadways would be constructed in substantial conformance with the requirements of the Specific Plan and, in many cases, would require only minor project-specific modification to the street sections set forth in the Los Angeles County Subdivision Code.

The one change from the Specific Plan's Master Circulation Plan would be the project applicant's request to revise the "A" Street classification from a four-lane Secondary Highway to a two-lane Collector Street. The Secondary Highway designation is also included in the County's Master Plan of Highways and the Santa Clarita Valley Areawide Plan's Circulation Plan.

Figure 1.0-22, Cross-Section Comparison, depicts a cross-section for a Secondary Highway as specified by the County. As shown, a Secondary Highway designation provides 94 feet of right-of-way that contains 64 feet of travel lanes separated by a 14-foot median with an 8-foot parkway on either side of the road. For purposes of comparison, **Figure 1.0-22** depicts the cross-section for the proposed Landmark Village "A" Street Collector. As shown, the proposed Collector Street typically provides 60 feet of travel lane with a 14-foot median, for a total street width of 74 feet from curb-to-curb. An additional 26 feet of landscape parkway and meandering sidewalk is found on the north side of the street, while the north side contains 4 feet of landscape parkway, along with a 6-foot paseo/walkway. The proposed Collector Street's total right-of-way is 110 feet in width, which is slightly different than the Secondary Highway designation.

Buildout of Landmark Village requires widening a segment of SR-126 to three lanes in each direction as it passes by the tract map site. This necessitates widening of the existing bridge over Castaic Creek on the south side to accommodate a six-lane right-of-way. The proposed project also provides 8 acres located within a 35-foot-wide strip of land along SR-126 for the future reservation of a rail right-of-way that runs parallel to the south side of SR-126. The mixed-use/commercial areas planned along Wolcott Road and Long Canyon Road also permit park-and-ride lots. In addition, the mixed-use/commercial area in the vicinity of Wolcott Road reserves a future transit station within the project site.

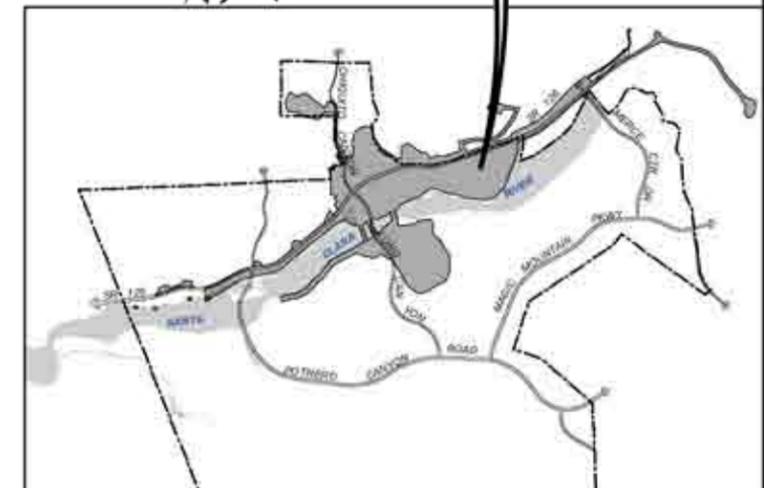


LEGEND

- STATE HIGHWAY
- MAJOR HIGHWAY
- SECONDARY HIGHWAY
- COLLECTOR
- POSSIBLE FUTURE COLLECTOR ALIGNMENT
- BUS PULL-IN



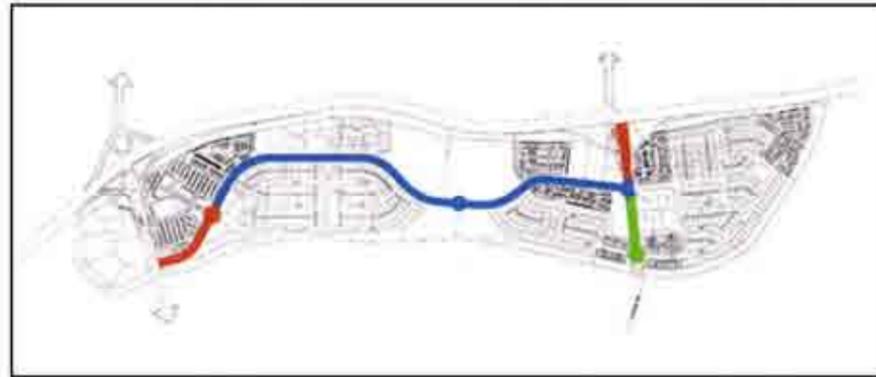
NOT TO SCALE



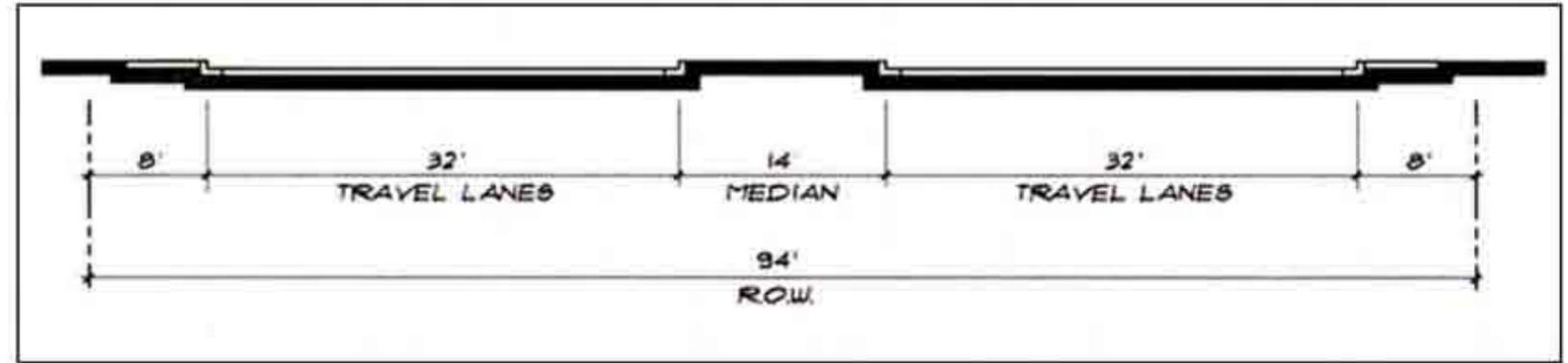
SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-21

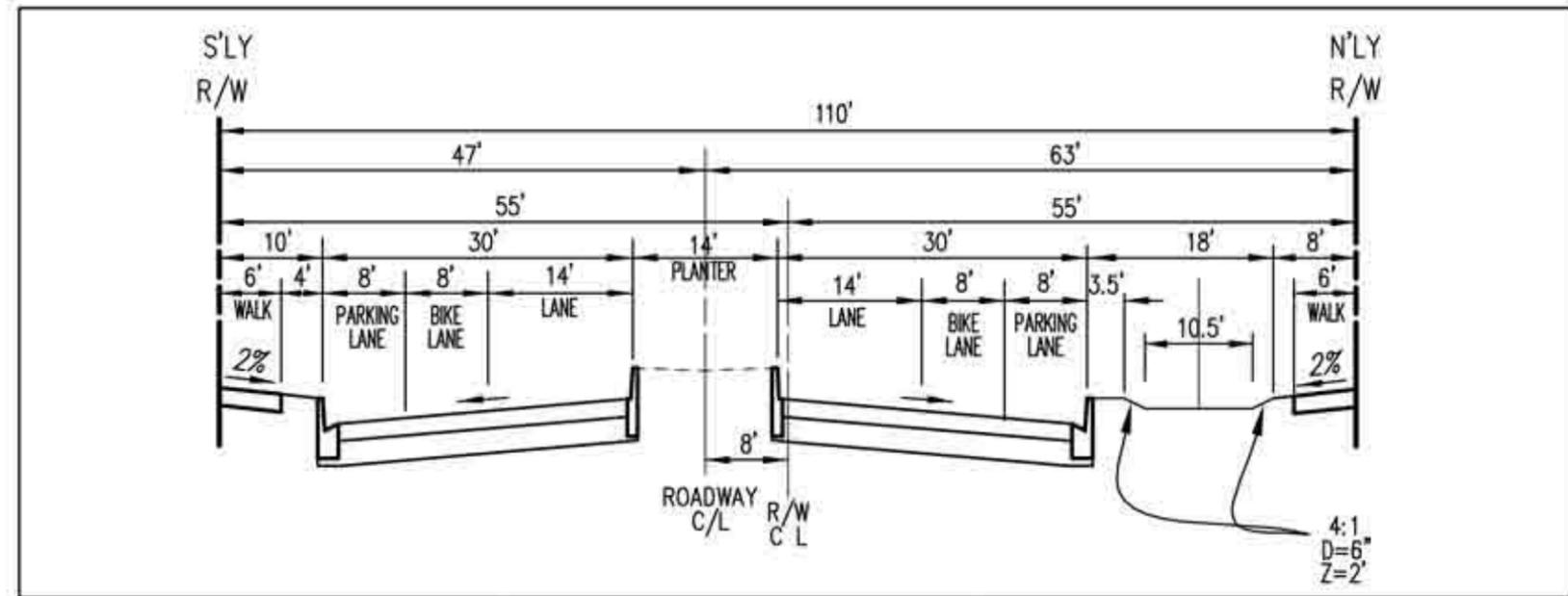
Landmark Village Portion of Specific Plan Master Circulation



Key Map



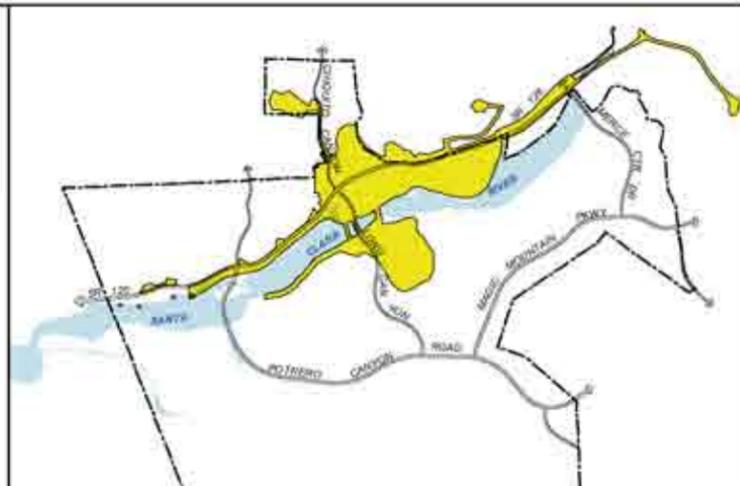
Specific Plan Secondary Highway



Landmark Village Spine Road Collector

Legend:

- █ Spine Road
- █ Entry Road
- █ Parkway



SOURCE: River Village Planning Book – August 2003

FIGURE 1.0-22

Cross-Section Comparison – Specific Plan Secondary Highway vs. Landmark Village Collector

(j) Long Canyon Road Bridge

As part of the project approvals for the Newhall Ranch Specific Plan, the Los Angeles County Board of Supervisors approved a program-level SEA CUP (No. 94-087-(5)) on May 27, 2003. The SEA CUP approved three elevated highway bridge crossings over the Santa Clara River, including the general alignment for the Long Canyon Road Bridge. The number and general location of the bridge crossings within the Specific Plan were established to minimize impacts to sensitive habitat and species within the River Corridor SMA/SEA 23, and to minimize major access points to SR-126. Each of the bridge crossings is an extension of an existing road, creating a functional regional circulation system.

The project applicant is proposing to construct the Long Canyon Road Bridge component of the Specific Plan, in conjunction with the Landmark Village project. The Long Canyon Road Bridge is one of the three bridge crossings over the Santa Clara River, and it would serve central portions of the Newhall Ranch Specific Plan. The new bridge would span the width of the Santa Clara River, equating to a roadway segment of approximately 1,000 feet in length and 100 feet in width. A six-lane highway would be constructed that extends from the proposed realignment of the existing Chiquito Canyon Road/SR-126 intersection in a southerly direction over the Santa Clara River to the proposed bridge terminus. Bridge supports would be constructed and consist of concrete piers to be located within the River Corridor SMA/SEA 23. Each support would be spaced approximately 100 feet apart. In addition, abutments and bank stabilization (including gunite and riprap) would be required on either side of the bridge to protect against erosive/scouring forces. The abutments and bank stabilization areas are also located within the River Corridor SMA/SEA 23.⁸ **Figure 1.0-23, Location of Long Canyon Road Bridge and Proposed Bank Stabilization**, illustrates the bridge and related River Corridor improvements in relation to the Landmark Village project site.

(k) Drainage/Flood Control

The Landmark Village project-level drainage and water quality plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Drainage Plan (Specific Plan Exhibit 2.5-1). The primary objective in developing the Specific Plan Backbone Drainage Plan was to identify conceptual drainage and flood protection system for the entire Specific Plan site, while preserving the Santa Clara River as an important natural resource. In order to satisfy this objective, several program-level criteria regarding the form and function of the Santa Clara River were identified early in the planning process, which formed the basis for establishing the River Corridor SMA/SEA 23. In addition, the Specific Plan established a commitment to meet the ongoing requirements of all National Pollutant Discharge

⁸ For a detailed discussion of the environmental effects of the bridge and related improvements, please see **Section 4.2, Hydrology**, and **Section 4.4, Biota**, of this EIR.

Elimination System (NPDES) Permits, including drainage/water quality improvements, such as water quality basins, vegetative swales, and inlet and outlet structures. The locations and sizing of such improvements were to be determined as part of the Newhall Ranch tentative subdivision map process. **Figure 1.0-24** depicts the Specific Plan's Conceptual Backbone Drainage Plan as it relates to the Landmark Village project site.

Figure 1.0-25, Landmark Village Drainage and Water Quality Plan, illustrates the project's proposed drainage and water quality plan and related improvements. The plan incorporates methodologies to meet or exceed the ongoing NPDES Permit requirements and conforms to the drainage and water quality requirements of the Specific Plan. The plan includes a comprehensive series of drainage, flood control, and water quality improvements designed to allow for a system to both protect development and preserve the Santa Clara River.

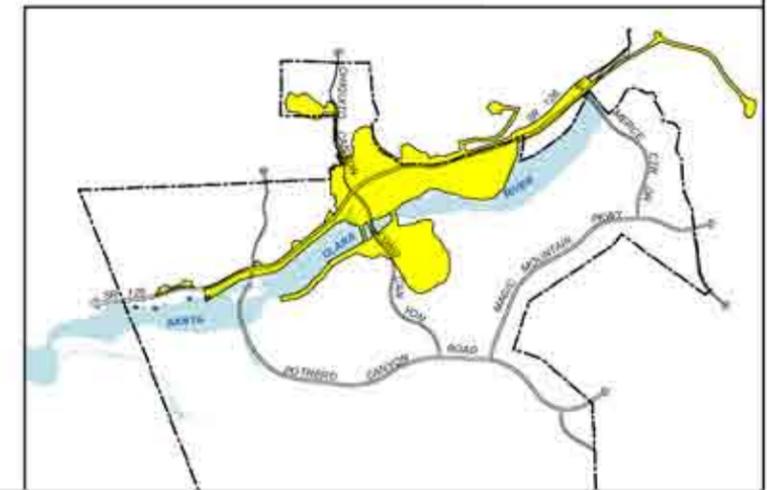
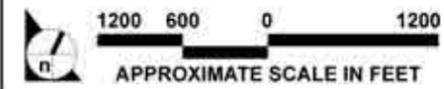
The proposed Landmark Village Drainage Concept is designed to provide drainage and flood protection, and to maintain storm water flows from the project during and after buildout at a level approximately equal to or less than pre-development conditions. As proposed, on-site surface runoff would be intercepted by curb, debris, and/or desilting inlets, and conveyed to a network of storm drains that lead to a series of treatment structures, including water quality basins, prior to discharge into the Santa Clara River. In commercial areas, parking lot and roof runoff would be directed through landscaped parkways and grassy swales to provide initial treatment prior to discharge into the drainage system. Flows from several unimproved drainages that drain the undeveloped watershed located north of SR-126 and discharge into the Santa Clara River would be intercepted and conveyed through the site to the river. At the confluence with Castaic Creek, the existing bank of the Santa Clara River would be excavated to allow passage of storm flows generated during the County Capital Storm event (Qcap). Please refer to **Section 4.2, Hydrology**, of this EIR for a detailed discussion of existing and post-development drainage conditions and related improvements on the project site.

Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). As currently planned, stormwater runoff from all urban areas within the project will be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas will be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain. Please refer to **Section 4.3, Water Quality**, of this EIR for detailed discussion of the water quality PDFs incorporated into the project drainage concept.



Legend:

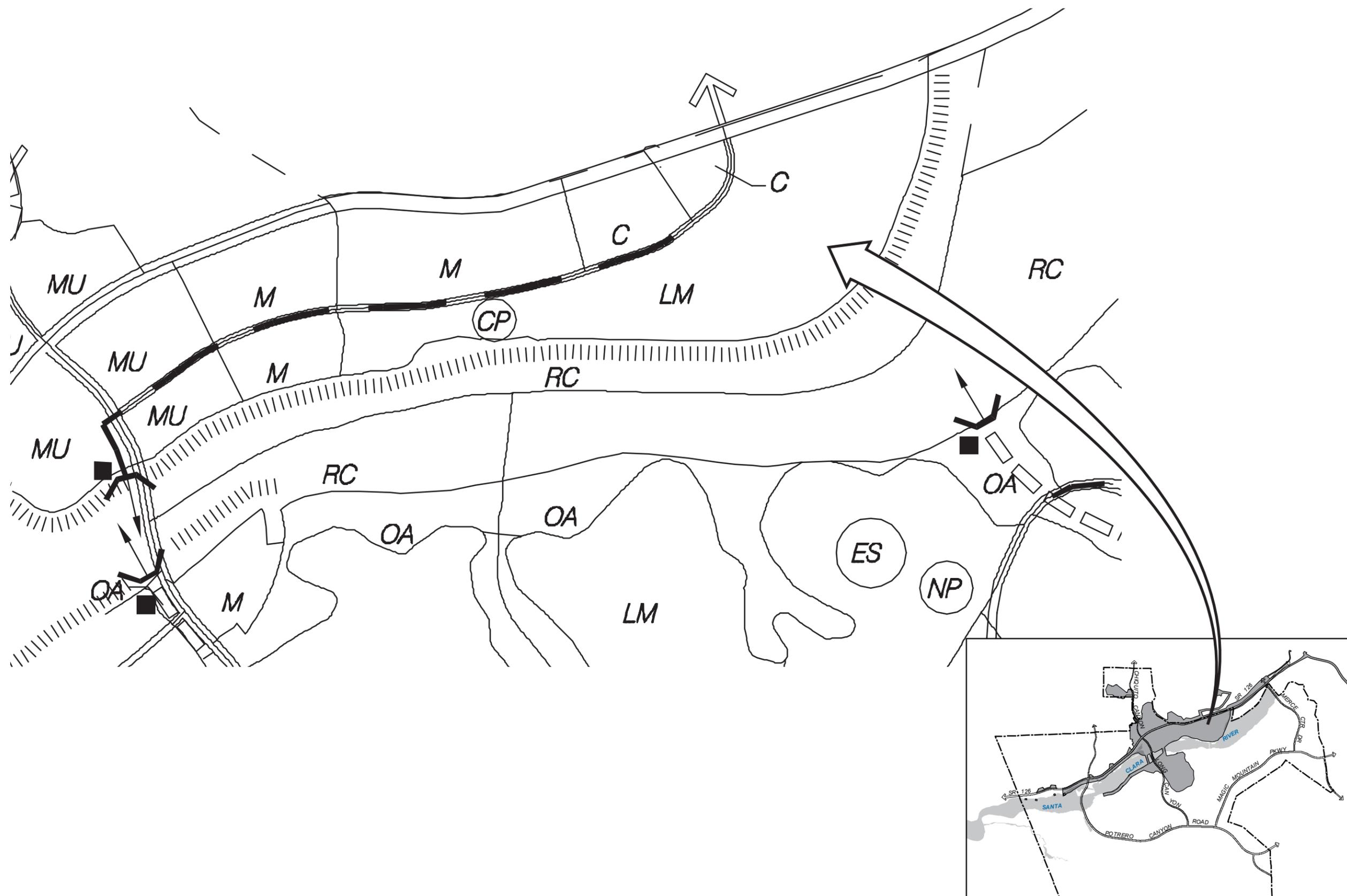
-  Residential Project Boundary
-  ACOE Jurisdiction Limits
-  Proposed Soil Cement Bank Protection
-  Proposed Utility Corridor Bank Protection



SOURCE: PACE Engineering – June 2005

FIGURE 1.0-23

Location of Long Canyon Road Bridge and Proposed Bank Stabilization



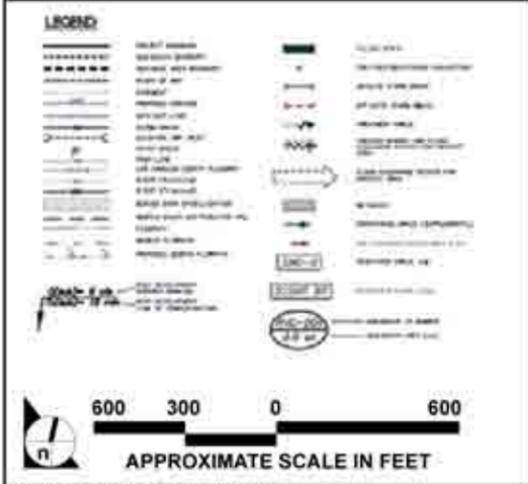
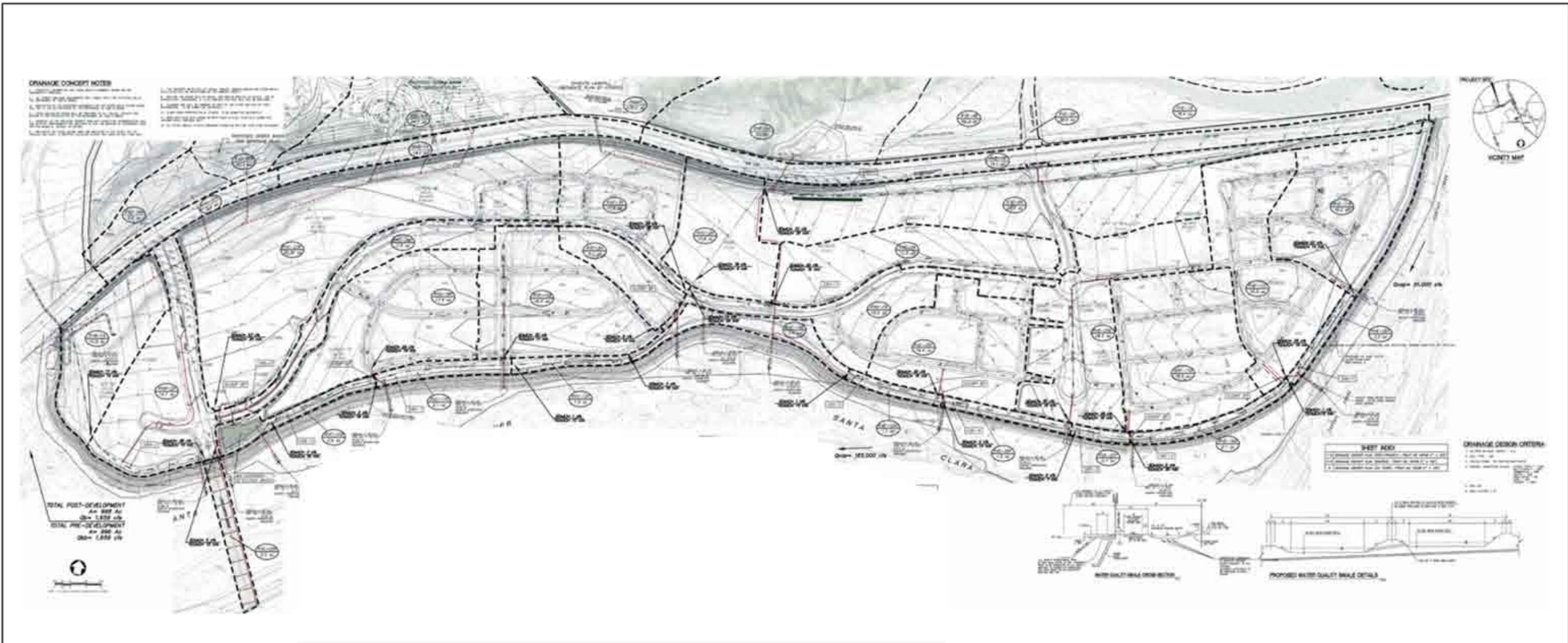
- Legend:**
- OPEN DRAINAGE
 - CLOSED SYSTEM
 - INLET
 - OUTLET
 - N.P.D.E.S. WATER QUALITY BASIN
 - BANK STABILIZATION

NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-24

Landmark Village Portion of Specific Plan Conceptual Backbone Drainage Plan



SPECIAL WATER QUALITY NOTES

1. ALL DRAINAGE BASINS SHALL BE DESIGNED TO TREAT 100% OF THE PRE-DEVELOPMENT RUNOFF FROM THE DRAINAGE AREA.
2. ALL DRAINAGE BASINS SHALL BE DESIGNED TO TREAT 100% OF THE POST-DEVELOPMENT RUNOFF FROM THE DRAINAGE AREA.
3. ALL DRAINAGE BASINS SHALL BE DESIGNED TO TREAT 100% OF THE PRE-DEVELOPMENT RUNOFF FROM THE DRAINAGE AREA.
4. ALL DRAINAGE BASINS SHALL BE DESIGNED TO TREAT 100% OF THE POST-DEVELOPMENT RUNOFF FROM THE DRAINAGE AREA.

POST PROJECT CHANGES

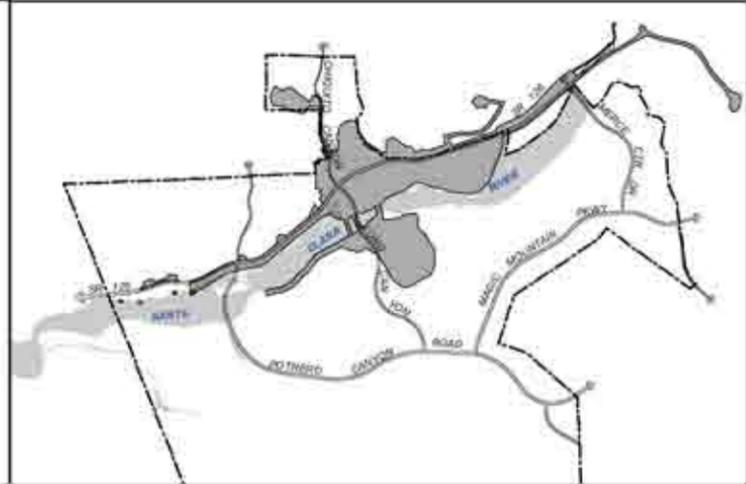
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REFERENCES

1. ALL DRAINAGE BASINS SHALL BE DESIGNED TO TREAT 100% OF THE PRE-DEVELOPMENT RUNOFF FROM THE DRAINAGE AREA.
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POST PROJECT CHANGES

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| 94 | ... | ... | ... | ... | ... |
| 95 | ... | ... | ... | ... | ... |
| 96 | ... | ... | ... | ... | ... |
| 97 | ... | ... | ... | ... | ... |
| 98 | ... | ... | ... | ... | ... |
| 99 | ... | ... | ... | ... | ... |
| 100 | ... | ... | ... | ... | ... |



SOURCE: PSOMAS - September 2004

FIGURE 1.0-25
 Landmark Village Drainage and Water Quality Plan

(I) Bank Stabilization

The approved Newhall Ranch Specific Plan contemplated installation of bank stabilization along portions of the Santa Clara River to protect development from flood hazards while preserving the river as a natural resource. The approved Specific Plan contained specific criteria to be followed by projects implementing the Specific Plan (see, Specific Plan [May 2003], Chapter 2, pp. 2-71 through 2-75). The environmental effects of the bank stabilization were analyzed in the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the tract map level as part of this EIR.

Consistent with the Specific Plan, the Landmark Village project proposes buried bank stabilization where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and Los Angeles County Department of Public Works' requirements. The bank stabilization is designed and would be constructed to retain the Santa Clara River's significant riparian vegetation and habitat, to allow the river to continue to function as a regional wildlife corridor, and to provide flood protection pursuant to Los Angeles County standards.

The location of the protection was illustrated earlier on **Figure 1.0-23**. As shown, the proposed buried bank stabilization extends along the Santa Clara River and Castaic Creek adjacent to and downstream of the tract map site. In total, approximately 18,600 linear feet (LF) of bank would be provided with bank stabilization. This would include approximately 11,000 LF fronting the southern boundary of the tract map site on the north bank of the Santa Clara River, and approximately 6,400 LF on the south bank of the river, beginning at the Long Canyon Road Bridge and extending both east and west.

The bank stabilization proposed downstream of Long Canyon Road Bridge is necessary to mitigate impacts associated with the Landmark project. An additional approximately 1,200 LF of soil cement bank stabilization is located downstream of the project site, and is designed to protect the approved WRP. The bank stabilization related to the WRP was approved and analyzed at a project-level with the Newhall Ranch EIR.

The project also includes the construction of buried bank stabilization between the Santa Clara River and the Old Road, north of the existing Valencia WRP. This bank stabilization was approved with the Santa Clara River Natural Management Plan (NRMP) and was analyzed within the certified Environmental Impact Report/Environmental Impact Statement (EIR/EIS) prepared for the NRMP.

Additionally, the project includes the installation of Turf Reinforcement Mat (TRM) or a similar bank stability protection along 6,600 LF of the utility corridor west of the Landmark Village tract map site. Finally, the project includes the installation of various stormwater outlet structures, both within the tract

map site and off site. The off-site outlet structures and energy dissipaters would be located at the outlet of Chiquito Canyon Creek, San Martinez Grande Creek, and Long Canyon Creek.

Figure 1.0-26, Bank Stabilization – Typical Cross Section, depicts a typical cross-section for buried bank stabilization. As shown, the buried bank stabilization approach uses soil cement, which is buried beneath the existing banks of the river to resist future scouring. The following guidelines will be applied in selecting the proper protection system:

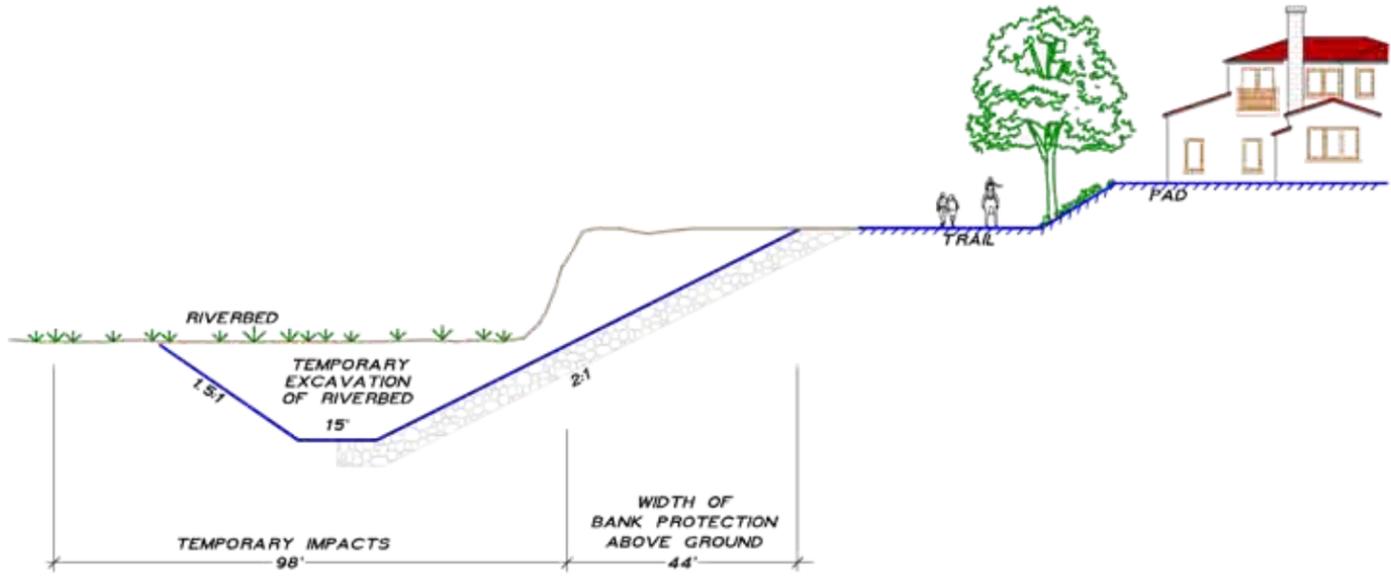
- Buried soil cement bank protection will be used in situations where the stream velocities are high or where there is the potential for lateral bank migration based on stream characteristics. Alternatively, buried ungrouted rip-rap will be used if in situ soils do not meet soil cement design requirements.
- If there is not sufficient space to allow covering of the revetment with the earthen fill because of physical constraints such as topographic features or existing facilities, then exposed ungrouted rock rip-rap will be used if the velocities do not exceed the limitations of the rock.
- Locations where there are proposed bridge crossings would require the banks underneath the bridge to have concrete gunite slope protection.

As to buried bank stabilization, the soil placed on top of the bank stabilization is replanted with native vegetation to return the disturbed area to its natural condition upon completion of construction. Typically, the lining must be buried at least twice the height of the lining in order to resist scouring. Burying the toe of the lining requires temporary excavation and backfilling. A temporary construction zone of approximately 75 feet would occur at the base of the bank protection in order to bury the material. The original channel elevation would be restored after construction. The area would also be replanted with native vegetation.

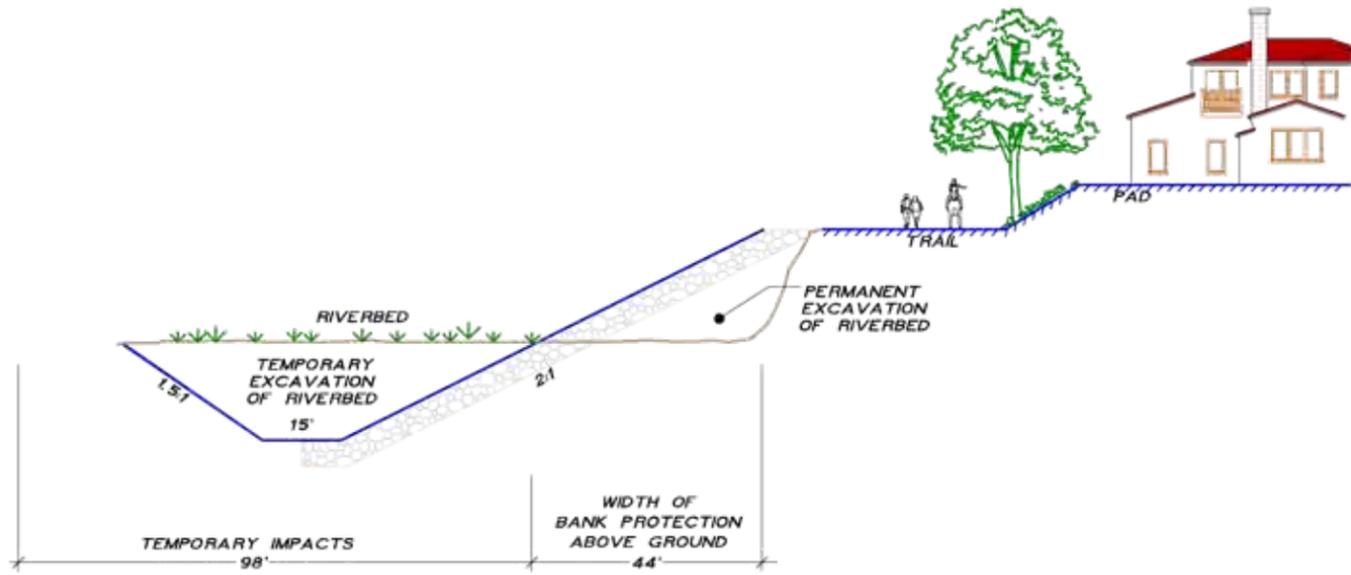
Figure 1.0-27, Bank Stabilization Techniques, provides illustrations of exposed and buried bank stabilization techniques to be used on this project. This figure also depicts the relationship between the Santa Clara River, buried bank stabilization, and trail areas. The representative photographs used in this figure are taken from previously constructed projects located in the Valencia community, in which exposed and buried bank stabilization were used.

(m) Potable Water

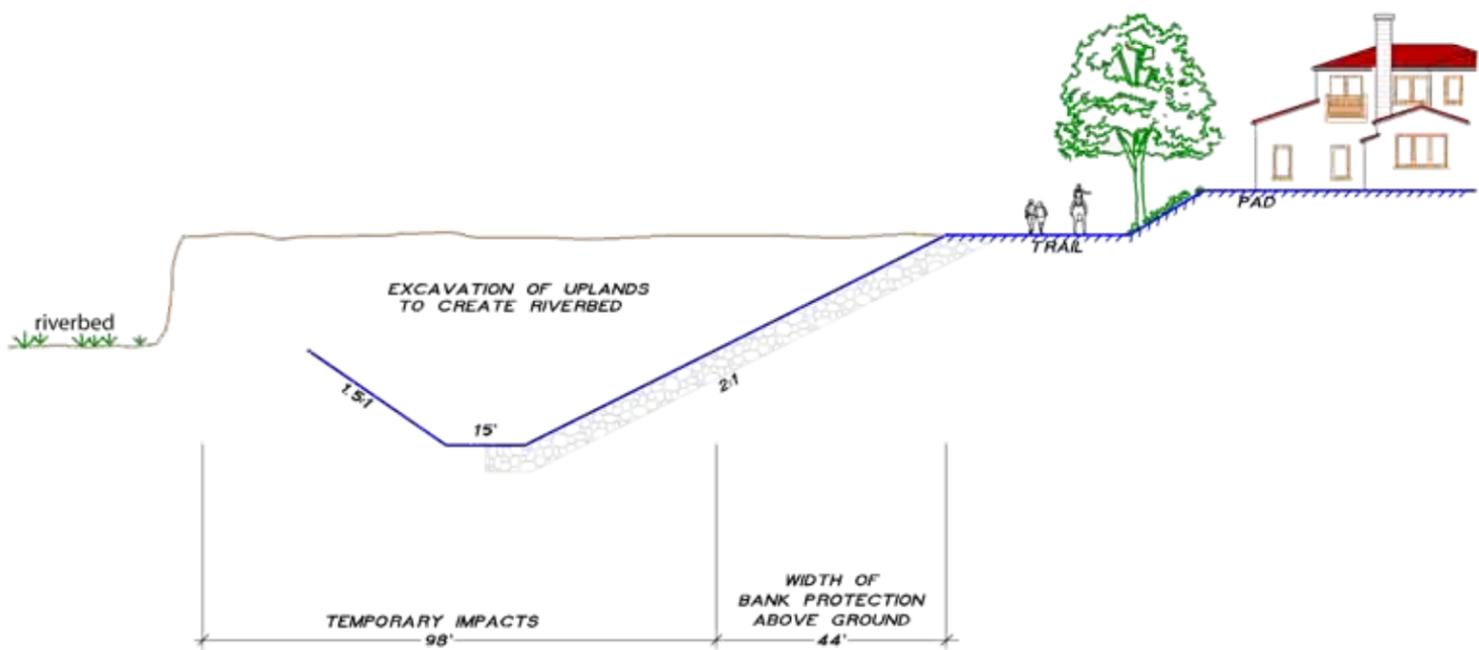
The Landmark Village project-level potable and reclaimed water plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Water Plan (Specific Plan Exhibit 2.5-2). This plan sets forth on-site storage and water distribution systems to provide adequate water service to the entire Specific Plan site. The Specific Plan also committed to the provision of reclaimed water, to the extent available, for irrigation use. **Figure 1.0-28** depicts the Specific Plan's Conceptual Backbone Water Plan, as it relates to the Landmark Village project.



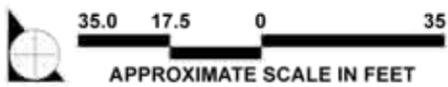
Section A
No Permanent Loss of Riverbed, Only Temporary Impacts



Section B
Permanent Loss of Riverbed and Temporary Impacts



Section C
No Permanent Loss of Riverbed and No Temporary Impacts



SOURCE: FORMA – March 2002

FIGURE 1.0-26

Bank Stabilization, Typical Cross Section



Stabilization at San Francisquito Creek
at the West Bank
(This photo depicts exposed
bridge abutment)

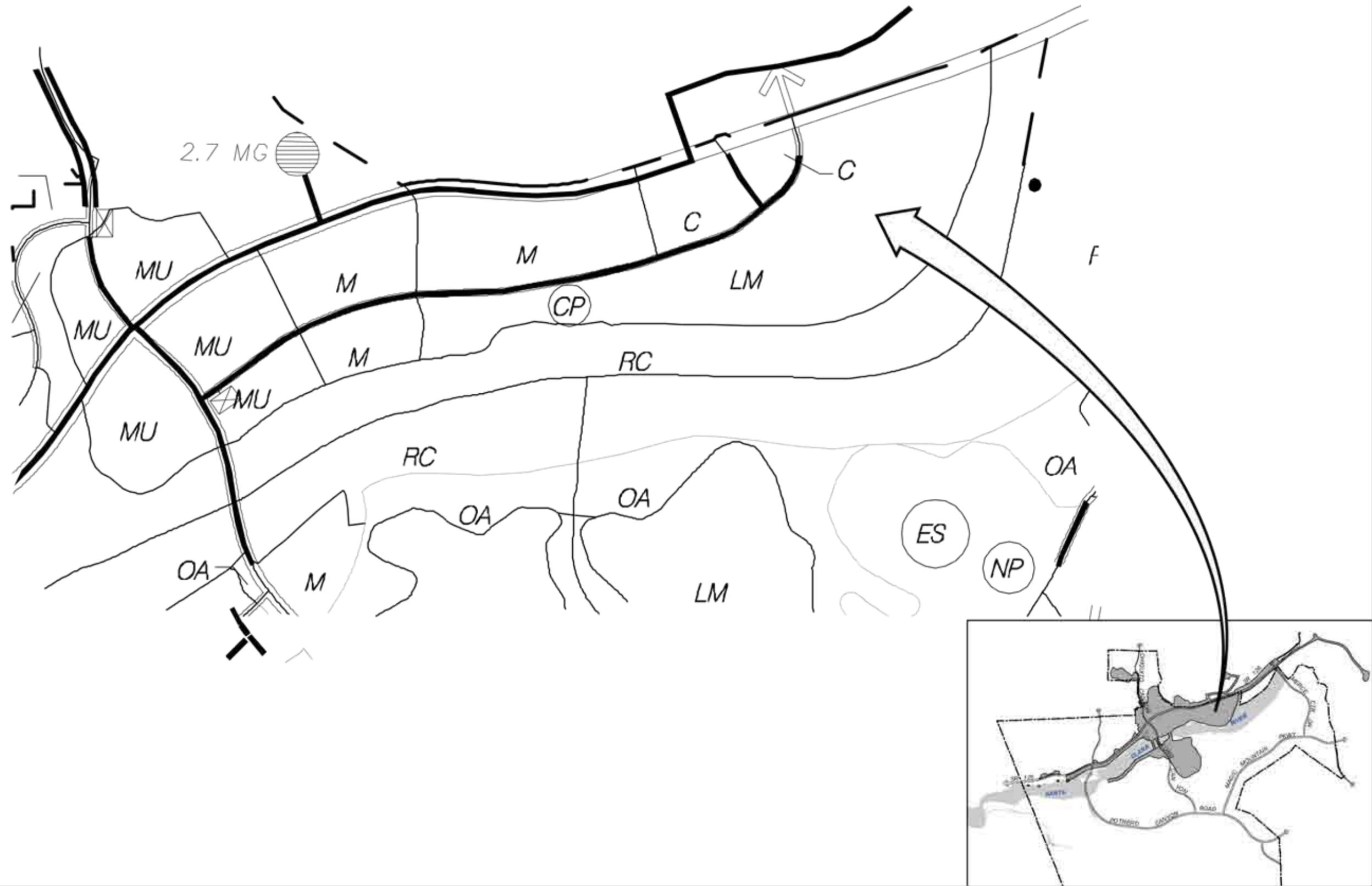


Stabilization at Bridgeport
(This photo depicts
Buried Bank stabilization)

SOURCE: PSOMAS – 2003

FIGURE 1.0-27

Bank Stabilization Techniques



Legend:

-  WATER TANK SITE (POTABLE AND/OR RECLAIMED)
-  PUMP STATION
-  PRESSURE REDUCTION STATION
-  POTENTIAL AQUIFER STORAGE AND RECOVERY WELLS (ASR)
-  WATER AND/OR RECLAIMED WATER LINES
-  WATER RECLAMATION PLANT

 NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-28

Landmark Village Portion of Specific Plan – Conceptual Backbone Water Plan

The Valencia Water Company would be the retail water company providing potable water to the project site. There are currently two options for the provision of water service to the tract map site.

First Water Service System Option. The first water delivery system option consists of two new water tanks connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for SR-126 and major roadways. A network of 8-inch lines located within the planned roadway network of Landmark Village would distribute the water for connection to laterals located on individual lots.

Under this first option, two water pressure zones (Zones 1 and 1A) would overlay the tract map site. Water pressure Zone 1, which would serve uses at an elevation of less than 1,160 feet above mean sea level (msl), would be connected to an existing 18-inch line from the existing 2.5 million gallon potable water storage reservoir tank located directly north of the project site within the Valencia Commerce Center. This connection would also serve as the source of supply for the system serving Zone 1A.

Zone 1A will be served by two new potable water tanks. One of these new potable water tanks would be constructed near an existing water tank located in the Valencia Commerce Center, but at a slightly higher elevation. A 20-inch potable water line located within a 3.5-foot-wide by 5-foot-deep trench would extend approximately 5,600 LF from the tank along the existing Wolcott Road alignment, crossing SR-126 and into the proposed subdivision. This main would also extend to the Newhall Ranch WRP along the south SR-126 right-of-way from the west side of the tract map site. This alignment would tie in to the Zone 1A tank located in the Chiquito Canyon or Long Canyon line that runs to the proposed water tanks. This section extends approximately 10,000 LF. Construction is estimated to last three to four months.

Under this first option, the second potable water tank would be located further west, in Chiquito Canyon. A water line located in a 3.5-foot-wide by 5-foot-deep trench would extend approximately 5,900 LF from the new water tank site along the Chiquito Canyon Road alignment under SR-126 to the planned Long Canyon Road. An alternate location for this second potable water tank is proposed south of the Santa Clara River within the Adobe Canyon borrow site. A 20-inch line would be located in a trench 3.5-foot-wide by 5-foot-deep extending approximately 3,500 LF from the tank to the planned Long Canyon Road Bridge where it would span the river on the bridge and enter the proposed Landmark tract map site. Potable water improvements would be constructed in one phase over a four- to six-month period.

Under this first option, the two new potable water tanks would consist of above-ground welded steel tanks supported by reinforced concrete ring footings, with a storage capacity of 2.0 million gallons. The new tanks would be designed and constructed to meet American Water Works Association (AWWA), National Sanitary Foundation (NSF), and other industry standards for domestic water storage. With the

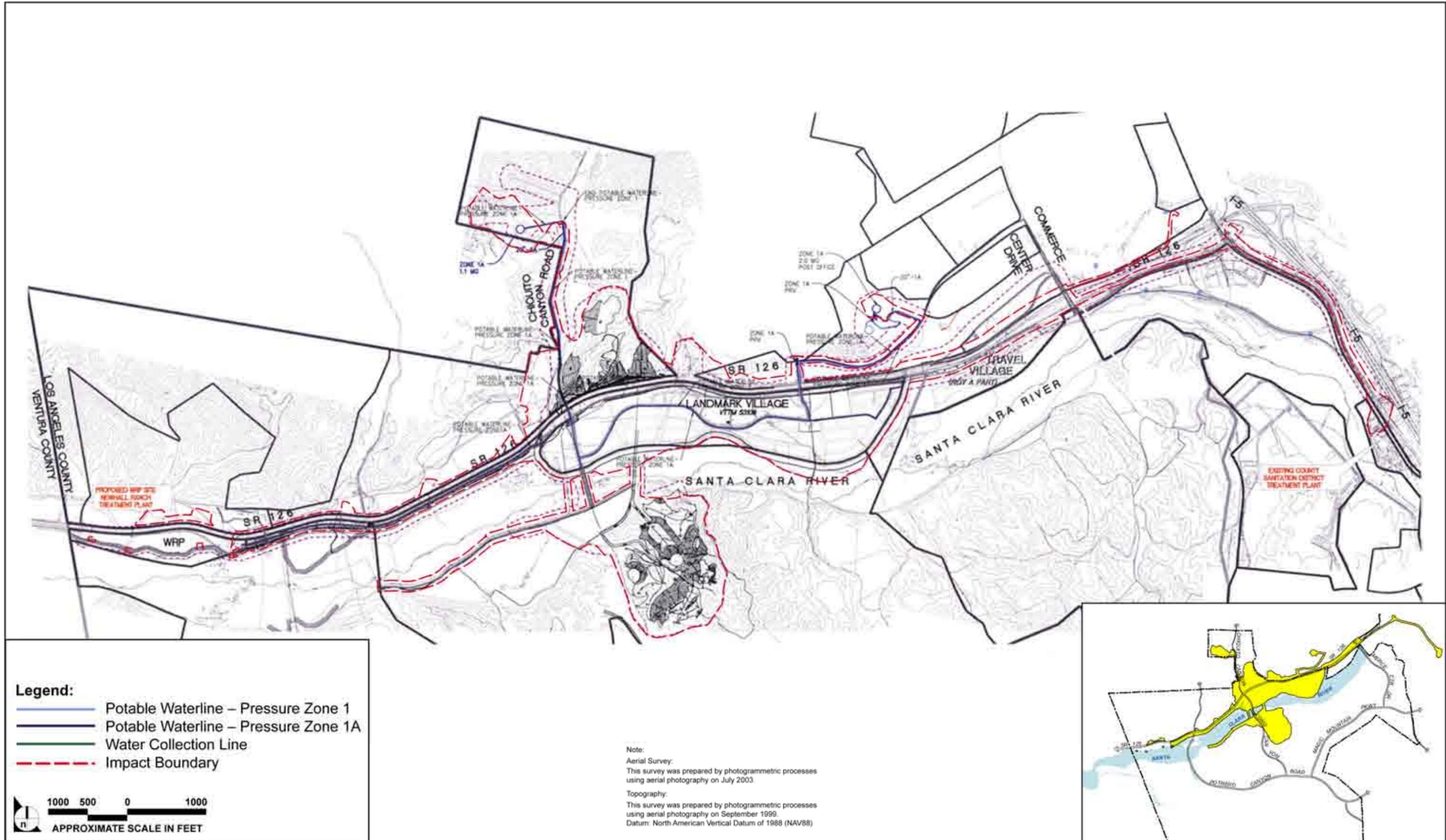
two water tanks, a total of 4.5 million gallons of storage capacity would be available to meet the emergency and fire-flow storage capacity requirements necessary to support the project upon completion. The two-tank system provides a secondary source of supply and storage to enhance the system's reliability, safety, and efficiency.

Second Water Service System Option. As shown on **Figure 1.0-29, Landmark Village Potable Water System Infrastructure and Off-Site Connection**, the second proposed water delivery system option consists of one new potable water tank and three pressure regulating stations connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for SR-126 and major roadways. A network of 8-inch lines located within the planned roadway network would distribute the water for connection to laterals located on individual lots.

Under this second option, a single water pressure zone (Zone 1A) would overlay the tract map site. This zone would supply potable water via the three pressure regulating stations from Zone 1. The stations would provide all the potable water supply for the system serving Zone 1A, which contains the proposed Landmark Village Vesting Tentative Tract Map No. 53108. Pressure Zone 1 would serve uses at an elevation of less than 1,160 feet msl and would be comprised of three existing storage tanks with a combined storage capacity of 8.3 million gallons.

As stated above, Zone 1A would require construction of a new potable water tank. This new potable water tank would be constructed near an existing water tank located in the Valencia Commerce Center, but at a slightly lower elevation. Two 20-inch potable water lines located within two 3.5-foot-wide by 5-foot-deep trenches would extend approximately 5,600 LF from the tank along the existing Wolcott Road alignment, crossing SR-126 and into the proposed subdivision. This main would also extend to the Newhall Ranch WRP along the south SR-126 right-of-way from the west side of the tract map site. Construction is estimated to last three to four months.

The new potable water tank would consist of an above-ground welded steel tank supported by a reinforced concrete ring footing, with a storage capacity of 2.0 million gallons. The new tank would be designed and constructed to meet AWWA, NSF, and other industry standards for domestic water storage. With the new water tank, a total of 10.3 million gallons of storage capacity would be available to meet the emergency and fire-flow storage capacity requirements necessary to support the project upon completion. The proposed Zone 1A water system consisting of one tank and three pressure-regulating stations from Zone 1 provide redundant sources of supply and storage to enhance the system's reliability, safety, and efficiency.



SOURCE: PSOMAS – March 2005, Impact Sciences, Inc. – February 2006

FIGURE 1.0-29

Landmark Village Potable Water System Infrastructure

Under either the first or second water delivery system option, potable water demands for Landmark Village would be met by using groundwater produced from the Alluvial aquifer from newly constructed replacement wells located within the Valencia Commerce Center that have been approved and permitted by the California Department of Health Services (DHS). These wells replaced older wells used for irrigation that are no longer active and have been permanently closed as directed by DHS. In August 2004, Valencia received an amended water supply permit from DHS for approval and construction of four domestic water supply wells. Two of the four replacement wells are needed for the project and would operate by delivering water to Zone 1 and then regulated into Zone 1A to meet the demands of project. The additional wells will be used to meet future water demands when needed.

(n) Reclaimed Water

The Landmark Village project proposes to use reclaimed water for landscape irrigation purposes and other allowable uses. The proposed delivery system for reclaimed (non-potable) water is illustrated on **Figure 1.0-30, Reclaimed Water Storage System**. Currently, reclaimed water is only available at the Valencia WRP along The Old Road east of the project site. Concurrent with buildout of the project, reclaimed water would become available from the Newhall Ranch WRP west of the project site. To supply reclaimed water to the tract map site and provide for a backbone system to serve other areas of Newhall Ranch, a reclaimed piping system would be constructed from the proposed Newhall Ranch WRP through the tract map site to the existing Valencia WRP. This pipeline would be constructed starting from the west along the SR-126 right of way approximately 10,000 feet to the proposed tract map site. The line will pass through the tract map site approximately 11,000 feet along the future spine road alignment. The line will then continue eastward where it will connect with the existing Valencia WRP. This reclaimed waterline will extend east along the north and south right-of-way of SR-126 and the south right-of-way of Henry Mayo Drive. This portion of the reclaimed waterline would be approximately 10,000 LF. At the point where SR-126 merges with I-5, the line would then head south along the western right-of-way along The Old Road where it would connect to the existing Valencia WRP. This southerly section is approximately 6,200 feet in length. Construction of the reclaimed waterlines would take approximately 12 months. The reclaimed water would be pressurized through the existing pump station at the Valencia WRP or through the proposed pump station at the Newhall Ranch WRP.

Storage would be required for the reclaimed water system, and 500,000 gallons of storage would be provided at the Newhall Ranch WRP as a fore bay for the pump station. Additional operational storage would be required and this storage would be provided by converting the 3.3 million gallon Round Mountain Tank, which is currently being used for potable water, to a reclaimed water reservoir. The reclaimed water would be delivered to this tank through the pipeline that is connected to the Valencia WRP. To utilize this tank, pipes would be extended southward in The Old Road and then follow the

Santa Clarita trails system eastward to connect to the existing Round Mountain Tank. A second storage option was considered that would have required a new tank to be constructed. This tank would have required construction of pipeline from the tract map site approximately 5,000 feet north in Chiquito Canyon Road and then 2,000-foot westward from Chiquito Canyon Road to a 1-acre site. This site would have been graded for construction of a reservoir. The current preferred site is the Round Mountain Tank.

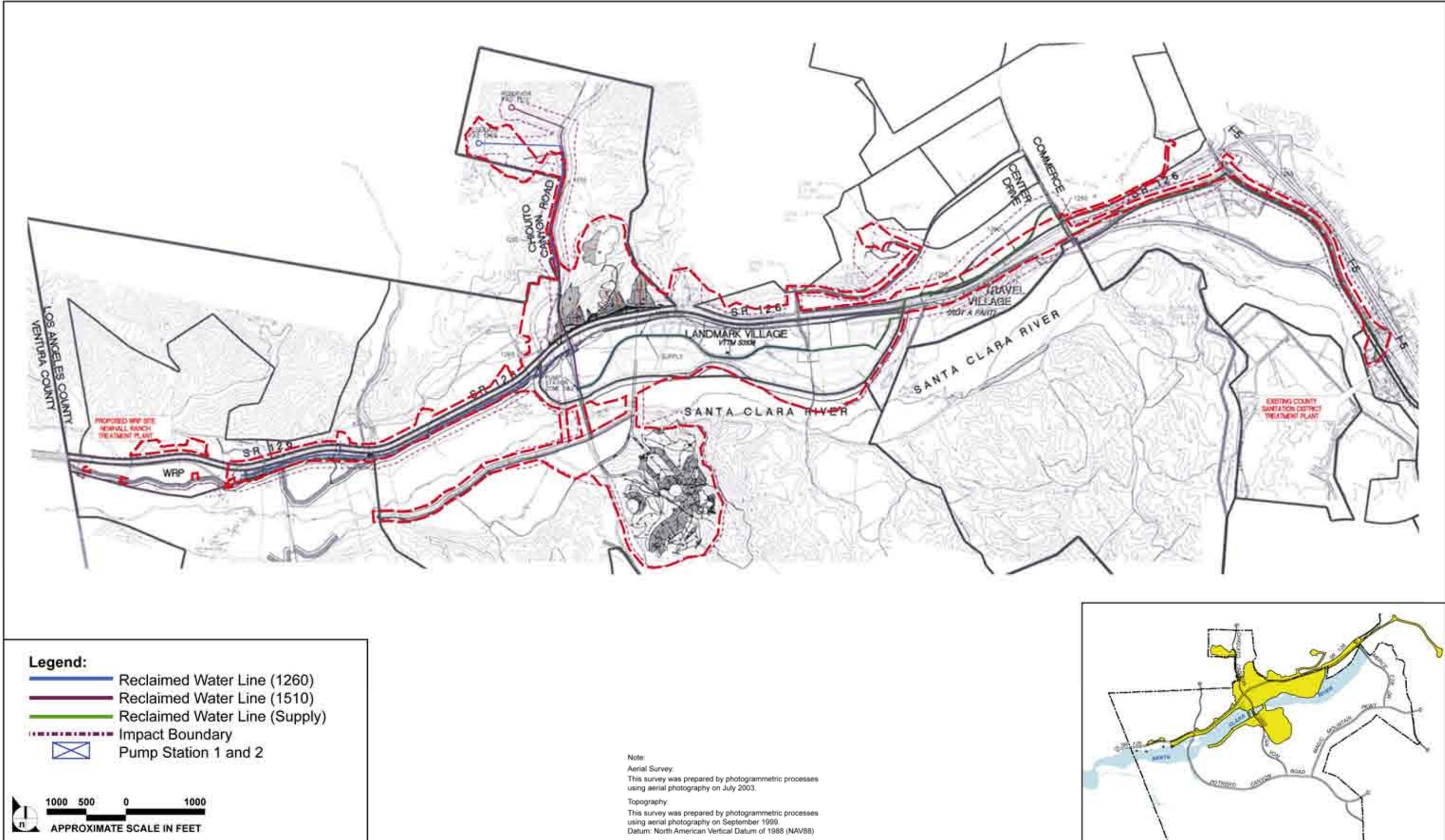
(o) Wastewater

The Landmark Village wastewater/sewer plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3). This plan set forth a system for wastewater/sewage collection for the entire Specific Plan site. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, the County Sanitation Districts of Los Angeles County (CSDLAC), or a new County sanitation district in accordance with their manuals, criteria and requirements. **Figure 1.0-31** depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to the Landmark Village project site.

Figure 1.0-32, Sewer Key Map – Off-Site Connection, illustrates the precise routing of sewer lines and the delivery system to serve the Landmark Village project site. The plan provides the tract map level of detail required to provide adequate sewer service to the project site, consistent with the Specific Plan.

The project-level wastewater/sewer collection system consists of gravity sewers, forced mains, and pump station. The long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within the Specific Plan area. The WRP's capacity is 6.8 mgd, with a maximum flow of 13.8 mgd. A new County sanitation district would be formed. The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR.

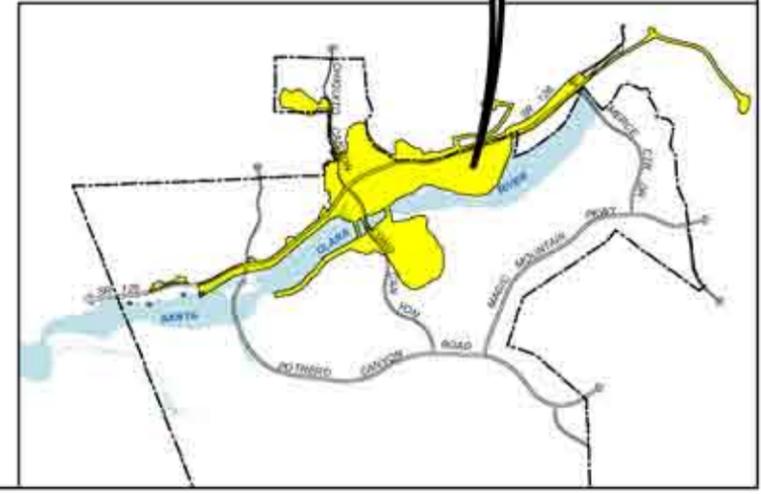
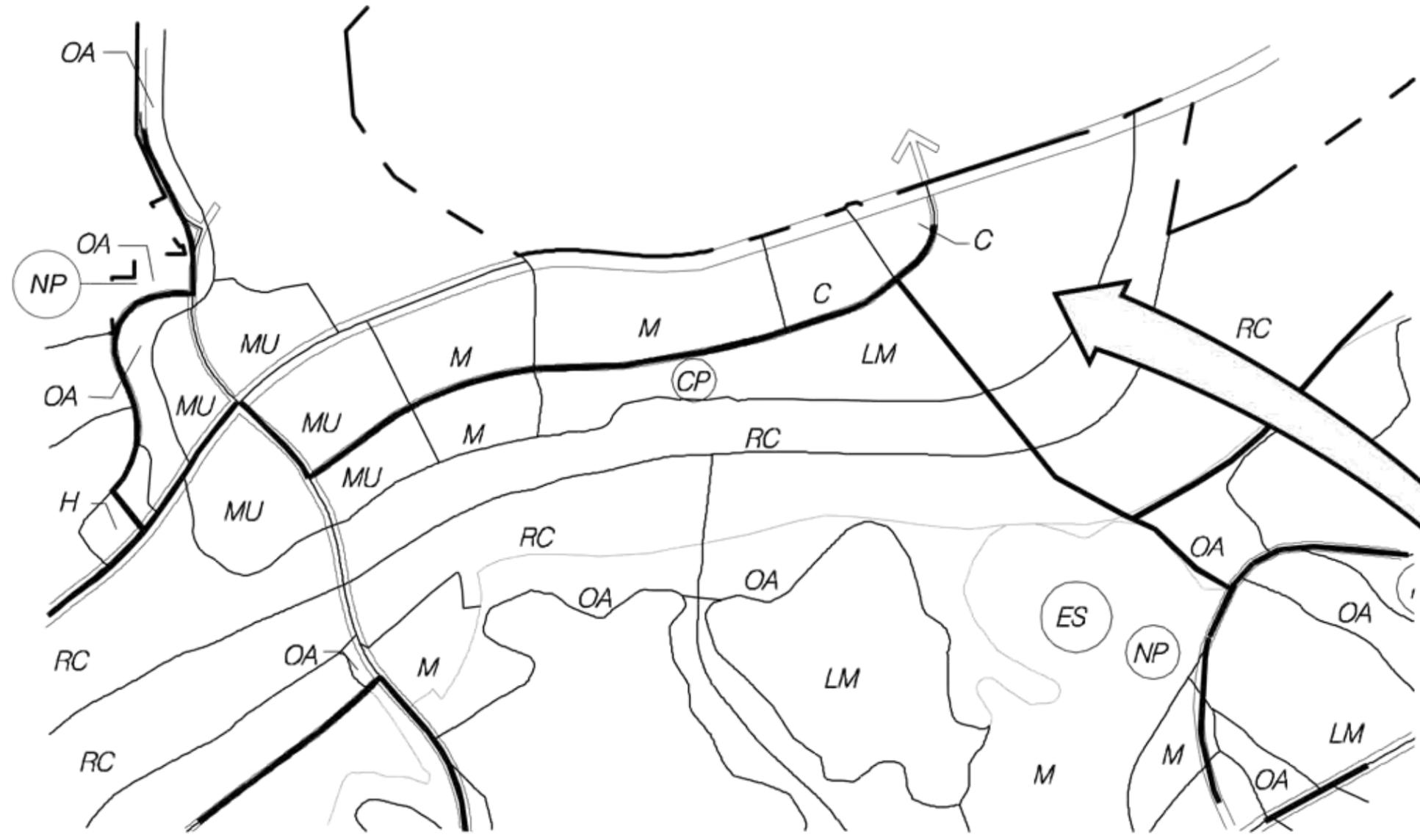
In the interim, several options are available to treat wastewater generated by the proposed project. One option is to construct an initial phase of the Newhall Ranch WRP to serve this subdivision, with buildout of the WRP occurring over time as demand for treatment increases. Under this approach, a network of 8-inch sewer collectors would convey effluent to an 18-inch sanitary sewer trunk line. This trunk line would be placed in a 7.5-foot-wide by 15-foot-deep (average depth) trench found in the southerly portion of the SR-126 right-of-way and extend west approximately 16,100 LF, where it would connect to the headworks of the Newhall Ranch WRP. The Newhall Ranch WRP is designed to meet Los Angeles County Department of Public Works, CSDLAC, and state standards and requirements. Phase 1 construction is estimated to begin sometime in 2007 and projected to have a 12-month construction schedule.



SOURCE: PSOMAS – March 2005

FIGURE 1.0-30

On-Site Reclaimed Water Improvements



LEGEND

-  SEWER LINE SYSTEM
-  PROPOSED WATER RECLAMATION PLANT

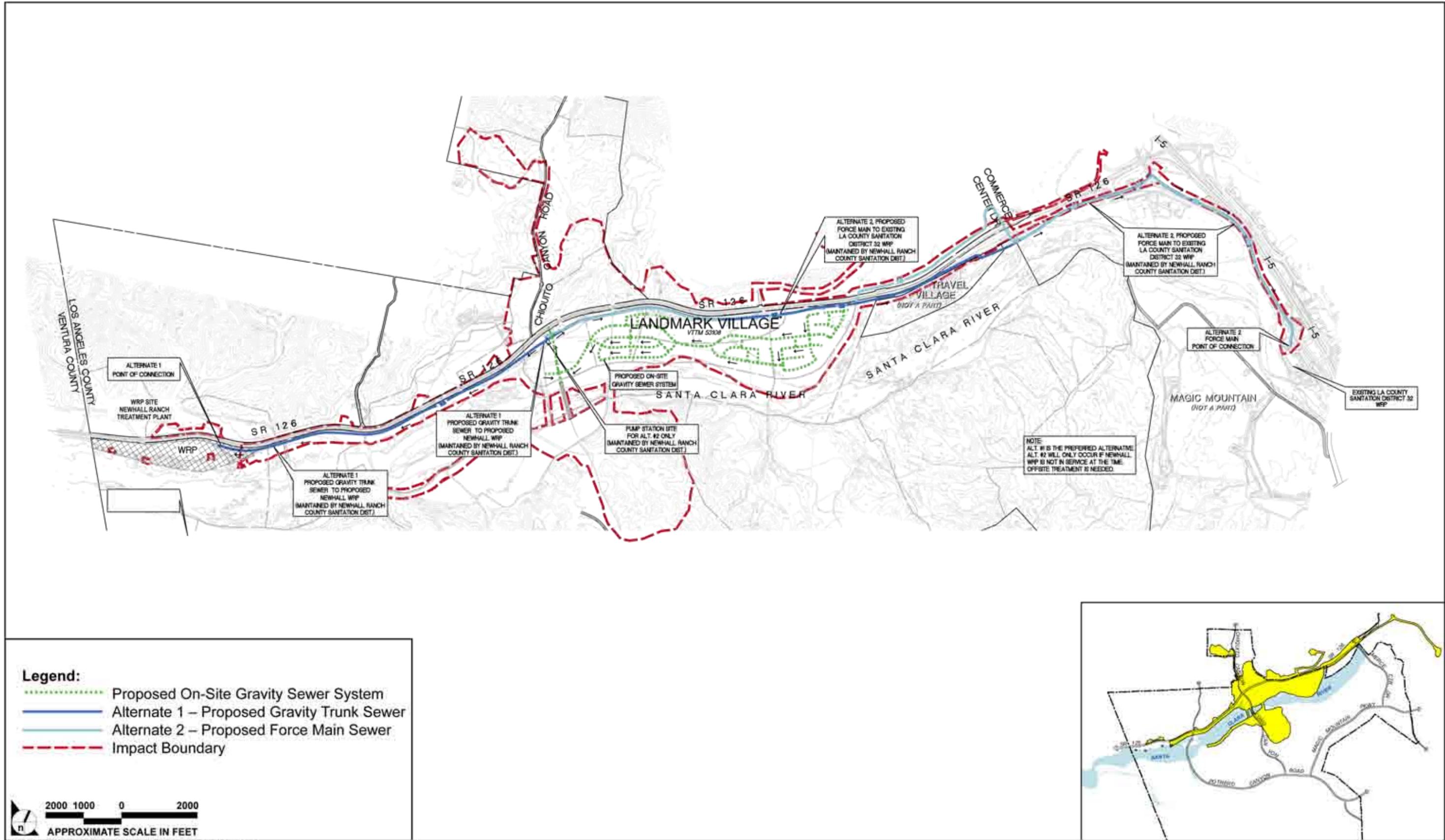


NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-31

Landmark Village Portion of Specific Plan – Conceptual Backbone Sewer Plan



SOURCE: PSOMAS – October 2004, Impact Sciences, Inc. – February 2006

FIGURE 1.0-32

Sewer Key Map – Off-Site Connection

The second option is to construct a pump station on the Landmark Village project site where wastewater would be pumped back to the existing Valencia WRP (District No. 32), located upstream of the project along I-5, until such time as the first phase of the Newhall Ranch WRP is constructed. Under this approach, a sanitary sewer force main line would be placed in a 3-foot-wide by 4.5-foot-deep trench from the tract map site easterly approximately 18,100 LF to the existing District 32 WRP. This alignment is within the south side of the SR-126 and Henry Mayo Drive rights-of-way before turning south and traveling within the easterly right-of-way for The Old Road. Off-site sewer improvements would be completed in one phase over a 6- to 12-month period.

The selection of one of the options will be made during final design and prior to construction. Please refer to **Section 4.11, Wastewater Disposal**, of this EIR for a detailed discussion of the wastewater collection and conveyance system.

(p) Electrical/Dry Utilities

Electrical utilities to serve the proposed project would be constructed in two phases. The first phase would relocate the existing 66 kilovolt (kV)/16kV overhead electric power line running parallel to SR-126. New power lines would be constructed from The Old Road west beneath the existing Castaic Creek Bridge to approximately 300 feet west of the Commerce Center Drive and Harrison Parkway intersection within an existing Southern California Edison (SCE) easement. The second phase would construct new transmission lines continuing west along the existing SCE easement approximately 12,000 LF crossing the Chiquito Canyon Landfill, Chiquito Canyon Road, and Chiquito Canyon Creek. An interim 66kV/16kV overhead line will continue southerly approximately 1,200 LF along the west side of the creek and tie in to the existing electric lines approximately 700 feet north of SR-126. The existing 66KV/16KV overhead line would be utilized to bring electricity east to the proposed Long Canyon Road. A new 16kV line would then be constructed southerly along Long Canyon Road and placed under ground prior to reaching SR-126. This would be the primary electric service for the tract map site.

The second phase of electrical/dry utilities is estimated to extend approximately 11,100 LF from the east boundary of the Landmark Village tract site map. Construction is projected to begin in 2008 and be completed in six to eight months.

(q) Natural Gas

A natural gas distribution main would be constructed in two phases to serve the tract map site. Currently, the terminus of the gas line is at the Valencia Wastewater Reclamation Plant. The first phase consists of an 8-inch line extending to the approved Newhall Ranch WRP from the east end of the proposed site (Castaic Creek Bridge). The 8-inch main extends approximately 10,000 LF through the

project site along the future spine road alignment. The line then turns north at Long Canyon Road and continues west along the south SR-126 right-of-way an additional 10,000 LF to the proposed Newhall Ranch WRP. The 8-inch gas main would be placed in a 3-foot-wide by 5-foot-deep trench. The estimated construction date is 2007, with a projected installation time of 8 to 10 months.

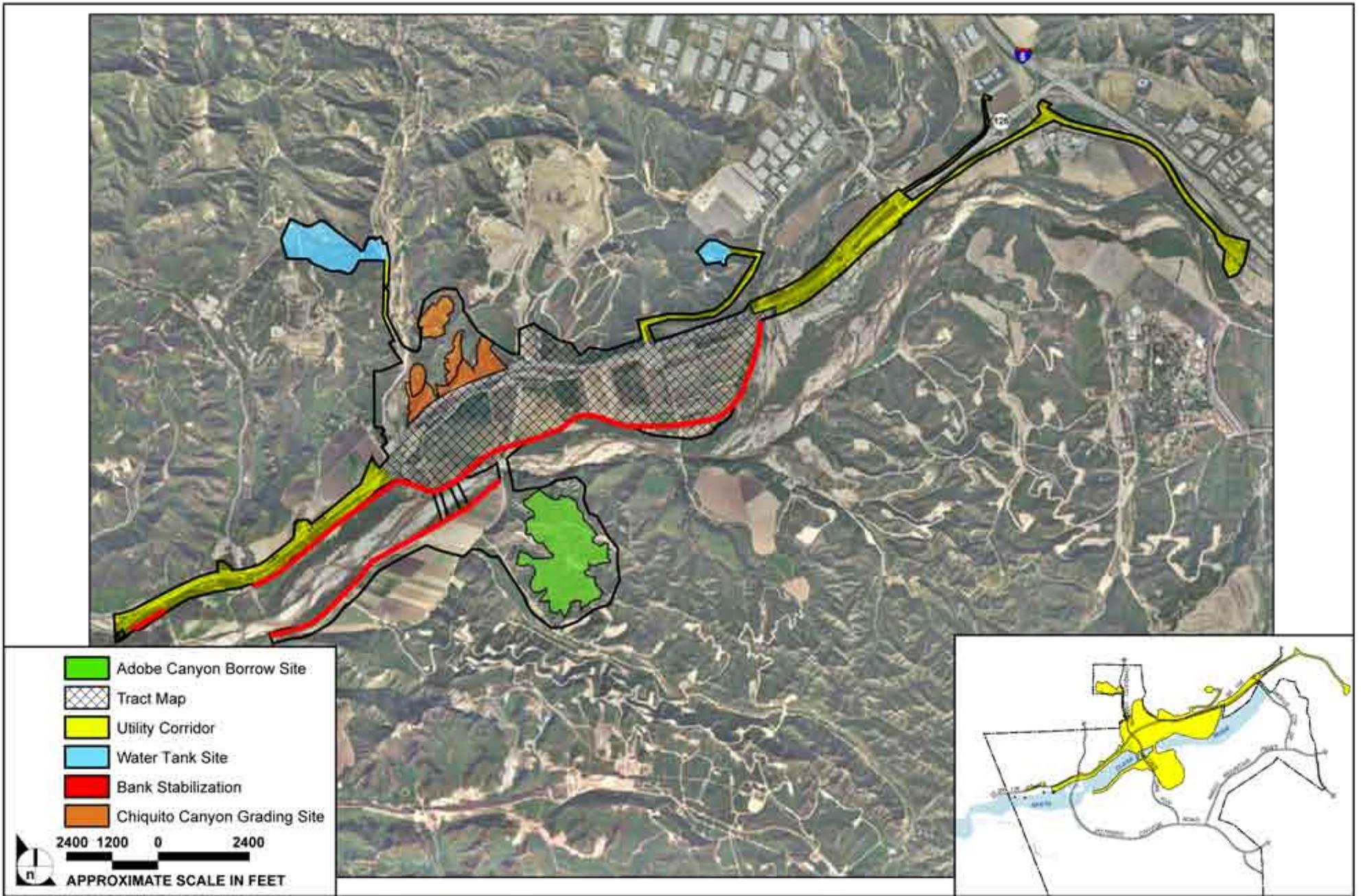
The second phase of the gas distribution main would travel east of the tract map site along the north SR-126 right-of-way to Commerce Center Drive where it crosses SR-126 and continues east along the south Henry Mayo Drive right-of-way ultimately connecting to the existing water reclamation plant. The second phase is estimated to measure approximate 9,800 LF. The trench would be approximately 3-foot-wide by 5-foot-deep with an estimated construction period of approximately four to six months.

(r) Grading

Off-site grading is required at several locations in order to construct the tract map site. In addition to the Adobe Canyon borrow site that will be excavated for soil needed to elevate the site from the floodplain, the proposed project requires off-site grading in Chiquito Canyon for improvements to SR-126, construction of debris basins, off-site water tanks and waste water treatment facilities that would be connected to the tract map site by utility lines in the utility corridor. **Figure 1.0-33, Off-Site Improvements**, depicts the off-site grading locations, the haul routes, the location of the proposed river crossing, the utility corridor, and the water tank locations. Earthwork associated with these off-site improvements is described below.

Project-related grading would require the movement of approximately 4.2 million cubic yards of removal and recompaction of existing material, and up to 5.8 million cubic yards of import from the off-site Adobe Canyon borrow site within the approved Specific Plan boundary to meet the flood-control requirements of the tract map site. The project grading is consistent with, and implements, the Specific Plan's approved Conceptual Grading Plan (Specific Plan Exhibit 2.7-1), and the applicable Specific Plan Design Guidelines (Specific Plan Chapter 4, Section 4.8) for grading and hillside management. In addition, the environmental effects of grading the entire Specific Plan site were evaluated as part of the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the project level in this EIR.

The off-site grading would excavate and reshape the hills and depressions forming the ridge separating Long and Adobe Canyons. Much of this work would occur along the top and bluffs of an unnamed plateau located just west of Sawtooth Ridge. This plateau ranges in elevation from a low of 1,130 feet at its northern most point to a high of 1,220 feet in the southeast, which is characterized by an increasingly steeper grade. The proposed grading would excavate the southeastern portion of this plateau creating a



SOURCE: Impact Sciences, Inc. - February 2006

FIGURE 1.0-33

Off-Site Improvements

gentler slope leading up to the top of the ridge. The resultant manufactured slope angle would range from 5:1 to 2:1 (horizontal/vertical). The grading would also alter the western facing slope leading up to the plateau creating a bench separated by two manufactured slopes stepping down the west facing ridgeline defining Adobe Canyon at a 3:1 grade. Additional earthwork is planned at the terminus of Adobe Canyon where a series of excavations would result in a manufactured slope approximately 100 feet in height at relatively uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Up to approximately 5.8 million cubic yards of earth may be excavated from the Long Canyon/Adobe Canyon area and transported across the Santa Clara River to the tract map site, using existing at-grade agricultural crossings as the haul route. It is expected that excavation and transport activities will take approximately 10 months time.

The second off-site grading site (Chiquito Canyon grading site) is located just north of SR-126 and west of the intersection with Chiquito Canyon Road. The Chiquito Canyon grading site is proposed on the ridgeline of a northeast-southwest trending hillside. The terrain on the southwesterly portion of the ridgeline gently slopes toward the intersection in a “finger” shape where elevations reach approximately 950 feet above msl at its low point (slightly elevated above the roadbed). The terrain becomes progressively steeper and more rugged toward the northwest portion of the ridge, with the peak elevation reaching 1,160 feet above msl. The grading would lower the “finger” of land extending toward the intersection of Chiquito Canyon Road with SR-126 by approximately 60 feet when compared to the existing elevation. Rather than a gradual incline that extends upward at increasingly greater grade, the reshaped slope would approximate the grade of SR-126 for about 1,500 feet west of the intersection with Chiquito Canyon Road. At this point, the grading would create a manufactured slope that extends upward at a uniform 3:1 grade reaching a high of 1,160 feet above msl. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Approximately 1.2 million cubic yards of earth would be excavated from this area and placed as fill in the adjacent canyons.

Upon completion of the grading operations associated with soil import, additional work would be needed for mass grading of the development areas, along with fine grading for development pads. Mass grading would consist of rough grading operations for major roads and infrastructure, drainage patterns and building pads for the various land uses within the tract map site. Remedial grading and custom grading may also be required depending upon future site-specific soils and geological investigations.⁹

⁹ Geotechnical conditions requiring remediation may include settlement and seismic conditions. Please refer to **Section 4.1, Geotechnical and Soil Resources**, of this EIR for a detailed discussion of potential grading impacts and related mitigation.

Graded slopes would be landscaped and irrigated pursuant to County grading and erosion control requirements.

Utility installation involves earthwork such as excavation of trenches and stockpiling of soils. Earthwork volume estimates for each of the utilities are provided below:

- Up to 182,000 cubic yards for the potable water system
- Up to 174,000 cubic yards for the reclaimed water system
- Up to 800,000 cubic yards for the sanitary sewer system
- Up to 50,000 cubic yards for installation of dry utilities including electrical and natural gas

The total volume of earthwork, inclusive of the utility corridor, is estimated at up to 7 million cubic yards.

(s) Sound Walls

The applicant proposes to construct sound walls of varying heights within the Landmark Village tract map site. The locations and heights of these walls are described and illustrated in **Section 4.8, Noise**, of this EIR.

(2) Economic Characteristics

(a) Fiscal Considerations

The Specific Plan included a fiscal impact analysis, which showed that implementation of Newhall Ranch would result in a favorable fiscal impact on Los Angeles County and the City of Santa Clarita. After funding all essential local governmental services, annual surpluses were projected to both the County and City.¹⁰ In addition, the Specific Plan analyzed the population, housing, and employment effects of the Specific Plan on the local and regional environment. As approved, the Specific Plan was found to be consistent with the population, housing, and employment projections of the County of Los Angeles General Plan and the Santa Clarita Valley Areawide Plan. In addition, the approved Specific Plan was found to be consistent with the Southern California Association of Governments' (SCAG) adopted population, housing, and employment forecasts for the Santa Clarita Valley and the region.¹¹

¹⁰ For further information, please refer to Section 6.0, Fiscal Impacts, of the Newhall Ranch Specific Plan Program EIR and the related fiscal impacts study (**Appendix 6.0**).

¹¹ For further information, please refer to Section 4.21, Population, Housing, and Employment, of the Newhall Ranch Program EIR.

(b) Public Services

Using data provided by the County of Los Angeles, Department of Regional Planning, the average household size is as follows: single-family units (308), 3.17 persons per household, and multi-family units (1,136), 2.38 persons per household. Therefore, the residential component of the Landmark Village project would result in a previously planned and approved population of approximately 3,680 persons ($308 \times 3.17 = 976$; $1,136 \times 2.38 = 2,704$; $976 + 2,704 = 3,680$).

The County of Los Angeles would provide public services to the project site. This would include police and fire service, flood control, library, and wastewater service. However, approval of such services to the entire Specific Plan site was considered by the County in adopting the Newhall Ranch Specific Plan. As contemplated, the project residents and businesses would generate revenue in the form of sales taxes, property taxes, fees, etc., which would be available to the County to fund public services on the site (e.g., fire and police service, flood control, library service, street maintenance, and wastewater treatment). Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to, fire facilities fees, water connection fees, wastewater connection fees, and school and library fees. Financing mechanisms for needed infrastructure improvements and supporting public service facilities could include private financing, assessment districts, landscape maintenance districts, fee districts, Mello-Roos districts, and bridge and thoroughfare fees.

(c) Affordable Housing

Section 3.10 of the adopted Newhall Ranch Specific Plan includes an Affordable Housing Program that provides for the direct inclusion of very low, low, and moderate income affordable housing opportunities within the Specific Plan area. At buildout, a total of 2,200 affordable dwelling units would be provided. The Affordable Housing Program includes timing mechanisms and monitoring provisions to ensure that affordable housing is provided concurrent with market rate housing. The applicant is required to identify the number and location of affordable housing units as a condition of tentative or final map approval.

Approximately 296 units located in the Medium Residential, High Residential, and Mixed Use land use categories would be set aside as affordable within the tract map site.

(3) Environmental Characteristics

Environmental characteristics associated with the entire buildout of the Specific Plan were thoroughly addressed by the County in the certified Newhall Ranch Specific Plan Program EIR; however, such characteristics are further analyzed at the project level for the Landmark Village project in this EIR.

b. Project Implementation/Phasing

Consistent with the Specific Plan (Chapter 5), implementation of the Specific Plan is to be carried out through the application and processing of County entitlements, including tentative subdivision maps, conditional use permits, oak tree permits, and other discretionary approvals or permits. In addition, the Specific Plan calls for all land subdivision maps of any type (e.g., tentative or final, vesting or non-vesting, tract or parcel) to be submitted, reviewed, and approved in accordance with the Los Angeles County Subdivision Ordinance and the California Subdivision Map Act.¹²

Consistent with the Specific Plan, the project applicant is seeking to implement the first phase of Newhall Ranch through the application and processing of the Landmark Village Vesting Tentative Tract Map No. 53108, and related project approvals.

Development of uses would be based on market conditions. For purposes of this analysis, it is assumed that residential units will develop initially together with a small amount of retail and commercial space, with the balance of the development of commercial uses after enough residential uses are built to generate sufficient demand for goods and services to support on-site commercial development. Complete project buildout is assumed to take place approximately four to five years from the granting of all necessary Project Approvals.

¹² Where the provisions or procedures of the Los Angeles County Subdivision Ordinance conflict with the approved Specific Plan, the Specific Plan applies (see Specific Plan, Chapter 5, Section 5.2).

2.0 ENVIRONMENTAL AND REGULATORY SETTING

1. PURPOSE

The following discussion of the Environmental and Regulatory Setting addresses those physical and regulatory conditions that characterize not only the Landmark Village site, but also local and regional areas in the Landmark Village vicinity, as required by the California Environmental Quality Act (CEQA) Guidelines Section 15125. This section is tiered from the previously certified Newhall Ranch Specific Plan Program EIR, under the authority of CEQA Guidelines Sections 15168 and 15152. It also incorporates by reference specific sections of the Newhall Ranch Specific Plan Program EIR in accordance with CEQA Guidelines Section 15150.

Section 2.0 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing environmental and regulatory setting for the entire Newhall Ranch Specific Plan. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted in May 2003. The project must also be in compliance with the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

2. ENVIRONMENTAL SETTING

The information presented in the Newhall Ranch Specific Plan Program EIR, Section 2.0, Environmental and Regulatory Setting, provides a detailed regional assessment of the area surrounding the entire Newhall Ranch Specific Plan, including the Landmark Village site and related off-site improvements. This assessment is incorporated by reference (CEQA Guidelines Section 15150).

a. Regional Setting

The Landmark Village site is located within the approved Newhall Ranch Specific Plan, which is located in the northwestern portion of unincorporated Los Angeles County, in the Santa Clara River Valley (see **Figure 1.0-1, Regional Location**, for the regional location). The project site is within the County's Santa Clarita Valley Planning Area and partially within the Castaic Area Community Standards District. The Santa Clarita Valley Planning Area is generally bound by the Los Padres and Angeles National Forest areas to the north; Agua Dulce and the Angeles National Forest to the east; the major ridgeline of the Santa Susana Mountains, which separates the Santa Clarita Valley from the San Fernando and Simi Valleys, to the south; and Ventura County to the west. The Castaic Area Community Standards District (CSD) defines the Castaic area of influence within Los Angeles County and describes the development standards governing the Castaic area. The Castaic Area CSD boundary includes, among other areas, part of the Newhall Ranch development; however, the CSD acknowledges that development in the Newhall Ranch Specific Plan area is exempt from the provisions of the CSD and governed by the approved

Newhall Ranch Specific Plan, as long as the Specific Plan remains in effect as to that area. The proposed Landmark Village project is the first development phase of the Newhall Ranch Specific Plan.

b. Local Setting

As illustrated in **Figure 1.0-3, Project Boundary/Environmental Setting**, the 292-acre Landmark Village tract map site is generally located due west of the confluence of Castaic Creek with the Santa Clara River. The northern bank of the Santa Clara River forms the southern boundary of the tract map site, and State Route 126 (SR-126) defines the tract map site's northern boundary. The eastern boundary abuts Castaic Creek. The City of Santa Clarita is located east of the site just beyond Interstate 5 (I-5), approximately 1 mile from the tract map site.

A series of improvements located off site of the Landmark Village tract map site are required to support proposed uses. A description of the local setting for each off-site improvement is described below and illustrated on **Figure 1.0-3**.

As shown on **Figure 1.0-3**, the Adobe Canyon borrow site is located in the northeastern portion of the approved Newhall Ranch Specific Plan, just south of the Santa Clara River and adjacent to Long Canyon. The Adobe Canyon borrow site would be used to import fill to the Landmark Village tract map site. Off-site grading also is required in the low-lying hills north of SR-126, east of Chiquito Canyon Road, and within and adjacent to the banks of the Santa Clara River at and downstream of the tract map site (Chiquito Canyon grading site). This site would be graded to accommodate roadway improvements to SR-126, and debris basins for stormwater flows collected by the tract map's storm drainage system. All of these improvements are proposed on unimproved land within the approved Newhall Ranch Specific Plan.

The proposed project also would require a water delivery system. Under the first water delivery option, two new potable water tanks and related lines/infrastructure would be constructed. The first potable water tank would be constructed near an existing water tank located in the Valencia Commerce Center, but at a slightly higher elevation; and the second tank would be built further west, in Chiquito Canyon. Under this first option, two new reclaimed water tanks would be located north of SR-126 within Chiquito Canyon, along with associated water lines necessary to serve the tract map site.

Under the second water delivery option, one new potable water tank, and related lines/infrastructure, would be constructed near the existing water tank in the Valencia Commerce Center, at a slightly higher elevation. For reclaimed water storage, the Round Mountain Tank, which is currently used for potable water, would be converted to a reclaimed water tank, with reclaimed water lines to serve the tract map site. The setting for each tank site is illustrated on **Figure 1.0-3**.

Finally, **Figure 1.0-3** depicts the utility corridor area. The utility corridor would house various utilities needed to serve the Landmark Village tract map site, including water/reclaimed water lines, sewer lines, telephone/cable lines, and other utilities. The corridor extends from the Landmark Village tract map site and travels within the existing roadway rights-of-way for SR-126, Henry Mayo Drive, The Old Road, and Wolcott Road. The utility corridor extends west along the southern edge of the SR-126 right-of-way to the site of the approved Newhall Ranch Water Reclamation Plant (WRP), and to the east where it travels along SR-126 to Henry Mayo Drive until reaching The Old Road; whereupon, the alignment turns south and heads to the existing Valencia WRP. Another segment of the alignment travels north up Wolcott Road where it stubs to the existing water tank site at the Valencia Commerce Center Business Park.

Surrounding land uses are described in detail in the Newhall Ranch Specific Plan Program EIR.

c. Public Services

The Newhall Ranch Specific Plan Program EIR addressed the public services required to implement the approved Newhall Ranch Specific Plan. Such services are discussed in this EIR in the context of the proposed Landmark Village project. For example, Valencia Water Company is identified as the local retail water purveyor for the proposed Landmark Village tract map site. Please refer to this EIR, **Section 4.10, Water Resources**, for additional information regarding water supply and demand and related issues.

In addition, the Newhall Ranch Specific Plan Program EIR provided a complete description of wastewater disposal, police and fire protection services, area school districts, library services, and park and recreation facilities for the entire Newhall Ranch Specific Plan. Such services are discussed below in the context of the proposed Landmark Village tract map site.

As to the proposed Landmark Village tract map site, there are two options for treatment and disposal of wastewater generated by on-site uses. One option involves connection to the existing wastewater facilities of the Santa Clarita Valley Joint Sewage System (SCVJSS), which consists of an interconnected network of trunk sewer lines and appurtenant facilities that link to existing treatment plants in the Santa Clarita Valley. A second option involves construction of the first phase of the Newhall Ranch WRP, which represents the long-term plan for the treatment and disposal of effluent generated by future uses within the Newhall Ranch Specific Plan. Please refer to this EIR, **Section 4.11, Wastewater Disposal**, for additional information regarding such wastewater facilities and services.

The proposed Landmark Village project tract map site would be served by the County of Los Angeles Sheriff's Department, and the California Highway Patrol would provide traffic regulation, enforcement, and other services on I-5, SR-126, State Route 14 (SR-14), and other major roadways in unincorporated

Los Angeles County. Please refer to this EIR, **Section 4.13, Sheriff Services**, for additional information regarding the provision of such services for the proposed Landmark Village tract map site.

Fire protection and emergency medical response services for the proposed Landmark Village tract map site would be provided by the Los Angeles County Fire Department. Please refer to this EIR, **Section 4.14, Fire Protection Services**, for additional information regarding the provision of such services.

The proposed Landmark Village tract map site would be served by Castaic Union School District for elementary and junior high school levels, and the William S. Hart Union High School District would provide high school education. Please refer to this EIR, **Section 4.15, Education**, for additional information regarding such educational services.

Library services for the proposed Landmark Village tract map site would be provided by the County of Los Angeles Public Library system. Please refer to this EIR, **Section 4.17, Library Services**, for additional information regarding such library services.

Parks and recreation would be provided on the proposed Landmark Village tract map site, along with several other existing and proposed parks and recreational facilities in proximity to the site. Please refer to this EIR, **Section 4.16, Parks and Recreation**, for additional information regarding such parks and recreational facilities and services.

d. Site Characteristics

The proposed Landmark Village tract map site is currently cultivated with row crops. Miscellaneous ancillary sheds used to store agricultural equipment are found on the site. Several dirt roads provide access to the cultivated fields. Multiple abandoned oil wells along with water wells are also dispersed within the tract map boundary. Land within the Adobe Canyon borrow site, Chiquito Canyon grading site, and along the utility corridor is characterized by undeveloped road right-of-way, is generally disturbed by agricultural cultivation, cattle grazing, oil production, or contains native vegetation like chaparral and coastal sage scrub. Similarly, potable water tank construction is planned on disturbed land, containing non-native grasslands and coastal sage scrub. Vacant land found along the Santa Clara River characterizes the site of the proposed Long Canyon Road Bridge, bank protection, and the reclaimed water tank site (see **Figure 2.0-1, Existing Land Use**).

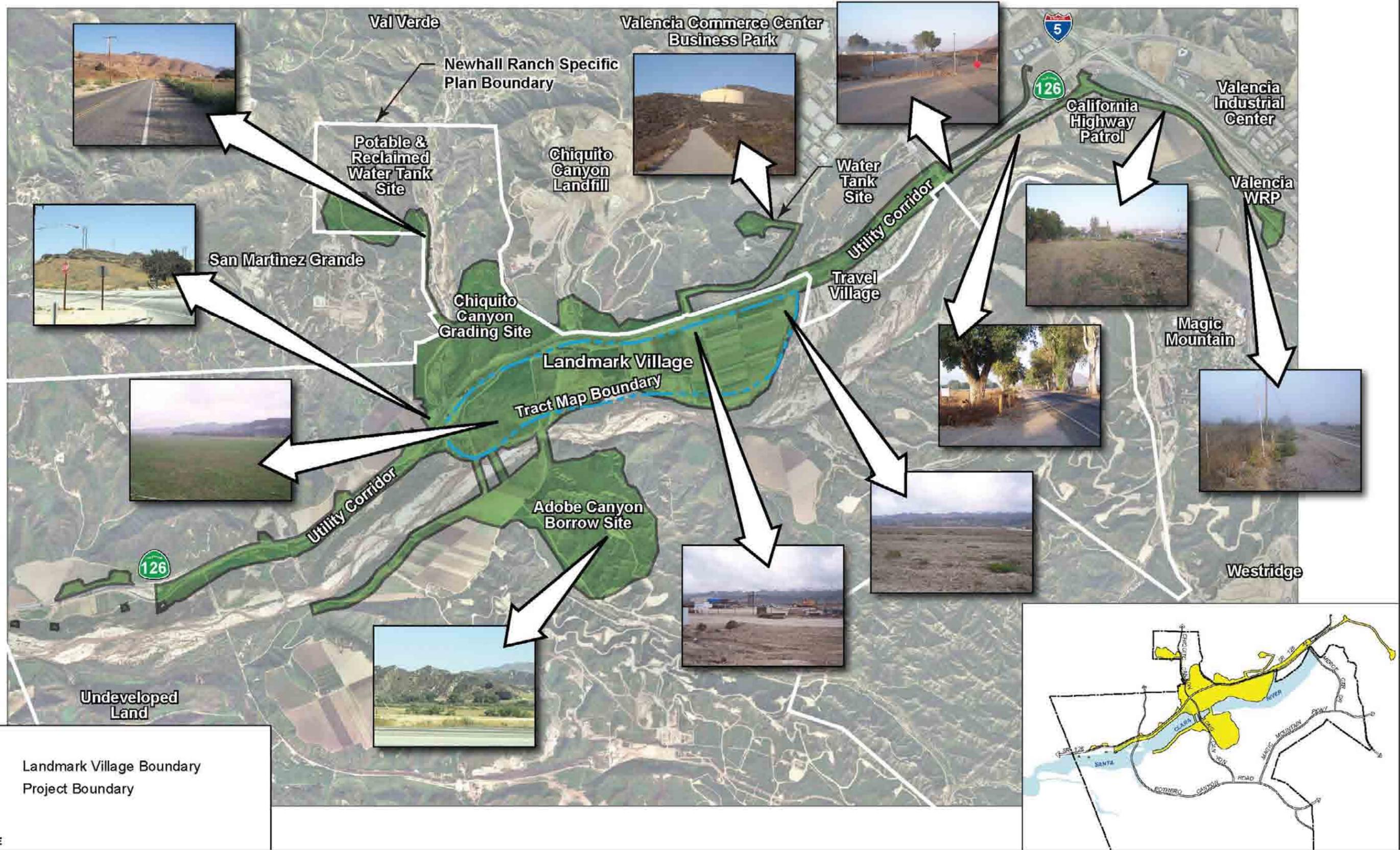


FIGURE 2.0-1

Existing Land Use

(1) Geotechnical Resources

The Landmark Village site, including related off-site improvements, is located within the tectonically active Transverse Ranges of Southern California and is cut by segments of the potentially active Del Valle and Salt Creek Faults. Bedrock formations found on the study area include the Pico and Saugus Formations. Surficial deposits include quaternary alluvium and older alluvium along with artificial fill.

As shown on **Figure 2.0-2, Mineral Resource Zones**, the Landmark Village site and related off-site improvements are also underlain by mineral and gravel deposits. The California Department of Conservation, Division of Mines and Geology, categorizes the tract map site as a Mineral Resource Zone (MRZ-2). This zone indicates that information exists, which identifies a substantial deposit of mineral and/or gravel resources in this area. Please refer to **Section 4.1, Geotechnical and Soil Resources**, for additional information on existing geotechnical and soil resources on the Landmark Village site.

(2) Biology

The proposed Landmark Village tract map site is disturbed by historic and ongoing agriculture activity; however, existing sensitive biological resources and habitat types occur on the project site and within its vicinity. On-site vegetation communities vary depending upon their location on the project site. In addition to disked farm fields, habitat communities include, among others, non-native grassland, upland scrub habitat and sensitive riparian habitat located primarily in areas adjacent to and within the Santa Clara River to the south of the project site.

The Adobe Canyon borrow site is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. This site is dominated by coastal sage scrub, but also includes areas of coastal sage chaparral scrub, non-native grassland, and live oak woodland. Portions of Long Canyon and the lower portion of Adobe Canyon have been used for agricultural purposes. Dumped fill associated with past oil well drilling activities exists at various locations within the Adobe Canyon borrow site.

The Chiquito Canyon grading site is characterized by non-native grassland, coastal sage scrub vegetation, and agricultural/disturbed areas. The land is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. Dumped fill associated with past oil well drilling activities is present at the eastern portion of the site. A Southern California Edison easement traverses the northern portion of the area. An existing electrical tower within this easement is located at the top of one of the proposed, semicircular cut-slopes. A dirt road currently exists to provide access to this tower. A second power line easement is present at the southern portion of the site.

The utility corridor alignment and water tank site in the Valencia Commerce Center represent disturbed, vacant land containing ruderal vegetation and disturbed/developed uses. Vegetation communities on the water tank site within Chiquito Canyon are dominated by coastal sage scrub.

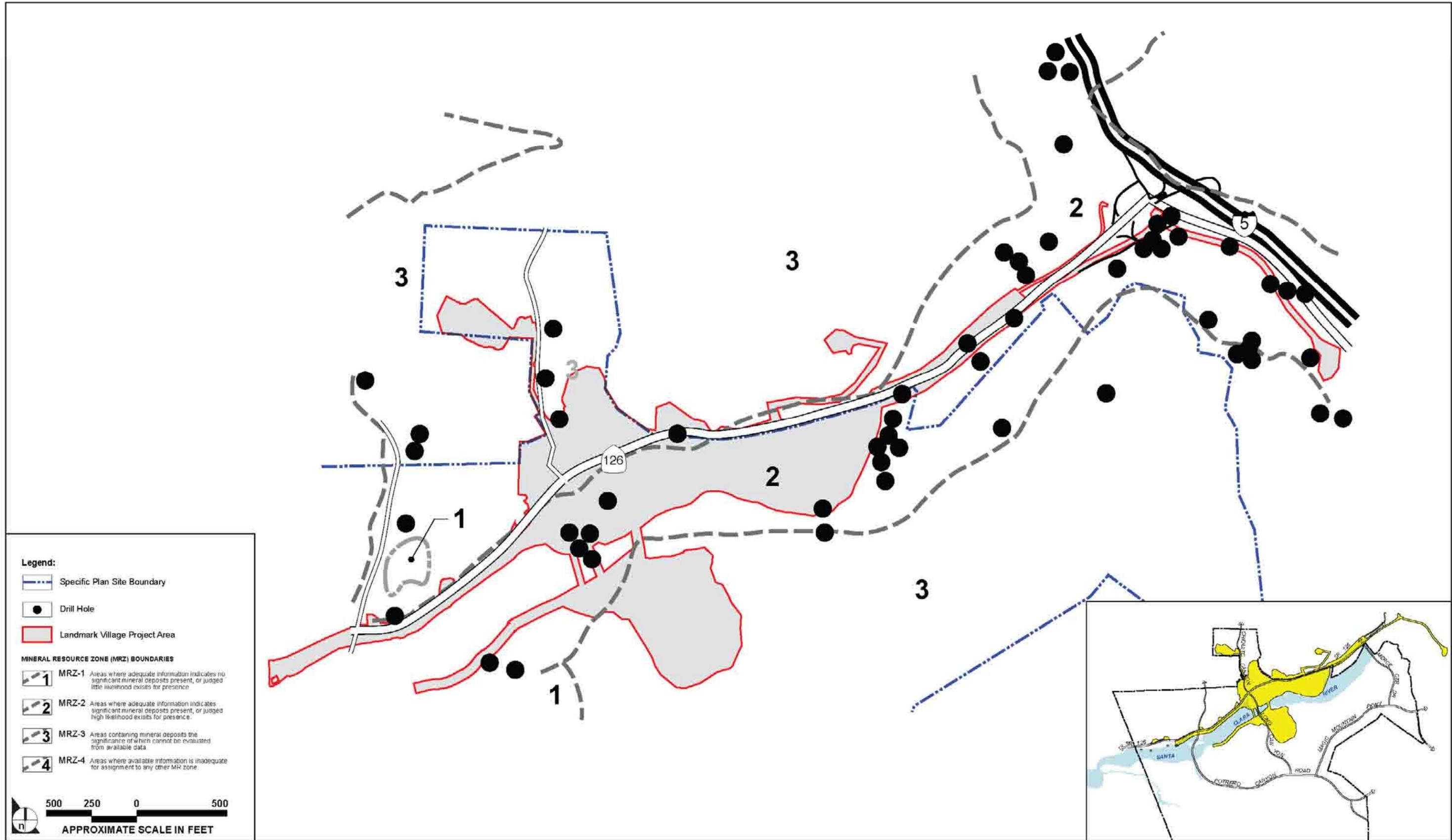
As mentioned above, the Santa Clara River forms the southern boundary of the Landmark Village tract map site and is the site of the proposed Long Canyon Road Bridge and buried bank stabilization. The Santa Clara River represents the last major unchannelized river in Los Angeles County. The river area is located within the approved Specific Plan River Corridor Special Management Area (SMA), which is also designated as part of the County's Significant Ecological Area (SEA) 23. The approved River Corridor SMA/SEA 23 area south of the project site was protected at the Specific Plan level because of the resource values present in that designated area. The area includes riparian habitats and associated species, and it also functions as a regional east/west wildlife movement corridor. The approved River Corridor SMA/SEA 23 includes habitat for the endangered unarmored three-spine stickleback (known to be present), least Bell's vireo (known to be present), and the southwestern arroyo toad (not known to be present). Other sensitive or threatened species in the River Corridor SMA/SEA 23 area include the arroyo chub, Santa Ana sucker, two-striped garter snake, southwestern spadefoot toad, and the southwestern pond turtle.

In conjunction with approval of the Specific Plan, the Los Angeles County Board of Supervisors approved a program-level SEA Conditional Use Permit (SEA CUP). The approved SEA CUP allowed some Specific Plan development within the River Corridor SMA/SEA 23 boundaries. This development is comprised of three bridge crossings, including the Long Canyon Road Bridge, buried, and exposed bank stabilization, trails, and development on mostly agricultural land within the approved River Corridor SMA/SEA 23 area. The applicant is seeking a project-level SEA CUP for proposed project development within the River Corridor SMA/SEA 23 in order to ensure consistency with both the adopted Specific Plan and the approved program-level SEA CUP.

Please refer to **Section 4.4, Biota**, of this EIR for additional information on the existing sensitive biological resources on the Landmark Village site, along with the consistency analysis for project-level development within the approved River Corridor SMA/SEA 23 area of the proposed project.

(3) Topography

The Landmark Village tract map site and related off-site improvements are part of the Ventura Basin of Southern California, which is a westerly-plunging depositional basin produced by tectonic downwarping initiated during the early Miocene period (13 to 25 million years before the present). Topography of the tract map site slopes gently in a southwesterly direction (see **Figure 2.0-3, On-Site Topography**). On-site elevations range from 950 feet above mean sea level (msl) along the eastern boundary of the project site to approximately 900 feet msl along the eastern property boundary.



SOURCE: California Department of Conservation, Division of Mines and Geology, Mineral Land Classification Map, Aggregate Resources Only, 1987.

FIGURE 2.0-2

Mineral Resource Zones

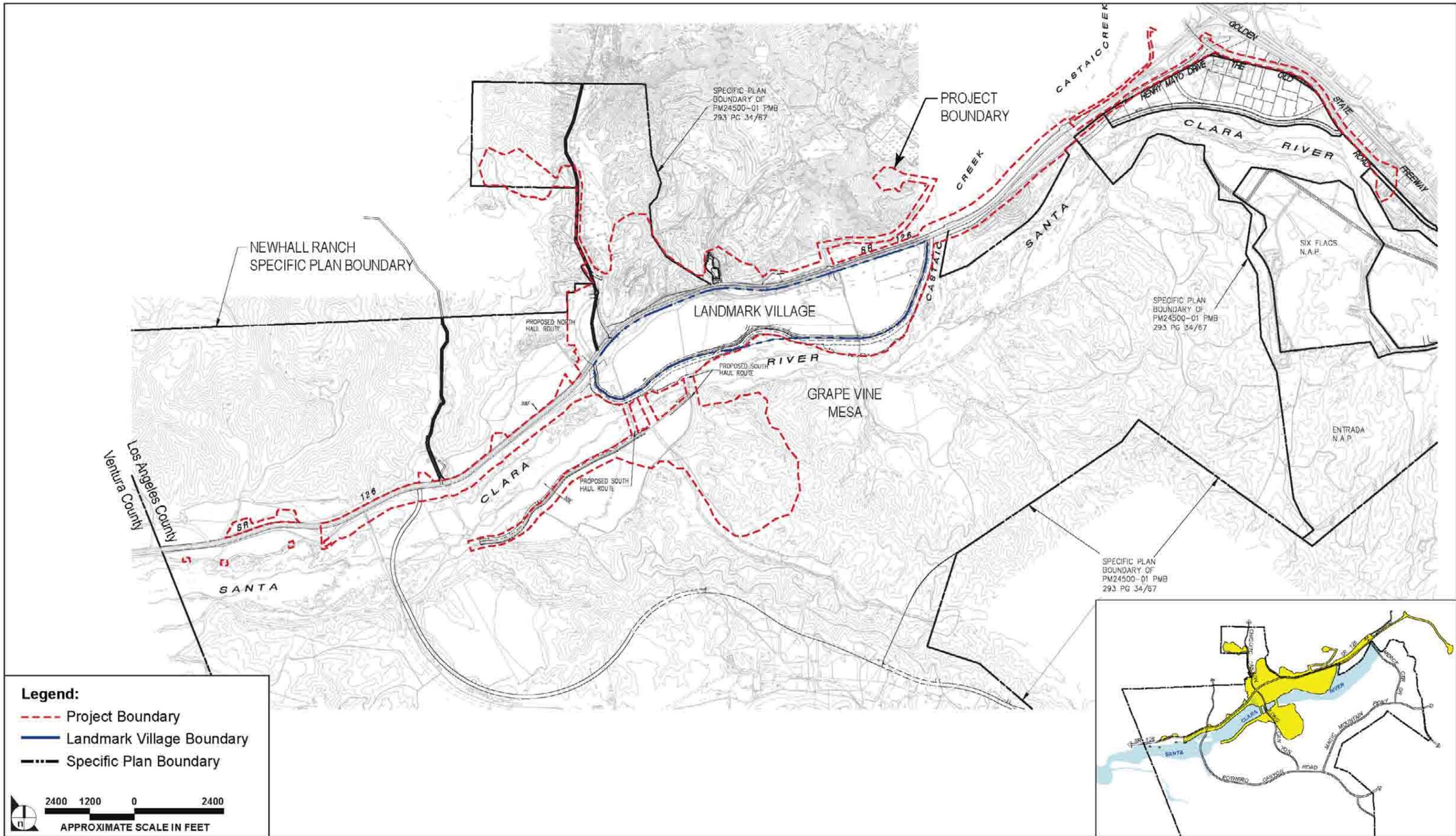


FIGURE 2.0-3

On-Site Topography

Steep slopes and valley floors characterize land within the Adobe Canyon borrow site, Chiquito Canyon grading site, and Chiquito Canyon tank site. Elevations on the Adobe Canyon borrow site range from approximately 920 feet (near the river) rising to 1,260 feet above msl further south. Elevations within the Chiquito Canyon site range from approximately 970 feet near SR-126 rising to 1,190 feet above msl further north. Topography along the utility corridor is relatively flat with elevations generally around 900 feet msl. Distinctive features in the surrounding area include an unnamed plateau located west of Sawtooth Ridge along the northeastern side of Long/Adobe Canyon.

There are other distinctive ridges within the Santa Susana Mountains, which comprise the land located within the Newhall Ranch Specific Plan.

(4) Drainage Characteristics

The Landmark Village project site is within the Santa Clara Valley River basin. Numerous named and unnamed drainages are present in the site vicinity including Salt Creek, Potrero Creek, Chiquito Creek, Long Canyon Creek, and San Martinez Grande Creek.

The 50-year capital floodplain (as defined by the Flood Control Division of the Los Angeles County Department of Public Works) of the Santa Clara River is located on the Landmark Village project site. The reach of the Santa Clara River within the Specific Plan site has year-round low flows created primarily by tertiary-treated effluent discharge from the Valencia WRP. Natural flows in the river only occur in the winter due to storm runoff. The flows vary significantly from year to year. In addition, there can be short-term releases from Castaic Lake during summer months that reach the river via Castaic Creek, which joins the river at the Specific Plan site.

Beneath the surface of the Landmark Village site and related off-site improvements, ground water is found within the Alluvial aquifer and the deeper Saugus Formation. The Newhall Ranch Specific Plan Program EIR provides a thorough description of the drainages in the Landmark Village area. Additionally, please refer to **Section 4.2, Hydrology**, and **Section 4.5, Floodplain Modifications**, for additional information on the drainage characteristics of the Landmark Village project site, including related off-site improvements.

(5) Cultural Resources

The Pico and Saugus Formations, which exist within the study area, are known to have a high-to-moderate potential for yielding paleontological resources. One prehistoric archaeological site exists within the boundary of the Landmark Village Vesting Tentative Tract Map No. 53108 (CA-LAN-2234). A subsequent Phase II investigation concluded that CA-LAN-2234 represented introduced fill used for

erosion control that was artifact bearing. It appeared to be derived from the nearby site CA-LAN-2233 located north of SR-126 outside the study area and did not represent an extant archaeological site. Please refer to this EIR, **Section 4.22, Cultural/Paleontological Resources**, for additional information on the archaeological and paleontological resources found on the Landmark Village tract map site and related off-site improvement locations.

(6) Noise

The Newhall Ranch Specific Plan Program EIR provided a detailed assessment of noise issues associated with Specific Plan development. Specific point sources of noise in the Landmark Village study area include SR-126, the Chiquita Canyon Landfill, the Travel Village Recreational Vehicle (RV) Park, Valencia Commerce Center Business Park, and the Valencia WRP. The noise from SR-126 is generated from vehicular traffic. Magic Mountain Theme Park is too distant from the project site to provide a point noise source to the Landmark tract map site. Most of the noise at the Chiquita Canyon Landfill is generated by truck traffic to and from the landfill. Noise levels generated by landfill operations are very low at the landfill property boundary, 50 dB(A) or less, and are hardly perceptible on the Landmark Village tract map site. Noise generated by Travel Village, Valencia Commerce Center Business Park, and the Valencia WRP typically involves human activity or motor vehicles. Please see this EIR, **Section 4.8, Noise**, for additional information regarding the existing noise conditions on the project site and within its vicinity.

(7) Air Quality

The Newhall Ranch Specific Plan Program EIR provided an assessment of the air quality issues relative to the Landmark Village project, which lies within the South Coast Air Basin (SCAB). Please refer to this EIR, **Section 4.9, Air Quality**, for additional information on ambient air quality on and in the vicinity of the Landmark Village project site and related off-site improvements.

(8) Existing Roadway Network

Direct regional access to the Landmark Village tract map site and related off-site improvements is currently provided by SR-126. The I-5/SR-126 interchange is located approximately 0.5 mile east of the Landmark Village tract map site. Initially, access to the tract map site will be obtained from SR-126 via the existing intersections of Wolcott Road and Chiquito Canyon Road. The proposed project would construct interim intersections with SR-126, which would be consistent with the project's planned potential future interchange alignments for Wolcott Road/SR-126 and Long Canyon Road/SR-126. These two potential future grade separated crossings would be constructed if future traffic volumes determine that the crossings are warranted. The environmental impacts associated with these future crossings are evaluated in this EIR. Future phases of Newhall Ranch will provide access to and from the south via the

Long Canyon Road Bridge. The Landmark Village tract map site itself is currently under active agricultural cultivation and does not contain an improved roadway network.

Please refer to this EIR, **Section 4.7, Traffic/Access**, for additional information on the existing roadway network on the Landmark Village project site and within its vicinity.

3. REGULATORY SETTING

a. Los Angeles County General Plan, Santa Clarita Valley Areawide Plan, and Planning and Zoning Code

State planning law mandates that every city and county prepare a General Plan. A General Plan is a comprehensive policy document outlining the capacity of future development in a city or county. This policy statement is divided into seven elements: Land Use, Housing, Circulation, Open Space, Conservation, Noise, and Safety. The Land Use Element has the broadest scope of all the General Plan Elements. The Land Use Element establishes the pattern of land use and sets standards and guidelines to regulate development.

Two plans govern unincorporated land development in the Santa Clarita Valley Planning Area. These include components of the County of Los Angeles General Plan and the Santa Clarita Valley Areawide Plan. The County of Los Angeles General Plan serves as the overall policy document for the unincorporated portions of the County, including the Landmark Village site. The land use designations are very broad in nature, as are the types of uses permitted within each designation. More detailed area plans have been prepared for various planning areas throughout the County. The Santa Clarita Valley Areawide Plan is the community plan that provides detailed policy statements, land uses, and development standards for the Landmark Village site. Absent adoption of a specific plan, the County of Los Angeles Zoning Code provides precise development guidelines (i.e., permitted and conditionally permitted land uses, minimum lot sizes, building heights, maximum square footage, etc.).

As discussed earlier in the **Introduction** to this EIR, the project site is located within the approved Newhall Ranch Specific Plan area, which was adopted by the Los Angeles County Board of Supervisors on May 27, 2003, consistent with Title 22, Chapter 22.46 of the Los Angeles County Zoning Code. The Newhall Ranch Specific Plan implements the goals and policies of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan on a focused, site-specific basis. The Specific Plan contains a conceptual development plan, development regulations, design guidelines, and implementation mechanisms consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan.

The authority to adopt a Specific Plan ultimately lies in state planning law contained in Sections 65450 through 65457 of Title 7, Division 1, Chapter 3, Article 8 of the California Government Code, which includes a requirement that a Specific Plan be consistent with a jurisdiction's General Plan. Because any adopted Specific Plan must be consistent with the County General Plan and the Santa Clarita Valley Areawide Plan, all future projects filed within the Newhall Ranch Specific Plan area, which are found to be consistent with the Specific Plan, will also be consistent with the County General Plan and Santa Clarita Valley Areawide Plan. Please refer to the certified Newhall Ranch Specific Plan Program EIR for an evaluation of the Specific Plan's consistency with the County General Plan and Santa Clarita Valley Areawide Plan.

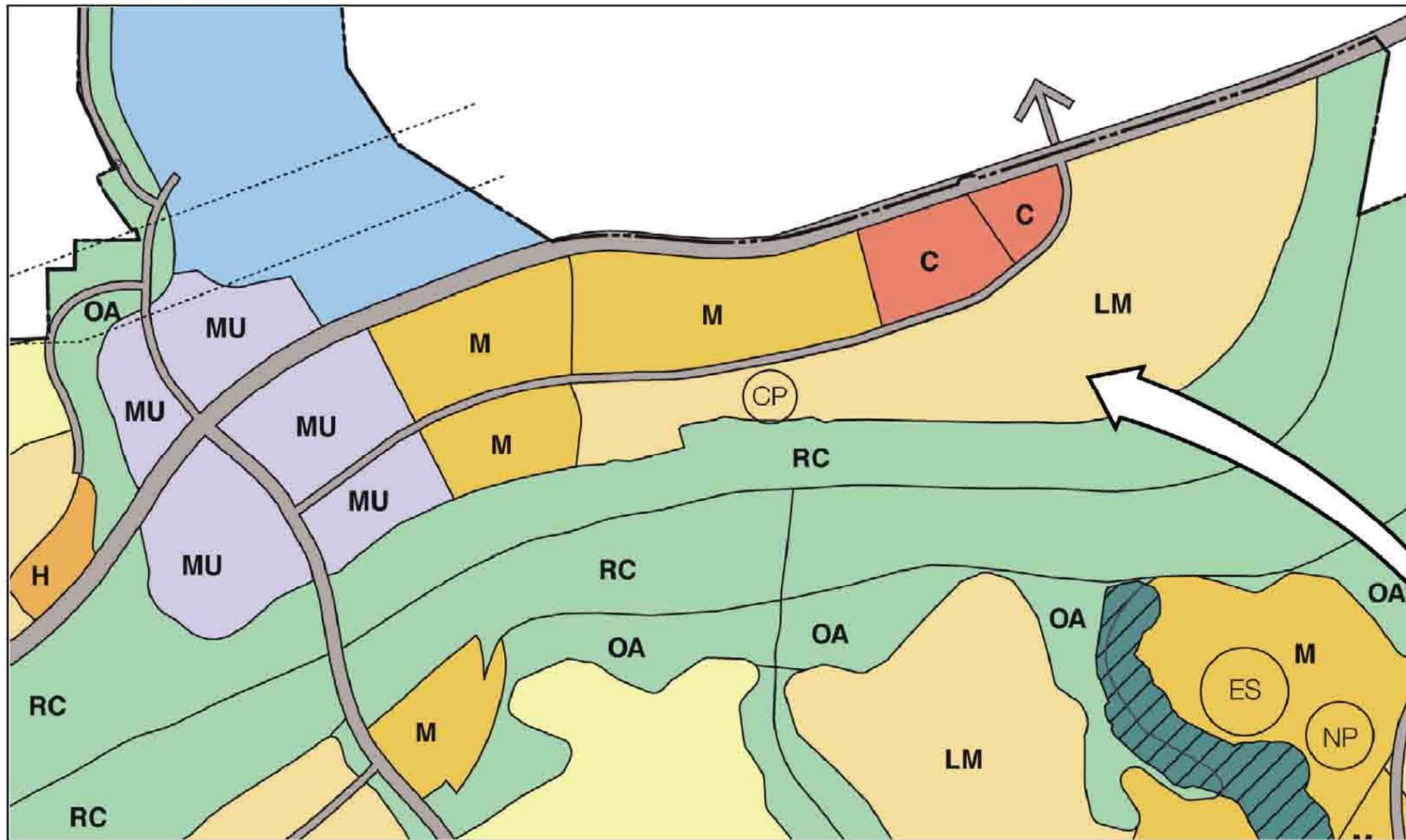
b. Newhall Ranch Specific Plan

The Newhall Ranch Specific Plan is a comprehensive document that guides future development of the Newhall Ranch property and serves as the zoning for the entire Specific Plan area. A specific plan is a zoning document that sets forth development guidelines and policies to be utilized by landowners, developers, and public agencies when considering development plans for an area. A specific plan is a substitute for standard zoning and is used to address the unique qualities of a particular property.

The proposed Landmark Village project represents the first subdivision map filed within the approved Newhall Ranch Specific Plan. All development constructed within the Specific Plan area is subject to development standards for grading and drainage, trails and walkways, landscaping, building mass, building density, setbacks, lighting, and fencing. These standards are enforced during the County of Los Angeles project review and plan check process. An analysis has been prepared which demonstrates the consistency of the proposed Landmark Village project with the approved Newhall Ranch Specific Plan and can be found in **Appendix 2.0**.

The Newhall Ranch Specific Plan is divided into distinct villages based on natural landmarks and topographic features. The project site is located within Riverwood Village portion of the Specific Plan, which is that area located north of the Santa Clara River and south of SR-126. As illustrated on **Figure 2.0-4, Existing Specific Plan Land Use Designations**, the Landmark Village site is designated as Low-Medium Residential (LM), Medium-Residential (M), Commercial (C), and Mixed-Use (MU) development. Surrounding land use designations include the River Corridor SMA/SEA 23, which abuts the southern boundary of the project site, while Mixed-Use and Business Park uses are found north of SR-126 opposite the project site.

The Low Medium Residential designation allows both attached and detached homes. The minimum lot size is 2,500 square feet with a minimum front yard setback set at 18 feet. A 5-foot minimum side yard setback applies to detached product, while attached units may have a zero lot line subject to certain criteria.



Legend:

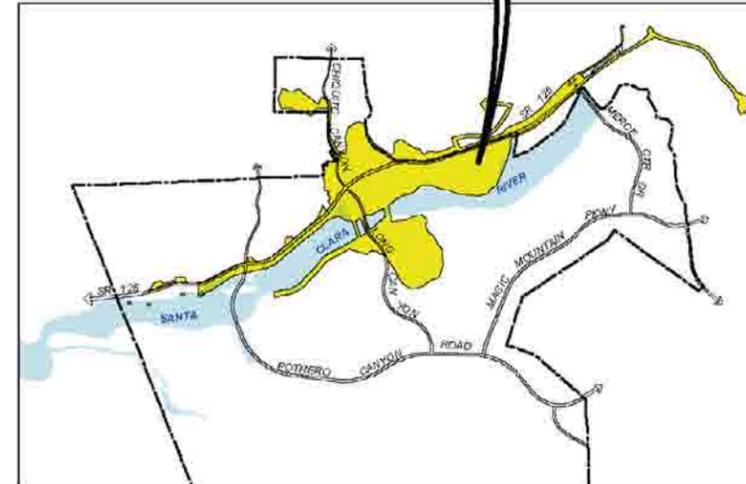
- ESTATES
- LOW DENSITY
- LOW-MEDIUM DENSITY
- MEDIUM DENSITY
- HIGH DENSITY
- MIXED USE
- COMMERCIAL
- BUSINESS PARK
- VISITOR SERVING
- OPEN AREA
- RIVER CORRIDOR
- HIGH COUNTRY
- CDFG SPINEFLOWER CONSERVATION EASEMENTS
- ROADS*
- SCE/UTILITY EASEMENT

LAND USE OVERLAYS (POTENTIAL LOCATIONS)

- CP COMMUNITY PARK
- NP NEIGHBORHOOD PARK
- ES ELEMENTARY SCHOOL
- JH JUNIOR HIGH SCHOOL
- HS HIGH SCHOOL
- LB LIBRARY
- GC GOLF COURSE
- CL COMMUNITY LAKE
- FS FIRE STATION
- ES ELECTRICAL SUBSTATION
- WR WATER RECLAMATION PLANT

*Roads/road right of way within CDFG spineflower conservation easements and all other spineflower preserves are subject to realignment prior to subdivision approval pursuant to Board motion (March 25, 2003).

NOT TO SCALE



SOURCE: River Village Planning Notebook – August 2003

FIGURE 2.0-4

Existing Specific Plan Land Use Designations

The Medium Residential designation allows a variety of housing types including small lot, single-family detached and attached units along with multi-family homes. The minimum lot size for a detached home is 2,500 square feet, with a minimum front yard setback of 18 feet and side yard setback of 5 feet. There is no minimum lot size for the attached homes under this category, although a 10-foot front yard setback does apply.

The Commercial land use designation permits maximum site coverage of 50 percent with a minimum front setback of 20 feet. Building height is restricted to a maximum of 45 feet. Mixed-Use designations are more permissive, and contain no maximum site coverage requirements and no minimum front setbacks. Building height is restricted to a maximum of 55 feet.

Development standards also apply for major open areas such as the River Corridor SMA/SEA 23 that abuts the southern Landmark Village project boundary. A required setback applies from the property line adjacent to the River Corridor SMA/SEA 23 area. The Newhall Ranch Specific Plan, Section 2.6 Resource Management Plan, at page 2-105, subsection (v), states:

“A minimum 100 foot wide buffer adjacent to the Santa Clara River should be required between the top river-side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor or that a 100 foot wide buffer is infeasible for physical infrastructure planning. The buffer may be used for public infrastructure, such as: flood control access; sewer, water and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.”

Maximum building height adjacent to the River Corridor SMA/SEA 23 is restricted to 25 feet.

The Specific Plan contains provisions to monitor future development to ensure compliance with the regulations and standards of the Specific Plan, and to establish a record of progress in the phasing of development and implementation of required infrastructure. To accomplish these tasks, the monitoring program divides the Specific Plan into planning areas within each village and lists the land use as well as the number of housing units and/or non-residential building square footage.

The Landmark Village project is located within planning area RW-27, and RW-29 through RW-36 of the Newhall Ranch Specific Plan. A map depicting the Newhall Ranch Specific Plan Planning Areas is found in this EIR, **Section 1.0, Project Description, Figure 1.0-3a, Planning Areas of Riverwood Village**. A maximum of 1,444 dwelling units is allowed along with approximately 1.5 million square feet of commercial/mixed-use development in the designated planning areas.

In total, the proposed Landmark Village project contains 1,444 dwelling units and 1.03 million square feet of commercial mixed-use development. Based on the type and organization of land use patterns and the proposed amount of development, the proposed Landmark Village project is considered consistent with the land use designations and permitted development shown in the approved Newhall Ranch Specific Plan.

Table 2.0-1, Newhall Ranch Specific Plan – Maximum Allowed Land Use by Type-Project Planning Areas, shows the maximum allowed land uses by type for the planning areas within the Landmark Village project site.

Table 2.0-1
Newhall Ranch Specific Plan
Maximum Allowed Land Use by Type-Project Planning Areas

| Planning Area | Residential* | | Mixed-Use* and Commercial | |
|--------------------|--------------|---------------|---------------------------|-------------|
| | Gross Acres | Maximum Units | Gross Acres | Max Sq. Ft. |
| RW-27 | -- | -- | 27.8 | 594,000 |
| RW-29 | -- | -- | 25 | 475,500 |
| RW-30 | -- | -- | 12.5 | 283,500 |
| RW-31 | 26.5 | 456 | -- | -- |
| RW-32 | 14.1 | 302 | -- | -- |
| RW-33 | 39.5 | 600 | -- | -- |
| RW-34 | 118.5 | 801 | -- | -- |
| RW-35 | -- | -- | 15.6 | 196,500 |
| RW-36 ¹ | -- | -- | 6.7 | |
| TOTAL | 198.6 | 1,444* | 87.6 | 1,549,500 |

* The total number of residential units within the Planning Areas RW-27 and RW-29 through RW-34 shall not exceed 1,444 dwelling units according to footnote 3 of Table 5.4-1 "Annotated Land Use Plan Statistical Table" of the Newhall Ranch Specific Plan.

¹ This area is identified as a potential site for a transit station.

To assess the Landmark Village project's consistency with the policies and objectives of the approved Newhall Ranch Specific Plan, please refer to this EIR, **Appendix 2.0**. Based on the Specific Plan compliance/consistency analysis found in this EIR, it can be determined that the Landmark Village project is consistent with the adopted policies and objectives of the Newhall Ranch Specific Plan. The Los Angeles County Regional Planning Commission and Board of Supervisors will conduct discretionary review of the Landmark Village project's consistency with the approved Specific Plan.

c. Castaic Area Community Standards District

The Castaic Area CSD defines the Castaic area of influence within Los Angeles County and describes the development standards governing growth within the Castaic area community. The Castaic CSD was approved by the Los Angeles County Board of Supervisors in December 2004, and was established to protect the rural character, unique appearance, and natural resources of the Castaic area communities. The CSD also ensures that new development will be compatible with the Castaic area's existing neighborhoods and with the goals of the Santa Clarita Valley Areawide Plan. Finally, the CSD promotes the establishment of trucking-related businesses in locations where trucking activities presently occur, while ensuring that the trucking businesses do not interfere with the community's residential character, circulation, and traffic patterns. The CSD generally includes the existing communities of Castaic, Castaic Junction, Val Verde, Hasley Canyon, Hillcrest, and Paradise Ranch; the canyons of Charlie, Tapia, Romero, Sloan, and Violin; the Valencia Commerce Center; the Peter Pitchess Detention Center; the Northlake development and part of the Newhall Ranch development, both of which are governed by specific plans.

The Castaic Area CSD does not apply to areas within the CSD boundary governed by a specific plan or development agreement that was approved prior to the effective date of the CSD, as long as such specific plan or development agreement is legally valid and has not terminated. In this instance, the Castaic Area CSD recognizes that the Newhall Ranch Specific Plan area will be governed by the Specific Plan, including any amendments thereto; and, therefore, is exempt from the provisions of the Castaic Area CSD.

d. Regional Plans and Policies

Regional planning considerations and federal air and water quality laws have increased the relative importance of land use planning in a regional context. Southern California Association of Government's (SCAG's) *Regional Comprehensive Plan and Guide* (RCPG) includes a Growth Management chapter that provides the demographic forecasts used in the South Coast Air Quality Management District's (SCAQMD's) *Air Quality Management Plan* (AQMP) and that provides a flexible framework to resolve growth-related issues expected in the future. The RCPG's Growth Forecasting Chapter and the Regional Housing Needs Assessment Chapter were both updated in 2002, after the Newhall Ranch Specific Plan Program EIR was originally certified. In addition, SCAQMD released a new AQMP in 2003. Any variation or new information prompted by the update in plans is reflected in the summaries and in the several sections in this EIR impacted by these updates.

In addition to the plans discussed above, the Landmark Village area is subject to the *Water Quality Control Plan (Basin Plan) [for the] Los Angeles Region (4)* of the California Regional Water Quality Control Board and the *Congestion Management Program (CMP)* of the Metropolitan Transportation Authority. The CMP was updated in 2002, and therefore any new impacts or information prompted by this update, which occurred after the original certification of the Newhall Ranch Specific Plan Program EIR, will be discussed in **Section 4.7, Traffic/Access**. The Newhall Ranch Specific Plan Program EIR addressed all four of these plans, and is incorporated by reference here, to the extent that they are pertinent.

The Landmark Village tract map site is also subject to state laws and regulations regarding water supply. The Newhall Ranch Specific Plan Program EIR addressed the Specific Plan's consistency with these water supply laws and regulations. Please refer, specifically, to the Newhall Ranch Revised Additional Analysis, Volume VIII, May 2003, Section 2.5, Water Resources, which is available for public review and inspection at the County of Los Angeles, Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California, and is incorporated by this reference.

The RCPG, AQMP, Basin Plan, CMP, and water supply laws and regulations are summarized below, along with an analysis of the proposed project's consistency with the goals and policies of these plans, programs, laws, and regulations.

(1) Regional Comprehensive Plan and Guide

The RCPG consists of five Core Chapters, which are Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management. These Core Chapters respond directly to federal and state requirements placed on SCAG, with the exception of the Hazardous Waste Management Chapter, and contain mandatory requirements for cities and counties, as well as for projects of regional significance, such as Landmark Village. Under CEQA, local governments must use these requirements as the basis for determining the consistency of local projects of regional significance with the applicable regional plans. SCAG's most recent population, household, and employment forecasts for the North Los Angeles County Council of Governments (NLACOG) subregion are contained in the 2001 Regional Transportation Plan (RTP) (published in April 2001).

The following is a brief discussion of the mandatory sections of the Core Chapters that apply to the proposed project. The Hazardous Waste Management Core Chapter is designed to assist the region's counties and cities in their efforts to plan for current and future hazardous waste management requirements, and it is not applicable at the individual project level; therefore, it is not discussed below. In addition to the Core Chapters, applicable policies of the Open Space Chapter are discussed below.

(a) **Growth Management Chapter**

There are a number of policies in this chapter that refer to SCAG's mandates in the review of regionally significant projects. Those that are considered applicable to the Landmark Village project are discussed below.

Policy 3.01: The population, housing, and job forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.

Analysis: Based on SCAG's most recent forecasts, by the year 2025, the Los Angeles region is expected to grow to approximately 22.6 million people, representing 7.4 million household units and 9.9 million jobs. This growth represents a population increase of 34.5 percent, an increase in housing of 37.9 percent, and an increase in employment of 34.2 percent between the years 2000 and 2025. SCAG's distribution of regional growth was developed through the subregional planning process. Development of the proposed project will accommodate an increase in population of about 3,680¹ persons and 1,444 housing units. The resultant increase in region-wide population is planned and considered negligible. While the proposed project would not create significant or permanent employment opportunities, it would provide new housing in support of existing and new employment opportunities expected to occur in the Santa Clarita Valley. A detailed analysis of the project's consistency with the population and housing forecasts for the North Los Angeles County subregion and City of Santa Clarita is provided in the Newhall Ranch Specific Plan Program EIR. Also refer to **Section 4.9, Air Quality**, of this EIR for additional information on project consistency with demographic forecasts used when preparing the Air Quality Management Plan.

Policy 3.03: The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.

Analysis: The proposed Landmark Village project represents the first phase of the Newhall Ranch Specific Plan, which contains backbone water, sewer, and drainage plans that generally identify the size and location of needed infrastructure. The proposed project would be developed over five years as part of Vesting Tentative Tract Map No. 53108, which

¹ Based upon County of Los Angeles-provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

represents the phasing mechanism used by the Specific Plan to identify the timing and sizing of necessary infrastructure.

Given the existence of the approved Specific Plan, and that the proposed project is located adjacent to existing infrastructure, Landmark Village would represent an orderly progression of development that would aid in implementing the region's growth policies. The proposed project would use various techniques currently available for financing and maintenance of public facilities, streets, and utilities. For example, the applicant could decide to finance the infrastructure and services necessary to serve the project through a Community Facilities District under the provisions of the Mello-Roos Communities Facilities Act of 1982. Such a district is formed to finance designated public services and capital facilities by levying special taxes within the specific plan area.

While the exact financing method has not yet been decided, the County and the property owner/developer must mutually agree to the method and enter into an agreement reflecting the selected financing and maintenance method. As proposed, the project would be consistent with the region's growth policies.

In addition to the mandatory goals of the Growth Management Chapter of the RCPG, listed below are a number of non-mandatory goals used by SCAG. For example, the Growth Management Chapter includes a goal to improve the regional standard of living by developing urban forms that (1) enable individuals to spend less income on housing costs; (2) minimize public and private development costs; (3) enable firms to be more competitive; and (4) strengthen the strategic goal to stimulate the regional economy. Applicable policies related to this RCPG goal include the following:

Policy 3.05: SCAG shall encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.

Policy 3.09: SCAG shall support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.

Policy 3.10: SCAG shall support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

Analysis: The Landmark Village site is located near existing urban uses that are supported by a full complement of roadways, water, sewer, electricity, natural gas, communications links, cable, and other urban infrastructure. In addition, existing development in the area is

served by local law enforcement and fire protection services. As a result, extension of these services to proposed on-site uses would make use of existing facilities. Project residents would generate revenue in the form of property taxes, fees, etc., which would be available to the County to fund public services on site, such as fire and police services, flood control, library services, street maintenance, and wastewater treatment. Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to, bridge and thoroughfare fees, fire facilities fees, sewer annexation and construction fees, and school fees. In addition, the project would build all on-site roadways, potable water, sewer, energy, and communications systems, as well as share in the upgrade of all affected roadways. Financing mechanisms for needed on-site infrastructure improvements and supporting public service facilities could possibly include, but are not limited to, private financing, assessment districts, fee districts, and Mello-Roos districts. As such, the project is consistent with these RCPG policies.

The Growth Management Chapter also includes a goal to improve the regional quality of life by developing urban forms that (1) enhance quality of life; (2) accommodate a diversity of lifestyles; (3) preserve open space and natural resources; (4) are aesthetically pleasing and preserve the character of communities; and (5) enhance the strategic goal of maintaining the regional quality of life. Applicable policies related to this RCPG goal include:

Policy 3.12: SCAG shall encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.

Policy 3.14: SCAG shall support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.

Analysis: Two major transit carriers serve the Landmark Village project study area, the Santa Clarita Transit (SCT) system operated by the City of Santa Clarita and Metrolink operated by the Southern California Regional Rail Authority (SCRRA). The SCT largely serves the Santa Clarita Valley, while Metrolink currently serves Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties.

The SCT route passes the tract map site via SR-126 and provides service to the Santa Clarita and Newhall Metrolink Stations, the Valencia Industrial and Commerce Centers,

and the Valencia Town Center area. Buses run every 30 minutes. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are Soledad Entertainment Center, Newhall, Newhall Metrolink Station, Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde.

SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: Olive View Medical Center in Sylmar (Route 790), Chatsworth Metrolink/Amtrak Station – Warner Center (Route 791), UCLA/Westwood – Century City (Routes 792 and 797), Van Nuys – Sherman Oaks (Routes 793 and 798), Los Angeles Union Station/Gateway Transit Center (Route 794), Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), Warner Center (Route 796), and downtown Los Angeles – 7th and Spring Streets (Route 799).

The proposed project is consistent with these transit policies because it would place development in an area presently served by local and regional transit. It can also be considered consistent because of its extensive pedestrian and bicycle trails network, which are linked to adjacent uses and roadways. This network would provide project residents with a combination of transportation modes including bicycling, walking, and driving. Furthermore, because the project has been designed to provide housing that would support existing and new employment opportunities that are projected to occur in the Santa Clarita Valley, it could reduce travel distances and could create opportunities for employees to walk and bike to work.

Policy 3.17: SCAG shall support and encourage settlement patterns, which contain a range of urban densities.

Policy 3.18: Encourage planned development in locations least likely to cause environmental impact.

Policy 3.19: SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.

Analysis: The Landmark Village tract map site is largely disturbed due to ongoing agricultural activity and is planned for development as part of the Newhall Ranch Specific Plan, which implements the goals and policies of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan on a focused, site-specific basis. The approved Newhall Ranch project site is located adjacent to developed uses and is subject to the

provisions of the Specific Plan. The Specific Plan contains a conceptual development plan, development regulations, design guidelines, and implementation mechanisms consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Areawide Plan, including those directed towards protection of open space and natural resources.

The project design was developed consistent with the Resource Management Plan (Section 2.6 of the Specific Plan) and the resource conservation objectives of the Specific Plan. Design considerations included establishment of an adequate buffer between residential uses and sensitive resources to enhance the habitat value of the natural area and preserve the river resources. To this end, roughly 38 acres of the Landmark Village project site would be dedicated to open space. The Landmark Village project would also construct a Community Park consistent with the Specific Plan as well as trails and major utility easements that function as a separation between development areas south of the SR 126 and the Santa Clara River. For these reasons, the project is consistent with these RCPG policies.

Policy 3.20: SCAG shall support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.

Analysis: The Landmark Village tract map site is largely disturbed from ongoing agricultural activity but it is located adjacent to the River Corridor SMA/SEA 23. SEA 23 was originally established along the Santa Clara River to protect the variety of riparian habitat found within and along its corridor. In general terms, the purpose of designating SEAs is to maintain and protect areas that possess biotic resources that are uncommon, rare, unique, or critical to the maintenance of wildlife. More specifically, SEA 23 was established to conserve habitat for four federally listed endangered species: (1) unarmored three-spine stickleback, (2) least Bell's vireo, (3) Southwestern pond turtle, and (4) arroyo Southwestern toad in the Santa Clarita Valley.

On May 27, 2003, the County's Board of Supervisors adopted General Plan Amendment No. 94-087-(5), as part of the Board's project approvals for the Newhall Ranch Specific Plan. The General Plan Amendment approved adjustments to the existing boundaries of SEA 23, consistent with General Plan policies requiring protection of natural resources within SEAs. The approved SEA boundary adjustments were found to be consistent with the adopted Specific Plan, which established a Specific Plan "Special Management Area"

designation over the adjusted SEA 23 boundaries. Although the adjusted boundaries within SEA 23 were designated as the River Corridor SMA in the adopted Specific Plan, the County's underlying SEA designation remains in effect. In addition, on May 27, 2003, the Board approved program-level SEA CUP No. 94-087-(5) (SEA CUP). The approved SEA CUP allows some Specific Plan development within the SEA boundaries, including bridge crossings (e.g., Long Canyon Road Bridge), trails, bank stabilization, and other improvements.

The proposed Landmark Village project represents the first phase of construction within the Newhall Ranch Specific Plan, and the applicant is planning to construct a number of improvements within the River Corridor SMA/SEA 23 as contemplated by the Program SEA CUP No. 94-087-(5), including the Long Canyon Road Bridge, trails, water quality basins, bank stabilization, water and sewer utility crossings, storm drain outlets, and potential riparian mitigation sites.

Consistent with the approved SEA CUP, the Landmark Village project has been designed to lessen direct and indirect impacts to the sensitive resources found within the River Corridor SMA/SEA 23. The site plan incorporates a setback to separate natural resources in the River Corridor SMA/SEA 23 from the residential and mixed uses associated with the project. Where improvements must be constructed in the River Corridor SMA/SEA 23, they have been sensitively designed to minimize permanent disturbance.

The drainage concept for Landmark Village proposes the use of buried bank stabilization where necessary to protect against erosion except at bridge crossings, where exposed grouted rip-rap or reinforced concrete would be used. Buried bank stabilization is a modern technique used to protect development from erosion and flooding while maintaining soft banks containing natural vegetation. Construction of the bank stabilization would cause temporary impacts, but once re-planted with natural vegetation, the disturbed areas return to a natural condition, thereby, avoiding permanent impacts to the river channel. Moreover, the existing river channel width that carries the ordinary 2-, 5-, and 10-year flood events would be completely spanned by the Long Canyon Road Bridge. Consequently, under most circumstances, project improvements would not hinder river flows or reduce the area of the floodplain. Instead, these flows would spread across the river channel, unaffected by the bank protection and bridge abutments.

The Landmark Village tract map site would also introduce people and animals into this resource area as the project would implement a segment of the River Trail as identified by the Master Trails Plan of the Newhall Ranch Specific Plan. However, access to trails in the River Corridor SMA/SEA 23 must be restricted to daytime hours as defined by the management component of the Resource Management Plan (see Section 2.6 of the Newhall Ranch Specific Plan). In addition, the River Trail is separated from the natural resources by fencing or other barriers to discourage intrusion into natural areas. Based on the above, the project is considered consistent with these policies.

Please refer to this EIR, **Section 4.4, Biota**, for additional information on the sensitive biological resources found on and in the vicinity of the proposed project.

Policy 3.21: SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

Analysis: Please refer to this EIR, **Section 4.22, Cultural/Paleontological Resources**, for information on cultural and archaeological resources on the project site and any measures required by *CEQA Guidelines* or other regulatory provisions necessary to protect them.

Policy 3.22: SCAG shall discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.

Policy 3.23: SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

Analysis: The Landmark Village tract map site is flat and site development would not expose people to hazards associated with steep slopes. As with all areas in Southern California, the site is subject to seismic hazards associated with local and regional fault systems and uses on the site would be subject to building codes addressing seismic hazards. The site is located adjacent to the Santa Clara River and portions of the site are within the Federal Emergency Management Act (FEMA) 100-year flood boundary. The project contains a drainage concept that would protect people and development from flood hazards. In addition, the Los Angeles County Fire Department designates the project site as Zone 4, High Fire Hazard, so the project would be subject to Section 1117.2.1 of the County Fire

Code, which requires preparation of a fuel modification plan, landscape plan, and irrigation plan for developed areas.

The proposed project has been designed consistent with the Land Use Plan component of the Newhall Ranch Specific Plan. Less sensitive Commercial and Medium-Density residential uses are planned along SR-126. In addition, mitigation measures have been incorporated into this EIR that will minimize impacts to those residential units closest to SR-126, San Martinez Grande, and Chiquito Canyon Road.

As described above under Policy 3.20, the Landmark Village tract map site is disturbed from ongoing agricultural activity but is located adjacent to sensitive resources in the River Corridor SMA/SEA 23. The project itself has been designed to minimize impacts to sensitive resources. Where necessary, mitigation measures have been proposed, which would reduce impacts to sensitive biological and ecological resources to the extent feasible.

In summary, hazards to the project associated with wildfires, flooding and seismic events would be reduced to less than significant levels through compliance with building and fire codes, as required by the County of Los Angeles. Impacts associated with roadway noise and disturbance to natural resources are addressed through site design and implementation of recommended mitigation measures in this EIR. Please refer to this EIR, **Section 4.1, Geotechnical and Soil Resources; Section 4.2, Hydrology; Section 4.4, Biota; Section 4.8, Noise; and Section 4.14, Fire Protection Services**, for additional information on the Landmark Village development plans.

The Growth Management Chapter also includes a goal to provide social, political, and cultural equity. This goal avoids economic and social polarization by promoting a regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended to guide direction of this goal, and does not, however, infer regional mandates and interference with local land use powers. Applicable policies related to this RCPG goal include:

Policy 3.24: Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluating in the Regional Housing Needs Assessment.

Policy 3.27: Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and

effective services such as: public education, housing, health care, social services, recreational services, law enforcement, and fire protection.

Analysis: SCAG prepares the Regional Housing Needs Assessment (RHNA) for a six-county region that includes Ventura, Los Angeles, San Bernardino, Riverside, Orange and Imperial Counties and some 150 local governments. The RHNA defines the housing need allocation for each member local government in Southern California, including Los Angeles County. This total need is divided into housing construction need for households in four broad income categories: very low (households making less than 50 percent of median-family income), low (50–80 percent of median-family income), moderate (80–120 percent of median-family income), and above moderate (more than 120 percent of median-family income). For the unincorporated area, this need has been determined to be 9,019 units of very low-income housing, 7,519 units of low-income housing, 9,859 units of moderate-income housing, and 25,835 units of above moderate-income housing.

Section 3.10 of the adopted Newhall Ranch Specific Plan includes an Affordable Housing Program that provides for the direct inclusion of very low, low, and moderate income affordable housing opportunities within the Specific Plan area. At buildout, a total of 2,200 affordable dwelling units would be provided. The Affordable Housing Program includes timing mechanisms and monitoring provisions to ensure that affordable housing is provided concurrent with market rate housing. The applicant is required to identify the number and location of affordable housing units as a condition of tentative or final map approval.

The Landmark Village project proposes a total of 1,444 dwelling units. Approximately 296 units located in the project's Medium Residential, High Residential, and Mixed-Use land use categories would be set aside as affordable under the Affordable Housing Program of the Newhall Ranch Specific Plan. An affirmative marketing program consisting of advertising in newspapers, information flyers, promotional materials, and on-site signage would be used to assure opportunities for local residents. The variety of housing types proposed for the project site, combined with implementation of a portion of the Newhall Ranch Affordable Housing Program, will serve to assist in meeting the County's housing needs, which cover all levels of the economic spectrum.

The Landmark Village project would implement the first phase of the Newhall Ranch Specific Plan, which is a balanced community containing the full range of community

and social services. The Landmark Village project site is currently served by one fixed-route transit line (Route 2). The route passes the project site via SR-126 and provides service to the Newhall Metrolink Station, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. Buses run every 30 minutes. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are Soledad Entertainment Center, Newhall, Newhall Metrolink Station, Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde. Close proximity of the project site to regional transportation modes provides greater opportunity for all members of society access to public education, housing, health care, social and recreational services (provided within and outside of the project), law enforcement, and fire services.

(b) Regional Mobility Chapter/Regional Transportation Plan

The Regional Mobility Chapter is a summary of another SCAG document entitled, Regional Mobility Element (RME). The RME, originally adopted in 1994, is the principal transportation policy, strategy, and objective statement of SCAG, proposing a comprehensive strategy for achieving mobility and air quality mandates. The RME is also referred to as the Regional Transportation Plan (RTP), and it serves as both the federal- and state-required regional long-range transportation plan for the SCAG region. The RTP was most recently updated in 2001. The RTP is the guide for developing the federal and state Regional Transportation Improvement Program (RTIP), which is a seven-year program for regional transportation improvements for highways, transit, and aviation. The RTIP is aimed at improving the overall efficiency and people-moving capabilities of the existing transportation system.

The Regional Mobility Chapter links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic, and commercial limitations.

Goals relevant to the Landmark Village project are listed below along with an analysis of the project's consistency with them.

Goals:

- Transportation investments shall be based on SCAG’s adopted Regional Performance Indicators:

Mobility – Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, faster and economical movement of people and goods.

- Average Work Trip Travel Time in Minutes – 25 minutes (Auto)
- PM Peak Freeway Travel Speed – 45 minutes (Transit)
- PM Peak Non-Freeway Travel Speed
- Percent of PM Peak Travel in Delay (Freeway)
- Percent of PM Peak Travel in Delay (Non-Freeway)

Accessibility – Transportation system should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

- Work Opportunities within 45 minutes door to door travel time (Mode Neutral)
- Average transit access time

Environment – Transportation system should sustain development and preservation of the existing system and the environment. (All Trips).

- CO, ROG, NO_x, PM₁₀, and PM_{2.5} – Meet the applicable SIP Emission Budget and the Transportation Conformity requirements.

Reliability – Transportation system should have reasonable and dependable levels of service by mode. (All Trips).

- Transit – 63%
- Highway – 76%

Safety – Transportation systems should provide minimal accident, death, and injury. (All Trips).

- Fatalities Per Million Passenger Miles – 0
- Injury Accidents – 0

Equity/Environmental Justice – The benefits of transportation investments should be equitably distributed among all ethnic, age, and income groups. (All Trips).

- By Income Groups Share of Net Benefits – Equitable Distribution of Benefits among all Income Quintiles

Cost-Effectiveness – Maximize return on transportation investments. (All Trips) Air Quality, Mobility, Accessibility, and Safety.

- Return on Total Investment – Optimize return on Transportation Investments
- Transportation investments shall mitigate environmental impacts to an acceptable level.

Analysis: The Landmark Village tract map is proposed to accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers. Because the project has been designed to provide housing that would support existing and new employment opportunities that are projected to occur in the Santa Clarita Valley, it could reduce travel distances and could create opportunities for employees to walk and bike to work, thereby reducing vehicle miles traveled (VMT). The project also includes a mobility system that includes alternatives to automobile use, such as an extensive pedestrian, equestrian and bicycle trail system. The trails provide linkages from homes at the site to important destinations within the community, such as the school and park, recreation centers, and nearby commercial developments. The project would provide safe and convenient access to the local bus system and to the Metrolink commuter train station in Newhall. By providing for convenient access to public transit opportunities, the project would help to minimize travel time to work.

The proposed project would preserve the environment by providing for needed housing and opportunities to work closer to home. The shorter travel distances will reduce VMT and associated emissions by shortening the distance between home and work and providing safe and convenient access to public transit opportunities. Please refer to this EIR, **Section 4.7, Traffic/Access**, and **Section 4.9, Air Quality**, for a further discussion of traffic and air quality impacts associated with project-related traffic.

A traffic study for the Landmark Village project has been prepared and is discussed fully in this EIR, **Section 4.7, Traffic/Access**. The study evaluates project-related, as well as long-term, Santa Clarita Valley buildout traffic impacts on local and regional road networks.

The project includes a number of on- and off-site transportation system management actions, such as traffic signals and intersection improvements to speed the flow of traffic. Mitigation measures are proposed for traffic improvements and traffic signals, and comply with the requirements of the County's Congestion Management Program (discussed below). As a result, the project is consistent with these RTP policies.

(c) **Air Quality Chapter**

The Air Quality Chapter of the RCPG is intended to facilitate an improved standard of living by encouraging sustained economic growth along with an improvement in air quality through the creation of new industries and products required to achieve cleaner air and by providing adequate transportation for all residents while meeting clean air goals.

The project's consistency with the requirements of the South Coast AQMP is discussed later in this section. As stated in the Air Quality Chapter, SCAG is responsible for preparing and approving the portions of the AQMP which relate to the following: regional demographic projections and integrated regional land use; housing, employment, and transportation programs; control measures; and strategies.

The RCPG Air Quality Chapter core actions related to the proposed project include the following:

Goal 5.07: Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle miles traveled/emissions fees) so that options to command and control regulations can be assessed.

Goal 5.11: Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land use, transportation, and economic relationships to ensure consistency and minimize conflicts.

Analysis: The Landmark Village tract map site proposes the construction of an arterial street/infrastructure system and a network of pedestrian and bicycle trails that would provide for local travel by a combination of transportation modes, including bicycles, walking, bus transit, commuter rail service, and automobiles. The project also incorporates bus pull-ins, as necessary, to accommodate bus-related transit and proposes to fund its fair share of infrastructure improvements required off site through the payment of fees. As indicated in this EIR, **Section 4.7, Traffic/Access**, funding and construction of main-line freeway capacity (i.e., I-5 and SR-14) and interchanges with other regional highways (i.e., I-5 at SR-126) is provided by existing sources of tax revenue and by Caltrans through allocations made by the Metropolitan Transportation Authority (MTA). Existing funding sources include state and federal gas taxes and Los Angeles County Proposition A and C sales taxes. As transportation improvements are constructed over the life of the project, the desire to improve air quality while providing

adequate transportation infrastructure can be facilitated. Consequently, the project favorably addresses this issue.

As indicated above, the project proposes a pattern of development that includes a wide range of housing unit types and job-creating uses. These uses would be linked by an arterial street system and a pedestrian and bicycle trails network that provide for local travel by a combination of transportation modes, including bicycles, walking, bus transit, and automobiles. The project has been designed to provide future residents of the site with employment opportunities and services within proximity to the project, through the inclusion of the commercial site. Access to the community-wide trail system promotes an efficient means of access to these uses; therefore, VMT and air pollutant emissions can be minimized. Furthermore, the project is located in close proximity and adjacent to existing job centers (e.g., Valencia Commerce Center, Industrial Center, Town Center, and Corporate Center) which would help to reduce the need for long commutes from the site to more distant employment centers in Ventura County, the San Fernando Valley, and beyond. As a result, VMT and, consequently, air pollution emissions would be minimized. Based on this information, the proposed project favorably addresses the above-noted air quality core actions.

For detailed discussion of this project's AQMP consistency, refer to this EIR, **Section 4.9, Air Quality**.

(d) Water Quality Chapter

The stated purpose of this chapter is to provide a regional perspective on current water quality issues and the plans and programs for addressing these issues. In addition, the chapter identifies the current water quality goals and objectives for the region under existing law and provides a framework for ensuring that growth in wastewater treatment capacity is consistent with regional growth projections. The specific objectives for water quality in the region are identified in the various Regional Water Quality Control Board (RWQCB) *Water Quality Control Plans* (Basin Plans), discussed later in this section.

The two primary goals are:

1. To restore and maintain the chemical, physical, and biological integrity of the nation's water (federal Clean Water Act); and
2. To achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters (state Porter-Cologne Water Quality Act).

The Water Quality Chapter contains the following policy that is pertinent to the proposed project:

Policy 11.07: Encourage water reclamation throughout the region where it is cost effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.

Analysis: The Landmark Village tract map site proposes the use of reclaimed water for landscape irrigation purposes, consistent with the Public Services and Facilities Plan of the Newhall Ranch Specific Plan. The project is considered consistent with this policy. For more information see this EIR, **Section 4.11, Wastewater Disposal**.

(e) Hazardous Waste Chapter

The Hazardous Waste Management Core Chapter is designed to assist the region's counties and cities in their efforts to plan for current and future hazardous waste management requirements and, as such, it is not applicable at the individual project level. If hazardous wastes are generated during the construction process, compliance with applicable codes and the National Pollutant Discharge Elimination System (NPDES) requirements will mitigate potential hazards and, therefore, the project is considered consistent with this chapter. For more information regarding hazardous waste management policies, see this EIR, **Section 4.21, Environmental Safety**.

(f) Open Space Chapter

The following policies, related to the proposed project's relationship to outdoor recreation, public health and safety, and resource protection, are identified in the Open Space Chapter of the RCPG.

Policy 9.02: Increase the accessibility to open space lands for outdoor recreation.

Policy 9.03: Promote self-sustaining regional recreation resources and facilities.

Analysis: The Landmark Village tract map site provides a variety of open space for both passive and active recreation. Consistent with the Specific Plan's Community Park Land Use Overlay designation, the project provides a 16-acre Community Park that contains both active and passive recreational areas. The project also implements a segment of the Regional River Trail and Community Trails identified in the Specific Plan's Master Trails Plan. A river outlook point is located in the passive area of the Community Park, which is accessed by both the Regional River Trail and the Community Trail system. Thus, the proposed project is considered consistent with outdoor recreation and public health and

safety policies identified in the Open Space Chapter of the RCPG. For more information regarding open space and recreational land uses, please see **Section 4.16, Parks and Recreation**, in this EIR.

Policy 9.04: Maintain open space for adequate protection of lives and properties against natural and man-made hazards.

Policy 9.05: Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.

Analysis: Open spaces proposed within the Landmark Village project site would be maintained and owned by a Homeowners Association or the County of Los Angeles to ensure that open space areas protect both persons and properties against natural and manmade hazards. Implementation of geotechnical reports and drainage concepts as well as review of plans by the Los Angeles County Sheriff and Fire Departments will ensure that development located in areas susceptible to flooding, earthquakes, and wildfire hazards are constructed and situated so as to minimize and avoid potential hazards. Subsequently, the proposed project is considered consistent with Policies 9.04 and 9.05 of the Open Space Chapter of the RCPG. For more information about development plans to minimize potential hazards, please see this EIR, **Section 4.1, Geotechnical and Soil Resources**, and **Section 4.2, Hydrology**.

Policy 9.07: Maintain adequate viable resource production land, particularly lands devoted to commercial agriculture and mining operations.

Analysis: The Landmark Village tract map site is presently cultivated with row crops. Site development as proposed would result in the loss of 292 acres of active farmland. The economic and agricultural productivity of the Landmark Village site is constrained, as the property is isolated from nearby agricultural lands by the presence of SR-126 and the Santa Clara River. The loss of 292 acres of agricultural land for development of Landmark Village represents a significant unavoidable impact that was considered in the CEQA Findings adopted by the County Board of Supervisors for the Newhall Ranch Specific Plan.

A number of overriding economic, legal, social technological and other considerations were identified in the Statement of Overriding Considerations to determine that these

benefits outweighed the loss of this agricultural land. The Landmark Village project is the first subdivision map filed under the Specific Plan.

Policy 9.08: Develop well-managed viable ecosystems or known habitats of rare, threatened, and endangered species, including wetlands.

Analysis: The Landmark Village project site has been designed to minimize direct and indirect impacts to the sensitive resources found within the River Corridor SMA/SEA 23. For example, the site plan incorporates a setback to separate natural resources in the River Corridor SMA/SEA 23 from the residential and mixed uses associated with the project. Where improvements must be constructed in the River Corridor SMA/SEA 23, they have been sensitively designed to minimize permanent disturbance. Mitigation measures have been incorporated into the proposed project (**Section 4.4, Biota**) to minimize impacts on the endangered species, which reside in the Santa Clara River. Consequently, the proposed project is considered consistent with Policy 9.08 of the Open Space Chapter of the RCPG.

(2) Air Quality Management Plan

The intent of the AQMP is to establish a comprehensive program that will result in the achievement of federal and state air quality standards. The Landmark Village site is located in the SCAB, which, at the time of this writing, fails to meet the National Ambient Air Quality Standards (NAAQS) established under the federal Clean Air Act. The SCAB is classified by the U.S. Environmental Protection Agency (U.S. EPA) as an extreme nonattainment area for ozone (the only area in the nation to be classified as such), a serious nonattainment area for CO and PM₁₀, and a nonattainment area for nitrogen oxide (NO₂).

The AQMP suggests that a determination of a project's consistency with the goals and policies of the AQMP can be measured against the "Population Number and Location"² projected for a given area. SCAG projects that the Santa Clarita Valley (including the proposed project site) will undergo sustained growth through the year 2020. As mandated by the federal Clean Air Act (Section 176(c), 42 U.S.C. (Section 7506), SCAG is the responsible agency for providing current population estimates, which are then used to investigate how population increases are accommodated, and whether the project is planned in a way that results in the minimization of VMT, and consequently air pollutant emissions, so that the project is consistent with the AQMP.³

² South Coast Air Quality Management District. *CEQA Air Quality Handbook* (Diamond Bar, California: South Coast Air Quality Management District, April 1993), Table 12-2, p. 12-5.

³ Ibid.

Analysis: The Landmark Village tract map site is proposed to contain a range of housing unit types and some limited job creating uses. Such uses would occur adjacent to the extension of Long Canyon and Wolcott Roads, which are linked by an arterial street system and a pedestrian and bicycle trails network that promote efficient local travel by a combination of transportation modes including bicycles, walking, bus transit, and automobiles. Because the project has been designed to provide future residents of the site with parkland, open space, and access to trails, VMT and air pollutant emissions can be minimized. Furthermore, the project is located near existing job centers (e.g., Valencia Commerce Center, Industrial Center, Town Center and Corporate Center), which helps preclude long commutes from the site to more distant employment centers in Ventura County, the San Fernando Valley and beyond; VMT and air pollutant emissions can then be further minimized. Based on this information, the proposed project is considered consistent with the AQMP.

The AQMP consistency analysis presented in the Newhall Ranch Specific Plan Program EIR fully evaluated the Newhall Ranch Specific Plan against the standards of consistency that apply to the AQMP in effect at that time and found the Specific Plan to be consistent. Since that time, a new AQMP (2003) has been adopted for the SCAB. Because of the new AQMP, an update will be provided to the previous analysis conducted in the Newhall Ranch Specific Plan Program EIR. Please refer to this EIR, **Section 4.9, Air Quality**, for a consistency analysis against the 2003 AQMP.

(3) Water Quality Control Plan (Basin Plan)

The *Basin Plan*, which includes the Santa Clara River and its watershed in the Los Angeles Region, is designed to preserve and enhance water quality and to protect the beneficial uses of all regional waters. This plan has not been updated since the 1995 version relied upon by the Newhall Ranch Specific Plan Program EIR. Therefore, based on *CEQA Guidelines* Section 15385, this analysis incorporates by reference the discussions and analysis contained in the Newhall Ranch Specific Plan Program EIR pertaining to the Basin Plan.

A consistency analysis was presented in the Newhall Ranch Specific Plan Program EIR, which fully evaluated the Specific Plan against the goals, objectives, and policies of the Basin Plan. Given that the proposed Landmark Village project is consistent with the goals, objectives, and land use designations contained in the Specific Plan, prior consistency analysis is still accurate and Landmark Village would not have any effects that were not previously examined in the Newhall Ranch Specific Plan Program EIR.

Please see this EIR, **Section 4.2, Hydrology**, and **Section 4.3, Water Quality**, for more detailed discussion of how the project would comply with the Basin Plan's water quality requirements.

(4) Congestion Management Program

The CMP was enacted by the State Legislature to address traffic congestion in California's urbanized counties. The Legislature noted that the existing transportation system relies upon an overcrowded street and highway system that impacts the economic vitality of the state and diminishes the quality of life in many communities. The current CMP for Los Angeles County was adopted in 2002, and it is required by law to be updated biennially.

An overview of the background, purposes, and goals of the CMP is incorporated by reference from the Newhall Ranch Specific Plan Program EIR. Several CMP roadways exist within the vicinity of Newhall Ranch including SR-126 and I-5. SR-126 is designated by the CMP as a State Highway (Arterial), and I-5 is designated as a State Freeway. The CMP consistency analysis presented in the Newhall Ranch Specific Plan Program EIR fully evaluated the Newhall Ranch Specific Plan and found the Specific Plan to be consistent with the 1995 CMP. Since that time, a more recent CMP (2004) has been adopted for Los Angeles County. Because of the new plan, an update will be provided to the previous analysis conducted in the Newhall Ranch Specific Plan Program EIR. Please refer to this EIR, **Section 4.7, Traffic/Access**, for a consistency analysis against the 2004 CMP.

(5) Water Supply Laws and Regulations

The following laws and regulations govern water supply for the Landmark Village tract map site. As stated above, CLWA is the wholesale public water agency for the Santa Clarita Valley, and Valencia Water Company is the retail water company that will serve the Landmark Village tract map site.

(a) Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMP Act) is found in the California Water Code, Division 6, Part 2.6, commencing with Section 10610. The UWMP Act requires most water utilities to update and submit to the Department of Water Resources (DWR) an Urban Water Management Plan (UWMP) every five years. A UWMP is required in order for a water supplier to be eligible for the DWR-administered state grants and loans and drought assistance. The UWMP requires information on water usage and demand, water supplies, recycled water, water quality, reliability planning, demand management measures, best management practices, and water shortage contingency planning. CLWA, Newhall County Water District, CLWA Santa Clarita Water Division, and Valencia Water Company jointly prepared the 2005 UWMP for the CLWA service area, which includes the service areas of the local

retail water purveyors. The 2005 UWMP was approved by CLWA and the local water purveyors in December 2005 (see **Appendix 4.10**). The regional 2005 UWMP builds upon previous documents, specifically the 2000 UWMP, as amended in 2005 by the “Groundwater Perchlorate Contamination Amendment and Other Amendments.”

The adopted 2005 UWMP is the subject of a legal challenge filed in Ventura County Superior Court (*California Water Impact Network, et al. v. Castaic Lake Water Agency, et al.*, Civ. No. CIV-239359) on February 27, 2006. The 2005 UWMP remains valid while the litigation is pending; however, the litigation nonetheless creates uncertainty over the ultimate validity of that plan.

Please refer to **Section 4.10, Water Service**, of this EIR for information on the Landmark Village project water demand and supplies. This section refers to the 2005 UWMP, but does not rely only on that plan for water use, demand and supply information for the Santa Clarita Valley. Instead, the Landmark Village **Water Service** section evaluated the existing conditions, potential impacts, and mitigation measures associated with the supply of water to the Landmark Village project site based on numerous documents addressing water use, demand, and supply in the Santa Clarita Valley. These documents are referenced under the **Existing Conditions** heading in **Section 4.10, Water Service**, of this EIR. In addition, copies of the referenced documents are provided in **Appendix 4.10** of this EIR.

(b) Water Requirements (Senate Bill 610/Water Code Section 10910)

In 2001, the California Legislature amended legislation concerning water supply planning efforts in the State of California. Codified at Water Code Section 10910 *et seq.*, the law coordinates local water supply and land use decisions to assist California’s cities and counties with respect to water supplies. Section 10910 requires cities and counties to prepare Water Supply Assessments (WSA) when considering approval of certain development projects in order to determine whether projected water supplies can meet the project’s anticipated water demand, in conjunction with other planned and future water demands. The projects for which WSAs must be prepared include (a) a residential development of more than 500 dwelling units; (b) a shopping center or business employing more than 1,000 people or having more than 500,000 square feet of floor space; (c) a commercial office building employing more than 1,000 people or having more than 250,000 square feet; (d) a hotel or motel with more than 500 rooms; (e) an industrial or manufacturing establishment housing more than 1,000 people or having more than 650,000 square feet or 40 acres; (f) a mixed-use project containing any of the foregoing; or (g) any other project that would have a water demand at least equal to a 500-dwelling-unit project.

The WSA, which also is required as part of the CEQA process, must include identification of existing water supply assessments, water rights, or water service contracts relevant to the identified water supply

for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. If the water demand for the proposed development has been accounted for in a recently adopted UWMP, the water supplier may incorporate information contained in the UWMP to satisfy certain requirements of a WSA. If a water supply for a proposed project includes groundwater, additional groundwater-related information must also be included in the WSA.

Because the proposed Landmark Village tract map site includes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units) and 1,033,000 square feet of mixed-use/commercial uses, the proposed project meets the above-described requirements for preparation of a WSA. The WSA for the Landmark Village project was prepared by Valencia Water Company. A copy of the WSA, which is incorporated by this referenced, is included in **Appendix 4.10** of this EIR.

(c) Additional Water Requirements (Senate Bill 221/Government Code Section 66473.7)

In 2001, the California Legislature amended the Subdivision Map Act to include water supply and availability conditions for certain map approvals. Codified at Government Code Section 66473.7, in general, a legislative body of a city or county that is considering a tentative map for a proposed residential development subdivision of more than 500 dwelling units must include a map condition requiring that a sufficient water supply be available to satisfy the demands of the proposed subdivision. Under the law, “sufficient water supply” means the total water supplies available during normal, single-dry and multi-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. Proof of the availability of a sufficient water supply must be based on a “written verification” from the applicable water supplier. This written water verification is the mechanism for satisfying the map condition.

Because the proposed Landmark Village tract map site includes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units), the proposed project meets the above-described requirement for a tentative map condition requiring verification of a sufficient water supply. Valencia Water Company is the retail water supplier that will serve the Landmark Village tract map site; and, therefore, Valencia will provide the required water verification in order to comply with the Landmark Village tentative map condition.

3.0 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

1. PURPOSE

The purpose of this section is to explain the methodology for the cumulative project analysis presented in this EIR. This section is important because, in many cases, the impact of a single project may not be significant, but when combined with other projects the “cumulative” impact may be greater. Section 15355 of the California Environmental Quality Act (CEQA) Guidelines defines “cumulative impacts” as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” CEQA Guidelines Section 15130(b) states, “[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.”

Substantial cumulative impacts often result from the combined effect of past, present, and future related projects that are located in proximity to the project under review. For example, the wastewater demand generated by a proposed project may not be significant when analyzed alone; however, when analyzed in combination with wastewater demand of other approved or proposed related projects, the wastewater demands may exceed the resource capabilities of the wastewater agency, resulting in a significant cumulative impact. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments, which may have impacts that might compound or interrelate with those of the project under review. Furthermore, the cumulative impact analysis is an important part of an EIR as it allows the environmental analysis to provide a more complete forecast of future environmental conditions and show the impacts of all known related projects.

2. CUMULATIVE GROWTH FORECASTING METHODOLOGY

In order to analyze the cumulative impacts of the project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the *CEQA Guidelines* allows two methods of prediction: “(A) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions.” In order to analyze a worst-case condition, this EIR uses a combination of both methods to provide a reasonable and comprehensive estimate of cumulative impacts.

For this EIR, some impact analysis sections present two separate cumulative development scenarios:

- Development Monitoring System (DMS) Build-Out Scenario; and
- Santa Clarita Valley (SCV) Cumulative Build-Out Scenario (a summary of projections and DMS).

The environmental issue areas addressed with the DMS analysis include water services, wastewater disposal, education, fire, traffic, and library services. This scenario is discussed further under **Subsection a., DMS Build-Out Scenario**, below.

It should be noted that the list of cumulative projects (please see **Appendix 3.0, Development Monitoring System Database**) used in this EIR to assess cumulative impacts is an ever-changing dynamic list. From time to time the list is increased or decreased as specific development proposals are applied for, changed, withdrawn, approved, or denied by the City of Santa Clarita and the County of Los Angeles (County). An attempt has been made to be as current as possible in compiling cumulative projects lists; however, it is possible that the lists maintained by the City of Santa Clarita and County of Los Angeles will change even further while this EIR is under public review. To account for possible changes in City/County project filings that might occur prior to or during this EIR's public review, the cumulative analysis used in this EIR incorporates an additional unfiled 400 dwelling units. The unfiled units have been accommodated by including them in the City of Santa Clarita and the County of Los Angeles SCV Consolidated Traffic Model.

a. DMS Build-Out Scenario

Added to housing units already existing in the SCV, the first scenario (herein referred to as the "DMS Build-Out Scenario") entails buildout of subdivision projects listed in the County's DMS plus the proposed project.¹ DMS data used for this analysis include all pending, recorded, and approved projects for which land divisions have been filed within the City of Santa Clarita and County unincorporated lands as of October 2003. The City plus County unincorporated area together constitute the County's SCV Planning Area, the area for which DMS is run. A build-out scenario of the SCV Planning Area based on the development in DMS is presented in **Table 3.0-1, DMS Build-Out Scenario – Santa Clarita Valley**

¹ The Los Angeles County General Plan includes provisions known as the "Development Monitoring System" to give decision makers information about the existing capacity of available public services at the time a new development proposal is considered in the four major Urban Expansion Areas of the Los Angeles County General Plan (Antelope Valley, Santa Clarita Valley, Malibu/Santa Monica Mountains, and East San Gabriel Valley). The goal of DMS is to identify the new public facilities that will be required for new development, and to ensure that the appropriate cost of any expansion of facilities will be paid for by that new development, and not assumed by existing taxpayers. For further discussion of the County's DMS, please refer to the Newhall Ranch Specific Plan Program EIR (March 1999), at Section 2.0, Environmental and Regulatory Setting, pp. 2-18–19.

Planning Area With and Without Project (refer to **Appendix 3.0**, for detailed calculations). The listings presented in **Table 3.0-1** do not include General Plan Amendment requests (the SCV Cumulative Build-Out Scenario, which follows, includes General Plan Amendment requests). **Table 3.0-2, DMS Implementation**, provides a summary of the County's implementation of DMS.

Table 3.0-1
DMS Build-Out Scenario – Santa Clarita Valley Planning Area With and Without Project

| Land Use Types | DMS Buildout w/o Landmark Village ¹ | Landmark Village | DMS Buildout w/ Landmark Village ¹ |
|--------------------------------|--|-------------------|---|
| Single-Family | 62,472 du | 308 du | 62,780 du |
| Multi-Family | 29,037 du | 1,136 du | 30,173 du |
| Mobile Home | 1,818 du | | 1,818 du |
| Commercial Retail | 8,847,337 sq. ft. | 1,033,000 sq. ft. | 9,880,337 sq. ft. |
| Hotel | 670 rooms | | 670 rooms |
| Sit-Down Restaurant | 146,340 sq. ft. | | 146,340 sq. ft. |
| Fast Food Restaurant | 15,100 sq. ft. | | 15,100 sq. ft. |
| Movie Theater | 3,300 seats | | 3,300 seats |
| Health Club | 54,000 sq. ft. | | 54,000 sq. ft. |
| Car Dealership | 300,000 sq. ft. | | 300,000 sq. ft. |
| Hospital | 222,800 sq. ft. | | 222,800 sq. ft. |
| Library | 129,110 sq. ft. | | 129,110 sq. ft. |
| Church | 323,190 sq. ft. | | 323,190 sq. ft. |
| Industrial Park | 19,042,611 sq. ft. | | 19,042,611 sq. ft. |
| Business Park | 3,100,321 sq. ft. | | 3,100,321 sq. ft. |
| Manufact./Warehouse | 3,006,821 sq. ft. | | 3,006,821 sq. ft. |
| Utilities | 1,037,240 sq. ft. | | 1,037,240 sq. ft. |
| Commercial Office | 4,086,541 sq. ft. | | 4,086,541 sq. ft. |
| Medical Office | 133,730 sq. ft. | | 133,730 sq. ft. |
| Golf Course | 345.0 ac | | 345.0 ac |
| Developed Parkland | 110.1 ac | 16 ac | 126.1 ac |
| Special Generator ² | 296.0 sg | | 296.0 sg |

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

¹ Los Angeles County Department of Regional Planning, Service Provider Report (October 12, 2003) using data for the William S. Hart Union High School District, which encompasses the SCV Planning Area. Includes existing development as contained in the SCV Consolidated Traffic Model, (November 2002).

² Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.

**Table 3.0-2
DMS Implementation**

| DMS Issues | County Review/ Implementation |
|-----------------------------------|---|
| Geotechnical Hazards/Grading | Not identified by DMS. Geotechnical Studies/Mitigation, Conditions of Approval, Building Permit. |
| Flood/Drainage | Not identified by DMS. Hydrology Study/Mitigation, Conditions of Approval, Building Permit, National Pollutant Discharge Elimination System (NPDES) Permit. |
| Traffic/Access | Project must meet criteria and implement one or more of the mitigation measures identified. Traffic Study, Joint City/County Bridge/ Thoroughfare District, General Plan/Mitigation, Conditions of Approval, Building and Improvement Permits. |
| Air Quality | Not identified by DMS. Air Quality Report/Mitigation, Conditions of Approval. |
| Noise | Not identified by DMS. Noise Study/Mitigation, Conditions of Approval. |
| Biota/SEA/River | Not identified by DMS. SEATAC, Biological Study, Mapped Line, Mitigation. |
| Cultural Resources | Not identified by DMS. Cultural Resources Report/Mitigation, Conditions of Approval and Monitoring during grading. |
| Visual Resources | Not identified by DMS. Specific Plan/Mitigation, Conditions of Approval. |
| Water Services | DMS Analysis (Determination of adequate water supply). Mitigation, Conditions of Approval. |
| Wastewater | DMS Analysis (Annexation into Sanitation District service area, pay sewage connection fee as a Condition of Approval/Mitigation). |
| Solid Waste | Not identified by DMS. SRRE, HHWE/Conditions of Approval/Mitigation. |
| Utilities: Energy Resources | Not identified by DMS. Mitigation, Building plan review. |
| Education | DMS Analysis Fees per SB 50 or other applicable state fees/ Mitigation, Conditions of Approval. |
| Library Services | DMS Analysis (\$640.00/dwelling unit County Library fee/ Mitigation, Conditions of Approval. |
| Fire Protection | Meet service criteria, pay Fire Facilities Fee Program/ Mitigation Conditions of Approval. |
| Parks and Recreation | Conditions of Approval/Mitigation Not identified by DMS. |
| Population/Housing/ Employment | Not identified by DMS. SCV Areawide Plan/Mitigation, Conditions of Approval. |
| Agricultural Resources | Not identified by DMS. SCV Areawide Plan/Mitigation. |
| Sheriff Services | Not identified by DMS. Conditions of Approval/Mitigation. |

| DMS Issues | County Review/ Implementation |
|------------------|---|
| Man-Made Hazards | Not identified by DMS. Conditions of Approval/Mitigation. |
| Oak Trees | Not identified by DMS. County Forester, Oak Tree Ordinance and Guidelines, Oak Tree Report/Mitigation, Conditions of Approval. |

b. Santa Clarita Valley Cumulative Build-Out Scenario

The second scenario (herein referred to as the “SCV Cumulative Build-Out Scenario”), which also adds to existing development, entails buildout of all lands under the current land use designations indicated in the Los Angeles County SCV Areawide Plan, the City of Santa Clarita General Plan, the proposed project, plus all known active pending General Plan Amendment requests for additional urban development in the City of Santa Clarita and County unincorporated area, including the proposed Chiquita Canyon Landfill Master Plan Revision.² Because this scenario combines both of the CEQA future development prediction methods (i.e., the listing of known projects, plus a summary of development projections from an adopted general plan), the SCV Cumulative Build-Out Scenario is considered a worst-case projection of future development activity. It also allows a comprehensive analysis of the infrastructure, services, and other impacts of the region’s buildout.

The source of data for the SCV Cumulative Build-Out Scenario is the November 2002 Santa Clarita Valley Consolidated Traffic Model, 2002 Update and Validation (SCVCTM), which was used in the traffic analysis. The SCVCTM was developed jointly by the City of Santa Clarita and the LACDPW and amended as necessary to include General Plan Amendment applications as they are submitted to the City and County. The modeled area extends easterly from the Los Angeles County/Ventura County line to where the Antelope Valley Freeway (SR-14) passes out of the SCV near Vasquez Rocks Park; northerly to the Grapevine area north of Castaic; and southerly to the confluence of the Interstate 5 (I-5) and SR-14 freeways south of Newhall Pass (this is the area that is the subject of the County’s SCV Areawide Plan).

In this EIR, the SCVCTM area is often referred to as the “Valley.” A list of the future development activity expected in the valley under the SCV Cumulative Build-Out Scenario is presented in **Table 3.0-3, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario with Project** (refer to **Appendix 3.0** for detailed calculations). The City of Santa Clarita General Plan can be reviewed

² This proposed project involves an application for a Conditional Use Permit (CUP) to expand the landfill footprint by approximately 102 acres within the existing site boundary. The project also requests to accept wastes such as water treatment and wastewater residue that are prohibited under the current CUP (89-091) approved in 1996, and to construct approved facilities under the existing CUP that were not yet constructed. The proposed revisions to the Landfill Master Plan would not change the existing maximum disposal rate that can be accepted at the landfill of 6,000 tons per day and 30,000 tons per week.

at the City of Santa Clarita, Community Development Department (Planning Division Public Counter), 23920 Valencia Boulevard, Suite 300, Santa Clarita, California, and the Los Angeles County SCV Areawide Plan can be reviewed at the County of Los Angeles Department of Regional Planning, 320 West Temple Street, Los Angeles, California. Both documents are incorporated by reference in this EIR.

**Table 3.0-3
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario
(Project Option)**

| Land Use Types | Cumulative Buildout w/o Project ¹ | Project | Cumulative Buildout w/ Landmark Village ¹ |
|--------------------------------|--|-------------------|--|
| Single-Family | 93,412 du | 308 du | 93,720 du |
| Multi-Family | 47,621 du | 1,136 du | 48,757 du |
| Mobile Home | 2,699 du | | 2,699 du |
| Commercial Retail | 18,866,030 sq. ft. | 1,033,000 sq. ft. | 19,899,030 sq. ft. |
| Hotel | 2,071 room | | 2,071 room |
| Sit-Down Restaurant | 283,790 sq. ft. | | 283,790 sq. ft. |
| Fast Food Restaurant | 23,600 sq. ft. | | 23,600 sq. ft. |
| Movie Theater | 3,300 seats | | 3,300 seats |
| Health Club | 54,000 sq. ft. | | 54,000 sq. ft. |
| Car Dealership | 411,000 sq. ft. | | 411,000 sq. ft. |
| Elem./Middle School | 278,590 students | 750 students | 279,340 students |
| High School | 12,843 students | | 12,958 students |
| College | 29,948 students | | 29,948 students |
| Hospital | 247,460 sq. ft. | | 247,460 sq. ft. |
| Library | 171,790 sq. ft. | | 171,790 sq. ft. |
| Church | 501,190 sq. ft. | | 501,190 sq. ft. |
| Day Care | 785,000 sq. ft. | | 785,000 sq. ft. |
| Industrial Park | 41,743,950 sq. ft. | | 41,743,950 sq. ft. |
| Business Park | 8,424,330 sq. ft. | | 8,424,330 sq. ft. |
| Manufact./Warehouse | 3,932,470 sq. ft. | | 3,932,470 sq. ft. |
| Utilities | 1,150,240 sq. ft. | | 1,150,240 sq. ft. |
| Commercial Office | 6,380,520 sq. ft. | | 6,380,520 sq. ft. |
| Medical Office | 133,730 sq. ft. | | 133,730 sq. ft. |
| Golf Course | 1,209.0 ac | | 1,238.0 ac |
| Developed Parkland | 477.3 ac | 16 ac | 493.3 ac |
| Undeveloped Parkland | 1,000.0 ac | | 1,000.0 ac |
| Special Generator ² | 413.0 sg | | 413.0 sg |

du = dwelling unit; sq. ft. = square feet; ac = acres; sg = special generator

¹ SCV Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan and SCV Areawide Plan, and active pending General Plan Amendment requests.

² Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.

3. CUMULATIVE IMPACT ANALYSIS METHODOLOGY

The specific group of projects that interact to produce cumulative impacts can differ from environmental topic to environmental topic. For example, the William S. Hart Union High School District serves the project site, but also serves a large area of unincorporated County land. The potential for cumulative high school impacts would be analyzed for that large area to account for a worst case analysis. On the other hand, the Castaic Union School District also serves the project site, but provides elementary school education to only a portion of the unincorporated County land. Thus, a smaller geographical area (and, therefore, a smaller amount of future growth) is analyzed for cumulative elementary school impacts in the Castaic Union School District. **Figure 3.0-1, Cumulative Impact Analysis Methodology**, illustrates this concept. The topics in this EIR that fit this type of service boundary-driven cumulative impact analysis methodology include: water resources; wastewater disposal; education; and libraries.

Other environmental impacts do not confine themselves to specific service boundaries. The relevant geographical area is subject to certain variables such as the current structure of the regional and local roadway system, variables in driving behavior, future modifications to the circulation system, and uncertainty with respect to the pace of buildout of other development projects that would affect the same elements of the circulation system. In this case, a conservative approach was taken and a wide study area was utilized. In these cases, the broad geographical area used is the SCVCTM Planning Area described above for the SCV Cumulative Build-Out Scenario. The topics in this EIR that fit this type of cumulative impact analysis methodology include: transportation/circulation; noise (because it relies on traffic data from the SCVCTM); population, housing, and employment; solid waste; and parks and recreation.

The potential cumulative effects relating to another group of environmental topics can be felt beyond the SCVCTM Planning Area referred to in the previous paragraph. For example, cumulative impacts on biological resources can occur regionally, particularly when sensitive resources that occur over a large regional context are involved. For instance, a freeway may be proposed in a way that cuts off the regional movement of animals from one large open area to another, thereby having a regional impact that is not restricted to a planning area, but likely affecting the biological environment in topographically-related areas. The topics in this EIR that fit this type of cumulative impact analysis methodology include flood, agricultural resources, and biota. As an example, biota cumulative impacts will be addressed in relation to not only the project site, but also to the river system. This discussion can be found in **Section 4.4, Biota**.

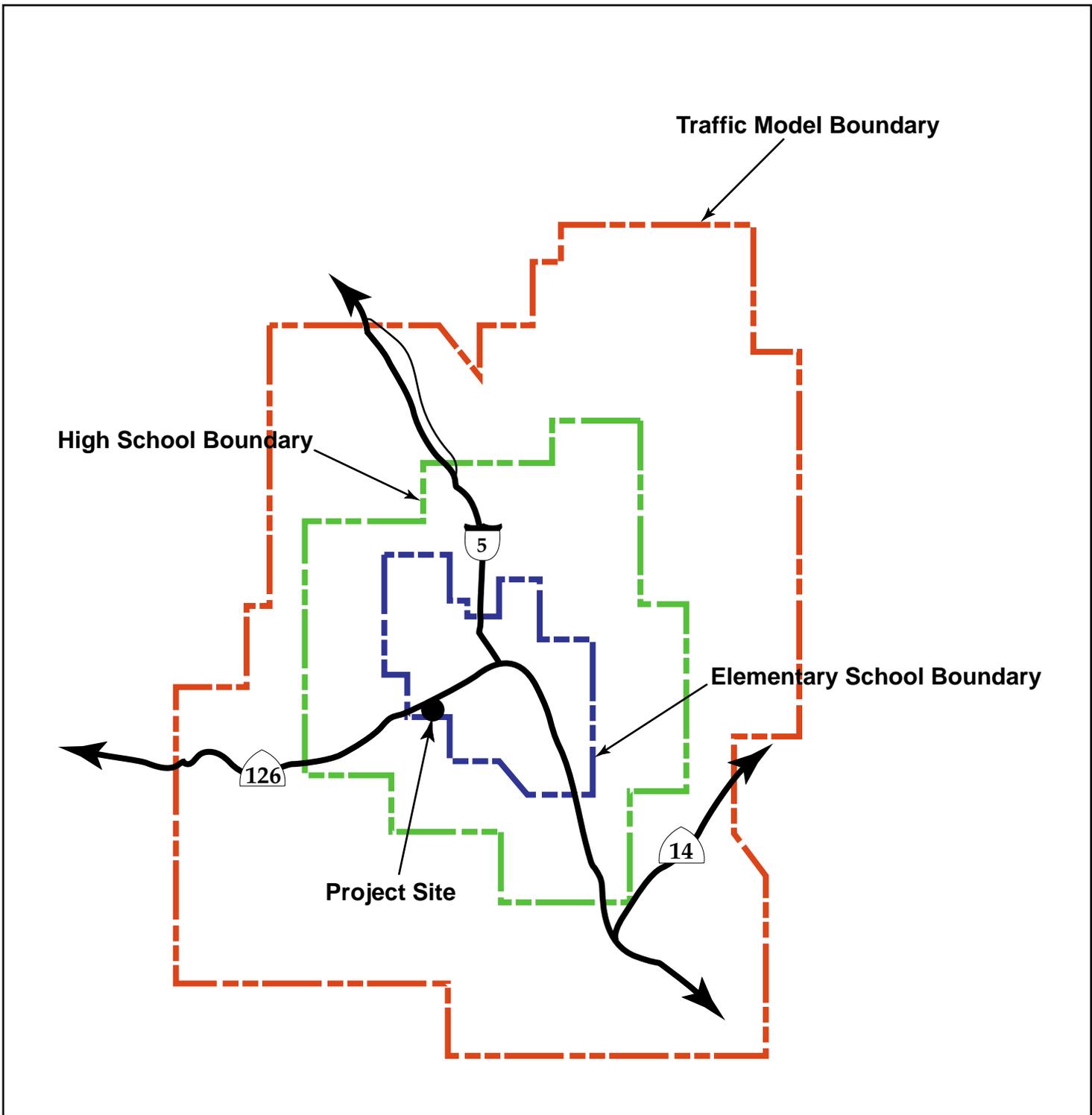
The assessment of cumulative air quality impacts relies on project-specific methods suggested by South Coast Air Quality Management District rather than the aforementioned growth predictions. The Air Quality Management District's methods are based on performance standards and emission reduction

targets necessary to attain the federal and state air quality standards identified in the *Air Quality Management Plan (AQMP)*. The 2003 *AQMP* was prepared to accommodate growth, to reduce the high levels of pollutants within the South Coast Air Basin, to meet state and federal air quality standards, and to minimize the fiscal impact pollution control measures have on the local economy. If the analysis shows that a project does not comply with the standards, then cumulative impacts are considered to be significant unless there is other pertinent information available to the contrary.³

Lastly, some cumulative impacts confine themselves to the project site. An example would be geotechnical impacts. For such impacts, the effects of two or more projects which occur at different locations are not affected by, and would not impact, the same piece of land. The topics in this EIR that fit this type of cumulative impact analysis methodology include: geotechnical resources; cultural/paleontological resources; and environmental safety.

The first step in evaluating cumulative impact potential is to predict the amount of future cumulative growth that is expected to occur. As indicated previously in this EIR section, such predictions have been completed under two growth scenarios, the DMS Build-Out Scenario and the SCV Cumulative Build-Out Scenario. Where the boundaries of an affected service district are precisely defined, the growth prediction was adjusted to estimate future growth on a district-by-district basis. Where boundaries are not as narrowly defined, the total cumulative growth prediction for the SCVCTM is utilized. For those impacts that are isolated to just the project site, the prediction of future growth beyond that proposed for the site or the expected tributary area is not needed. The database (growth predictions) used to assess cumulative impacts is provided in **Appendix 3.0** of this EIR.

³ The 2003 *AQMP* is available for public review at the County's Department of Regional Planning, 320 W. Temple Street, Los Angeles, California, and is incorporated by reference in this EIR.



Traffic Model Boundary

High School Boundary

Elementary School Boundary

Project Site

126

5

14

Legend:

- - - Traffic Model Boundary
- - - High School Boundary
- - - Elementary School Boundary

 NOT TO SCALE

Note: The boundary lines indicated are conceptual in nature as geographical parameters are continually modified and updated as a result of development agreements and the like.

SOURCE: Impact Sciences, Inc. – October 2004

FIGURE 3.0-1

4.0 ENVIRONMENTAL IMPACT ANALYSIS

PURPOSE

*This section provides information on the project site's existing conditions, project and cumulative impact potential, and cumulative mitigation measures (refer to EIR Sections 4.1, **Geotechnical and Soil Resources**, through 4.22, **Cultural/Paleontological Resources**). As proposed, Landmark Village would be developed over a five-year period. Mitigation measures are designed to reduce the project's impact potential. This section also describes the significant impacts which would occur after mitigation measures have been applied. Technical topics addressed in the EIR were defined by the Lead Agency through the Initial Study and Notice of Preparation process.*

4.1 GEOTECHNICAL AND SOIL RESOURCES

1. SUMMARY

Based on the analysis presented in this EIR section, there are no active faults, landslides, or surficial failures on or in close proximity to the Landmark Village project site, and the potential for earthquake-induced slope failures is considered negligible. Impacts associated with liquefaction and seismically induced settlement are considered less than significant. Due to the relative flatness of the project site, low liquefaction potential, subsurface soil stratigraphy, and proposed improvements in the river channel area, there would be no impacts relative to lateral spreading due to liquefaction. In addition, there would be no impacts relative to hydroconsolidation. However, unless mitigated, specific project-related significant geologic, soil, and geotechnical impacts could occur in the following areas:

- Along cut/fill and bedrock/alluvium contacts, there is a future potential hazard due to the combination of dynamic compaction and differential settlement, along with differential materials response;*
- Development of lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.);*
- The clay-rich bedding planes of the Saugus Formation may represent a potential hazard from secondary seismic movement along bedding planes;*
- Construction and development within areas of high groundwater;*
- Soil conditions on the project site that would affect construction practices on future site development include expansive soils, soils with shrink-swell potential, corrosive soils, and low cohesion soils;*
- Shallow weak soils;*
- High water tables requiring dewatering;*
- Low cohesion sands; and*
- Landslide potential at the Edison access road at the Chiquito Canyon grading site.*

Applicable mitigation measures to address these impacts were identified in the certified Newhall Ranch Specific Plan Program EIR. This EIR recommends additional mitigation measures specific to the Landmark Village project site. In summary, with implementation of the mitigation measures set forth in this section, the proposed project will not result in significant unavoidable geologic, soil, or geotechnical impacts.

*In compliance with Section 111 of the Los Angeles County Building Code, and according to the project geotechnical engineer (Seward), the site designated on the Geological/Geotechnical Maps, EIR **Figures 4.1-1 through 4.1-3**, is feasible for development, would be safe against hazards from landslide, settlement, or slippage, and development of*

the site would not affect off-site property, provided the mitigation measures identified in this section are adopted and implemented during project construction. With implementation of the identified mitigation measures, the proposed project's geologic, soil, and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.1 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with the geologic, soil, and geotechnical resources for the entire Newhall Ranch Specific Plan. The Newhall Ranch mitigation program was adopted by the County in its findings and in the revised Mitigation Monitoring Plans for both the Specific Plan and Water Reclamation Plant (WRP). The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant geologic, soil, and geotechnical impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. That EIR also determined that site-specific geologic, soil, and geotechnical analysis and evaluation would be required as the Specific Plan is implemented through the application and processing of tentative subdivision maps and other discretionary entitlements for Newhall Ranch. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted May 2003, and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.1** assesses the Landmark Village project's existing conditions, the project's potential environmental impacts, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR and any new mitigation measures recommended by this EIR.

b. References for this EIR Section

The technical analyses used in this section were prepared by Allan E. Seward Engineering Geology, Inc. (Seward).¹ The Seward technical reports prepared specifically for the Landmark Village project are as follows:

1. *Geologic and Geotechnical Report, Vesting Tentative Tract Map 53108, River Village, Newhall Ranch*, 2 volumes, September 27, 2000, Job No. 00-1702R-4 (see **Appendix 4.1**);

¹ Seward and R.T. Frankian & Associates were the consultants that performed the geotechnical reconnaissance and reporting associated with the Newhall Ranch Specific Plan Program EIR.

**Please refer to Figure 4.1-1, Geologic/Geotechnical Map,
in the accompanying map box.**

**Please refer to Figure 4.1-2, Adobe Canyon Geologic/Geotechnical Map,
in the accompanying map box.**

**Please refer to Figure 4.1-3, Chiquito Canyon Geologic/Geotechnical Map,
in the accompanying map box.**

2. *Geologic and Geotechnical Report – Addendum No. 1: Response to County Comments* (Review Sheets dated December 12, 2000 and January 2, 2001), Vesting Tentative Tract Map 53108, Map dated June 11, 2000, River Village, Newhall Ranch, February 10, 2001, Job No. 01-1702R-4 (see **Appendix 4.1**); and
3. *Geological and Geotechnical Report*, Adobe Canyon and Chiquito Canyon Preliminary Bulk Grading Study, November 14, 2003, Job No. 03-2022-9.

These project-specific technical reports are included in **Appendix 4.1** to this EIR. Altogether, these reports evaluate existing geologic, soil, and geotechnical conditions, identify potentially significant project-specific geologic, soil, and geotechnical impacts, and identify mitigation measures to reduce the impacts to below a level of significance.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified potentially significant geologic, soil, and geotechnical impacts that would result from implementation of the Specific Plan. The significant on-site and off-site geologic, soil, and geotechnical impacts identified in the Program EIR were landslides, surficial failures, cut slopes, expansive bedrock, hydroconsolidation, liquefaction potential, and seismic hazards.

In response to identified significant impacts, the County adopted 56 measures to address on-site geology, soils, slope stability, seismicity, and secondary seismic hazards. Based on the Newhall Ranch Specific Plan Program EIR and the entire record, the County's Board of Supervisors found that the significant geotechnical and soil resources impacts identified in that EIR would be mitigated to below a level of significance with implementation of the 56 mitigation measures that were adopted when the Program EIR was certified.²

4. EXISTING CONDITIONS

The proposed Landmark Village tentative tract map site is generally flat, except for existing banks between younger and older alluvium and ascending fill slopes and local bedrock outcrops along the south side of State Route 126 (SR-126). The tract map site ranges in elevation from approximately 900 feet along the Santa Clara River on the southwestern portion of the site to a high point of 1,005 feet on a knob along SR-126 (see **Figure 2.0-3, On-Site Topography**, for details of the site topography). Much of the site is currently used for agricultural purposes. Portions of the northern margin of the tract map site have been disturbed by construction associated with SR-126, the abandoned Southern Pacific railroad line, and

² See, Mitigation Measures 4.1-1 through 4.1-56 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

various pipelines. Debris, including concrete and asphalt concrete blocks, has been placed on several portions of the site. Five abandoned oil wells have been drilled on or immediately adjacent to the project site. At least 13 water wells also have been constructed, 11 of which are still in existence.

The Adobe Canyon borrow site is located within the Newhall Ranch Specific Plan area, in the northeastern portion of the Santa Susana Mountains just south of the Santa Clara River and easterly and adjacent to Long Canyon. This borrow site is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. It is covered with natural grasses, chaparral and scattered oak trees. Portions of Long Canyon and the lower portion of Adobe Canyon have been used for agricultural purposes. Dumped fill associated with past oil well drilling activities exists at various locations within the borrow site. Elevations range from approximately 925 feet in the vicinity of the Santa Clara River to approximately 1,350 feet at the natural ridgeline in the vicinity of a future water tank site that is not part of the Landmark Village project. Properties adjacent to the borrow site are under the same ownership.

Off-site grading is also required in the low-lying hills north of SR-126 and the Santa Clara River, easterly of Chiquito Canyon Road and westerly of the Chiquita Canyon Landfill. This land is also located within the Newhall Ranch Specific Plan area. The site is covered with natural grasses and scattered chaparral with the exception of the alluvial area within Chiquito Canyon, which is commonly used for farming. The land is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. Dumped fill associated with past oil well drilling activities is present at the eastern portion of the site. A Southern California Edison easement traverses the northern portion of the area requiring off-site grading. An existing electrical tower within this easement is located at the top of one of the proposed, semicircular cut-slopes. A dirt road currently exists to provide access to this tower. A second power line easement is present at the southern portion of the site.

Assessment of the geologic/geotechnical conditions included the excavation and logging of 64 Cone Penetration Tests (CPTs), eight rotary-wash borings, 13 hollow-stem-auger borings, four bucket-auger borings, and 27 pit trenches. Bulk and drive samples of representative materials at the site were collected for laboratory analysis. Two of the rotary-wash borings were sampled as correlation borings to verify the conditions indicated in adjacent CPTs. Thirty-eight additional trenches were excavated to assess the limits of buried debris. Piezometers were installed in five of the rotary-wash borings to monitor fluctuations in ground water depths.

a. Geologic Structure and Earth Materials

Most of the Landmark Village tract map and borrow site are underlain by Quaternary alluvium and older alluvium (see **Figures 4.1-1 through 4.1-3, Geologic/Geotechnical Maps**). Uncompacted artificial fill and

debris are locally present on the tract map site and compacted fill was recently placed on the northern side of the site during the widening of SR-126. Bedrock of the Pico and Saugus Formations is only locally exposed along the southern side of SR-126. The underlying bedrock structure is dominated by an east-plunging anticline, which traverses the northern portion of the site and a parallel, east-plunging syncline, which is concealed below the southwestern margin of the site. Bedding exposed on the site is primarily on the south-limb of the anticline and typically strikes approximately N60E and dips 15–22 degrees southeast.

The bedrock beneath much of the Adobe Canyon borrow site has been uplifted and deformed by past tectonic forces into a northwest-trending syncline (downfold). The axial trace of this fold is located only at the extreme northeastern corner of the site. The geologic structure of the Saugus and the underlying Pico Formation bedrock exposed over much of the site (southern limb of the syncline) strikes northwest and is dipping at angles ranging between 32 and 48 degrees towards the northeast. The geologic structure of the bedding exposed along the northern limb of the syncline is striking towards the northeast and is dipping at angles ranging between 9 and 17 degrees southwest. Faulting has not been observed within the Adobe Canyon borrow site.

The Chiquito Canyon grading site improvements are located on the southern limb of the Del Valle anticline (upfold), which trends roughly east-west to northwest-southeast just north of the site. Both the Pico and Saugus Formation bedrock in the vicinity of the subject site is striking toward the northeast and dipping at angles ranging from 9 to 22 degrees towards the southeast. Faults have not been observed in the vicinity of this area.

The utility corridor is within the rights-of-way of several roadways. Soils within the rights-of-way consist of compacted artificial fill (Caf) that is underlain predominately by bedrock of the Pico and Saugus Formations. The Homestead Anticline located to the north of the corridor defines the geologic structure along the western reach of the utility corridor. Bedding south of this anticline dips moderately to steeply to the south and southeast. The northern limb of the Pico Anticline, which trends in an east-west direction, defines the geologic structure along the eastern segment of the utility corridor.

(1) Bedrock Formations

(a) Pico Formation (Tp/Tps)

The transition from the upper Pico Formation to the overlying Saugus Formation on the tract map site and utility corridor is gradational and interfingering. Geologic observation of the bedrock exposed in existing cuts, trenches and in a bucket-auger boring on the northwestern margin of the site indicates that this material is part of the Pliocene marine Pico Formation rather than the Saugus Formation. The Pico

Formation observed at the site consists dominantly of moderately hard, light-gray to light greenish-gray sandstone and pebbly sandstone with local interbeds of light greenish-gray to olive-gray siltstone, sandy siltstone, and rare moderate-brown mudstone. The sandstones are generally well sorted and massive to locally well bedded with common low angle cross bedding. Pebbles are generally well rounded and commonly crystalline in composition. The siltstone and mudstone units are potentially expansive.

The Pliocene Pico Formation underlies the southern and western portion of the Chiquito Canyon grading site and is present only at the extreme southwestern corner of the Adobe Canyon borrow site. At the Chiquito Canyon grading site, this formation is gradational and interfingering with the overlying Saugus Formation. The Pico Formation observed at both the sites consists of moderately hard, light-gray to light greenish-gray sandstone and pebbly sandstone with local interbeds of light, greenish-gray to olive-gray siltstone, sandy siltstone, and rare moderate-brown mudstone. The sandstones are generally well sorted and massive to locally well bedded with common low angle cross bedding. Pebbles are generally well rounded and commonly crystalline in composition. The siltstone and mudstone units are potentially expansive. Thin, low-strength clay seams are present within this formation and can be problematic relative to slope stability.

(b) Saugus Formation (TQs)

The Plio-Pleistocene Saugus Formation is exposed in small cuts along SR-126 on the northeastern portion of the Landmark Village tract map site and utility corridor. The observed bedrock is dominated by moderately hard, light-gray to yellowish-gray sandstone and conglomerate with local interbeds of greenish-gray siltstone and sandy siltstone, and rare reddish-brown mudstone. Pebbles within this foundation are typically less rounded and more variable in composition than in the Pico Formation. Siltstone and mudstone units of the Saugus Formation are potentially expansive.

The lower portion of the Plio-Pleistocene Saugus Formation is exposed at both the Adobe Canyon borrow site and the Chiquito Canyon grading site. This formation is the dominant formation at the Adobe Canyon borrow site and is located at the eastern portion of the Chiquito Canyon grading site where it is gradational and interfingering with the underlying Pico Formation. The observed bedrock is dominated by moderately hard, light-gray to yellowish-gray sandstone and conglomerate with local interbeds of greenish-gray siltstone and sandy siltstone, and uncommon reddish-brown mudstone. Pebbles within this foundation are typically less rounded and more variable in composition than in the Pico Formation. Siltstone and mudstone units of the Saugus Formation are potentially expansive. Thin, low strength clay seams occur in the reddish-brown mudstone units both as a result of original deposition and due to flexural slip along bedding during tectonic folding subsequent to deposition. These low strength clay

layers may be fairly rare; however, where they occur they have proven problematic relative to slope stability.

(2) Surficial Deposits

(a) Quaternary Older Alluvium (Qoa)

Uplifted alluvium on the northern and eastern portions of the Landmark Village tract map site is designated as Quaternary older alluvium on **Figure 4.1-1, Geologic/Geotechnical Map**. Two levels of older alluvium are present on the site: an upper (older) level of older alluvium and a lower (younger) level of older alluvium.

Upper (Older) Level of Older Alluvium

The upper (older) level of older alluvium or fan deposits occurs in a small area on the northeastern portion of the Landmark Village tract map site, and consists primarily of yellowish-gray, fine silty sand and sandy silt. A distinctive 5-foot-thick layer of coarse sand with cobbles and boulders was observed at the base of this unit. The upper portion of this deposit has been disturbed and partially removed by grading activities associated with the construction of SR-126.

Lower (Younger) Level of Older Alluvium

The lower (younger) level of older alluvium occurs along the southern side of SR-126 on the western portion of the Landmark Village tract map site and widens toward the east across the entire site. This material typically consists of yellowish-gray poorly graded sand with gravel lenses and interbeds of light-brown silty sand and local grayish-brown lean clay with sand. The upper 1 to 3 feet of this material have generally been disturbed by agricultural activities.

Uplifted alluvium is present at the Adobe Canyon borrow site in the vicinity of Long and Adobe Canyons, as well as along the western portion of the Chiquito Canyon grading site in the vicinity of the proposed temporary debris basin. This uplifted alluvium is designated as Quaternary older alluvium on both of the geologic maps. These deposits generally consist of moderately consolidated to unconsolidated poorly graded sand with gravel lenses, fine silty sand, sandy silt, and clay. The upper 1 to 3 feet of this material has generally been disturbed by agricultural activities.

(b) Quaternary Alluvium (Qal)

Quaternary alluvium mapped on the Landmark Village tract map site includes active and recently active river deposits associated with the Santa Clara River system. This material consists primarily of light

yellowish-gray, poorly graded sand and gravelly interbeds and lenses with local interbeds of light-brown silty sand. The upper 1 to 2 feet of this material have locally been disturbed by agricultural activities.

At the Adobe Canyon borrow site, alluvium is present along the northern portion of the site in the vicinity of the Santa Clara River. At the Chiquito Canyon grading site, alluvium is present in the active Chiquito Canyon in drainage channel, as well as within the two northerly trending narrow canyons at the south central portion of that site. This material typically ranges from very fine-grained, silty sand to cobble size deposits.

(c) Quaternary Slopewash (Qsw)

Slopewash is a non-bedded, heterogeneous accumulation of soil and weathered bedrock deposited by gravity on slopes. Owing to the flat nature of the site, slopewash is uncommon on the tract map site. Slopewash materials were observed to a maximum depth of 12.5 feet on the northern margin of the site adjacent to the mapped bedrock outcrops. The observed slopewash consists of grayish-brown to brown silty sand with pebbles and scattered cobbles. This unit is not shown on **Figure 4.1-1**.

Slopewash is found on nearly all of the slopes at both the Adobe Canyon borrow site and the Chiquito Canyon grading site. This material has accumulated via gradual surface wash and periodic debris flows. The thickest accumulations occur at the toe of slopes and where broad swales join the main drainage areas. This material is generally poorly consolidated and commonly interfingers with the alluvium. The slopewash is designated as Qsw on **Figure 4.1-2, Adobe Canyon Geologic/Geotechnical Map**, and **Figure 4.1-3, Chiquito Canyon Geologic and Geotechnical Map**.

(3) Fill and Plowed Soils

(a) Compacted Artificial Fill (Caf)

Compacted artificial fill was placed along the utility corridor alignment and the northern margin of the Landmark Village tract map site during construction and widening of SR-126. The fill typically forms small fill slopes, which ascend from original ground on site up to the highway at a gradient of approximately 2:1 horizontal to vertical (h:v).

(b) Artificial Fill (af)

Artificial fill has been placed on the Landmark Village tract map site as a result of road construction, oil well drilling activities, utility line placement, agricultural activities, and the abandoned Southern Pacific railroad line. The more prominent fill areas are shown on **Figure 4.1-1**. Minor fill was placed to backfill trenches and borings excavated during geologic investigations.

Artificial fill exists at various locations on the Adobe Canyon borrow site and the Chiquito Canyon grading site. The fill ranges from minor spill fills to large dumped fill pads associated with oil well activities. At the Adobe Canyon borrow site, artificial fill is present at the southern portion of Adobe Canyon within the limits of the proposed grading. This artificial fill is associated with oil well drilling activities. At the Chiquito Canyon grading site, artificial fill is present at the proposed eastern temporary debris basin. This artificial fill is also associated with oil well drilling activities.

(c) Soil/Plow Pan

Plowing and other agricultural activities have disturbed the upper portion of the alluvium and older alluvium on the Landmark Village tract map site. The thickness of this material ranges from 1 to 3 feet. This material is not shown on **Figure 4.1-1**.

(4) Existing Debris

Debris has been stockpiled in the past on several portions of the Landmark Village tract map site, as shown on **Figure 4.1-1**. The debris varies from asphalt concrete to reinforced concrete mixed with pieces of pipes, plastic, artificial fill, etc. Some of the concrete blocks were observed to be up to 12 feet in maximum dimension. Areas where asphalt concrete is concentrated are delineated on **Figure 4.1-1**.

(a) Mass Movement Deposits

No landslides have been recognized on the Landmark Village tract map site during investigations by the project geotechnical engineer (Seward), or on published maps of the site, and no restricted use areas are currently recommended. Owing to the flat nature of the site, the potential for future landslides is considered low to nonexistent.

Several landslides have been mapped on the Adobe Canyon borrow site and the Chiquito Canyon grading site. These landslides are primarily translational failures controlled by the underlying bedding orientation. The landslides vary from small shallow failures to large landslides and were identified based on review of previously published and unpublished geologic data, geomorphic features observed on the aerial photos, the site topography illustrated on the attached geologic maps, reconnaissance field mapping and subsurface explorations. Additional subsurface exploration will be required to confirm the existence of landslides, and to accurately delineate the lateral extent and depth of the landslide material prior to any future development of these areas.

The landslides mapped at both the Adobe Canyon and Chiquito Canyon sites have been divided into the two following categories:

- (QIs) Landslides that are mapped with moderate to great certainty are designated with a standard boundary and direction of movement arrows on the Geologic Map.
- (QIs?) Where the existence or lateral extent of the landslide is uncertain or inferred, the landslide is queried with a question mark. These landslides will require subsurface exploration to confirm their existence.

No landslides are known to exist along the utility corridor and none are expected given the compacted nature of the fill material comprising the roadbed and relatively gentle grade of roadways along the alignment.

b. Seismicity

The Southern California region is seismically active and commonly experiences strong ground shaking resulting from earthquakes along active faults. Earthquakes along these faults are part of a continuous, naturally occurring process that has contributed to the characteristic landscape of the region.

(1) On-Site Fault Zones

No active or potentially active faults have been recognized on either the Landmark Village tract map site or the off-site grading locations on published maps or during site investigations by the project geotechnical engineer (Seward). Because no faults are known to exist, no restricted use areas for faulting are currently recommended for the proposed Landmark Village project.

The Del Valle Fault traverses in a northwest direction across the western utility corridor segment. This Fault Zone is well exposed as a steeply southwest-dipping, 0.75-inch thick, clayey gouge zone with minor sub parallel faults disrupting the surrounding bedrock.

(2) Seismic Hazard Potential

Three common types of geologic hazards may be produced on the Landmark Village tract map site during a seismic event (earthquake) on an area fault. These include ground rupture, ground motion, and ground failure.

(a) Ground Rupture

Ground rupture or displacement, generally expected to occur along pre-existing faults, occurs as a fault breaks the ground surface during a seismic event. Ground rupture cannot be prevented; therefore,

mitigation of this hazard involves avoiding construction over known existing faults. Where the locations of faults are unknown or suspected, they are investigated through subsurface exploration, delineated, and, if necessary, placed into a potentially hazardous fault zone where construction should be avoided.

Review of published geologic maps, Alquist-Priolo Maps, and the Los Angeles County Safety Element indicates that no active or potentially active faults have been previously recognized on the tract map site. Furthermore, the project geologist (Seward) observed no evidence of surface faulting or past ground rupture during investigations.

Neither the Adobe Canyon borrow site, nor the Chiquito Canyon grading site, lies within any of the state's Alquist-Priolo Earthquake Fault Zones. The Los Angeles County Seismic Safety Element does not show any faults at either of the locations. Regional geologic maps do not show any active faults (i.e., faults demonstrated to be active in the last 11,000 years) located on or trending towards these locations. No evidence of active faulting or ground rupture was observed on either of the two sites during reconnaissance field mapping and limited subsurface explorations. The closest known active fault (surface trace) to the Adobe Canyon borrow site is the San Gabriel Fault, located approximately 4.7 miles to the northeast. The closest known active fault (surface trace) to the Chiquito Canyon grading site is also the San Gabriel Fault, located approximately 3.5 miles to the northeast.

The County's Seismic Safety Element identifies the Del Valle Fault as potentially active. However, there is no known direct evidence of Holocene activity on the Del Valle Fault; therefore, the fault is not within an Alquist Priolo special studies zone.

(b) Ground Motion

Ground motion is generated during an earthquake when two blocks of the earth's crust slip past each other. Ground motion is generally greatest near the epicenter of an earthquake, and then decreases with increasing distance and increases with increasing magnitude. Measurement of ground motion is modified by a number of criteria, including focal depth, proximity to projected or actual fault rupture, fault mechanism, duration of shaking, local structure, source direction of earthquake, underlying earth material characteristics, and topography. The combination of these factors makes it difficult to accurately predict potential ground motions at a given site in the geographically and topographically complex Southern California region.

Potential ground motion from future earthquakes on nearby faults have been evaluated utilizing the procedures outlined in the California Department of Conservation, Division of Mines and Geology (CDCMG) Guidelines described in Special Publication 117 and Los Angeles County policies. Based on a probabilistic analysis, a peak horizontal acceleration of 0.87 times the force of gravity (g) was estimated as

the design basis ground motion (10 percent chance of exceedance in 50 years) for use in liquefaction assessment of standard development at the Landmark Village tract map site. A 6.5 magnitude earthquake on the Santa Susana Fault would most likely produce this acceleration at the site. The peak ground acceleration from the upper bound earthquake was estimated to be 1.04g from a 6.5 magnitude earthquake.

For the Adobe Canyon borrow site and Chiquito Canyon grading site, a probabilistic analysis estimated peak horizontal ground acceleration with a 10 percent chance of exceedance in 50 years at 0.79g for the alluvial portions of the Adobe Canyon site and 0.87g for the alluvial portions of the Chiquito Canyon site.

(c) Ground Failure

Soil liquefaction occurs as a result of loss of shear strength or shearing resistance in loose and some medium dense, saturated cohesionless soils, and some sandy silts, during earthquake-induced ground shaking. A significant number of detailed liquefaction analyses were performed for the Landmark Village tract map site, and interpolated historic high ground water levels were assumed in the analyses. The results of the liquefaction assessment indicate that some relatively thin liquefaction-prone zones locally exist at the site at isolated depth intervals. More important than the identification of zones of potential liquefaction are the settlements caused by seismic excitation. Even though some thin deposits appear to be liquefiable, the potential seismically-induced settlements in subsurface soils at the site are small. The maximum cumulative calculated settlement is 1.4 inch and differential settlements are expected to be no greater than 0.9 inch in a distance of 30 feet.

Most of the Adobe Canyon borrow site, Chiquito Canyon grading site and utility corridor are underlain by bedrock that is not susceptible to liquefaction. The alluvium present in the narrow tributary canyon areas of both sites (see, Geologic Maps) may be subject to liquefaction. The alluvial areas within the Adobe Canyon site and the alluvial area at the western portion of the Chiquito Canyon site are designated as potential liquefiable areas on the State of California Seismic Hazard Zones Map (Val Verde Quadrangle). However, liquefaction potential is not a significant impact relative to these locations. Detailed liquefaction assessments will be required for the alluvial areas prior to any future development of these areas.

Earthquake-induced slope failures include activation and reactivation of landslides, rock falls, debris flows, and surficial failures. The potential for earthquake-induced slope failures is moderate to high on the steep canyon slopes. Most of the hillside areas of both the Adobe Canyon and the Chiquito Canyon sites are designated on the State of California Seismic Hazard Zones Map (Val Verde Quadrangle) to have

potential for earthquake-induced slope instability. The proposed cut and fill grading for each site eliminates most of these areas.

c. Groundwater

Groundwater levels on the Landmark Village tract map site range from a minimum depth of 6 feet on the western portion of the site to greater than 28 feet on the northeastern portion of the site. Review of the historic groundwater data obtained from Los Angeles County Flood Control District (LACFCD) water wells and the published Ground Water Contour Map by Robson (1972) indicates that historic high groundwater levels have ranged from 0 to greater than 20 feet along the tract map site and utility corridor. The shallowest groundwater levels occur in the alluvium on the western portion of the corridor and tract map site where the ground surface is lower; however, groundwater is deeper below the uplifted older alluvium. Historic low groundwater levels of greater than 60 feet have been measured at the site in LACFCD wells.

Groundwater beneath the Adobe Canyon borrow site and Chiquito Canyon grading site can be generally grouped into two categories: (1) groundwater contained in the alluvial deposits, and (2) groundwater contained in the bedrock and quaternary terrace deposits.

Historic groundwater records for the alluvial areas within the Adobe Canyon borrow site indicate that the groundwater has risen to within 12 to 30 feet of the existing ground surface in the vicinity of Long Canyon and along the margins of the Santa Clara River. In May and June 2000, exploratory borings drilled to depths of 35 and 40 feet within the alluvial areas of Long Canyon, just west of the proposed grading limits, did not encounter groundwater. Perched groundwater within elevated bedrock areas has not been observed on the Adobe Canyon site. Natural springs or seeps were not observed within the Adobe Canyon site during previous investigations.

Historic groundwater records for the alluvial areas within the Chiquito Canyon grading site indicate that the groundwater has risen to within 18 to 30 feet of the existing ground surface in the vicinity of the lower Chiquito Canyon area. In 1999 and 2003, exploratory borings drilled within Chiquito Canyon just west of the proposed grading limits did not encounter groundwater. Minor seeps were observed with some of the subsurface exploratory borings within landslide material; however, surface springs were not observed during surface field mapping of the site. Quarterly measurements over the last four years from a piezometer located west of the site indicate that groundwater ranges from 38 to 47 feet below the ground surface in the canyon alluvium.

d. Oil Wells

Review of the 1999 Munger Map Book indicates that five oil wells have been drilled on, or just south of the Landmark Village tract map site. Oil well records obtained from the California Division of Oil, Gas, and Geothermal Resources (CDOGGR) indicate that all of these wells have been abandoned. The locations of these wells, as determined by metal detection surveys by CDOGGR, are illustrated on the tract map and on the Geologic/Geotechnical Maps (**Figure 4.1-1**).

In addition, one documented oil well is present within the proposed grading limits on the Adobe Canyon borrow site. An additional four documented oil wells are located in the vicinity surrounding the site. At the Chiquito Canyon grading site, there is one documented oil well present within the proposed grading limits at the location of the eastern temporary debris basin and one oil well located north of the grading limits. No known wells exist along the utility corridor.

e. Potential Corrosivity of Soils

On the Landmark Village tract map site, a total of eight samples were collected from on-site alluvium, older alluvium, and bedrock materials and tested for resistivity and acidity of a solution (pH). Soil electrical resistivity values of selected shallow soils suggest that on-site soils are mildly corrosive to corrosive to ferrous metals at a few locations and depths; pH data shows no significant acidity of tested soils. A total of nine samples of on-site alluvium, older alluvium, and bedrock were collected and submitted to Fruit Growers Lab for sulphate and chloride testing. Concrete exposure to sulfates in shallow soils would be negligible per 1997 Uniform Building Code (UBC) Classification.

Soils on the Adobe Canyon borrow site and Chiquito Canyon grading site may have some degree of corrosive characteristics to concrete and ferrous metals. Soil moisture, chemistry, and other physical characteristics all have important effects on corrosivity. No development is proposed on either the Adobe Canyon borrow site or the Chiquito Canyon grading site as part of the proposed Landmark Village project. Nonetheless, soils from the borrow sites would be placed on the Landmark Village tract map site. The utility corridor also traverses such soils. Unless mitigated, the potential corrosive characteristics of these soils could have a significant impact wherever development within Landmark Village is proposed on these soils.

f. Rippability

The granular and poorly cemented nature of alluvial deposits indicates that grading operations on the Landmark Village tract map site can be performed with conventional equipment. Heavy, single-shank ripping may be required within the more indurated portions of the Saugus and Pico Formation bedrock.

At the Adobe Canyon borrow site and Chiquito Canyon grading site, the bedrock is moderately consolidated, and grading operations should be able to be performed with conventional equipment. Heavy single shank ripping probably would be required if massive conglomerate units of the Pico and Saugus Formations are encountered.

5. PROPOSED PROJECT IMPROVEMENTS

Review of Landmark Village Vesting Tentative Tract Map No. 53108 indicates that the proposed final grades will be raised from 1 to 18 feet over much of the project site and approximately 5.8 million cubic yards of fill would be imported. The tallest cut-slope is proposed to be 25 feet high along the south side of SR-126 on the western portion of the site. All of the proposed fill slopes would be less than 25 feet in height.

The existing river banks on the margin of the tract map site range from 5 to 12 feet in height. Proposed grades would be raised to 15 to 20 feet above the adjacent channel areas. Bank protection is proposed to consist of a soil cement, gunite, or rip-rap liner that would be buried/concealed behind a 4:1 (h:v) fill slope.

The Preliminary Bulk Grading Study Map for the Adobe Canyon borrow site indicates primarily westerly (northwesterly and southwesterly) facing cut slopes with minor portions facing toward the south. These slopes would have gradients up to 2:1 (h:v), but typically are designed at 3:1 (h:v) gradients or flatter. The highest proposed cut slope would be approximately 100 feet high. The maximum vertical cut to proposed grade would be 175 feet, and would be located at the northeastern portion of the site south of the proposed temporary debris basin. The maximum proposed fill would be approximately 50 feet thick, located at the top of the proposed 3:1 (h:v) gradient fill slope west of the location of a future water tank not proposed as part of the Landmark Village project. The proposed graded area would consist of approximately 125 acres. Project-related grading would require the movement of approximately 4.2 million cubic yards of removal and reoccupation of existing material, and up to 5.8 million cubic yards of import from the Adobe Canyon borrow site within the approved Specific Plan boundary to meet the flood control requirements of the tract map site. Storm runoff from the relatively level pad areas that would be created would sheet flow to the two proposed temporary debris basins, one located within the Adobe Canyon area, and one located at the northerly portion of the study. A proposed trapezoidal debris channel is illustrated near the central portion on the plan.

The Preliminary Bulk Grading Study Map for the Chiquito Canyon grading site indicates primarily south- to southwesterly-facing cut slopes with the exception of one northerly-facing cut slope located along the southern portion of the site adjacent to SR-126. These slopes have gradients up to 2:1 (h:v). The

highest proposed cut slope would be approximately 186 feet high and a combination 2:1 and 3:1 (h:v) gradient slope located just south of the existing Edison transmission tower. The maximum vertical cut would be approximately 130 feet located at the toe of this 186-foot-high slope. Only minor fill (less than 12 feet thick) is proposed on the Bulk Grading Study map. The proposed graded area consists of approximately 45 acres. The Bulk Grading Study indicates that 1,519,000 cubic yards of raw cut material would be generated, and 5,900 cubic yards of fill material would be placed, leaving 1,513,200 cubic yards of fill material for export to the tract map site. Storm runoff from the relatively level pad areas that will be created would sheet flow to the various temporary debris basins illustrated on the plan. A new access road alignment is provided to the existing Edison transmission tower located at the top of the 186-foot-high cut slope. The existing power transmission lines located at the southern portion of the site would have to be relocated.

6. PROJECT IMPACTS

The analysis of potential geologic, soil, and geotechnical impacts associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Criteria

Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines* indicates that the proposed project would result in a significant geologic and soils impact if the project would:

- (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;
 - (ii) Strong seismic ground shaking;
 - (iii) Seismic-related ground failure, including liquefaction; and
 - (iv) Landslides.
- (b) Result in substantial soil erosion or the loss of topsoil;
- (c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

- (d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- (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.

In addition, the project Initial Study (**Appendix ES**) suggests that a project would result in a significant geotechnical impact if:

- It is located in an active or potentially active fault zone or Alquist-Priolo Earthquake Fault Zone;
- It is located in an area containing a major landslide(s);
- It is located in an area having high slope instability;
- It is subject to high subsidence, high groundwater level, or hydrocompaction;
- The project is considered a sensitive use (school, hospital, public assembly site) located in close proximity to a significant geotechnical hazard; or
- The project would entail substantial grading and/or alteration of topography including slopes of over 25 percent.

An additional criterion against which the project is evaluated is construction within and upon expansive soils, soils with a high shrink-swell potential, corrosive soils, and other soils with properties that could have an adverse effect on future site development.

b. Construction Impacts

The proposed project would not be constructed in proximity to an active fault zone, a major landslide, or on an area of high slope instability; consequently, no construction activities would occur in areas posing these types of hazards. Any construction activities that would occur during the earlier phases of site development would be set back far enough away from existing structures such that any associated grading of temporary steep slopes that may be excavated during remedial grading (if any) or during placement of infrastructure would not affect the existing development. In addition, construction operations would be conducted pursuant to the requirements of the Occupational Safety and Health Administration (OSHA) and the mitigation measures identified in this EIR. As a result, any potential impacts associated with temporary steep slopes that may be created during remedial grading (if any) or during placement of infrastructure in the utility corridor would be mitigated to below a level of significance through standard construction practices and OSHA requirements. Accordingly, construction of the proposed project is not expected to result in any significant geologic, soil or geotechnical impacts.

c. Operational Impacts

(1) Hazards Associated with Faults

There are no active faults on or in immediate proximity to the Landmark Village tract map site; however, the proposed project would be subject to ground shaking in the event of an earthquake that would result from regional fault activity. No landslides or surficial failures have been mapped on or in close proximity to the development site, and no natural slopes would remain on or adjacent to the proposed development.

While landslides have been mapped on both the Adobe Canyon borrow site and Chiquito Canyon grading site, no Landmark Village development is proposed at these locations and landslide materials to be excavated are considered safe for use as fill material. Therefore, the potential for earthquake-induced slope failures at the Landmark Village tract map site, the adobe Canyon borrow site and Chiquito Canyon grading site is considered negligible. Owing to the flat nature of the tract map site, potential hazards from shattered ridge effects are considered non-existent. Associated effects of such ground shaking on the site; however, can potentially include liquefaction, lateral spreading, dynamic compaction, differential materials response, and sympathetic movement. Each is discussed separately below.

(a) Liquefaction

Liquefaction is the process in which water-saturated, usually loose-to-moderately dense, fine-to-medium sands temporarily lose strength due to strong ground motion and behave as a viscous fluid. The results of the liquefaction assessment for the tract map site indicate that some relatively thin liquefaction-prone zones locally exist at the site at isolated depth intervals. However, more important than the identification of zones of potential liquefaction are the settlements caused by seismic excitation. Even though some thin deposits appear to be liquefiable, the potential seismically-induced settlements in subsurface soils at the Landmark Village tract map site are small. The maximum cumulative calculated settlement is 1.4 inch and differential settlements are expected to be no greater than 0.9 inch in a distance of 30 feet. Certified compacted fill from proposed removals and recompaction, as shown on **Figure 4.1-1**, is anticipated to attenuate any minor settlements beneath the fill due to bridging effects. Due to the low magnitude of estimated conservative earthquake-induced total and differential settlements, and the proposed recompacted layers, potential impacts associated with liquefaction and seismically induced settlement are considered less than significant.

The alluvial areas within Adobe Canyon borrow site and the alluvial area at the western portion of the Chiquito Canyon grading site are designated as potential liquefiable areas on the State of California Seismic Hazard Zones Map (Val Verde Quadrangle). However, no portion of the proposed fill areas over

alluvium and slopewash are considered “structural fill”; therefore, the potential impacts associated with liquefaction of the proposed fill areas are not considered significant.

(b) Lateral Spreading

Lateral spreading is a type of liquefaction where sediments/materials spread laterally down slope due to temporary loss of shear strength. Lateral spreading may occur on slopes as shallow as 1 to 2 degrees.

No lateral spreading due to liquefaction is expected on the Landmark Village tract map site, the Adobe Canyon borrow site, or the Chiquito Canyon grading site for the following reasons:

- The tract map site is generally flat and both Adobe and Chiquito Canyons are primarily underlain by bedrock.
- Liquefaction potential and associated settlements are considered to be minor. It should be noted that the settlement calculations include multi-directional effects in the volumetric strains.
- Subsurface soils are essentially horizontally layered.
- The liquefaction-prone soils, which would remain below the recommended removals, are thin and discontinuous.
- A buried channel liner is proposed between the development and the river channel areas, which would require removals below the elevation of the river channel, and the compacted backfill would inhibit any potential lateral spreading within the development.

As a result, there would be no significant impacts associated with lateral spreading.

(c) Dynamic Compaction and Differential Materials Response

Differential materials response refers to the different responses various materials display when subjected to seismic waves. Dynamic compaction refers to seismically-induced settlement and permanent movement of poorly-consolidated materials.

Where materials with different densities or strengths are in contact, differential materials response to the seismic energy may cause distress along the contact. The combination of dynamic compaction and differential settlement along with differential materials response is a source of future potential hazards along cut/fill and bedrock/alluvium contacts on the Landmark Village tract map site. Unless mitigated, development of lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) could result in a potentially significant geotechnical impact.

Since the majority of the Adobe Canyon borrow site and Chiquito Canyon grading site are underlain by bedrock, seismically induced compaction and differential materials responses at those sites are not expected to result in a potentially significant impact.

(d) Sympathetic Movement

Strong ground motion may cause sympathetic movement along weak inclined planes, such as claybeds, or non-causative faults. Movement may be related to strong ground motion or flexural slip during folding of beds.

The specific location of future potential sympathetic movement along weak planes, such as inclined clay beds, cannot be reliably predicted on the Landmark Village tract map site at this time. Most of the site is underlain by horizontally bedded Quaternary Alluvium, which is not subject to bedding plane slippage. However, the clay-rich bedding planes of the Saugus Formation may represent a potential hazard from secondary seismogenic movement along bedding planes, and could result in a potentially significant geotechnical impact unless mitigated.

The majority of the Adobe Canyon borrow site and Chiquito Canyon grading site are underlain by inclined bedrock. Sympathetic movement along weak bedding planes could occur at those sites, but this is not considered a significant impact given the intended use of the sites for soil removal.

(2) Hazards Associated with Major Landslides

No landslides or surficial failures have been mapped on or in close proximity to the Landmark Village tract map site; therefore, site development would not be subject to hazards associated with major landslides and no potentially significant impacts are anticipated. However, the Adobe Canyon borrow site and Chiquito Canyon grading site do contain such hazards as discussed in greater depth below.

Three suspected landslides have been mapped within the proposed grading limits for the Adobe Canyon borrow site. These landslides are likely translational failures controlled by the bedding orientation. These landslides are queried on the Geologic Map because their existence or lateral extent is uncertain. The suspected landslides are considered safe for the intended use as a borrow site (soil removal). Four landslides have been mapped within the proposed grading limits of the Chiquito Canyon site. These landslides are primarily translational failures³ controlled by the bedding orientation. Cut slopes and/or grading is proposed in landslide material, and landslides are located in areas where they potentially could affect the stability of the site. As long as on-site containment is provided for potential failures,

³ A translational failure is characterized by movement of a relatively intact slide mass above a failure plane that is relatively deep when compared to that of a debris slide.

where necessary, the intended grading on the Chiquito Canyon site would not result in potentially significant impacts. However, the new alignment proposed to provide continued access to the Edison tower traverses a mapped landslide. Landslide movement could be triggered if the grading operations on the Chiquito Canyon site destabilize a portion of a landslide. This landslide must be mitigated to the satisfaction of Southern California Edison and/or Los Angeles County Department of Public Works to maintain a serviceable access to the tower.

(3) Hazards Associated with High Slope Instability

(a) Cut and Fill Slopes

Review of the Landmark Village tract map indicates that proposed final grades will be raised from 1 to 18 feet over much of the site and approximately 5.8 million cubic yards of import are anticipated. The tallest cut-slope is proposed to be 25 feet high along the south side of SR-126 on the western portion of the site. No natural slopes are proposed to remain on the site. Gross stability analyses were performed for two cut-slopes anticipated to expose adverse bedding conditions. The analyzed cross-sections reflect critical conditions for stability (i.e., steeper adverse potential bedding plane(s) and greater slope height). In addition, surficial stability of cut-slopes and fill slopes (e.g., stability fills) were performed. Findings show that the analyzed cut-slopes and proposed grades, and compacted fill slopes comply with Los Angeles County requirements for gross stability under static and pseudostatic loading conditions and for surficial stability, as applicable, except that compacted on-site silty sand and cuts in Older Alluvium do not comply with surficial stability requirements. As a result, use of these soils within fill slopes and stability fills on the tract map site would result in a significant geotechnical impact unless mitigated.

The proposed cut slopes within the Adobe Canyon borrow site are designed at a gradient of 2:1 (h:v) or shallower, (approx. 26.5 degrees) with terrace drains every 25 feet for slopes greater than 3:1 (h:v) gradients. The highest proposed cut slope would be approximately 100 feet and the deepest proposed cut area would be approximately 175 feet. Due to the northeast-dipping geologic structure of the bedrock, and due to the steepness of dip of the bedrock (32 to 45 degrees), the proposed cut slopes would be favorably to neutrally oriented with respect to the geologic structure of the bedding. Even if potentially unstable cut slopes are found to exist at the site, they should be considered suitable for the intended use as a borrow site (soil removal) and no potentially significant impacts are anticipated.

Proposed fill slopes within the Adobe Canyon borrow site are designed at 2:1 (h:v) gradients or shallower with terrace drains every 25 feet. Review of the preliminary Bulk Grading Study indicates that the highest proposed fill slope on the site would be approximately 90 feet and the deepest proposed fill area

would be approximately 50 feet. The fill slopes would be suitable for the intended use as a borrow site (soil removal) and no potentially significant impacts are anticipated.

The proposed cut slopes for the Chiquito Canyon grading site are designed at a gradient of 2:1 (h:v) or shallower with terrace drains placed every 25 feet. The highest proposed cut slope would be approximately 186 feet and the deepest cut would be approximately 130 feet. Due to the south-dipping geologic structure of the bedrock, all proposed southerly facing cut slopes would be potentially unstable. All proposed cuts are considered suitable for the intended use, with the exception of the proposed 186-foot-high cut slope located in the vicinity of the existing Edison Transmission Tower and the small cut slopes associated with the new Edison access road alignment. To offset this potentially significant impact to the tower slope, slope stability analyses should be performed relative to the existing transmission tower and the proposed descending cut slope to ensure compliance with the County's required minimum factors of safety. Appropriate mitigation should be implemented as needed for this slope. The small cut slopes along the new Edison access road alignment will require mitigation per Southern California Edison and/or L.A. County requirements. This mitigation will likely involve the construction of stability fills.

Proposed fill slopes for the Chiquito Canyon grading site are designed at 2:1 gradients or shallower with terrace drains every 25 feet. Review of the Preliminary Bulk Grading Study for the site indicates that only minor fill areas are proposed on the site. Fill is proposed within the minor topographic swale located at the western portion of the 186 feet high cut slope located beneath the existing Edison Tower. This fill slope is considered a sliver fill and should be evaluated along with the proposed 186-foot-high cut slope due to the anticipated adverse bedding condition present below the existing Edison transmission tower.

(b) Natural Slopes and Debris Flows

No natural slopes will remain on the Landmark Village tract map site following proposed grading. Therefore, the potential debris flow hazard at this site is considered negligible. Within the Adobe Canyon borrow site, all proposed natural slopes with daylighted bedding conditions and or steep gradients (greater than 2:1 [h:v]) adjacent to graded areas may be potentially unstable and/or subject to debris flow hazard. Based on a review of the Preliminary Bulk Grading Study Map, most of the natural slopes are self-supporting with respect to the geologic structure of the bedrock bedding planes and slope orientations; hence gross stability is generally favorable. However, the steep drainages and swales present are subject to surficial debris flows. For the intended use as a borrow site, the proposed natural slope areas are generally considered suitable.

For the Chiquito Canyon grading site, all proposed natural slopes with daylighted bedding conditions and/or steep gradients (greater than 2:1 [h:v]) adjacent to graded areas may be potentially unstable. However, the proposed natural slopes are considered suitable for the intended use and no potentially significant impacts are anticipated. With respect to debris flows, the subject site contains numerous drainages and swales with alluvial and colluvial soil material. These drainages and swales may be subject to potential debris flow during heavy rains, especially in exceptionally wet years (scattered small debris flow scars were observed within the steeper portions of the site). However, as long as on-site containment can be provided, the debris flow hazard is considered safe for the intended use, and no potentially significant impacts are anticipated.

(4) Hazards Associated with High Subsidence, High Groundwater Level, and/or Hydrocompaction

No known areas of subsidence occur within the Landmark Village tract map site; therefore, there would be no impacts associated with subsidence.

Although the proposed grades shown on the tentative map would be at least 15 feet above historic high groundwater levels, groundwater may be encountered during removal of alluvium on the western portion of the site. Because the groundwater table will fluctuate up and down in response to natural recharge and pumping requirements, construction and development within areas of high groundwater could potentially result in a significant impact unless mitigated.

Based upon consolidation test data, the compressibility of the subsurface soils is considered to be generally low. Compressibility is lower at greater depths due to the coarser-grained texture and high relative density of the soils. Also, any potentially adverse effects due to compressibility would be reduced as a result of relatively low structural loads. Based upon laboratory data, no hydroconsolidation effects due to water incursion are expected at the site, and there would be no associated impacts.

Most of the Adobe Canyon and Chiquito Canyon areas are underlain by bedrock, which is not susceptible to subsidence or hydrocompaction and shallow ground water conditions are not expected at either site. Hydrocompaction may occur in the alluvial areas, but hydrocompaction is not considered a significant impact relative to the intended uses for each site.

(5) Hazards Associated with Placing a Sensitive Use in Close Proximity to a Significant Geotechnical Hazard

No significant geologic hazard (i.e., fault, landslide, areas of subsidence, etc.) exist on the Landmark Village tract map site; therefore, no sensitive uses would be placed in proximity to a significant

geotechnical hazard and there would be no impact relative to this significance criterion. No sensitive uses are proposed on either the Adobe Canyon borrow site or Chiquito Canyon grading site as part of this project. Should future development occur at either location, more specific geologic issues would be addressed under a separate environmental review when development plans for future development projects are prepared.

(6) Hazards Associated with Substantial Grading and/or Alteration of Topography

Final grades for the Landmark Village tract map site would be raised from 1 to 18 feet over much of the site, requiring the import of approximately 5.8 million cubic yards of fill. The tallest cut-slope is proposed to be 25 feet high along the southern side of SR-126. All of the proposed fill slopes would be less than 25 feet in height. With respect to the borrow and grading sites, cut slopes would reach a maximum height of 186 feet within Chiquito Canyon, while a cut slope reaching 175 feet would occur within Adobe Canyon.

Although no numerical definition is given for the phrases “substantial grading” or “substantial alteration of topography,” a considerable amount of grading would occur on the project site, and existing topography would be altered. Grading and topographic modification, if done improperly and without due consideration for on-site geologic and hydrologic considerations, could result in ground failure and damage to future uses on the site. Thus, grading associated with the proposed project would result in a potentially significant impact unless mitigated through compliance with all appropriate grading, soil compaction, and slope construction practices.

(7) Other Potentially Hazardous Geotechnical Conditions

Soil conditions that would affect construction practices and future site development include expansive soils, soils with shrink-swell potential, and corrosive soils. Construction within and over soils with these characteristics would adversely affect future development of the site unless mitigated.

(a) Expansive Soils

Based on preliminary testing of selected samples of finer-grained soils on the Landmark Village tract map site, the expansion potential of shallow soils is medium to high (per UBC classification). Although these fine-grained soils are not typical to the site, and were encountered only at a few locations and depths in test pits excavated on the site, the fine-grained units of the Saugus Formation and Pico Formation, which are found within the two off-site grading site locations, are potentially very expansive. Because expansive soils can have an adverse effect on future development of the site, thereby resulting in

potentially significant impacts, additional expansion testing should be conducted on the tract map and off-site grading site locations prior to the commencement of construction.

(b) Shrink-Swell Potential

The expected rate of shrinkage of the various near-surface materials encountered at the site, when these materials are excavated, relocated and compacted as controlled fill to an estimated average of 92 percent Relative Compaction (R/C), is estimated as follows:

- Artificial Fill (Af): 15%–20%;
- Alluvium (Qal): 12%–15%; and
- Older Alluvium (Qoa): 16%–20%.

The expected rate of bulking of excavated bedrock materials found on the site is estimated as follows:

- Saugus Sandstone (TQs): 0%–3%;
- Pico Sandstone (Tp): 0%–5%; and
- Pico Siltstone (Tp): 5%–10%.

Although bedrock would only provide a small fraction of the total on-site fill materials, the potential for adverse shrink-swell effects on future site development would be significant unless mitigated. However, much of the proposed import fill from the off-site grading site locations would be derived from the bedrock.

(c) Soil Corrosivity

Soil electrical resistivity values of selected shallow soils on the Landmark Village tract map and the two off-site grading site locations suggest that on-site soils are mildly corrosive to corrosive in the presence of ferrous metals at a few locations and depths; pH data shows no significant acidity of tested soils. Construction on and within these soils without consideration of their corrosive effects would have a potentially significant effect on future development. Preliminary sulfate testing indicates that the shallow on-site soils have a negligible corrosion potential to concrete. Additional testing should be completed at the grading plan stage to verify the preliminary test results and to assess the import soil sources.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential geologic, soil, and geotechnical impacts prior to mitigation, the County already has imposed mitigation measures required to be

implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to geologic, soil, and geotechnical resources, are found in the previously certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing both the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended for the proposed Landmark Village project to ensure that future development of the project site and related off-site grading activities would be safe from geologic, soil, and geotechnical hazards, and that such development would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following 56 mitigation measures (**Mitigation Measure Nos. 4.1-1 through 4.1-56**, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). Of the 56 mitigation measures, 36 measures are applicable to the Landmark Village project due to its geographic location and/or geologic conditions. The applicable mitigation measures will be implemented to mitigate the potentially significant geologic, soil, and geotechnical impacts associated with the proposed Landmark Village project. All mitigation will be assumed to be applicable unless otherwise noted. These measures are preceded by "SP," which stands for Specific Plan.

- SP 4.1-1 The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44.)
- SP 4.1-2 The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44.)
- SP 4.1-3 In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable.
- SP 4.1-4 The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or

borings, they are to be reviewed and approved by the project geotechnical engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)

- SP 4.1-5 Wherever the Pacoima Formation is exposed, it may be potentially expansive; therefore, it is to be tested by the project soils engineer at the grading plan stage to determine its engineering characteristics and mitigation requirements, as necessary. (*This mitigation measure is not applicable because there is no Pacoima Formation on the tract map site or the borrow sites.*)
- SP 4.1-6 Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-7 If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the “finished” or “subgrade” surface and the excavated area backfilled with non-expansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-8 At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project geotechnical engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-9 Subdrains are to be placed in areas of high ground water conditions or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan geotechnical engineer.
- SP 4.1-10 Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the geotechnical engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-11 Canyon subdrains may be installed in “V”-ditches or in a rectangular trench excavated to expose competent material or bedrock as approved by the geotechnical engineer. (*This mitigation measure applies to the Canyon fills proposed in the Adobe Canyon borrow site.*)

- SP 4.1-12 The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-13 Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44.)
- SP 4.1-14 Proposed structures on ridgelines will have a minimum 20-foot horizontal setback from the margin of the bedrocks to prevent perched or ground water levels where relatively impermeable materials can block downward migration. *(This mitigation measure is not applicable to the Landmark Village project. The measure calls for proposed "structures on ridgelines" to have minimum horizontal setback requirements; however, the Landmark Village project does not propose construction of structures on any ridgelines due to the topographic conditions found on the site.)*
- SP 4.1-15 Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer, and to the satisfaction of the Los Angeles County Department of Public Works.
- SP 4.1-16 At the subdivision stage, the existence of landslides designated with "3" on **Figure 4.1-2**, Existing Landslide Areas, and within or adjacent to the development area is to be confirmed. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to the "existence of landslides" designated with a "3" on Figure 4.1-2 contained in the Newhall Ranch Specific Plan Program EIR. There are no such designated landslides within the boundaries of the Landmark Village tract map and borrow sites.)*
- SP 4.1-17 The existence, or lack thereof, of landslides on or adjacent to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated by

subsurface investigations at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “landslides” on or adjacent to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)*

- SP 4.1-18 The potential hazards associated with debris flow scars and other possible surficial failures located in proximity to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) These areas are to be mitigated as determined by the Newhall Ranch Specific Plan geotechnical engineer. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “debris flow scars and other possible surficial failures” located in proximity to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)*
- SP 4.1-19 Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16.)
- SP 4.1-20 All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)
- SP 4.1-21 Cut-slopes, which will expose landslide material, are to undergo geologic and geotechnical evaluation at the subdivision stage to determine their stability and degree of consolidation. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) Several options are available to mitigate potential landslide failure in the proposed cut-slopes. Landslides may be stabilized with buttress fills or shear keys designed by the Newhall Ranch Specific Plan geotechnical engineer; landslide material can be entirely removed and replaced with a stability fill; or the slope can be redesigned to avoid the landslide. Landslides underlying cut pad or road areas may be removed or partially removed if the Newhall Ranch Specific Plan Geologist and geotechnical engineer conclude that the landslide is stable and sufficiently consolidated to build on. Landslides located on ascending natural slopes above proposed graded areas will also require evaluation for stability. Unstable landslides on natural slopes above graded areas will either require stabilization, removal, or building setbacks to mitigate potential hazards. *(This mitigation would apply to the revised access road*

proposed to replace the existing Edison road to the power line tower involves creating small cut slopes in landslide material.)

- SP 4.1-22 Additional geologic investigations are required prior to approval of future tentative maps which allow construction, or grading plans to determine the geologic and geotechnical feasibility of the fifteen (15) lots proposed in the High Country Special Management Area (SMA). *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to the 15 lots proposed in the High Country SMA, which is not located within the boundaries of the Landmark Village project site, including the off- site grading areas.)*
- SP 4.1-23 Prior to construction of the road embankment located within landslide QIs II, a compacted fill shear key will be constructed at the property boundary. (R.T. Frankian & Associates, 19 September 1994, p. 6.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to a specific road embankment, which is not located within the boundaries of the Landmark Village project site, including the off- site grading areas.)*
- SP 4.1-24 Landslides, which will not affect the proposed grading concept, are to be placed in Restricted Use Areas on the Final Maps. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 43.) *(This mitigation measure is not applicable because landslides in and immediately adjacent to the borrow sites are required by LACDPW to be placed in restricted use areas until site-specific geotechnical elevations are completed and proposed mitigation is recommended.)*
- SP 4.1-25 Surficial stability of cut-slopes designated with a “G” are to be fully evaluated at the subdivision stage, due to the possibility of wedge failures or surficial material in the slope. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “surficial stability” of certain designated cut-slopes, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)*
- SP 4.1-26 Cut slopes designated as “P” are potentially unstable and are to be fully evaluated at the subdivision stage to ascertain whether they are stable as designed. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) *(This mitigation measure is not applicable to the Landmark Village project. The*

measure refers to “potentially unstable” designated cut slopes, which are not located within the boundaries of the Landmark Village project site, including the off- site grading areas.)

- SP 4.1-27 Cut-slopes designated with a “U” are to be further investigated at the subdivision stage to confirm underlying geologic conditions and slope stability. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to designated “cut-slopes” requiring further investigation at the subdivision stage, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)*
- SP 4.1-28 Cut-slopes associated with the construction of the proposed extensions of Magic Mountain Parkway and Valencia Boulevard are to be further investigated at the subdivision stage to confirm the underlying geologic conditions and slope stability. Corrective measures are to be required if it is determined that the cut-slopes will not be stable. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, pp. 11 and 12.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “cut-slopes” associated with construction of certain proposed road extensions, which are not located within the boundaries of the Landmark Village project site, including the off- site grading areas.)*
- SP 4.1-29 Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan engineering geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-30 All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-31 No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the geotechnical engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-32 Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)

- SP 4.1-33 Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the geotechnical engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-34 Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-35 Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-36 The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-37 When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-38 When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-39 Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-40 Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)

- SP 4.1-41 When placing fills over slopes, sidewall benching is to extend into competent material, approved by the geotechnical engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I.) Competent material is defined as being free of loose soil, heavy fracturing, or compressive soils.
- SP 4.1-42 When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-43 The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I.)
- SP 4.1-44 All artificial fill associated with past petroleum activities as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision and/or grading plan stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45.) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan geotechnical engineer.
- SP 4.1-45 Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20.)
- SP 4.1-46 Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20.)
- SP 4.1-47 Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20.)
- SP 4.1-48 Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)
- SP 4.1-49 If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan

E. Seward Engineering Geology, Inc., 19 September 1994, p. 21.) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.

- SP 4.1-50 The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12.)
- SP 4.1-51 Survey control will be required to precisely locate the Salt Creek and Del Valle Faults at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 33.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)*
- SP 4.1-52 Additional subsurface trenching will be performed within the Holser Structural Zone on Newhall Ranch during the subdivision stage to evaluate its existence. Within Potrero Canyon, additional subsurface evaluation will be performed during the subdivision stage to confirm that nontectonic alluvial movement was the cause of surface ground cracking during the January 17, 1994 earthquake, and to evaluate the potential for shallow-depth faults. (Allan E. Seward Engineering Geology, Inc. 19 September 1994, p. 42, as revised above.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to subsurface trenching and additional subsurface evaluation required on areas of Newhall Ranch, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)*
- SP 4.1-53 Precise Building Setback Zones for the Newhall Ranch Specific Plan site are to be defined at the subdivision stage. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to "precise building setback zones," which are not applicable to the Landmark Village project site, including the off-site grading areas.)*
- SP 4.1-54 Due to the potential activity of the Salt Creek and Del Valle Faults, site development is to remain outside of Building Setback Zones around fault traces, and the possible fault zone connecting them (see Figure 4.1-4). (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 42.) *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)*

- SP 4.1-55 To minimize potential hazards from shattered ridge effects, structures and storage tanks proposed on ridgelines are to have a minimum 20-foot setback from the margins of the bedrock. Designation of specific building setbacks will require evaluation at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 40.) Building setback zones are to be identified on all site plans and tract maps for the site. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to storage tanks on ridgelines within areas of Newhall Ranch, which are not applicable to the Landmark Village project site, including the off- site areas.)*
- SP 4.1-56 The potential for ground motion and ground failure associated with a seismic event in proximity to the planned roadway alignments of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) Mitigation to reduce associated significant impacts will also be identified at that time. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to planned roadway alignments within Newhall Ranch, which are not applicable to the Landmark Village project site, including the off- site grading areas.)*

b. Mitigation Measures Recommended for the Project by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant geologic, soil, and geotechnical impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Landmark Village project, each measure is preceded by “LV,” which stands for Landmark Village.

(1) Tentative Tract Map Site

(a) Earthwork and Grading

- LV 4.1-1 Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), Caf, loose alluvium, and other unsuitable materials. The geotechnical engineer and/or his representatives shall observe the excavated areas prior to placing compacted fill.
- LV 4.1-2 After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then

compacted to 90 percent per the latest American Society for Testing and Materials (ASTM) D1557 laboratory maximum density.

- LV 4.1-3 Removal depths for alluvium, older alluvium, and overlying soil/plow pan materials range from 4 to 16 feet and shall be as indicated on the approved Geologic/Geotechnical Map.
- LV 4.1-4 Soil removals on the southwestern portion of the site shall be scheduled if possible during the summer or fall months, to minimize impacts to Grading from shallow groundwater. The contractor shall be prepared to implement dewatering systems, if necessary.
- LV 4.1-5 Pico and Saugus Formation bedrock shall be over-excavated 5 feet below proposed grade to eliminate cut-fill or bedrock-alluvium transitions in building pads. Expansive materials in the bedrock shall be over excavated 8 feet in building pad areas.
- LV 4.1-6 Slopewash that is locally present on the site adjacent to slope areas on the northern margin of the site shall be removed and recompacted prior to the placement of compacted fill.
- LV 4.1-7 Compacted artificial fill along the northern margin of the site shall be assessed for building suitability at the grading plan stage.
- LV 4.1-8 Concrete, asphalt concrete and other debris stockpiled on the site shall be removed, and either ground up for use as sub-base material, or reduced into fragments small enough to be buried in the deeper portions of the fill.
- LV 4.1-9 Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric data for planning dewatering measures.
- LV 4.1-10 On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are

too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on-site or imported fill shall be necessary for use in fill slopes.

LV 4.1-11 The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.

LV 4.1-12 Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5:1 (h:v). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will expose fill-over-bedrock or alluvium-over-bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering geologist.

LV 4.1-13 Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.

(2) Recommended Earthwork Specifications

LV 4.1-14 Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.

LV 4.1-15 All drainage devices shall be properly installed and observed by the geotechnical engineer and/or owner's representative(s) prior to placement of backfill.

LV 4.1-16 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the geotechnical engineer. The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.

- LV 4.1-17 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.
- LV 4.1-18 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.
- LV 4.1-19 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the soils engineer in areas designated as suitable for rock disposal.
- LV 4.1-20 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.
- LV 4.1-21 The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.
- LV 4.1-22 The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.
- LV 4.1-23 Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be

removed or treated to the satisfaction of the soils engineer and/or the controlling agency for the project.

LV 4.1-24 The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.

LV 4.1-25 The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.

(a) Recommendations for Placement of Trench Backfill

LV 4.1-26 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.

LV 4.1-27 Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.

LV 4.1-28 Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.

LV 4.1-29 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.

LV 4.1-30 No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.

LV 4.1-31 Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum

compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.

- LV 4.1-32 The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing improvements, or completed work.
- LV 4.1-33 Observations and field tests shall be carried on during construction by the geotechnical engineer to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.
- LV 4.1-34 Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.
- LV 4.1-35 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.

(b) Drainage and Erosion Control Recommendations

- LV 4.1-36 Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in Sections 7018 and 7019 of the 1997 Los Angeles County Uniform Building Code.
- LV 4.1-37 Modification of the existing pad grades after approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.

- LV 4.1-38 Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.
- LV 4.1-39 Permanent erosion control measures shall be initiated immediately following completion of grading.
- LV 4.1-40 All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. A qualified engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.
- LV 4.1-41 Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.
- LV 4.1-42 The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Pondered water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.
- LV 4.1-43 Slope surficial soils may be subject to water-induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s).
- LV 4.1-44 Short-term, non-plant erosion control measures shall be implemented during construction delays, adverse climate/weather conditions, and when plant growth rates do not permit rapid vegetation of graded areas. Examples of short-term, non-plant erosion control measures include matting, netting, plastic sheets, deep (5 feet) staking, etc.
- LV 4.1-45 All possible precautions shall be taken to maintain a moderate and uniform soil moisture to avoid high and/or fluctuating water content in slope materials. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.
- LV 4.1-46 A program of aggressive rodent control shall be implemented to control burrowing on slope areas.

(c) River Bank Slope Protection

LV 4.1-47 Bank protection is proposed to consist of a soil cement, gunite or rip-rap liner, which is buried/concealed behind a 4:1 (h:v) fill slope. Construction of the liner will involve the excavation of a 20-foot-deep slot as shown in the details on the tentative map. Where the toe of the 4:1 slope extends beyond the removals for the slot, the alluvium shall be overexcavated 3 feet prior to placement of overlying fill.

LV 4.1-48 Ground water will likely be encountered between a depth of 5 and 10 feet; therefore dewatering shall be undertaken to complete the lower 10 to 15 feet of the proposed slot excavation.

(d) Landscaping

LV 4.1-49 All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscape vegetation requiring excessive watering shall be avoided adjacent to the building foundations. Should landscaping be constructed, an effective water-tight barrier shall be provided to prevent water from affecting the building foundations.

(e) Seismic Considerations

LV 4.1-50 Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.

LV 4.1-51 Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.

LV 4.1-52 Over-excavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap is recommended to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.

(f) Proposed Slopes and Grades

LV 4.1-53 Stability Fills shall be analyzed at the grading plan stage based on testing of the actual materials proposed for the fill.

LV 4.1-54 Most of the alluvium and older Alluvium on the site are coarse-grained and have low cohesion. These materials shall not be used within the outer 4 feet of fill slopes and Stability Fills.

(g) Excavations, Shoring and Backfill

LV 4.1-55 Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the State Division of Industrial Safety, CAL OSHA. Temporary excavations no higher than 12 feet shall be no steeper than 1:1 (h:v). For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion between 3.5 and 20 feet shall be no steeper than 1.5:1 (h:v). Excavations not complying with these requirements shall be shored. It is strongly recommended that excavation walls in sands and dry soils be kept moist, but not saturated at all times.

LV 4.1-56 Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.

LV 4.1-57 The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method. Recommended specifications for placement of trench backfill are presented in Appendix C of the September 27, 2000 geologic and geotechnical report.

(h) Foundation and Settlement Considerations

LV 4.1-58 The structural design shall include seismic geotechnical parameters in accordance with UBC requirements for Seismic Zone 4. These parameters shall be provided at the grading plan stage.

LV 4.1-59 Shallow spread footings for foundation support of up to three-story residential, commercial or light industrial developments can adequately be derived from non-organic native soils, processed as necessary, and bedrock or engineered fill compacted as previously recommended. The composition of footings for heavier structures, if applicable, shall be addressed at the grading plan stage. Tentatively, an allowable bearing capacity of 2,500 pounds per square foot can be used for shallow foundations constructed in certified

compacted fill originated from existing, near-surface soils (except vegetative soils). Lateral resistance of footing walls shall be provided at the grading plan stage.

LV 4.1-60 Figure C4 (Appendix C), “Cut Lot (Transitional)” and “Cut-Fill Lot (Transitional)” of the September 27, 2000 geologic and geotechnical report provides a foundation grading detail for locations where foundations will straddle transition zones between cut and fill materials. If the remaining cut-fill transition is steep at depth below the building area, the geometry of the transition shall be reviewed during grading operations by the soils engineer on a site specific basis to evaluate the need for additional over-excavation removals and/or additional foundation reinforcement. Based on this review, appropriate action shall be taken as deemed necessary by the engineer. As a general guideline, steep cut/fill transitions would include slope gradients steeper than 4:1 (h:v) and overall variations in fill thickness of greater than 15 feet, which occur within 20 feet of final pad grade. Transitions between differing material types, such as bedrock and alluvium, also shall be overexcavated 5 feet as recommended in Section 1.2 of Appendix E of the September 27, 2000 Geologic and Geotechnical Report.

LV 4.1-61 To minimize significant settlements, upper soils in areas to receive fills shall be removed and recompacted to competent materials. Specific foundation design loads shall be provided at the grading plan stage.

(i) Drainage Control

LV 4.1-62 Whenever seepage of groundwater is observed, the condition shall be evaluated by the engineering geologist and geotechnical engineer prior to covering with fill material.

LV 4.1-63 Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which is to discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided to control erosion and to create sheet flow.

LV 4.1-64 Fill slopes and stability fills, as applicable, shall be provided with subsurface drainage as necessary for stability.

(j) Expansive Soils

LV 4.1-65 Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.

(k) Soil Corrosivity

LV 4.1-66 Testing for soil corrosivity shall be undertaken at additional locations within the project site at the grading plan stage. Final recommendations for concrete shall be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals.

(l) Retaining Walls and Pavement Design

LV 4.1-67 Retaining wall geotechnical design parameters and pavement design(s) shall be provided at the grading plan stage.

(3) Off-site Grading and Borrow Site

LV 4.1-68 If the proposed fills over alluvium and slopewash at either the Adobe Canyon or Chiquito Canyon sites are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.

LV 4.1-69 Where possible, removals that impact the mapped landslides shall be completed so as to not remove the existing landslide stability. If this is not possible, the conditions shall be geotechnically evaluated on a case-by-case basis at the Grading Plan stage in order to safely complete the necessary removals.

LV 4.1-70 Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.

8. CUMULATIVE IMPACTS

Because any potential geotechnical impacts that may result with development of the Landmark Village tract map site would be site-specific in nature, and because development of the proposed project, as well as the development of all surrounding projects, is required to be consistent with applicable Los Angeles County and Uniform Building Code requirements relative to potential geologic hazards, the proposed project would not result in significant cumulative geologic, soil or geotechnical impacts.

The cumulative impacts analysis presented in the certified Newhall Ranch Specific Plan Program EIR considered the cumulative geologic, soil, and geotechnical impacts associated with buildout of the entire Specific Plan, including the WRP. The Newhall Ranch Specific Plan Program EIR determined that geologic, soil, and geotechnical impacts tend to be site specific, rather than cumulative in nature and that each development site would be subject to, at minimum, uniform site development and construction standards relative to seismic and other geologic conditions prevalent within the region. When development plans would be developed for a specific site, appropriate and site-specific studies would be done to identify geotechnical and soils impacts, and to recommend appropriate mitigation.

This impact analysis has identified the geologic and soils impacts associated with development of the proposed tract map site and related off-site improvements, including the Adobe Canyon borrow site, the Chiquito Canyon grading site, and the utility corridor. Grading activities at these sites would facilitate future development; therefore, they are discussed in this cumulative impact analysis. While not a part of this project proposal, future development is proposed to occur on both the Adobe Canyon borrow site and the Chiquito Canyon grading site under the adopted Specific Plan. Within the Adobe Canyon borrow site, all proposed natural slopes with daylighted bedding conditions and or steep gradients (greater than 2:1 [h:v]) adjacent to graded areas may be potentially unstable and/or subject to debris flow hazard. Based on a review of the Preliminary Bulk Grading Study Map, most of the natural slopes are self-supporting with respect to the geologic structure of the bedrock bedding planes and slope orientations; hence gross stability is generally favorable. However, the steep drainages and swales present are subject to surficial debris flows, and could result in a significant geologic impact in the vicinity of the proposed water tank site. The natural slopes in the vicinity of the proposed water tank site would require gross and surficial stability analysis during future project stages when more site specific geologic data is available. Building setbacks or remedial measures would be required where ascending or descending slopes are not stable as determined by geologic or geotechnical stability analysis. If any natural slopes are determined to be unstable, or subject to debris flow hazard, mitigation measures would need to be designed.

Three suspected landslides have been mapped within the proposed grading limits for the Adobe Canyon borrow site. These landslides are likely translational failures controlled by the bedding orientation. Future development on this borrow site would require subsurface exploration and analysis relative to potential adverse impacts from landslides prior to its development.

9. CUMULATIVE MITIGATION MEASURES

While not proposed as part of this project, future development in either Adobe Canyon or Chiquito Canyon could result in potentially significant geologic and soils impacts. The following mitigation measures are recommended for future development on these sites:

- LV 4.1-71 If the proposed fills over alluvium and slopewash at either Adobe Canyon or Chiquito Canyon are to be considered “structural fill,” subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.
- LV 4.1-72 If future development is proposed within either Adobe Canyon or Chiquito Canyon, subsurface exploration and analyses shall be conducted to determine landslide stability. Means to mitigate the potential effects of landslides, including complete or partial removal, buttressing, avoidance, or building setbacks shall be identified at that time.
- LV 4.1-73 Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.
- LV 4.1-74 The natural slopes surrounding the proposed water tank site within the Adobe Canyon borrow site shall be evaluated to determine the gross stability of the natural slopes. This study shall include subsurface investigation to determine the specific geologic conditions. Corrective measures such as avoidance, cutting back to a shallower angle, or buttressing with compacted fill shall be implemented if the natural slopes do not meet the minimum required factor of safety.
- LV 4.1-75 A study shall be conducted to evaluate potential debris flows in the vicinity of the proposed water tank located in the Adobe Canyon borrow site. Corrective measures such as the construction of debris walls and/or basins, control of runoff or removal of loose surficial materials shall be implemented to mitigate this impact.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Specific Impacts

With implementation of the mitigation measures recommended in this section, no significant unavoidable project-related geologic, soil, or geotechnical impacts are anticipated.

b. Cumulative Impacts

With implementation of the cumulative mitigation measures recommended in this section, no significant unavoidable cumulative geologic, soil, or geotechnical impacts have been identified or are anticipated for the proposed project.

1. SUMMARY

Site clearing and grading operations within the Landmark Village tract map site would have the potential to discharge sediment in the Santa Clara River during storm events. Temporary erosion control measures in disturbed areas of the project site during the construction phase (including grading in Adobe Canyon and Chiquito Canyon, and construction of the utility corridor) are recommended to reduce this potential impact to less than significant levels. Once developed, the Landmark Village project would reduce post-development stormwater flows during a capital storm event, as compared to existing conditions. Specifically, the amount of discharge from the project site (including the tributary watershed in which the project site lies) would decrease from 1,117 cubic feet per second (cfs) to 850 cfs. This 24 percent reduction in rainfall runoff would be due to the reduction in erosive areas on the project site that contribute sediment and debris to the runoff, as well as to one existing and three proposed upstream debris basins north of State Route 126 (SR-126). The proposed storm drainage improvements would meet the flood control requirements of the Flood Control and Watershed Management Divisions of the Los Angeles County (County) Department of Public Works (LACDPW) and reduce flood impacts to less than significant levels.

Discharge from the Adobe Canyon borrow site after grading would be reduced from 450 to 352 cfs during a capital storm event, which represents a 22 percent reduction. Discharge from the Chiquito Canyon grading site after grading would be reduced from 283 cfs to 197 cfs, which is a 30 percent reduction. These reductions in discharge would result from a reduced rate of runoff from the grading sites allowing for greater infiltration. They would also result from the proposed debris basins that would capture sediment and debris in runoff before it discharges to the river. As a result of the grading and the debris basins, discharge from the off-site grading areas would not result in downstream flooding or an exceedance of river capacity, and impacts relative to upstream and/or downstream flooding would be less than significant.

Discharge and debris flow from the utility corridor would be equal to or less than existing conditions

Approximately 169 acres of the Landmark Village tract map site would be elevated above the capital floodplain (the remaining portions of the tract map site are already above the capital floodplain) and, therefore, none of the improvements proposed on the tract map site would be subject to flood hazard from the river or other nearby drainages. Neither the Adobe Canyon borrow site nor the Chiquito Canyon grading site include proposed structures within a 100-year or capital flood hazard area. By elevating the project site above the 100-year and capital flood hazard areas and by providing bank protection and erosion protection, where necessary, no housing or structures would be exposed to flood hazards.

The proposed project would not result in risk of loss, injury, or death due to flooding, mudflow, tsunami, or seiche.

Project water quality impacts are discussed in this EIR in Section 4.3, Water Quality. Project impacts on biological resources in the Santa Clara River as a result of changes to river hydraulics associated with proposed site grading, bank stabilization, and other floodplain modifications are addressed in this EIR in Section 4.5, Floodplain Modifications.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.2 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with flood protection for the entire Newhall Ranch Specific Plan site. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. The Newhall Ranch Specific Plan Program EIR also determined that site-specific Drainage Concept Plans would be required as the Specific Plan is implemented through the application and processing of tentative subdivision maps. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiered from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.2** discusses the Landmark Village project's existing conditions, the project's potential environmental impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any new mitigation measures recommended by this EIR for the Landmark Village project.

As compared to the Newhall Ranch Specific Plan Program EIR analysis, there are three minor modifications, with the project's proposed flood protection improvements. They are (1) modifications to the location of the soil cement tie-in at Chiquito Canyon Creek; (2) avoidance of riparian resource areas near the proposed central park area on the Landmark Village tract map site; and (3) minor realignment of the bank protection both upstream and downstream of the Long Canyon Road Bridge. All three proposed modifications are instances in which flood protection is pulled further back from the river corridor (i.e., farther away from the river) than what was analyzed in the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003) in **Appendix 4.10**.

b. References for this EIR Section

The information presented in this section relies on the Landmark Village tract map drainage concept and off-site grading areas drainage concept, both of which were prepared by PSOMAS (2006). It also relies on

portions of the *Landmark Village Flood Technical Report*, prepared by Pacific Advanced Civil Engineering, Inc. (PACE), dated August 2006. These reports are presented in **Appendix 4.2** of this EIR. This section addresses the potential hydrologic impacts of the proposed project, including the potential impacts to river hydraulics resulting from elevating the project site out of the Federal Emergency Management Agency (FEMA) 100-year and capital flood hazard areas, and the proposed bank stabilization. Potential impacts to the biological resources within and adjacent to the Santa Clara River and its tributary drainages are addressed in this EIR in **Section 4.5, Floodplain Modifications**. The proposed project's potential water quality impacts are addressed in this EIR in **Section 4.3, Water Quality**.

In addition to the above project-specific documents, the following references were used in this analysis. Documents referred to, referenced, or cited in this EIR section are incorporated by reference and are available for public review at the County of Los Angeles, Department of Regional Planning, 320 West Temple Street, Los Angeles, California:

- Center for Watershed Protection. *The Practice of Watershed Protection* (2000).
- Chow, VT. *Open Channel Hydraulics*. McGraw Hill Civil Engineering Series (1959).
- Federal Emergency Management Agency (FEMA) *Flood Insurance Map 065043-0340* (October 20, 2002).
- Los Angeles County Department of Public Works *Hydrology Manual* (December 1991) and *Sedimentation Manual* (June 1993).
- Los Angeles County Department of Public Works. *Development Planning for Storm Water Management, A Manual for the Standard Urban Storm Water Mitigation Plan (SUSMP)* (September 2002).
- Los Angeles County of Public Works *Level of Flood Protection and Drainage Protection Standards* (1986).
- Los Angeles County Department of Public Works, *Santa Clara River Enhancement and Management Plan, Flood Protection Report* (June 1968 Final Draft).
- PACE, Inc. – *Newhall Ranch Santa Clara River HEC-RAS Modeling report*, January 2006.
- PACE, Inc. – *Landmark EIR – Newhall Ranch Santa Clara River LA County & FEMA Updated Floodplain and Floodway Studies*, - May 2006
- PSOMAS. *Surveyed Topography Data for River Village* (1999).
- U.S. Army Corps of Engineers. *Santa Clara River Adopted Discharge Frequency Values* (adopted May 3, 1994 by the U.S. Army Corps of Engineers, the Ventura County Flood Control Department and the Los Angeles County Department of Public Works).
- Valencia Company, *Natural River Management Plan* (Permitted Projects and Activities under the U.S. Corps of Engineers 404 Permit, California Department of Fish and Game 1603 Agreement and 2081 Permit, November 1998).

- Sikand. Newhall Ranch Specific Plan Master Drainage Concept, Santa Clara River (April 2001).
- Sikand. Newhall Ranch Santa Clara River HEC-RAS Study (June 28, 2000).
- Sikand. Supplemental Report for Newhall Ranch Santa Clara River HEC-RAS Study (July 2000).
- Simons, Li & Associates. Summary Report, Fluvial Study of Santa Clara River and the Tributaries (November 1990).
- U.S. Geological Survey (USGS). Sediment Discharge in the Santa Clara River Basin, Ventura and Los Angeles Counties, California, Water Resource Investigations 79-78 (August 1979).

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

With respect to flood impacts, the Newhall Ranch Specific Plan Program EIR concluded that implementation of the Specific Plan's Conceptual Backbone Drainage Plan would result in an approximate 30 percent decrease in total debris volume and a 12 percent decrease in total burned and bulked runoff in the 20,724-acre tributary watershed where Newhall Ranch is located. Specifically, the existing amount of burned and bulked flows total 52,729 cfs for the capital storm, and the current total debris volume is estimated at 1,203,790 cubic yards (cy). Implementation of the Specific Plan would reduce the amount of burned and bulked discharge by 6,179 cfs to 46,550 cfs, and the amount of debris volume generated by 361,420 cy to a total of 842,370 cy.

In order to avoid flooding impacts along the Santa Clara River, those areas along the river that are proposed for commercial and residential development would be elevated above the existing FEMA 100-year and LACDPW capital flood hazard areas and, where necessary, erosion protection provided, thereby, removing the development from flood hazards.

The floodplain modifications proposed in the Specific Plan included three bridge crossings over the river, soil cement (and other bank protection methods) along portions of the banks in the river corridor of the Specific Plan site, and removal of mostly agricultural acreage from the floodplain by raising the land areas and installing bank protection. It was concluded that the proposed Specific Plan improvements would alter flows in the river; however, the effects would only be expected during infrequent flood events that reached the buried banks (e.g., 100-year and capital flood events).

The analysis also found that implementation of the Specific Plan would cause an increase in flows, water velocities, water depth, changes in sediment transport, and changes in the flooded areas of the river; however, these hydraulic effects were found to be localized and minor in magnitude and event. The

analysis also determined that, under the Specific Plan, the river would still retain sufficient width and natural hydraulic conditions so as to allow the existing fluvial processes to continue.

Based on the prior analysis, implementation of the Specific Plan was found to not increase site discharge during a capital storm, not result in upstream or downstream flooding, and not subject any on-site or off-site improvements to flood hazards. Therefore, the development proposed in the Specific Plan was found to result in less than significant on-site and off-site flooding impacts.

The Newhall Ranch Specific Plan Program EIR also included several mitigation measures to ensure that the Specific Plan's Conceptual Backbone Plan is implemented with the results intended in the Specific Plan and that the improvements are consistent with the requirements of the LACDPW. With implementation of these measures, it was determined that there would be no on-site or off-site significant flood impacts from either the Newhall Ranch Specific Plan or cumulative development within its tributary areas.

4. METHODOLOGY

The following section discusses Los Angeles County's capital flood methodology. The County's methodology for calculating the project's impacts on river hydraulics is presented in this EIR in **Section 4.5, Floodplain Modifications**, and the methodology used for calculating water quality impacts is addressed in **Section 4.3, Water Quality**. This impact analysis addresses three development scenarios:

1. Existing;
2. Existing with Project; and
3. Cumulative Buildout.

The hydrologic and hydraulic methodology used for the first two scenarios are summarized in this section to provide the reader with background information on the approach used to calculate pre- and post-development runoff quantities, the capacities of proposed improvements, and the effects of development on the Santa Clara River. The third scenario is a cumulative build-out scenario that was previously addressed in the Newhall Ranch Specific Plan Program EIR.

a. Explanation of County Capital Flood¹

In 1931, the Los Angeles County Flood Control District (now the Flood Control Division of the LACDPW) began development of a comprehensive plan of flood control facilities to collect and convey flows from the mountainous canyons, the alluvial fans, and the urbanized coastal plain.

The major needs in designing the system were the reduction of damage due to high canyon flows, the conveyance of large flows of water in a major storm, and the ability to meet future flood control needs. The design of the flood protection system for the County is based upon the LACDPW's 50-year capital flood hydrology. The reader should note that the LACDPW 50-year capital event design flow rate is well in excess of the FEMA 100-year flow rate.

The Department's 50-year capital flood (or Qcap) hydrology is based on a "design," or theoretical storm event, which is derived from 50-year frequency rainfall values and is patterned after actual major extra-tropical storms observed in the Los Angeles region. The 50-year capital frequency design storm is assumed to occur over a period of four days, with the maximum rainfall falling on the fourth day. For the sake of clarity and to minimize confusion, the prior sections and remaining sections of this document will drop the reference to "50-year capital flood" and only use the term "capital flood."

Analysis of recorded major storms reveals that, during the 24-hour period of maximum rainfall, rainfall intensity typically increases during the first 70 to 90 percent of the period and decreases in the remaining time. Furthermore, approximately 80 percent of the amount of the 24-hour rainfall occurs within the same 70 to 90 percent of the period. In developing the capital flood, the 50-year frequency design storm is assumed to fall on saturated soils. In converting rainfall to runoff, rainfall that is not lost due to the hydrologic processes of interception, evaporation, transpiration, depression storage, infiltration, or percolation is assumed to be surface runoff. The effect of snowfall or snowmelt on rainfall-runoff relationships is a consideration in only a very limited portion of the County (i.e., the higher elevations) where snowfall accumulates in winter.

Another assumption made in developing a capital flood design flow rate is that natural portions of the watershed have been burned by fire. When a watershed burns, the soil infiltration rate decreases due to the loss of vegetation and physical changes in the soil. The County has run field infiltrometer tests in order to quantify the effect that burning has on the coefficient of runoff. The effect of burning the watershed can increase the design runoff rate from 10 percent to 20 percent.

¹ Los Angeles County Department of Public Works, *Hydrology Manual* (Alhambra, California, December 1990).

The final factor in adjusting the capital flood design flow rate is referred to as a bulking factor. In the area where a watershed is burned, the runoff would carry with it a large layer of eroded topsoil. This sediment, along with the associated burned trees and brush, is referred to as debris. In order to account for these quantities of debris, the design flow rate is artificially increased using a prescribed bulking factor, which is a function of not only soil type, but also the steepness of the terrain and the size of the drainage basin. The bulking factors for larger drainage basins range from about 1.20 to 1.50, or from 20 percent to 50 percent over and above the burned flow rate.

In September 2003, LACDPW revised the hydrologic method that accounts for fire effects on runoff computations. In the previous practice, a completely burned watershed was assumed. That policy was updated to employ a statistical approach that relates historical fire data and vegetation recovery rates to changes in the runoff coefficient of soil. In so doing, a fire factor (*FF*) was developed to represent the effectively burned percentage of a given watershed. This factor is used to adjust runoff coefficients for the capital flood by indexing between an unburned and completely burned soil coefficient for a given soil.

Because the prior capital flood methodology was used for the Newhall Ranch Specific Plan, the previous capital discharge is used in this impact analysis for comparison. In the design stages for the Landmark Village project, the updated 2003 capital discharge will be employed as this updated version is anticipated to be adopted between now and approval of the proposed project. Because the 2003 capital discharge is lower than previous calculations, using updated values in the design phase will result in reduced calculated flood flows and a reduced calculated potential for flood-related impacts. Any changes in design of bank protection resulting from utilizing the updated capital discharge would only reduce the top of bank protection elevation and toe of the bank protection depth. Final design of bank protection would adhere to LACDPW capital flood design standards. The LACDPW has revised capital flood flow rates for the Santa Clara River (PACE – Newhall Ranch Santa Clara River HEC-RAS Modeling, January 2006). In general, these revised flow rates are 15 to 20 percent less than the previous values for the Santa Clara River within the study reach (see **Table 4.2-2** later in this document).

In summary, the County's *Qcap* is based on a theoretical four-day storm event occurring right after the watershed has been burned with the resulting flow rate being increased again by a bulking factor, thereby yielding a peak flow rate that is greater than a 50-year storm over an unburned-unbulked drainage basin. The probability of all of the theoretical assumptions identified in the County's capital flood occurring at the same time is extremely small, and yields greater design flows than the FEMA methodology for calculating the 100-year and 500-year floods. As a result, the County's methodology is more conservative than the FEMA 100-year flow rate.

b. Method of Drainage Analysis

The engineering term for the methods used to properly size pipes and channels is “hydraulic analysis.” In order to determine the proper sizes of pipes and channels, assumptions must be made regarding the amount of rainfall to design for and the amount and type of development that would take place in a drainage basin. An estimate also must be made of how often that amount of rainfall could be surpassed. This is referred to as the event exceedance probability, or its reciprocal value, return period. For example, a storm that has a 10 percent exceedance probability is a storm that has a 10 percent chance of exceeding a particular rainfall runoff in any given year. The reciprocal of this number (1/10) is also known as a 10-year return period storm. An important concept to keep in mind is that a pipe or channel is “designed” for a rate of flow (measured in cfs), not a volume of flow (measured in cubic feet or acre-feet). A dam or a lake is designed for storing or containing a fixed volume of water. A pipe of a fixed size, on the other hand, can carry different flow rates, depending on the pressure placed on the water.

In designing a storm drain system, the size of a pipe that would safely carry a predicted rate of flow (expressed in cfs) must be calculated. A 1-foot-square box that is 1 foot deep (a cubic-foot) can hold 7.5 gallons of water. Based on this fact, the amount of stormwater passing through a pipe or channel in one second can be calculated by multiplying the cross sectional area of the flow in the pipe (in square feet) by the rate of storm flows through the pipe in feet per second (fps). This three-dimensional rate of flow is referred to as “cubic feet per second” or cfs.

With the above concepts in mind, the effects of development on natural ground can be considered. Buildings, driveways, patios, sidewalks, and roads all create new impervious covers to the natural ground, and prevent water from being absorbed, or infiltrating, into the ground. The water that would normally infiltrate into the ground would, therefore, run off at higher than normal flow rates. Thus, the surface discharge from developed areas is greater than from undeveloped areas.

LACDPW requires that all designs utilize exceedance probability calculations for design and analysis. By employing this methodology, this impact analysis meets County design standards.

c. Explanation of Design Hydrology

The following provides additional discussion of the effects of soil type, imperviousness, and burning and bulking on storm discharge quantities.

(1) Effects of Soil Type and Amount of Imperviousness on Runoff Rates

The rate of runoff is directly related to the type of soil (see **Sections 4.1, Geotechnical and Soil Resources**, and **4.18, Agricultural Resources**, for further discussion regarding on-site soils). Certain soil types accept water faster (are more permeable) than other soils. Therefore, the types of soils present on a site are used in the calculations of runoff. Different soil types have very different water infiltration (or absorption) rates. If a sandy soil (highly permeable) is paved over, the coefficient of runoff (C) would greatly increase, whereas if a clay soil (not highly permeable) is paved over, runoff values would go up, but not as high as in the case of sandy soil because the sandy soil absorbs water faster. In small storms, some soils can absorb 100 percent of the rainfall. For example, soil type 015, Tujunga Fine Sandy Loam, can completely absorb a 0.5-inch per hour (in/hr) storm and almost completely absorb a 1.0 in/hr storm, thereby yielding extremely low runoff rates. For a 200-acre parcel with soil types 015 (Tujunga Fine Sandy Loam) and 012 (Ramona Clay Loam), radically different runoff quantities for the same rainfall events occur. For an intense storm, $I = 1.0$ in/hr, and the very pervious soil type 015 (Tujunga Fine Sandy Loam), the runoff rate would be 20 cfs. For the same size parcel on a very impervious soil, such as soil type 012 (Ramona Clay Loam), the runoff rate would be 168 cfs.

(2) Effects of Burning and Bulking

In an undeveloped watershed, capital flood flow rates assume a burned condition, which causes the coefficient of runoff to increase. Further, after increasing the coefficient of runoff for burning, the flow rate is then multiplied by a bulking factor, which is used to account for the amount of mud and debris that would be contained within the flow from the burned watershed. In the case of the project, the increase in runoff, or flow rates due to an increase in C to account for burning is from 10 to 20 percent. Application of the bulking factor to account for debris production would increase runoff quantities by 20 to 50 percent over and above the burned flow rate. Computer modeling for this project was used to estimate the runoff for the 50-year capital storm events. The analysis considered burned hydrology, but no additional bulking factors were used in the proposed (post-development) on-site runoff conditions because sediment-trapping devices are proposed upstream of the project site and north of SR-126.

(3) Effects of Development

As previously mentioned, development places impervious materials over soils that had previously absorbed stormwater. Once the impervious materials are placed over the soil, little direct infiltration occurs and runoff discharge increases. Because development does not typically completely cover the ground surface, portions of each developed parcel (e.g., front, side, and rear yards, landscaping, open

space, etc.) remain pervious to infiltration by stormwater. Percent imperviousness for each proposed land use for the project site is presented in **Table 4.2-1, Percent Imperviousness for Selected Land Uses**.

Table 4.2-1
Percent Imperviousness for Selected Land Uses

| Land Use | Percent Imperviousness |
|-----------------------------|------------------------|
| Single Family Residential | 42% |
| Multi Family Residential | 68% |
| School | 82% |
| Commercial | 92% |
| Park | 15% |
| Roadway | 100% |
| Open Space/Off-Site Grading | 0% |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (see Appendix 4.2).

(4) Santa Clara River Hydraulics

The floodplain conditions of the river were modeled using River Analysis System (RAS) software developed by the U.S. Army Corps of Engineers (ACOE) Hydrologic Engineering Center (HEC). Inputs to the HEC-RAS model include channel geometry, boundary conditions, hydraulic roughness, and hydrology (see the PACE report in **Appendix 4.2** of this EIR for a detailed description of this model). The original river modeling prepared by Sikand Engineering and utilized in the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003) in **Appendix 4.10**, used the HEC-RAS predecessor hydraulic model "HEC-2." The original HEC-2 model was converted and input into HEC-RAS.

The modeling prepared for the proposed project is consistent with that prepared for the Newhall Ranch Specific Plan. Discharges include the 50 percent (2-year), 20 percent (5-year), 10 percent (10-year), 5 percent (20-year), 2 percent (50-year), and 1 percent (100-year) annual probability return periods. In addition, the LACDPW capital flow (which is a 0.05 percent to 0.02 percent (2,000-year to 5,000-year) recurrence interval also has been evaluated. The numerical modeling includes velocity distributions for over 100 river cross-sections. Manning's roughness values for the model bed were taken from analysis of aerial photography of the project site and vary horizontally along each model cross-section. The proposed conditions analysis was conducted by modifying the existing conditions model such that the proposed bank protection (described below) was placed within the model as encroaching levees. The impacts of the proposed Long Canyon Road Bridge and the on-site and off-site bank protection (and

erosion protection) for the entire Landmark Village project site has been evaluated and are included as a part of the numerical modeling analysis.

The project model for the river was created by modifying existing cross-section geometrics to simulate the hydraulic effects of the proposed bank protection (soil cement, rip-rap and concrete), erosion protection, and the Long Canyon Road Bridge abutments and piers. The encroachment due to the soil cement was conservatively approximated by the insertion of vertical walls or “levee markers” in the HEC-RAS model to define the horizontal location of the proposed bank protection levees in the hydraulic model (model levees set at equivalent elevation on slope of riverbank). The modeling of the proposed Long Canyon Road Bridge span, concrete slope protection, pier spacing, and abutment locations is consistent with the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003). For modeling and impact analysis consideration, these conservative bridge configurations would have the greatest impact on river hydraulics. It should be pointed out, however, that this river hydraulic analysis is based on the project-specific design details, not assumptions from the previous *Newhall Ranch* Specific Plan evaluation.

Existing Santa Clara River discharge rates for the 2-, 5-, 10-, 20-, 50-, and 100-year storm events were obtained from a 1994 ACOE study entitled, *Santa Clara River Adopted Discharge Frequency Values*. This study is based upon a frequency analysis of stream flow data along the Santa Clara River and, therefore, approximates river flows from observed data. These values are presented in **Table 4.2-2, Existing Santa Clara River Conditions – Discharge by Return Period**. It is important to note that these values include discharges from upstream tributaries and direct runoff from the watershed.

**Table 4.2-2
Existing Santa Clara River Conditions
Discharge by Return Period (cfs)**

| Location | Station | 2-Year ¹ | 5-Year ¹ | 10-Year ¹ | 20-Year ¹ | 50-Year ¹ | 100-Year ¹ | ML Map Q _{cap} ² |
|---|---------|---------------------|---------------------|----------------------|----------------------|----------------------|-----------------------|--------------------------------------|
| Upstream of Castaic Creek Confluence | 35245 | 1,720 | 5,240 | 9,490 | 15,600 | 27,500 | 40,300 | 138,000 |
| At Castaic Confluence | 32265 | 2,527 | 8,232 | 14,942 | 24,157 | 41,141 | 58,207 | 163,000 |
| Downstream of Chiquito Creek Confluence | 22195 | 2,558 | 8,333 | 15,123 | 24,453 | 41,646 | 58,922 | 165,000 |
| At Grande Canyon Creek Confluence | 17360 | 2,581 | 8,408 | 15,263 | 24,675 | 42,025 | 59,457 | 166,500 |
| Downstream of Potrero Creek Confluence | 15125 | 2,600 | 8,480 | 15,400 | 24,900 | 42,400 | 60,000 | 168,000 |

Source: Pacific Advanced Civil Engineering, Inc., Landmark Village Flood Technical Report (August 2006).

¹ These recurrence intervals were obtained from ACOE. Santa Clara River Adopted Discharge Frequency Values (adopted May 3, 1994 by the ACOE, the Ventura County Flood Control Department, and the LACDPW).

² This recurrence interval is from the LACDPW ML Maps 43-ML-24 and 43-ML-25 of floodplain and floodway. This published Q_{cap} flow rate from LACDPW was recently revised downward.

³ Revised Capital Flood Flow Rates from LACDPW 2005 - see PACE January 2006 Santa Clara River HEC-RAS Modeling report (EIR, Appendix 4.2).

5. PLANS AND POLICIES FOR FLOOD CONTROL

Storm runoff from the project site, and discharges of runoff into and/or encroachment upon natural drainages, wetlands, and/or floodplains are subject to the Federal Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.) and associated regulations; the State Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) and associated regulations; Sections 1600–1607 of the California Fish and Game Code; and the requirements established by the ACOE, the CDFG, the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Board (RWQCB), and the Flood Control and Watershed Management Divisions of the LACDPW. Many of these regulations control water quality and floodplain modifications, and, where applicable, are addressed in this EIR in **Section 4.3, Water Quality**, and **Section 4.5, Floodplain Modifications**, respectively.

a. The Federal Clean Water Act

The project would be subject to federal permit requirements under the federal Clean Water Act.

In 1972, the federal Water Pollution Control Act (later referred to as the CWA) was amended to require 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. In 1987, the CWA was again amended to add Section 402(p), requiring that the U.S. Environmental Protection Agency (U.S. EPA) establish regulations for permitting of stormwater discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The U.S. EPA published final regulations directed at municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more, and stormwater discharges associated with industrial activities, including construction activities, on November 16, 1990. The regulations require that MS4 discharges to surface waters be regulated by a NPDES Permit (Phase I Final Rule, 55 Fed. Reg. 47990). The U.S. EPA published final regulations directed at stormwater discharges not covered in the Phase I Final Rule, including small construction projects of 1 to 5 acres, on December 8, 1999 (Phase II Final Rule, 64 Fed. Reg. 68722).

Section 404 of the CWA regulates activities that result in the location of a structure, excavation, or discharge of dredged or fill material into “waters of the U.S.,” which include wetlands along with non-wetland habitats, such as streams (including intermittent streams), rivers, lakes, ponds, etc. The Santa Clara River, including that portion of the river that flows through the Landmark Village tract map site, is designated by the U.S. Geological Survey as “waters of the U.S.” Four other drainages within or adjacent to the project site are also considered “waters of the U.S.” and fall under ACOE jurisdiction. These include Castaic Creek, Chiquito Canyon Creek, San Martinez Grande Canyon Creek, and Potrero Canyon Creek (see **Section 4.4, Biota**, for further information).

The CWA authorizes the U.S. EPA to permit a state to serve as the NPDES permitting authority in lieu of the U.S. EPA. The State of California has in-lieu authority for an NPDES program. The Porter-Cologne Water Quality Control Act authorizes the SWRCB, through the RWQCB, to regulate and control discharges into waters of the state. The SWRCB entered into a memorandum of agreement with the U.S. EPA on September 22, 1989 to administer the NPDES program governing discharges to “waters of the U.S.”

To facilitate compliance with federal regulations, the SWRCB has issued two statewide general NPDES permits for stormwater discharges: one for stormwater from industrial sites (not applicable to the Landmark Village project), and the other for stormwater from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit, reissued on April 17, 1997). Under the General Construction Activity Storm Water Permit as reissued, facilities discharging stormwater associated with construction projects with a disturbed area of 5 or more acres are required either to obtain individual NPDES permits for stormwater discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent (NOI) with SWRCB. However, a recent ruling (March 2003) amended the requirements to include all projects that disturb 1 acre or more. The General Construction Activity Storm Water Permit addresses both stormwater and non-storm water discharges from construction sites.

The applicant under the General Construction Activity Storm Water Permit must ensure that a Storm Water Pollution Prevention Plan (SWPPP) is approved, and file a NOI with SWRCB to comply with the state permit prior to issuance of a grading permit.

The RWQCB is the enforcement authority in the Los Angeles Region for the two statewide general permits, and all NPDES stormwater and non-stormwater permits. Construction sites and discharges are also regulated under local laws and regulations.

The project is also subject to the waste discharge requirements of the RWQCB Municipal Permit (General MS4 Permit) Order No. 01-182, NPDES No. CAS004001 (adopted December 13, 2001). The County of Los Angeles is a Permittee under the General MS4 Permit and, therefore, has legal authority to enforce the terms of the permit within its jurisdiction. The General MS4 Permit is intended to ensure that combinations of source control and treatment control Best Management Practices (BMPs) are implemented to protect the quality of receiving waters. It includes requirements governing the design, construction, and operation of developments.

b. United States Army Corp of Engineers

Additional project improvements within the jurisdiction of the ACOE would require permits under Section 404 of the CWA. Section 404 of the CWA regulates activities that result in the location of a structure, excavation, or discharge of dredged or fill material into “waters of the U.S.,” which include wetlands along with non-wetland habitats, such as streams (including intermittent streams), rivers, lakes, ponds, etc. The Santa Clara River, including that portion of the river that flows through the Landmark Village project site, is designated by the U.S. Geological Survey as “waters of the U.S.” Both Chiquito and Castaic Creeks are also considered “waters of the U.S.” and fall under ACOE jurisdiction (see **Section 4.4, Biota**, for further information on these drainages). Construction of a portion of the bank stabilization, outlet structures (discussed in **Section 4.5, Floodplain Modifications**), and the Long Canyon Road Bridge fall within the ACOE’s jurisdiction.

c. California Department of Fish and Game

CDFG has jurisdiction over the Santa Clara River as well as Chiquito and Castaic Creek plus 44 acres of riparian vegetation found on site and within the study area. Additional project improvements under the jurisdiction of the CDFG would require permits pursuant to Sections 1600–1607 of the California Fish and

Game Code. Under this state law, CDFG regulates activities that would alter the flows, beds, channels, or banks of streams² and lakes.

d. Los Angeles County Department of Public Works (LACDPW)

The Flood Control Division of the LACDPW regulates storm runoff from developed areas. The LACDPW issued a memorandum in 1986 entitled, “*Level of Flood Protection and Drainage Protection Standards*” for development projects in Los Angeles County. The memorandum established Los Angeles County policy on levels of flood protection and requires that the following facilities be designed for the capital flood: (a) all facilities not under State of California jurisdiction that intercept flood waters from natural drainage courses; (b) all areas mapped as floodways; (c) all facilities that are constructed to drain natural depressions or sumps; and (d) all culverts under major and secondary highways. In addition, all facilities in developed areas that are not covered by the capital flood protection conditions must be designed for the urban flood, or runoff from a 25-year frequency design storm. Because the project would intercept flood flows from natural areas to the north of SR-126, the project’s storm drainage facilities that would accept these flows must be sized and designed for the capital flood.

In addition to meeting this required level of flood protection, all development in the Santa Clara River watershed must meet standards adopted by the LACDPW for the Santa Clara River and its major tributaries in the County *Sedimentation Manual*. Further, properties adjacent to the river that include improvements along and across a segment of the river (including the project) must meet the standards adopted in the Newhall Ranch Specific Plan Program EIR and Revised Additional Analyses, Volume VIII (May 2003) in **Appendix 4.10**.

Additionally, LACDPW has required the project applicant to prepare detailed hydraulic and fluvial modeling (for the capital flood event) for the proposed study reach of the Santa Clara River. LACDPW had three stated purposes for requesting the Newhall Ranch Santa Clara River fluvial analysis:

- (1) Verify applicability of the Los Angeles County Design Manual (and Hydrology and Sedimentation Manual) top and toe elevation calculations for this reach of the Santa Clara River;
- (2) Establish proposed riverbank protection horizontal and vertical (top and toe elevations of the bank protection) alignments to facilitate a complete review of the various Newhall Ranch tentative tract map submittals; and
- (3) Provide level of understanding of the Newhall Ranch Santa Clara River reach fluvial mechanics as related to existing conditions and the proposed Newhall Ranch development conditions to identify any major project impacts.

² The term “stream” can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blueline streams, and watercourses with subsurface flows.

The fluvial study examined local, long-term and episodic components of riverbed adjustment. The study found that localized impacts from proposed bridge piers would occur, however, these impacts would not be significant. The study also found that the Landmark Village project would not change the fluvial mechanics of the Santa Clara River and, therefore, would not create a significant impact.

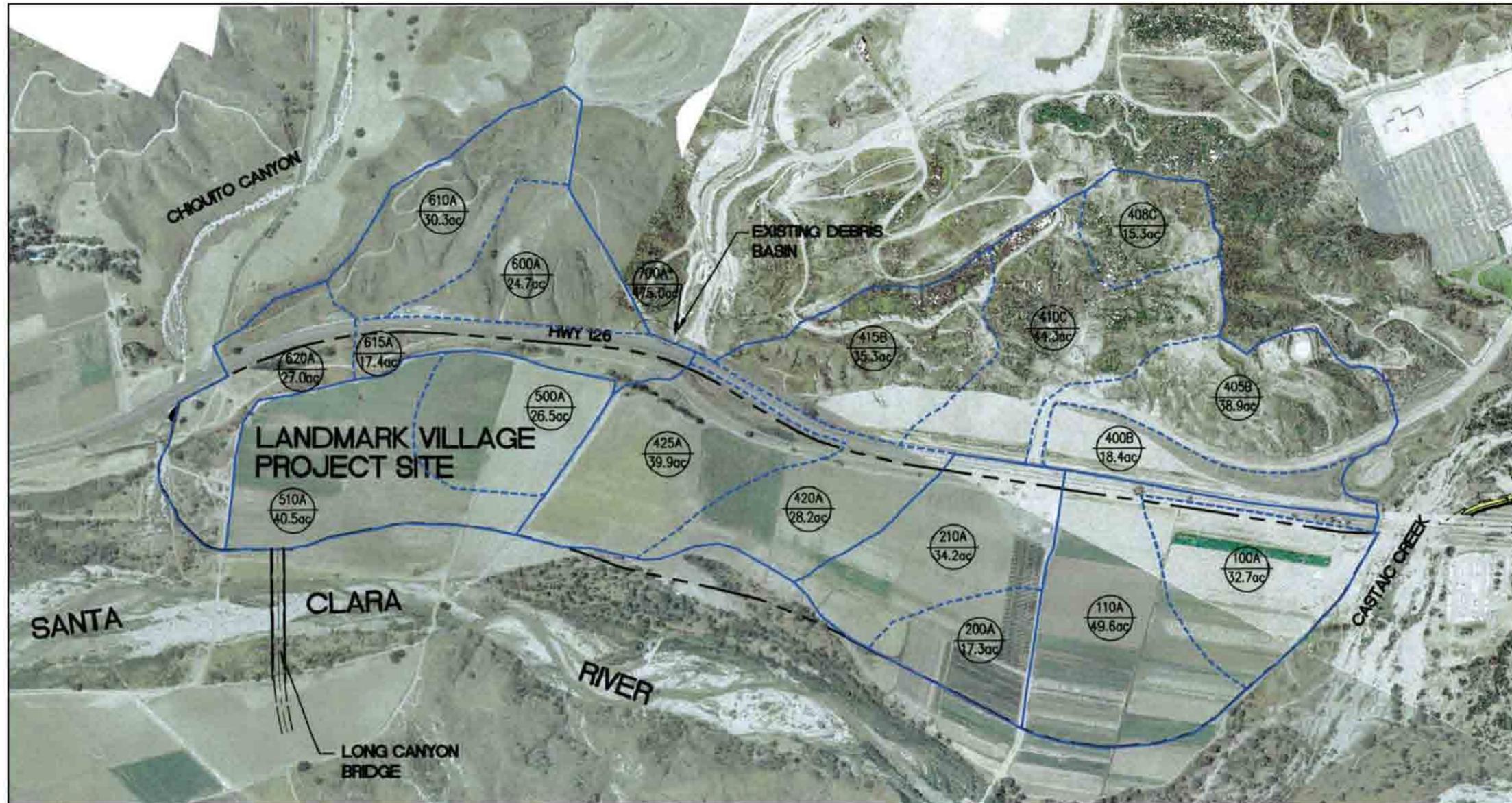
6. EXISTING CONDITIONS

The entire Landmark Village project site is located within the Santa Clara River basin. It flows through the northern portion of the Newhall Ranch site from east to west. The river has a Qcap of 116,236 cfs at a point upstream of Castaic Creek, and a Qcap of 140,776 cfs just west of the confluence of Castaic Creek and the Santa Clara River (values based on 2005 revised capital flood flow rates issued by LACDPW).

The entire watershed of the Santa Clara River basin at the Pacific Ocean is 1,634 square miles in area. The watershed drains portions of the Los Padres National Forest from the north, the Angeles National Forest from the northeast and east, and the Santa Susana Mountains from the south and southeast. At the downstream end of the Newhall Ranch Specific Plan site, the Santa Clara River drainage area is 644 square miles. The Landmark Village tract map site represents approximately 0.46 square mile (0.07 percent) of the 644-square-mile watershed (292.6 acres/640 acres per square mile = 0.46 square mile).

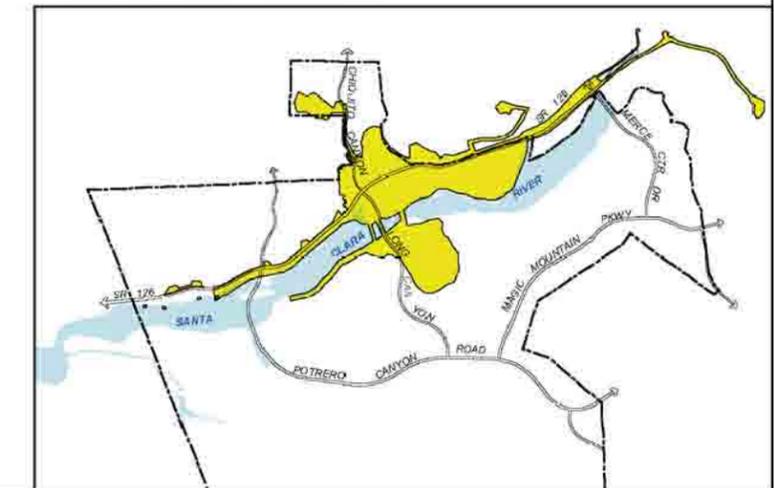
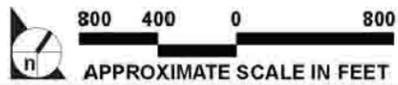
The Landmark Village tract map site is located immediately northwest of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the southern and western boundaries of the project site, while the eastern project boundary abuts Castaic Creek. There are a total of six drainages located in the vicinity of the project, excluding the river. These include Castaic Creek, Chiquito Canyon Creek, San Martinez Grande Canyon Creek, and Potrero Canyon Creek, a drainage from the adjacent landfill, and an unnamed jurisdictional drainage within the project site. Natural tributaries that drain into or adjacent to the project site include Chiquito Canyon Creek on the river's north bank, Long Canyon Creek on the south bank, and Castaic Creek, which enters the river upstream of the project site. The Chiquito Canyon Creek drainage is approximately 4.8 square miles, with a stream length of approximately 22,000 feet. The Long Canyon Creek drainage area is approximately 1.5 square miles, with a stream length of approximately 18,350 feet. The Castaic Creek watershed, the largest of the tributary watersheds, is approximately 209 square miles (including the area above the dam).

The Adobe Canyon borrow site is located south of the Landmark Village tract map site and east of Long Canyon, while the Chiquito Canyon grading site is located north of Landmark Village and SR-126. Rainfall in the tributary area is an annual average of 17 inches and generally occurs in the winter months. Runoff flows to and through the Landmark Village site is via sheet flows and natural concentrated flows (see **Figure 4.2-1, Existing Tributary Drainage Areas**).



Legend:

- Sub-Basin Number
Sub-Basin Area
- Residential Project Boundary
- Drainage Area Boundary
- Sub-Basins Boundary



SOURCE: Pacific Advanced Civil Engineering, Inc., Landmark Village Flood Technical Report (June 2005)

FIGURE 4.2-1

Existing Tributary Drainage Areas

The reach of the Santa Clara River adjacent to, and downstream of, the project site has perennial surface flows primarily created by tertiary treated effluent discharges from two upstream water reclamation plants operated by the County Sanitation Districts of Los Angeles County and by urban runoff. Natural flows in the river usually only occur in the winter due to storm runoff. Because rainfall within the Santa Clarita Valley varies from year-to-year, river flows can also vary significantly from year-to-year.

The reach of the river within and adjacent to the project site has multiple channels (braided). High sediment loads, bank erodibility, and intense and intermittent runoff conditions characterize this kind of system. The river has the potential for aggradation (deposit sediment) and degradation (scour or remove sediment) in various locations along the study reach based upon hydraulic conditions present in the various sub reaches of the river. Historical data analysis has found that the riverbed within the Landmark Village study area has aggraded up to 3 feet and degraded as much as 8 feet. Fluvial modeling, with the proposed Landmark Village bank protection improvements and the Long Canyon Road Bridge, identified the potential for up to 2 feet of aggradation and 5 feet of degradation during the capital flood event, or within the range documented by the historical data. Velocities and water surface elevations in the river vary from section-to-section of the river based on various hydraulic and hydrologic parameters. In general, velocity and water depth along the river will increase with higher discharge. An example of these relationships is provided in Table 3.1 of the PACE August 2006 report (EIR, **Appendix 4.2**). The data in that table indicate that velocities measured in fps, more than double, on average, from the 2-year to the 100-year storm event, while cross-sectional flow area increases ten-fold on average. In contrast, discharge increases almost 24 times from the 2-year to the 100-year storm event. Velocity and water depth percent increases do not correspond to the percent discharge increases because the wide river channel allows flood flows to spread out within the river cross-section thus reducing the increases in velocity and depth.

Provided below is information regarding the existing drainage characteristics of the off-site tributary area, and the Landmark Village project site, as well as the amount of runoff, which flows through and from the site into the river.

a. Tract Map Site (VTTM 53108)

The entire tributary drainage area for the Landmark Village site (excluding the Chiquita Canyon Landfill drainage-area) is approximately 568 acres and is comprised of six drainage-areas that independently drain toward the Santa Clara River (see **Figure 4.2-1**). The 475-acre Chiquita Canyon Landfill tributary

area extends predominantly in the northerly direction from the site and runoff from the tributary area flows through the site.³

The majority of the off-site drainage area is undeveloped land with moderate slopes. Runoff from this area flows through drainage channels underneath SR-126 and then largely sheet flows southwesterly through the Landmark Village site to the river. Runoff from the Chiquita Canyon Landfill tributary area flows into a debris basin located north of SR-126 prior to discharging through a drainage channel under SR-126, and onto and through the Landmark Village site.

Existing discharges from the project site are somewhat concentrated by both natural and man-made features as flow is conveyed to the river. However, these natural and man-made drainage features do not include drainage structures. Rather, surface water flows have naturally formed paths of least resistance and concentrate at existing topographic depressions or cut channels through the site that serve as concentrated discharge locations. There are currently no existing drainage or erosion/sedimentation control improvements located within the site other than minor agricultural drainage ditches and an insignificant amount of loose rock and earthen riverbank protection.

Capital flood runoff quantities for the drainage-areas are provided in **Table 4.2-3, Existing Drainages and Runoff Discharge – VTTM 53108**. In accordance with LACDPW requirements, the burned and bulked storm event (the capital storm) was used to calculate the discharge. Under existing conditions, burned and bulked flows from the six drainage-areas (excluding the Chiquita Canyon Landfill) total 1,117 cfs.

³ The Chiquita Canyon Landfill drainage (sub-basin 700 AB, 475 AC) drains through the Landmark Village tract map site, but the project would not impact this drainage and it will remain a separate, unmodified open drainage; however, it would be placed into a closed drainage system upon completion of the Landmark Village project. Runoff from the project site would not discharge into this system.

**Table 4.2-3
Existing Drainages and Runoff Discharge
VTM 53108**

| Drainage Areas | Acreage | Time of Concentration (minutes) | Q50c¹ (cfs) | Q50b² (cfs) | Q50bb³ (cfs) |
|-----------------------|----------------|--|-------------------------------|-------------------------------|--------------------------------|
| 100A | 32.7 | 22 | 27 | 41 | 52 |
| 110A | 49.6 | 20 | 44 | 58 | 74 |
| 200A | 17.3 | 17 | 17 | 24 | 30 |
| 210A | 35.8 | 24 | 28 | 39 | 50 |
| 400B | 18.4 | 24 | 14 | 20 | 25 |
| 405B | 38.9 | 28 | 27 | 39 | 50 |
| 408C | 15.3 | 8 | 25 | 32 | 41 |
| 410C | 44.3 | 19 | 41 | 57 | 72 |
| 415B | 35.3 | 11 | 46 | 62 | 79 |
| 420A | 34.4 | 24 | 27 | 37 | 47 |
| 425A | 39.9 | 20 | 35 | 48 | 61 |
| 500A | 26.5 | 20 | 23 | 33 | 42 |
| 510A | 40.0 | 24 | 31 | 44 | 53 |
| CTQ-1A | 6.1 | 8 | 10 | 13 | 16 |
| CTQ-2A | 3.6 | 6 | 7 | 9 | 11 |
| CTQ-3A | 1.8 | 5 | 4 | 5 | 6 |
| CTQ-4A | 12.3 | 10 | 17 | 22 | 28 |
| CTQ-5A | 4.4 | 5 | 10 | 12 | 15 |
| CTQ-6A | 24.9 | 15 | 27 | 36 | 46 |
| CTQ-7A | 2.1 | 5 | 5 | 6 | 8 |
| CTQ-8A | 2.8 | 5 | 6 | 7 | 10 |
| CTQ-9A | 31.8 | 14 | 36 | 48 | 61 |
| CTQ-10A | 15.6 | 11 | 21 | 27 | 35 |
| CTQ-10A | 10.2 | 17 | 18 | 18 | 19 |
| CTQ-12A | 11.7 | 10 | 26 | 26 | 28 |
| 620A | 12.4 | 22 | 10 | 14 | 18 |
| Totals | 568.1 | | | 660 | 831 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005).

¹ Q50c - 50-year rainfall intensity clear flow.

² Q50b - 50-year rainfall intensity burned flow.

³ Q50bb - 50-year rainfall intensity burned and bulked flow.

The capital flood within the river along the project site is approximately 140,776 cfs just west of the confluence of Castaic Creek and the Santa Clara River. The peak (burned and bulked) flow rate from the entire tributary area (including the Chiquita Canyon Landfill drainage area) is approximately 1,660. Existing burned and bulked flow from the project site is approximately 1,660 cfs. Therefore, capital flood flows from the project site are approximately one percent of the river capital flood discharge rate.

A portion of the project site lies within the County's capital floodplain for the river (see **Figure 4.2-2, Existing County Capital Floodplain Boundaries**) and within the 100-year floodplain identified by FEMA Flood Insurance Rate Map (FIRM) No. 065043-0340 (October 20, 2002) for the unincorporated areas of Los Angeles County (see **Figure 4.2-3, Existing FEMA Floodplain Boundaries**). The 100-year floodplain boundaries are based on historical runoff records as measured with stream gauges. Mapping the 100-year floodplain is important because FEMA uses the data to establish standards for flood insurance coverage under the Natural Flood Insurance Program (NFIP). Under Flood Insurance Agency (FIA) criteria, the 100-year flood elevation is the "base flood" and any land that is outside of this 100-year, or base flood, elevation is considered reasonably (2-yr, 5-yr, 10-yr, 20-yr, 50-yr, FEMA 100-yr and LACDPW capital) safe and free from flood hazards.

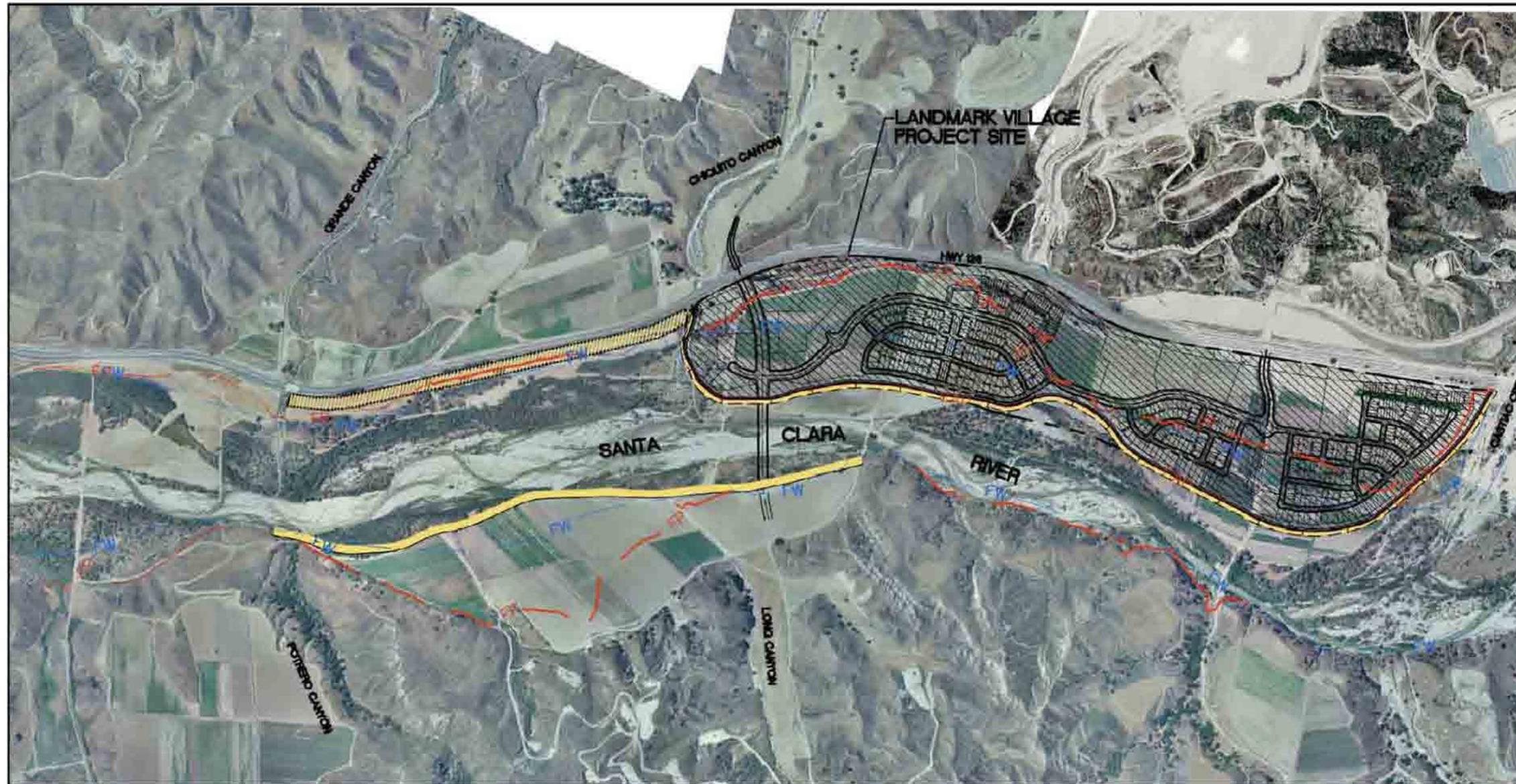
As a result of Hurricanes Rita and Katrina in 2005, Congress has allocated funding to FEMA to study and identify flood hazard areas throughout the U.S. (particularly in and around large population centers). The Santa Clara River and its major tributaries have been identified as a study area from the headwaters in Acton to the Pacific Ocean.

FEMA and their contracted consultants are heading the effort with Los Angeles and Ventura counties to update the floodplain and floodway for the Santa Clara River and the major tributaries. The floodplain is determined as the peak limits of flooding of a river, channel, etc. during a particular design storm event. The floodway limits are typically inside the floodplain for each design storm event. The floodway is a theoretical limit line where the insignificant (non-flow caring) floodplain fringe is eliminated. By definition, the floodway is the encroachment of the floodplain from both directions to raise the water surface up to 1.0 foot.

In the case of the Santa Clara River at the Newhall Ranch study area, there are two sets of floodplain limit lines. The FEMA Flood Insurance Rate Maps for the 100-year event ($\pm 60,000$ cfs) were recently updated and adopted by FEMA (2002), but FEMA has not mapped a 100-year floodway in this reach of the river. LACDPW has a mapped floodplain and floodway for the Santa Clara River for the capital flood event ($\pm 140,000$ cfs), which is the LACDPW design storm event.

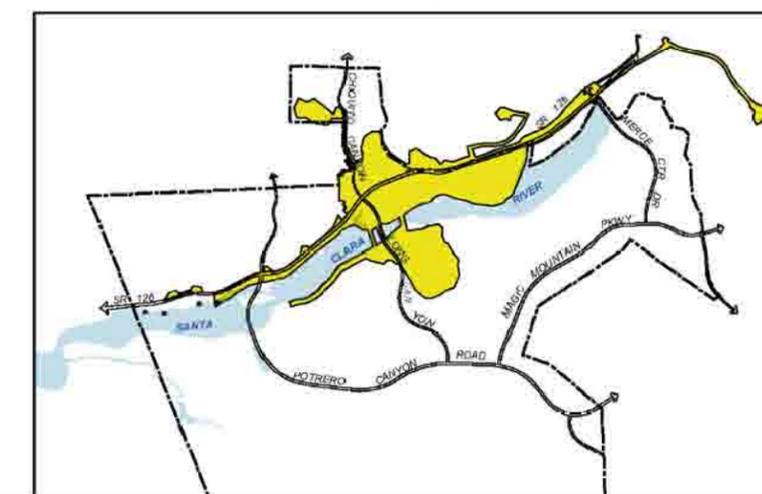
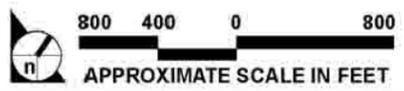
All of the Newhall Ranch Santa Clara River designs have been required to meet the higher ($\pm 140,000$ cfs) capital flood event. The Capital flood flow rate is ± 2.5 times greater than the FEMA 100-year flow rate and, therefore, the design criteria required to meet the LADPW capital storm is much more conservative and will meet/exceed the 100-year FEMA criteria.

Updated hydrology (run-off flow rate) will be reevaluated and the 1995 Joint Los Angeles and Ventura County study is being considered as the basis for the reevaluation (the 1995 study results were similar to



Legend:

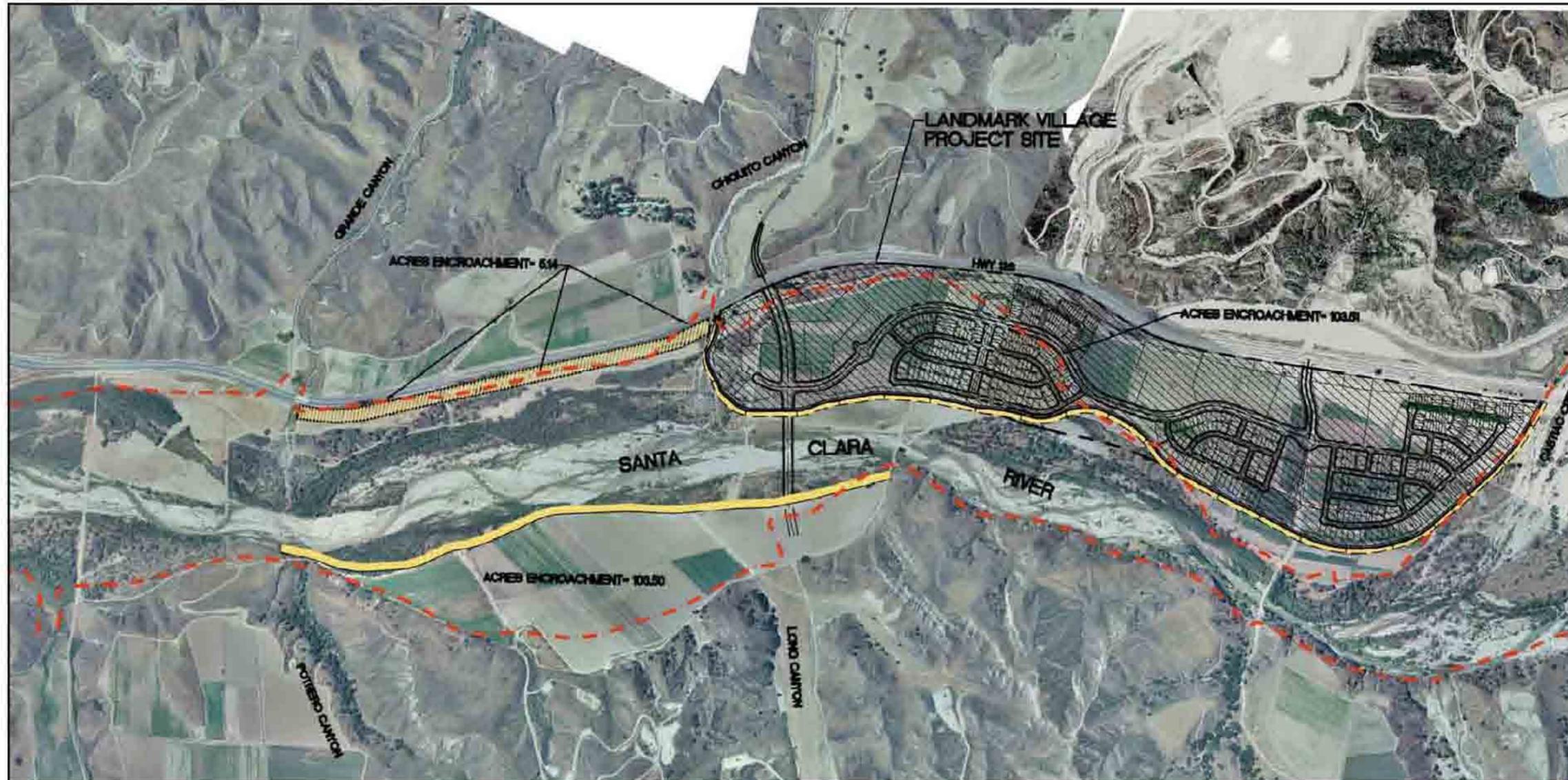
- Existing Flood Way Boundary
- Existing Flood Plain Boundary
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor Bank Protection



SOURCE: Pacific Advanced Civil Engineering, Inc., Landmark Village Flood Technical Report (June 2005)

FIGURE 4.2-2

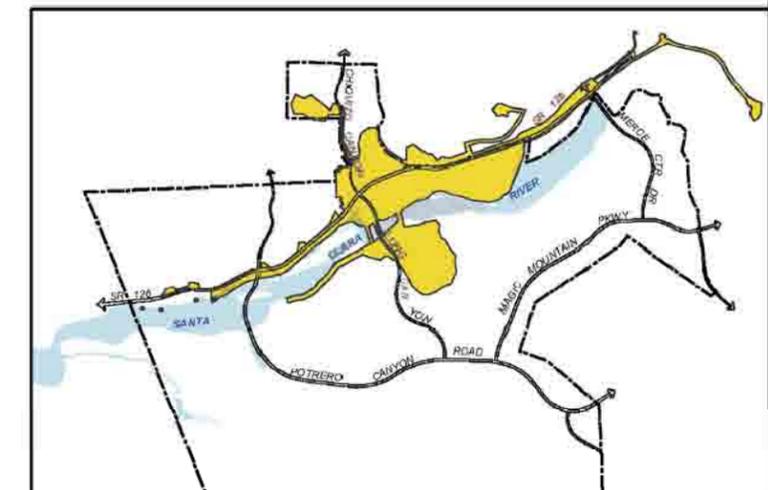
Existing County Capital Flood Plain Boundaries



Legend:

- - - FEMA Zone A
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor Bank Protection

800 400 0 800
 APPROXIMATE SCALE IN FEET



SOURCE: Pacific Advanced Civil Engineering, Inc., Landmark Village Flood Technical Report (June 2005)

FIGURE 4.2-3

Existing FEMA Flood Plain Boundaries

the existing FEMA 100-year flow rate of $\pm 60,000$ cfs). LACDPW has stated to FEMA that Newhall has provided updated Capital Floodplain Modeling results and LACDPW has approved the results for the existing condition. As part of the Newhall Ranch Specific Plan, a detailed floodplain and floodway analysis will be prepared for the updated existing conditions and the proposed Newhall Ranch development. This information will ultimately be adopted by FEMA for use as the published floodplain and floodway for the river in this reach.

It is not expected that the newly defined FEMA initiative to reevaluate the flood hazards (floodway and floodplain) along the Santa Clara River will impact any portion of the Newhall Ranch Specific Plan. As part of the Newhall Ranch Specific Plan, updated floodplain and floodway mapping will be provided to LACDPW and FEMA for review and approval.

The existing floodplains for the seven storm events are shown in Figures 3.2A through 3.2F of the PACE report (**Appendix 4.2**). The currently mapped capital floodplain (ML Map) lines are shown in Figure 4.5 of the PACE report. The updated capital floodplain limits are shown in the PACE January 2006 Santa Clara River HEC-RAS Modeling report (**Appendix 4.2**).

The difference in elevation between the channel bottom and the 100-year floodplain along the margins of the river varies greatly at the project site. This difference ranges from approximately 4.3 to 16.3 feet and is dependent upon the width of the river channel. For example, in wider portions of the river channel where flows spread out with low velocities, there is only a small elevational difference between the channel bottom and the adjacent floodplain boundary. In contrast, the channel is often deep where it is narrower, creating a large elevational difference between the channel bottom and the floodplain water surface.

The substrate of the river channel (i.e., top layer of the river bottom) is primarily sand, which is actively eroded and deposited in flood events. Previous studies (Simons and Li) have demonstrated that sediment deposition and scouring along the upper Santa Clara River are generally in equilibrium, and that there are no major trends of channel degradation or aggradation. However, some localized areas may experience either greater scouring or deposition. Updated studies (PACE 2006) provide more detailed analysis of long-term, general (capital) and local aggradation and degradation trends in the river for the existing and proposed project conditions. The results of this analysis are similar to previous reports in that the river is in a relative state of equilibrium and the proposed project impacts are not significant because they do not substantially modify existing conditions.

b. Adobe Canyon Borrow Site

There are eight sub-basins within the approximately 213-acre tributary for the Adobe Canyon borrow site that independently drain into Long Canyon and eventually discharge to the Santa Clara River to the

north (see **Figure 4.2-4, Existing Drainage Patterns – Adobe Canyon Borrow Site**). Most of these sub-basins drain northwesterly, while the remaining drain northerly and northeasterly to Long Canyon. The majority of the tributary area is undeveloped with steep to moderate slopes. Runoff from this borrow site is shown in **Table 4.2-4, Existing Drainages and Runoff Discharge – Adobe Canyon Borrow Site**. Total burned and bulked runoff during a capital storm under existing conditions would be approximately 450 cfs.

**Table 4.2-4
Existing Drainages and Runoff Discharge – Adobe Canyon Borrow Site**

| Sub-Basins | Acreage | Time of Conc. (minutes) | Q50u ¹ (cfs) | Q50b+d ² (cfs) | Q50bb+d ³ (cfs) |
|---------------|--------------|-------------------------|-------------------------|---------------------------|----------------------------|
| ADB-1A | 35.8 | 11 | 47 | 62 | 90 |
| ADB-2A | 40.0 | 12 | 49 | 65 | 95 |
| ADB-3A | 24.0 | 12 | 30 | 39 | 50 |
| ADB-4B | 16.7 | 13 | 20 | 26 | 33 |
| ADB-5B | 39.9 | 20 | 34 | 48 | 61 |
| ADB-7C | 27.4 | 14 | 31 | 41 | 52 |
| ADB-8C | 12.9 | 11 | 17 | 22 | 28 |
| ADB-9C | 16.6 | 9 | 25 | 32 | 41 |
| Totals | 213.3 | | 253 | 335 | 450 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005).

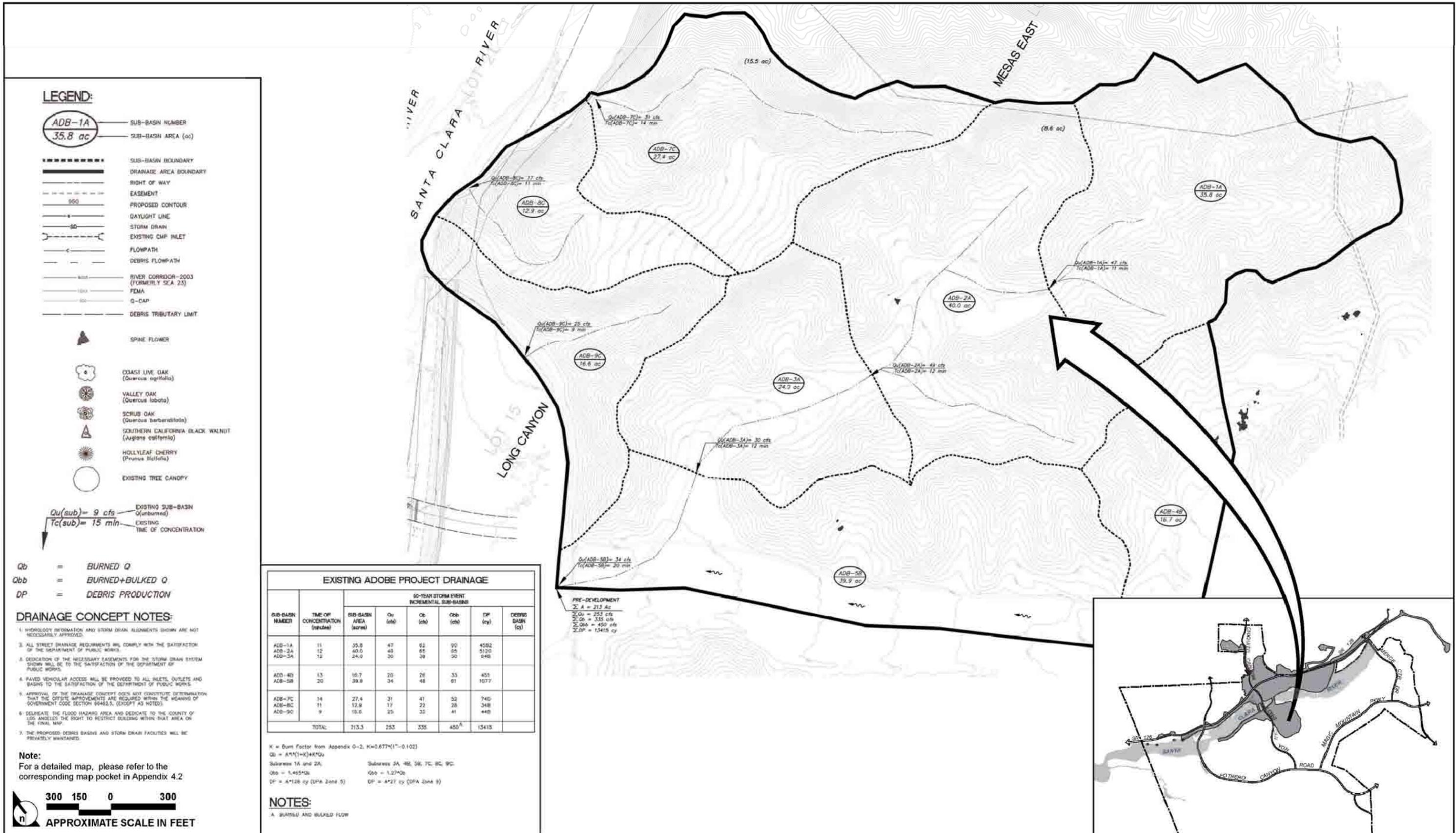
¹ unburned and unbulked runoff

² burned and developed runoff

³ burned and bulked and developed runoff

c. Chiquito Canyon Grading Site

As previously mentioned, the approximately 127-acre Chiquito Canyon grading site is located within a 568-acre drainage area to the north of the Landmark Village tract map site. There are 12 sub-basins within the approximately 127-acre Chiquito Canyon grading site drainage area that independently drain toward the Santa Clara River (see **Figure 4.2-5, Existing Drainage Patterns – Chiquito Canyon Grading Site**). Runoff from most of these sub-basins drains predominantly southerly toward existing culverts under SR-126, and eventually through the tract map site, while runoff from one sub-basin drains toward Chiquito Canyon to the west. The majority of the area is undeveloped land with steep to moderate slopes. Runoff discharge from the Chiquito Canyon Grading Site is shown in **Table 4.2-5, Existing Drainages and Runoff Discharge – Chiquito Canyon Grading Site**. Total burned and bulked runoff during a capital storm under existing conditions would be 283 cfs.



LEGEND:

- ADB-1A** (35.8 ac) — SUB-BASIN NUMBER
- 35.8 ac — SUB-BASIN AREA (ac)
- SUB-BASIN BOUNDARY
- DRAINAGE AREA BOUNDARY
- RIGHT OF WAY
- EASEMENT
- 950 — PROPOSED CONTOUR
- DAYLIGHT LINE
- STORM DRAIN
- EXISTING CMP INLET
- FLOWPATH
- DEBRIS FLOW-PATH
- RIVER CORRIDOR-2003 (FORMERLY SCA 2.3)
- FEMA
- G-CAP
- DEBRIS TRIBUTARY LIMIT
- ▲ SPINE FLOWER
- COAST LIVE OAK (Quercus agrifolia)
- VALLEY OAK (Quercus lobata)
- SCRUB OAK (Quercus berberidifolia)
- SOUTHERN CALIFORNIA BLACK WALNUT (Juglans californica)
- HOLLYLEAF CHERRY (Prunus bicolor)
- EXISTING TREE CANOPY

$Q_u(sub) = 9$ cfs — EXISTING SUB-BASIN Q (unburned)
 $T_c(sub) = 15$ min — EXISTING TIME OF CONCENTRATION

Q_b = BURNED Q
 Q_{bb} = BURNED+BULKED Q
 DP = DEBRIS PRODUCTION

DRAINAGE CONCEPT NOTES:

1. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. ALL STREET DRAINAGE REQUIREMENTS WILL COMPLY WITH THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATION OF THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM SHOWN WILL BE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
4. PAVED VEHICULAR ACCESS WILL BE PROVIDED TO ALL INLETS, OUTLETS AND BASINS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 94462.5. (EXCEPT AS NOTED).
6. DELINEATE THE FLOOD HAZARD AREA AND DEDICATE TO THE COUNTY OF LOS ANGELES THE RIGHT TO RESTRICT BUILDING WITHIN THAT AREA ON THE FINAL MAP.
7. THE PROPOSED DRAINAGE BASINS AND STORM DRAIN FACILITIES WILL BE PRIVATELY MAINTAINED.

Note:
 For a detailed map, please refer to the corresponding map pocket in Appendix 4.2

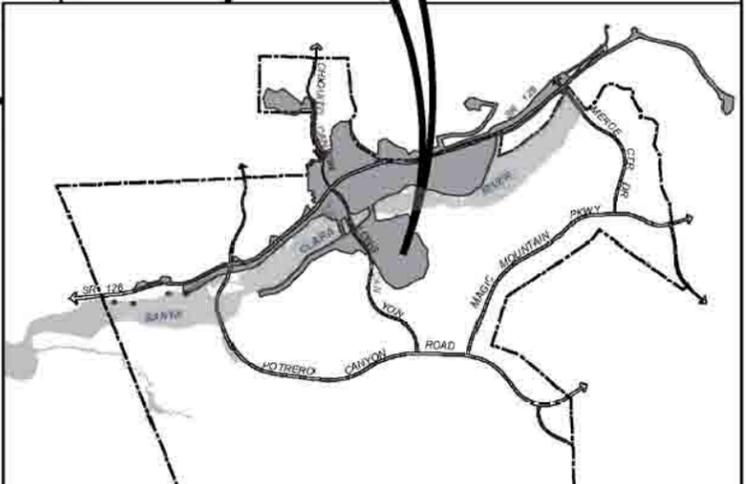


EXISTING ADOBE PROJECT DRAINAGE

| SUB-BASIN NUMBER | TIME OF CONCENTRATION (min) | SUB-BASIN AREA (acres) | 50-YEAR STORM EVENT INCREMENTAL SUB-BASINS | | | | TDP (cy) | DEBRIS BASIN (cy) |
|------------------|-----------------------------|------------------------|--|-------------|------------------------|--------------|----------|-------------------|
| | | | Q_u (cfs) | Q_b (cfs) | Q_{bb} (cfs) | DP (cy) | | |
| ADB-1A | 11 | 35.8 | 47 | 62 | 90 | 4582 | | |
| ADB-2A | 12 | 40.0 | 49 | 65 | 95 | 5120 | | |
| ADB-3A | 12 | 24.0 | 30 | 39 | 50 | 848 | | |
| ADB-4B | 13 | 16.7 | 20 | 26 | 33 | 451 | | |
| ADB-5B | 20 | 39.9 | 34 | 48 | 61 | 1077 | | |
| ADB-7C | 14 | 27.4 | 31 | 41 | 52 | 740 | | |
| ADB-8C | 11 | 12.9 | 17 | 22 | 28 | 348 | | |
| ADB-9C | 9 | 16.6 | 25 | 32 | 41 | 448 | | |
| TOTAL | | 213.3 | 253 | 335 | 450^A | 13415 | | |

K = Run Factor from Appendix 0-2, $K=0.677(1-0.102)$
 $Q_u = A^{0.78}(1+K)K^{0.2}$
 Subbasins 1A and 2A: $Q_{bb} = 1.455*Q_u$
 Subbasins 3A, 4B, 5B, 7C, 8C, 9C: $Q_{bb} = 1.27*Q_u$
 $DP = A^{0.128}$ (DFA Zone 5) $DP = A^{0.27}$ (DFA Zone 8)

NOTES:
 A. BURNED AND BULKED FLOW



SOURCE: PSOMAS, Off-Site Borrow Areas (Under Conditional Use Permit) Drainage Concept (March 14, 2005).

FIGURE 4.2-4

Existing Drainage Patterns – Adobe Canyon Borrow Site

Legend:

- SUB-BASIN NUMBER
- SUB-BASIN AREA (ac)
- EXISTING LOT LINE
- EXISTING EASEMENT
- EXISTING CONTOUR
- DAYLIGHT LINE
- SUB-BASIN BOUNDARY
- DRAINAGE AREA BOUNDARY
- RIGHT OF WAY
- EASEMENT
- EXISTING STORM DRAIN CULVERT
- EXISTING FLOWPATH
- EXISTING SUB-BASIN Q (unburned) TIME OF CONCENTRATION
- Qb** = BURNED Q
- Qbb** = BURNED+BULKED Q
- DP** = DEBRIS PRODUCTION

DRAINAGE DESIGN CRITERIA:

1. 50-YEAR 24-HOUR ISOHYET: 5.8
2. SOIL TYPE: 020
3. DESIGN STORM: 50 YEAR RETURN PERIOD
4. PERCENT IMPERVIOUS VALUES: SINGLE FAMILY - 42%
MULTI-FAMILY - 65%
COMMERCIAL - 92%
SCHOOL - 82%
OPEN SPACE - 0%
PARK - 15%
ROADWAY - 100%
5. DPA= 09
6. BULK FACTOR= 1.27

DRAINAGE CONCEPT NOTES:

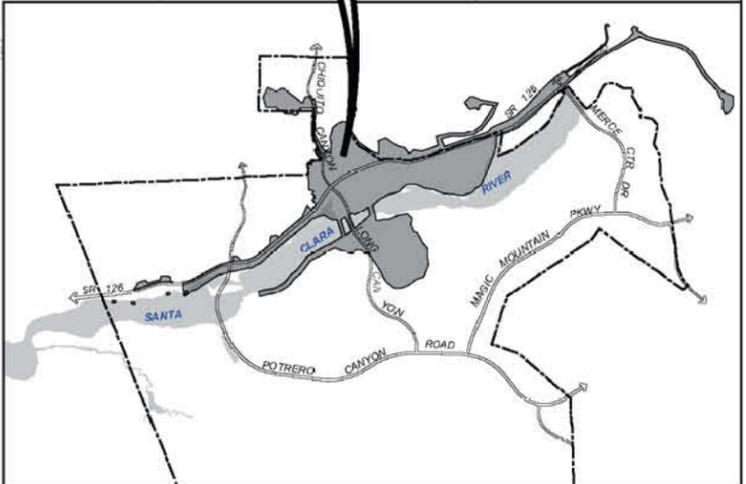
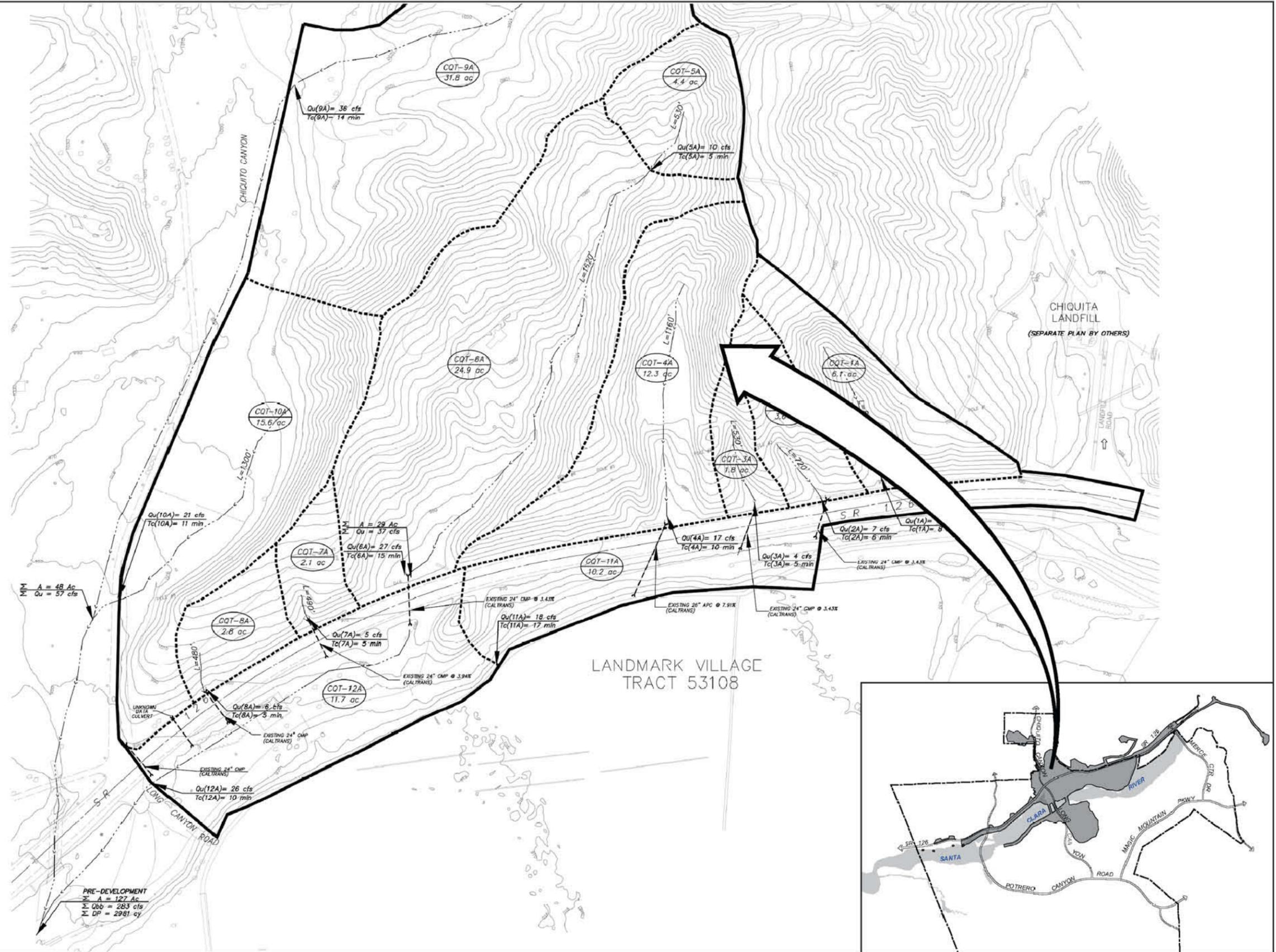
1. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. ALL STREET DRAINAGE REQUIREMENTS WILL COMPLY WITH THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATION OF THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM SHOWN WILL BE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
4. PAVED VEHICULAR ACCESS WILL BE PROVIDED TO ALL INLETS, QUILETS AND BASINS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 86462.5, (EXCEPT AS NOTED).
6. DELINEATE THE FLOOD HAZARD AREA AND DEDICATE TO THE COUNTY OF LOS ANGELES THE RIGHT TO RESTRICT BUILDING WITHIN THAT AREA ON THE FINAL MAP.
7. THE PROPOSED DEBRIS BASINS AND STORM DRAIN FACILITIES WILL BE MAINTAINED BY LOS ANGELES COUNTY.

EXISTING CHIQUITO PROJECT DRAINAGE

| SUB-BASIN NUMBER | TIME OF CONCENTRATION (minutes) | INCREMENTAL SUB-BASINS | | | | DEBRIS PRODUCTION (cy) |
|------------------|---------------------------------|------------------------|----------------------|----------------------|-----------------------|------------------------|
| | | SUB-BASIN AREA (ac) | Q _u (cfs) | Q _b (cfs) | Q _{bb} (cfs) | |
| CQT-1A | 8 | 6.1 | 10 | 1.3 | 16 | 165 |
| CQT-2A | 8 | 3.8 | 7 | 9 | 11 | 97 |
| CQT-3A | 5 | 1.8 | 4 | 5 | 6 | 49 |
| CQT-4A | 10 | 12.3 | 17 | 22 | 28 | 332 |
| CQT-5A | 5 | 4.4 | 10 | 12 | 16 | 119 |
| CQT-6A | 15 | 24.9 | 27 | 36 | 46 | 672 |
| CQT-7A | 5 | 2.1 | 5 | 6 | 8 | 57 |
| CQT-8A | 5 | 2.8 | 6 | 7 | 10 | 76 |
| CQT-9A | 14 | 31.8 | 36 | 48 | 61 | 859 |
| CQT-10A | 11 | 15.6 | 21 | 27 | 35 | 421 |
| CQT-11A | 17 | 10.2 | 18 | 18 | 19 | 54 |
| CQT-12A | 10 | 11.7 | 26 | 28 | 28 | 91 |
| TOTAL | | 127.3 | 187 | 229 | 283 | 2981 |

K = Burn Factor from Appendix G-2, $K=0.677(1-0.102)$
 $Q_b = A^{0.7}(1-K)+K*Q_u$
 $Q_{bb} = 1.27*Q_b$
 $DP = A^{0.27}$ (DPA Zone 9)

Note:
 For a detailed map, please refer to the corresponding map pocket in Appendix 4.2



SOURCE: PSOMAS, Off-Site Borrow Areas (Under Conditional Use Permit) Drainage Concept (March 14, 2005).

FIGURE 4.2-5

Existing Drainage Patterns – Chiquito Canyon Grading Site

**Table 4.2-5
Existing Drainages and Runoff Discharge – Chiquito Canyon Grading Site**

| Sub-Basins | Acreage | Time of Conc. (minutes) | Q50u ¹ (cfs) | Q50b+d ² (cfs) | Q50bb+d ³ (cfs) |
|------------|---------|-------------------------|-------------------------|---------------------------|----------------------------|
| CQT-1A | 6.1 | 8 | 10 | 13 | 16 |
| CQT-2A | 3.6 | 6 | 7 | 9 | 11 |
| CQT-3A | 1.8 | 5 | 4 | 5 | 6 |
| CQT-4A | 12.3 | 10 | 17 | 22 | 28 |
| CQT-5A | 4.4 | 5 | 10 | 12 | 15 |
| CQT-6A | 24.9 | 15 | 27 | 36 | 46 |
| CQT-7A | 2.1 | 5 | 5 | 6 | 8 |
| CQT-8A | 2.8 | 5 | 6 | 7 | 10 |
| CQT-9A | 31.8 | 14 | 36 | 48 | 61 |
| CQT-10A | 15.6 | 11 | 21 | 27 | 35 |
| CQT-11A | 10.2 | 17 | 18 | 18 | 19 |
| CQT-12A | 11.7 | 10 | 26 | 26 | 28 |
| Totals | 127.3 | | 187 | 229 | 283 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (*Appendix 4.2*).

¹ unburned and unbulked runoff

² burned and developed runoff

³ burned and bulked and developed runoff

7. PROPOSED IMPROVEMENTS

a. RELATED IMPROVEMENTS

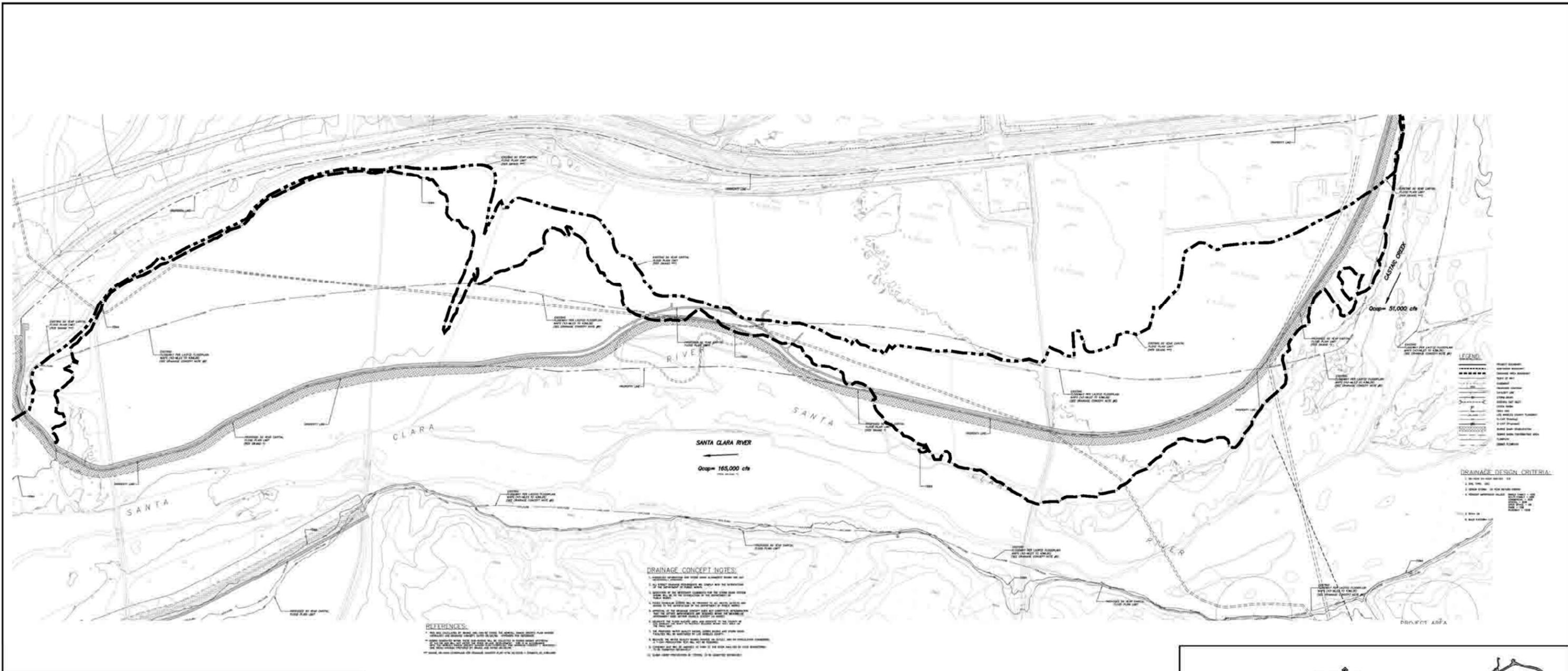
The Landmark Village tract map site is proposed on approximately 292 acres of land, located within the boundaries of the approved Newhall Ranch Specific Plan. To facilitate development of this site, several off-site project-related components would be implemented on an additional 750.9 acres of land mostly within the boundaries of the approved Specific Plan. These project-related components include the following:

- a cut and fill grading operation, which includes fill imported to the Landmark Village tract map site from a 215-acre borrow site located south of the Santa Clara River, and grading to accommodate roadway improvements to SR-126 and debris basins for stormwater flows collected by the project's storm drainage system on approximately 120 acres of land, located directly north of SR-126 within Chiquito Canyon (and related haul routes);
- a utility corridor, extending both east and west of the tract map site, which would extend municipal services to the tract map site;
- water tanks to convey potable and recycled water to the tract map site; and

- construction of the Long Canyon Road Bridge, bank stabilization, TRM's or similar, Chiquito Canyon/SR-126 culvert extension and storm drainage improvements.

At project buildout, off-site storm flows would continue to flow under SR-126 through existing culverts and through the site, and on-site runoff would continue to flow through the site to the river. The runoff, however, would be channeled through a stormwater conveyance system that would be constructed through the site down to the river. Three additional debris basins would be constructed within the tributary area north of SR-126 that would capture debris and sediment from runoff prior to its discharge under the SR-126 through the existing storm drains. (Runoff from the tributary area of the landfill already discharges into an existing debris basin.) Runoff from the developed portions of the Landmark Village site would be conveyed through a combination of grading, storm drainpipes, vegetated swales, catch basins, retention/detention basins, water quality basins, outlet structures, and debris basins. The proposed on-site drainage improvements are described below and their locations are illustrated in **Figure 4.2-6, Landmark Village Drainage Concept**.

Development on the tract map site is proposed on approximately 103.5 acres within the FEMA floodplain and on approximately 169 acres of the capital floodplain (see **Figure 4.2-3** and **Figure 4.2-7, Existing FEMA 100-Year and Capital Floodplain Delineations**). This development would be elevated a minimum of 1 foot above both floodplain elevations and, therefore, would not be subject to flood hazard from the river during the FEMA 100-year or LACDPW capital storm events. An additional 109 acres of encroachment into the FEMA floodplain boundaries are associated with bank improvements to protect against erosion downstream of the Landmark Village tract map site. Because a portion of the proposed development would be within the existing FEMA 100-year floodplain, adjustments to the FEMA published maps Flood Insurance Rate Maps (FIRMs) are required. These adjustments are administered by FEMA, and revisions to the mapping are made by applicants applying for a "Letter of Map Revisions" (LOMR). LOMRs are documents issued by FEMA that remove property and/or structures from special flood hazard areas. It is a common accepted practice, both nationwide and within Los Angeles County, to process revisions to the FEMA floodplain maps (i.e., LOMRs). The issuance of a LOMR would eliminate the property and/or structures from the applicable FEMA 100-year map. Any property and/or structures that are elevated above the FEMA 100-year floodplain zone are considered reasonably safe and free from flood hazard. Figure 4.4F in the PACE report (EIR, **Appendix 4.2**) illustrates the proposed final FEMA 100-year floodplain zone, consistent with the proposed developed topography and proposed bank protection. The Conditional Letter of Map Revision (CLOMR) process would precede project construction and LOMR submittal.



Legend:

— — — = FEMA Floodplain

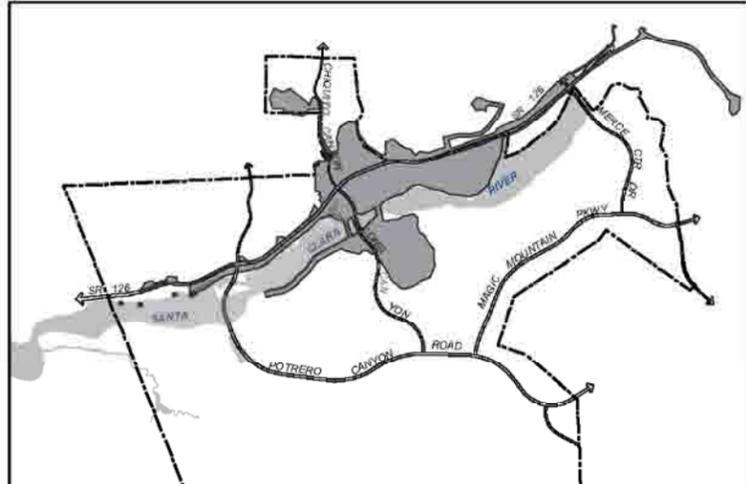
- · - · - = Capital Floodplain (Q-Cap)

Note:

For a detailed map, please refer to the corresponding map pocket in Appendix 4.2

600 300 0 600

APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – June 2005

FIGURE 4.2-7

Existing FEMA 100-Year and Capital Floodplain Delineations

Please see this EIR, **Section 4.4, Biota**, and **Section 4.5, Floodplain Modifications**, for a detailed discussion of the biotic and floodplain impacts for the 2-yr, 5-yr, 10-yr, 20-yr, 50-yr, 100-yr and capital flood events associated with the proposed bank stabilization. **Figure 4.2-6** illustrates the post-development drainage patterns for the Landmark Village tract map site. As required by the LACDPW, all on-site drainage systems carrying runoff from developed areas would be designed for the 25-year design storm (urban flood), while storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps would be designed for the 50-year capital flood.

The bank stabilization, stormwater drainage outlet structures, and the Long Canyon Road Bridge abutments and piers all represent construction within the river.

(1) Storm Drains

Storm drains (pipes and reinforced concrete boxes) designed for either the 25-year or 50-year capital storm would consist of both privately or publicly maintained systems (e.g., Homeowner Associations, Assessment Districts or the County of Los Angeles). The minimum publicly maintained mainline pipe size would be 18-inch connector pipes for clear flows.

(2) Open Channels

Small open channels would consist of rectangular and trapezoidal concrete channels and/or vegetated swales, and be designed for either the 25-year or 50-year capital storm, depending on the source of the runoff. The channels sized for the 50-year capital storm would have greater capacity than those sized for the 25-year storm.

(3) Low Flow Pipes and Outlets

To reduce pollution impacts from the low flow runoff, a series of pipes and outlets would be provided to intercept first flush runoff from developed portions of the tract map site. Pollutants expected to be generated on the site, their potential water quality impacts, and water quality control are addressed in this EIR, **Section 4.3, Water Quality**.

(4) Catch Basins

Catch basins would be provided to intercept flows beyond the 10- and 25-year storms and at strategic locations to minimize flooding at street intersections and at sump locations.

(5) Debris Basins

To reduce debris discharged through and from the tract map site, three additional debris basins north of SR-126 (and within Newhall Ranch) are proposed to intercept flows from undeveloped upland areas prior to their discharge under SR-126 and into the on-site storm system. The locations of these debris basins are illustrated in **Figure 4.2-6**.

(6) Erosion Control

Tract map-related erosion control that would occur in and adjacent to the river includes bank stabilization and various stormwater drainage outlet structures. Bank stabilization would be comprised of soil cement, rip-rap, and reinforced concrete. Bank protection would occur on both the northern and southern banks of the river, as well as the northern and southern sides of the bridge. It may be buried or exposed (soil cement, reinforced concrete or rip-rap), and rip-rap may be grouted or not grouted. Turf reinforcement mats (TRMs) or other suitable non-hardened bank protection is proposed along the northern riverbank between the Landmark Village site and the proposed water reclamation plant (WRP) site to protect the proposed utility corridor. These erosion control devices are discussed below under the **“Utility Corridor” subsection**. Additional bank protection (approved and included as part of the Natural River Management Plan) upstream of the Landmark Village project adjacent to the Old Road and downstream of the existing Valencia WRP is necessary to provide protection for the utility corridor.

(a) Energy Dissipaters

Runoff from the tributary area (including the Chiquita Canyon Landfill drainage area) would pass through the site via storm drains and, in some instances, detention and water quality basins, before it would discharge into the river at 14 separate locations. The Drainage Concept shows 14 storm discharge locations along the southern site boundary (see **Figure 4.2-6**). Eleven outlet structures into the river would be constructed in conjunction with the soil cement improvements. To reduce storm flow velocities and to prevent erosion at stormwater discharge points into the river, energy dissipaters consisting of either rip-rap or other larger reinforced concrete standard impact type energy dissipaters would be constructed at storm system outlets into the river. The energy dissipaters would slow the rate of flow of runoff into the river to prevent erosion of the stream channel. Additional dissipaters would be located at the outlet of Chiquito Creek and Long Canyon Creek. Dissipaters would be designed based upon storm drain outlet hydraulic conditions, such as discharge, velocity and pipe size, and location within the river.

(b) Soil Cement/Bank Stabilization

Soil cement is a highly compacted mixture of soil (well-graded soil mixture), cement, and water (by weight approximately 88 percent soil, 7 percent cement and 5 percent water). As the cement hydrates, it hardens the compacted soil into a strong, durable, low-permeability material. Soil cement bank protection has been used in highly erosive conditions by various flood control agencies for over 50 years. Buried soil cement bank protection is a modern flood control technique used to protect against bank erosion and scouring while allowing natural vegetation to occur in the soil over the soil cement resulting in a “soft bank” solution. In the event that the soil over the soil cement and overlying vegetation are removed through river erosion, the exposed soil cement would provide a naturalized and aesthetic bank protection method in contrast to traditional rip-rap or concrete. A typical cross section for buried soil cement bank protection is shown on Figure 1.5 of the PACE August 2006 report (EIR, **Appendix 4.2**) and, in **Section 1.0, Project Description**, of this EIR. As shown, this approach uses soil cement bank protection at the toe (bottom) of the bank protection, which is buried well below the existing bed of the river. Typically, the toe must be 10 to 20 feet below the bed of the river in order to resist capital flood scouring. Construction of the bank protection requires temporary excavation and backfilling of the soil in and around the bed and bank of the river. A temporary construction zone of up to 75 feet would occur at the base of the bank protection in order to excavate to the toe of the bank protection. The original channel elevation (and in some instances additional backfill is added to bury the soil cement bank protection slope face that would extend above the bed and bank of the river) would be restored after construction and disturbed areas would be re-vegetated with native plant species maintaining the natural habitat presently found along the river. The soil cement bank protection is required to protect residential and commercial development and the Long Canyon Road Bridge.

In most locations, the horizontal alignment of the soil cement bank protection would be placed outside the existing river channel, which would create additional new river channel. For example, soil cement bank protection proposed on the north side of the river near the confluence with Castaic Creek would be constructed on agricultural land, north of the existing river corridor. The land located between the existing riverbank and the newly created stabilized bank would be excavated to widen the existing river corridor, which would increase the area available for riverbed vegetation and habitat and increase the capacity of the river to convey the passage of flood flows.

While the Landmark Village Drainage Concept includes the use of buried soil cement bank protection to stabilize river and creek banks, at specific locations on the project site, such as at outlet structures, access ramps, or bridge abutments, grouted rip-rap or reinforced concrete bank protection would be used to provide bank stabilization and to minimize erosion. Approximately 68 percent of the river and creek banks on the project site would be provided with any one or a combination of bank stabilization

techniques (hard and soft types). At a minimum, approximately 75 percent of the river and creek banks that would be stabilized would be protected using buried soil cement bank protection. The remaining 20 percent would be comprised of TRMs (or other non-hardened bank protection methods), while approximately 5 percent would consist of rip-rap or reinforced concrete.

A total of approximately 11,000 linear feet of buried soil cement protection would be constructed on the north side of the river (along the project's proposed development area and 1,200 linear feet east of the proposed WRP bank protection), plus an additional 6,400 linear feet of buried soil cement protection would be constructed on the south side of the river adjacent to the Long Canyon Road Bridge and the property immediately downstream of the project site, for a total of 18,600 linear feet. The soil cement is primarily necessary to protect the proposed residential and commercial development on the project site, the Long Canyon Road Bridge, and the property immediately downstream of the project site from potential erosion due to project implementation. In addition 6,600 linear feet of TRMs (or other non-hardened bank protection methods) would be installed downstream of the project site along the northern edge of the river corridor to protect the utility corridor from Chiquito Canyon to San Martinez Grande Canyon.

Additionally, there is approximately 2,000 linear feet of soil cement bank protection that would be constructed in conjunction with the utility corridor adjacent to the Old Road directly north of the Valencia WRP. This bank stabilization was analyzed in the EIR/EIS prepared for the approved Santa Clara River Natural River Management Plan.

Please see **Section 1.0, Project Description**, of this EIR for further discussion and illustrations of bank stabilization techniques.

(c) Long Canyon Road Bridge Abutment

Long Canyon Road Bridge over the Santa Clara River would include abutments and bank stabilization on the northern and southern sides of the bridge, which would protect against the erosive forces of the river. The bridge abutments would be approximately 500 linear feet of river length of reinforced concrete transitioning to soil cement through approximately 50-100 linear feet of rip-rap bank protection.

(d) Castaic Creek/SR-126 Bridge Abutments

The Castaic Creek/SR-126 Bridge is to be widened to three lanes in each direction. Concurrently, the existing bridge abutments would be widened and extend up to approximately 500 linear feet on both sides of Castaic Creek. The buried bank stabilization would tie into the abutment with an approximate 50–100 linear foot section of rip-rap.

b. Off-Site Improvements

(1) Adobe Canyon Borrow Site

Grading in Adobe Canyon would involve grading and shaping of the hills and depressions that form the ridge separating Long and Adobe Canyons. Much of this work would occur along the top and bluffs of an unnamed plateau located just west of Sawtooth Ridge. The proposed grading would excavate the southeastern portion of this plateau creating a gentler slope leading up to the top of the ridge resulting in a manufactured slope angle ranging from 5:1 to 2:1 (horizontal/vertical). The grading would also alter the western facing slope leading up to the plateau creating a bench separated by two manufactured slopes stepping down the west facing ridgeline defining Adobe Canyon at a 3:1 grade. Additional earthwork is planned at the terminus of Adobe Canyon where a series of excavations would result in a manufactured slope at a relatively uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner.

(2) Chiquito Canyon Grading Site

The Chiquito Canyon grading site, located just north of SR-126 and west of the intersection with Chiquito Canyon Road, is proposed on the ridgeline of a northeast-southwest trending hillside, which gently slopes toward the intersection in a “finger” shape. The terrain becomes progressively steeper and more rugged towards the northwestern portion of the ridge, with the peak elevation reaching 1,160 feet above mean sea level. The grading would lower the “finger” of land extending toward the intersection of Chiquito Canyon Road with SR-126 and create a manufactured slope at a uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner.

The primary hydrologic effect of the grading on the two sites is that storm flows would runoff each site at slower rates than under existing conditions.

(3) Utility Corridor

The utility corridor is depicted on **Figure 1.0-30, On-Site Reclaimed Water Improvements**, found in **Section 1.0, Project Description**, of this EIR. The utility corridor is comprised of several alignments dependent upon the specific type of service. The majority of the alignment is located away from the Santa Clara River and tributaries and would not require bank protection or other measures that may affect river hydraulics, with the exception of approximately 6,600 linear feet of geotextile reinforced bio-engineered erosion protection installed downstream of the project site along the northern edge of the river corridor from Chiquito Canyon to San Martinez Grande Canyon and the approved buried bank

stabilization to be constructed directly north of the Valencia WRP. This erosion protection would provide bank stability protection along this portion of the utility corridor.

TRMs are one type of reinforced bio-engineered bank stabilization material. TRMs and geotextile reinforced bio-engineered bank stabilization methods are designed to reinforce vegetation at the root and stem, thereby allowing vegetation to be used as erosion control in areas where flow conditions could exceed the ability of natural vegetation to remain rooted. TRMs and other geotextiles are suitable for locations with high slopes or stream banks where grouted riprap and concrete channels are hydraulically unnecessary and hardened bank protection is aesthetically undesirable. TRMs are secured to the soil surface using a predetermined staple pattern and either wire soil staples or biodegradable stakes. TRM products are constructed of two basic materials that perform different functions: (1) permanent netting designed to provide permanent structure and strength to the vegetation at the root and stem level; and (2) degradable natural and synthetic fiber netting that provides erosion control immediately after installation by holding seed and soil particles in place and trapping moisture on the soil surface. As a result, TRM products provide erosion control, vegetation establishment, and reinforcement at one location.

The bank protection section of the utility corridor is located along the north bank of the river immediately downstream of the existing County Sanitation District Treatment facility/Valencia WRP, and would consist of bank stabilization between the river and the Old Road. This section of bank stabilization would be constructed in conjunction with the utility corridor. This approximately 2,000 linear feet of bank stabilization was analyzed and approved as part of the Natural River Management Plan (NRMP).

One additional section of utility corridor bank protection is required for the approximately 1,000 linear feet of reach downstream of the San Martinez Grande Canyon confluence with the river and is necessary to protect the utility corridor. The current bank protection material selection for this reach is soil cement; however, with the final design it may be determined that a geotextile-reinforced bio-engineered method could be adequate and, if so, the non-hardened solution would be utilized.

Newhall Land is currently in discussions with several of the utility agencies who will have infrastructure in the corridor. Prior to the project final map recordation, Newhall will finalize a maintenance agreement with an agency or some other entity (public or private – Homeowners Association (HOA), Center for Natural Land Management, Joint Power Authority, Landscape Maintenance District, etc.) for acceptance of the maintenance responsibility for bank protections for the Utility Corridor.

With the TRM (bio-engineered) slope protection along the Utility Corridor it is anticipated that there will be some limited maintenance activities related to vegetation replacement, removal of non-native species, removal of non-healthy plants, grading, replacement and/or repair of the TRM's. All of this work will

take place within the limits of the project disturbance limits as analyzed in the project EIR. As part of the maintenance entity agreement Newhall will provide a Utility Corridor maintenance easement for repair activities along the Utility Corridor to the limits of project disturbance.

In the unlikely event that maintenance or repair beyond that described above is necessary and would include impacts outside the project disturbance limits (maintenance easement) analyzed in the project EIR's the appropriate permits and approvals would have to be obtained.

8. PROJECT IMPACTS

a. Significance Threshold Criteria

According to the County of Los Angeles *Environmental Document Reporting Procedures and Guidelines*, the County is concerned with any development that may be subject to flood hazards and debris flows, including (1) flooding due to the development's location within a major drainage course; (2) flooding due to the development's location within a floodplain; and (3) high debris transport and deposition potential.

Under Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would result in a significant flood impact if it would result in any of the following:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- 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 within a 100-year flood hazard area structures which 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; and/or

- Create the potential for inundation by seiche,⁴ tsunami,⁵ or mudflow.

The Landmark Village site and its tributary area are too far inland from the Pacific Ocean to be affected by inundation by either a seiche or tsunami. Furthermore, no large, continuously filled body of water exists within or in proximity to the project site or the tributary area that would be subject to a seiche. The impacts of project implementation, however, are discussed below for the remaining significance threshold criteria. Wherever pertinent, these thresholds are applied to project construction impacts. Wherever a significance threshold criterion is exceeded or there is the potential for a criterion to be exceeded, mitigation is identified that, if feasible, would reduce the potential impact to a less than significant level. This impact analysis focuses only on the potential flood impacts of the project from storm runoff. The potential water quality impacts of the project are addressed in this EIR, **Section 4.3, Water Quality**. The project's potential impacts to biological resources within and around drainages are addressed in this EIR, **Section 4.4, Biota**, and **Section 4.5, Floodplain Modifications**.

b. Construction Impacts

(1) Landmark Village Site (VTTM 53108)

The primary concern during construction of the proposed Landmark Village project is potential erosion and sedimentation impacts during site clearing and grading, the placement of up to 5.8 million cubic yards of fill on the site, and excavation within the river to install the bank stabilization, construct the Long Canyon Road Bridge, and widen and extend of the Castaic Creek Bridge. After construction, the tract map site would largely be covered with impermeable surfaces and non-erodible surfaces, including landscape vegetation. Erosion and sedimentation caused by construction activities are dependent upon on climatic and site conditions, as well as the degree of soil disturbance during construction. Erosion within the creek and streambed would depend upon perennial and natural flows. Site clearing and grading operations, in particular, would have the greatest potential for discharging sediment downstream during storm events.

The proposed reinforced concrete and riprap at bridge abutments, in addition to the soil cement proposed as part of this project, would encroach into the existing 100-year floodplain in some areas. This action would trigger FEMA review in the form of the CLOMR/LOMR floodplain map revision process.

⁴ A seiche (pronounced say'sh) is a wave on the surface of a lake or landlocked bay caused by atmospheric or seismic disturbances. The effect of a seiche may also be referred to as "sloshing," which occurred to many swimming pools in the San Fernando Valley during the 1994 Northridge earthquake.

⁵ A tsunami (pronounced soo-NAH-mee) is a series of waves of extremely long wave length and long period, generated in a body of water by an impulsive disturbance that displaces the water, such as an earthquake, landslide, or sub-marine volcanic eruption.

Additionally, some banks located out of the floodplain need stabilization because of lateral migration of the riverbed, and the need to protect for the capital flood discharge. Construction of the soil cement bank protection represents a short-term construction-related disturbance as areas on the river side of the soil cement will be filled and re-vegetated.

Increases in sedimentation and debris production on the site, and erosion and sedimentation in the river and creek beds during construction, although temporary, would result in a significant impact without mitigation.

(2) Off-Site Grading

A primary concern during the grading of the Landmark Village tract map site is potential erosion and sedimentation impacts during the clearing, excavation, and grading at, and export of cut material from, the Adobe Canyon borrow site and the Chiquito Canyon grading site. These operations would have the greatest potential for the discharge of sediment downstream during storm events. Unless mitigated through erosion control and rapid soil stabilization at the completion of excavation and grading, increases in sedimentation and debris production during construction, although temporary, would result in a significant impact.

(3) Utility Corridor

Construction of the utility corridor would result in significant erosion and sedimentation impacts as the site grading, and borrow site excavation and grading, unless mitigated.

c. Operational Impacts

(1) Landmark Village Site (VTTM 53108)

(a) Substantial Alteration of an Existing Drainage Pattern

Implementation of the Landmark Village Drainage Concept Plan would allow runoff from the 996-acre tributary area (which is inclusive of the Chiquita Canyon Drainage) to collect in a storm drain system. Landmark Village does not propose to direct any flows to this drainage channel. Runoff would then gravity flow toward the river in a drainage pattern similar to existing conditions, where water flows have naturally formed paths of least resistance and concentrate at existing topographic depressions or cut channels through the site. Therefore, while the project would include development of the storm drain system and have predefined outlets to the river, existing drainage patterns would not be significantly altered.

The river would be encroached upon with placement of the buried soil cement, TRMs, bridge abutments and piers, storm drain outlets, and energy dissipaters proposed by the project. Project impacts are expected to include localized erosion and increased localized sedimentation as a result of changes to river velocity and water surface elevation due to project impacts (see this EIR in **Section 4.5, Floodplain Modifications**, for a discussion of potential project impacts on location biological resources as a result of these improvements). The project would not affect overall discharges to the river because no discharge would be diverted from or to the river as a result of the proposed project.

Site Erosion

Once the project site is implemented as proposed, erosion is not anticipated to be a concern because it would largely be covered with impermeable and non-erodible surfaces and landscaping. Placement of the soil cement along the northern bank of the river would result in a long-term beneficial impact because the soil cement would stabilize the river's banks.

Riverbed Scouring and Floodplain

In-stream velocities are indicators of potential riverbed scouring. Potential for erosion within the river can be evaluated by reviewing changes to hydraulic shear stress or flow velocities, in conjunction with potentially erodible materials. In Los Angeles County, velocities are the preferred indicator for potential streambed erosion. Because the riverbed is composed of alluvial materials, the non-erodible velocities (velocities below which no erosion would occur) range from 2.5 fps (fine gravels under clear flow conditions) to 5.0 fps (alluvial silts transporting colloidal materials). Therefore, a representative velocity of 4.0 fps was determined to be the appropriate indicator for potential erosion or scouring. In addition, a detailed capital fluvial analysis has been prepared to evaluate both existing and project conditions.

If a significant amount of the 2- to 100-year floodplain area were in the 0- to 4- fps range, but as a result of the project (including the Long Canyon Road Bridge and downstream bank protection), would be subjected to velocities greater than 4 fps, it would be considered to have a potentially significant erosion impact. Table 4.2 of the PACE August 2006 report indicates that flows in excess of 4 fps would be reduced by approximately -1.7, -4.5, -12.4, 0.1, 58.1 and 27.5 for the 2, 5, 10, 20, 50 and 100 year storm events. The result of this slight decrease in riverbed area where velocities exceed 4 fps is an indication of a slightly more stable and less erosive condition. However, based upon the minor reductions in the area where the velocity exceeds 4 fps, it is more of an indication that there is not much change between the existing and project condition (proposed project floodplain fill and bank protection) from the riverbed scour perspective.

The overall decrease in floodplain area where the velocity is greater than 4 fps is due to the proposed excavation of existing agricultural field and increase in riverbed. The valuation of the total floodplain indicates (PACE August 2006 report) a -0.5, 0.4, 1.2 -33.9, -90.1 and -100.3 change for the 2-, 5-, 10-, 20-, 50-, and 100 year events, respectively. However, the largest reductions in floodplain acreage with flows in excess of 4 fps would be on land presently used for agricultural purposes and that is proposed for conversion to residential and commercial uses.).

For high frequency floods (2-year, 5-year, and 10-year), the proposed floodplain modifications would not hinder flows or reduce the floodplain area. Instead, these flows would spread across the river channel unaffected by the bank protection because the river would have sufficient width to allow them to meander and spread out further than they would under pre-project conditions.

However, during more infrequent floods (20-year, 50-year and 100-year events), flows would spread out up to the buried soil cement. This would limit the area of the floodplain during these infrequent flood events, causing inundation over a smaller area because the bank protection would prevent flooding of formerly adjacent floodplain areas. These formerly adjacent areas would be developed under the Specific Plan for various land uses, including residential, commercial, industrial, and parks.

Table 4.3 of the PACE August 2006 report (**Appendix 4.2**) shows that during the 100-year storm event, project-related improvements would result in 31 increased water surface elevation locations with 10 exceeding 1 foot, and 21 decreased water surface elevation locations with one exceeding 1 foot, in the river. No impacts to water surface elevation would be realized upstream or downstream of the project.

Localized increases in velocity in excess of 4 fps would occur downstream of the Landmark Village project site development. Such localized increases have the potential to cause erosion; however, the project-related increases in velocity downstream of the project site would be mitigated by installation of buried soil cement protection on the southern edge of the river corridor south of the Long Canyon Road Bridge.

The Specific Plan acknowledges that natural riverine dynamics could erode fill placed on top of the bank protection (e.g., buried soil cement) during certain flood events. For example, natural riverine migration between the banks may place the lowest points along the length of the riverbed in contact with the bank. Additionally, storms greater than approximately the 25-year discharge are expected to flow from bank to bank.

The Long Canyon Road Bridge construction would include abutments, rip-rap transitions to soil cement, and approaches that would reduce the width of the 100-year floodplain. However, the existing active river channel width would be completely spanned by the bridge and remain unaffected for up to the

5-year flood event. The proposed bridge improvements would cause a localized narrowing at the channel at the bridge; however, flooding up to a capital flood event would still be contained within the channel. The Long Canyon Road Bridge and associated bank protection are consistent with the improvements described in the approved Specific Plan.

Erosion at Drainage Discharge Points

The Los Angeles MS4 Permit notes that increased volume, velocity, and discharge duration of stormwater runoff from developed areas could potentially accelerate downstream erosion and impair stream habitat. As a result, the permit stipulates, "Permittees shall control post-peak stormwater runoff in Natural Drainage Systems to prevent accelerated stream erosion and protect stream habitat." The following discussion supports the conclusion that there would be no significant downstream impacts potentially accelerating stream erosion as a result of the project. (See this EIR, **Section 4.5, Floodplain Modifications**, for a discussion of the project's potential impacts on biological resources in the river and other affected drainages.)

Development of the Landmark project site would place bank stabilization further inland from the existing riparian corridor. Subsequent revegetation installed after bank stabilization is in place would create more vegetated corridor than presently occurs under existing conditions. It is acknowledged that there is a potential for a portion of bank stabilization to become exposed during a major storm event. However, with the greater riverian corridor in place it is unlikely that large portions of bank stabilization will become exposed. For instance, 25-year storm events were experienced in the Santa Clara River in January 2005. At that time, none of the projects located along the Santa Clara River that had incorporated buried bank stabilization into their design experienced any exposure of bank stabilization. The success of the bank stabilization, in part, can be attributed to revegetation efforts required with the placement of buried bank stabilization. Lastly, the County of Los Angeles does not intend to refill portions of vegetated fill associated with bank stabilization should any be lost during periods of high storm water flows.

In natural riverine systems, such as the Santa Clara River and its tributaries, frequent discharges (on the order of the average annual and 2-year flows) dictate stream geomorphology. Extended and frequent discharges at these critical flow rates would potentially impact stream health. The project proposes to install water quality basins, which would capture runoff from small, frequent storms and release flows at non-erosive rates. This means that water from the basins would be released at a rate substantially less than discharges associated with 2-year storms; therefore, erosive impacts would be reduced to less than significant levels.

To reduce storm flow velocities during smaller, more frequent flows (i.e., 2-year storm events) and to prevent erosion at stormwater discharge points into the river, the Landmark Village Drainage Concept includes energy dissipaters consisting of either rip-rap or larger standard impact type energy dissipaters at affected storm system outlets in the river. These energy dissipaters would slow the rate of flow of discharge into the river in order to prevent erosion of the stream channel.

Energy dissipaters and water quality basins used to reduce erosion risk in smaller events also would reduce erosion risk in larger events.

The project would not affect the rate of flow, currents, or the course and direction of surface water of the side drainages as the project would be required to adhere to Los Angeles County requirements for detention basins and pipe sizing. As a result, project impacts under this criterion would be less than significant.

Fluvial Impacts

Development along the river within the study area has the potential to modify the fluvial mechanics of the river, and the PACE fluvial analysis evaluates impacts from buildout of Newhall Ranch from (1) fluvial modifications of the riverbed from single hypothetical storm events; and (2) changes in the floodplain fluvial operation over the long-term. It is important to note that the HEC-RAS and fluvial study covers an area from I-5 to generally west of the Ventura County/Los Angeles County line and is not limited to the Landmark project site.

The fluvial study examined local, long-term, and episodic components of riverbed adjustment. The study found that localized impacts from proposed bridge piers would occur, however, these impacts would not be significant. The study also found that the Landmark Village project would not change the fluvial mechanics of the Santa Clara River and, therefore, would not create a significant impact.

(b) Result in Runoff Flow Rates in Excess of Existing or Planned Drainage Systems

Because the proposed upstream debris basins are part of the project's drainage system design, runoff flow rates from the entire 996-acre tributary area are addressed in the following analysis. Runoff from the 349-acre Chiquita Canyon Landfill drainage area would be channelized through the Landmark Village site and no project site runoff would discharge into that separate facility. Runoff from the landfill is addressed in a separate report and improvements associated with that drainage area are determined to have adequate capacity to accommodate runoff from that acreage and facility. This report, Chiquito Landfill Drainage Report, Psomas is located in **Appendix 4.2**.

The development of the proposed Landmark Village project would increase the amount of runoff from those areas of the site that would be covered by roads, buildings, paved parking areas, and other relatively impermeable or impervious features (see **Table 4.2-1** for the assumed percent imperviousness the general land uses proposed for the site). Specifically, impervious surfaces on the site would increase the amount of clear flow runoff from and through the site, while burned and bulked runoff and debris flow rates would be reduced because the developed portions of the site would be overcovered with impervious surfaces and non-erodible vegetation, and because three additional debris basins that would reduce the amount of debris and sediment in the runoff would be constructed at upstream off-site locations (see **Figure 4.2-6**). Post-development runoff flow rates by drainage-area are presented in **Table 4.2-6, Post-Development Drainages and Runoff Discharge – VTTM 53108**.

**Table 4.2-6
Post-Development Drainages and Runoff Discharge – VTTM 53108**

| Drainage Areas | Acreage | Time of Conc. (min) | Q50u ¹ (cfs) | Q50b ¹ (cfs) | Q50bb ¹ (cfs) | Qdesign (cfs) (MORA) |
|----------------|---------|---------------------|-------------------------|-------------------------|--------------------------|----------------------|
| RVE-1A | 18 | 24 | 14 | 20 | 25 | 20 |
| RVE-2A | 39 | 28 | 28 | 38 | 50 | 39 |
| RVE-3B | 15 | 8 | 24 | 32 | 41 | 32 |
| RVE-4B | 44 | 19 | 41 | 57 | 72 | 57 |
| RVE-6A | 35 | 11 | 47 | 62 | 79 | 62 |
| | | | Q50d ¹ (cfs) | | | |
| RVE-7A | 14 | 29 | 21 | | | 21 |
| RVE-8A | 23 | 30 | 26 | | | 26 |
| RVE-9A | 6 | 11 | 11 | | | 11 |
| | | | | | | |
| RVE-11B | 16 | 14 | 27 | | | 27 |
| RVE-12C | 1 | 15 | 1 | | | 1 |
| RVE-13C | 17 | 19 | 25 | | | 25 |
| RVE-16D | 2 | 20 | 2 | | | 2 |
| RVE-17D | 18 | 15 | 30 | | | 30 |
| RVE-20E | 18 | 16 | 28 | | | 28 |
| RVE-21F | 1 | 7 | 1 | | | 1 |
| RVE-24F | 2 | 14 | 2 | | | 2 |
| RVE-25F | 14 | 16 | 22 | | | 22 |
| RVE-27B | 7 | 12 | 15 | | | 15 |
| RVE-28B | 5 | 10 | 11 | | | 11 |
| RVE-29B | 1 | 14 | 1 | | | 1 |
| RVC-2A | 11 | 9 | 18 | | | 18 |
| RVC-3A | 12 | 15 | 20 | | | 20 |
| RVC-7A | 10 | 27 | 13 | | | 13 |
| RVC-8A | 5 | 14 | 8 | | | 8 |
| RVC-11B | 16 | 11 | 30 | | | 30 |
| RVC-12C | 3 | 18 | 3 | | | 3 |

| Drainage Areas | Acreage | Time of Conc. (min) | Q50u ¹ (cfs) | Q50b ¹ (cfs) | Q50bb ¹ (cfs) | Qdesign (cfs) (MORA) |
|----------------|------------|---------------------|-------------------------------|-------------------------|--------------------------|------------------------|
| RVC-13C | 2 | 12 | 3 | | | 3 |
| RVC-17C | 2 | 19 | 2 | | | 2 |
| RVC-18C | 17 | 14 | 29 | | | 29 |
| RVC-21D | 3 | 16 | 3 | | | 3 |
| RVC-22D | 3 | 12 | 7 | | | 7 |
| RVC-23E | 39 | 24 | 53 | | | 53 |
| RVC-24E | 7 | 22 | 12 | | | 12 |
| CQT-1/4A | 23.9 | 9 | 37 | 41 | 46 | 41 |
| CQT-5A | 4.4 | 5 | 10 | 12 | 15 | 12 |
| CQT-6A | 22.6 | 15 | 25 | 31 | 39 | 31 |
| CQT-7/8A | 6.2 | 5 | 14 | 14 | 14 | 14 |
| CQT-9A | 31.8 | 14 | 37 | 44 | 52 | 52 |
| CQT-10A | 14.5 | 11 | 20 | 23 | 27 | 27 |
| CQT-11A | 7.4 | 21 | 11 | 11 | 11 | 11 |
| CQT-12A | 4.4 | 12 | 9 | 9 | 9 | 9 |
| | | | Q50d¹ (cfs) | | | |
| RVW-1A | 11 | 14 | 17 | | | 17 |
| RVW-2A | 15 | 14 | 28 | | | 28 |
| Totals | 568 | | | | | 850² |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (*Appendix 4.2*).

¹ Burned flow for Subareas RVE 1A through 6A. Developed flow for the remaining Subareas RVE, Subareas RVC and RVW, Burned flow for Subareas CQT-1/4A, CQT-5/6A, Burned and bulked flow for Subareas CQT-9/10, Developed flow for Subareas CQT-7/8A and CQT-11/12A

² Qdesign based on MORA tabulation as shown in the Appendix of the PSOMAS report (*Appendix 4.2*).

The post-development discharge quantities would total 850 cfs for the tributary area during a 50-year capital storm. A comparison of existing peak discharges from **Table 4.2-3** and post-development peak discharge from **Table 4.2-6**, is provided below.

| Existing | Acreage | | Existing | Q ₅₀ (cfs) | |
|----------|----------|------------|----------|-----------------------|------------|
| | Proposed | Difference | | Proposed | Difference |
| 568 | 568 | 0 | 831 | 795 | -36 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (*Appendix 4.2*).

As shown, there would be a 267 cfs reduction in discharge from the tributary watershed under post-development conditions. This reduction in discharge would be the result of reduced erosion of the site due to coverage of much of the site with pavement, roofs, vegetation, and other non-erosive surfaces. It also would be largely the result of the proposed debris basins that would capture sediment and debris in upstream runoff and allow debris to settle out from the runoff before it would enter the storm system

through the developed portion of the site. With these improvements in place, the project would reduce runoff flow rates through the site and into the Santa Clara River. Furthermore, since storm flows from upstream areas would be channeled through the site in facilities designed for the 50-year capital storm, and since on-site runoff would be accommodated in facilities designed for the 25-year urban design storm, pursuant to LACDPW requirements, no on-site or upstream flooding due to inadequately designed storm drainage facilities would occur.

As a result, the project would not create or contribute runoff flow rates that would exceed the capacity of existing or planned stormwater drainage systems and project impacts under this criterion would be less than significant.

(c) Place Housing or Structures Within a 100-Year Flood Hazard Area

Approximately 169 acres of the Landmark Village tract map site are currently located within the capital floodplain. The project proposes development within the existing FEMA flood hazard area. Therefore, the project applicant proposes to elevate approximately 169 acres of the site above the capital floodplain. As required, future habitable structures on the site would be elevated a minimum of 1 foot above the 100-year flood hazard area. As additional flood protection, buried bank protection is proposed on the project's southern boundary to stabilize the elevated bank and protect the proposed development from flood hazards. The buried bank protection is designed to act as a non-erodible boundary to contain floodwaters during a capital flood discharge. These improvements are consistent with those envisioned by the Newhall Ranch Specific Plan. As a result of these improvements, no housing or structures would be placed within a 100-year flood hazard area, and there would be no impact under this criterion.

(d) Exposure to Significant Risk of Loss, Injury, or Death by Flooding or Mudflow

As previously discussed, overall upstream tributary and project site runoff would decrease under post-development conditions. In addition, the project would channel off-site and on-site runoff through drainage improvements designed and constructed for either the 25-year urban flood or the 50-year capital flood as required by the LACDPW. Furthermore, approximately 169 acres of the site would be elevated above the capital floodplain of the Santa Clara River, thereby, removing the proposed improvements on the site from flood hazards. Increases in water levels in the river as a result of the elevation of the site and the soil cement bank protection placement would dissipate prior to the end of the proposed soil cement because encroachments into the floodplain would only minimally impact water surface elevations at the downstream portions of the project. Therefore, increases in flood water elevations due to project-related improvements would be limited to the applicant's property and would not expose people or structures to a significant risk of loss, injury, or death involving flooding. With these improvements in place, there

would be no exposure to significant risk of loss, injury, or death as a result of flooding or mudflow and, therefore, no significant impacts would result.

Although the site is presently subject to some debris and mud flows, adequate building setbacks from natural slopes and debris control facilities proposed in upstream areas of the site would protect the proposed project development from debris and mudflow hazards.

(2) Off-Site Grading

(a) Substantial Alteration of an Existing Drainage Pattern

Adobe Canyon Borrow Site

Under existing conditions, runoff from most of the eight sub-basins of the Adobe Canyon borrow site drain northwesterly and then into Long Canyon, while the remaining runoff would drain northerly and northeasterly to Long Canyon. After grading, there would be a total of 10 sub-basins (see **Figure 4.2-8, Post-Development Drainage Patterns – Adobe Canyon Borrow Site**). Runoff from the borrow site would continue to flow toward Long Canyon and ultimately to the Santa Clara River such that post-grading drainage patterns within Adobe Canyon and its vicinity would not be substantially altered, resulting in no significant impact.

Chiquito Canyon Grading Site

Under existing conditions, runoff from most of the twelve sub-basins drains southwesterly toward culverts under SR-126 and toward the project site, while runoff from one sub-basin drains toward Chiquito Canyon to the west. Chiquito Canyon flows south and discharges into the Santa Clara River. All of the runoff flows through the project site and into the Santa Clara River. After grading, there would be eight sub-basins and little to no change in the direction of storm flows (see **Figure 4.2-9, Post-Development Drainage Patterns – Chiquito Canyon Grading Site**). However, runoff from the sub-basin that currently flows west toward Chiquito Canyon would be redirected to flow south towards SR-126 and the Santa Clara River. This is not considered a substantial alteration to existing drainage patterns, and there would be no significant flood impact.

(b) Result in Runoff Flow Rates in Excess of Existing or Planned Drainage Systems

Adobe Canyon Borrow Site

Post-grading runoff flow rates for the Adobe Canyon borrow site are presented below in **Table 4.2-7, Post-Grading Drainages and Runoff Discharge – Adobe Canyon Borrow Site**. The post-development runoff quantities would total 352 cfs for the borrow site during a 50-year capital storm.

Table 4.2-7
Post-Grading Drainages and Runoff Discharge – Adobe Canyon Borrow Site

| Sub-Basins | Acreage | Time of Conc. (minutes) | Q50u ¹ (cfs) | Q50b+d ² (cfs) | Q50bb+d ³ (cfs) | Qdesign ⁴ (cfs) |
|---------------|--------------|-------------------------|-------------------------|---------------------------|----------------------------|----------------------------|
| ADB-1A | 28.0 | 12 | 35 | 46 | 67 | 46 |
| ADB-2A | 12.7 | 7 | 23 | 27 | 36 | 27 |
| ADB-3A | 29.5 | 12 | 29 | 39 | 39 | 39 |
| ADB-4A | 22.2 | 13 | 28 | 28 | 28 | 28 |
| ADB-5A | 25.2 | 11 | 36 | 36 | 36 | 36 |
| ADB-6B | 13.6 | 13 | 16 | 21 | 27 | 27 |
| ADB-7B | 28.7 | 26 | 21 | 30 | 38 | 38 |
| ADB-9C | 30.6 | 14 | 36 | 42 | 48 | 48 |
| ADB-10C | 8.8 | 6 | 17 | 21 | 27 | 27 |
| ADB-11C | 13.9 | 8 | 22 | 28 | 36 | 36 |
| Totals | 213.2 | | 273 | 318 | 382 | 352 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (**Appendix 4.2**).

¹ unburned and unbulked runoff

² burned and developed runoff

³ burned and bulked and developed runoff

⁴ Burned and developed for Sub-basins 1/4A, 5A, 6A, plus burned and bulked and developed flow for Sub-basins 9A, 10A, plus developed for Sub-basins 7/8A, 11A, 12A.

A comparison of existing and post-grading peak discharge rates for the Adobe Canyon borrow site is provided below.

| Acreage | | | Q ₅₀ (cfs) | | |
|----------|----------|------------|-----------------------|----------|------------|
| Existing | Proposed | Difference | Existing | Proposed | Difference |
| 213 | 213 | 0 | 450 | 352 | -98 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (**Appendix 4.2**).

Legend:

- ADB-1A 28.0 ac
 - ADB-9C 30.6 ac
 - ADB-10C 8.6 ac
 - ADB-11C 13.9 ac
 - ADB-3A 25.2 ac
 - ADB-4A 22.2 ac
 - ADB-7B 28.7 ac
 - ADB-9C 30.6 ac
 - ADB-1A 28.0 ac
 - ADB-2A 12.7 ac
 - ADB-3A 25.2 ac
 - ADB-4A 22.2 ac
 - ADB-7B 28.7 ac
- PRE-DEVELOPMENT
 $\Sigma A = 27.4$ Ac
 $\Sigma Q_{bb} = 52$ cfs
 DP = 740 cy
- POST-DEVELOPMENT
 $\Sigma A = 30.6$ Ac
 $\Sigma Q_{bb+d} = 48$ cfs
 DP = 419 cy
- PRE-DEVELOPMENT
 $\Sigma A = 12.9$ Ac
 $\Sigma Q_{bb} = 28$ cfs
 DP = 348 cy
- POST-DEVELOPMENT
 $\Sigma A = 8.6$ Ac
 $\Sigma Q_{bb+d} = 27$ cfs
 DP = 238 cy
- PRE-DEVELOPMENT
 $\Sigma A = 16.6$ Ac
 $\Sigma Q_{bb} = 41$ cfs
 DP = 448 cy
- POST-DEVELOPMENT
 $\Sigma A = 13.9$ Ac
 $\Sigma Q_{bb+d} = 36$ cfs
 DP = 375 cy
- PRE-DEVELOPMENT
 $\Sigma A = 21.3$ Ac
 $\Sigma Q_{bb+d} = 352$ cfs (A)
 DP = 2173 cy
- PRE-DEVELOPMENT
 $\Sigma A = 21.3$ Ac
 $\Sigma Q_{bb} = 451$ cfs (B)
 DP = 13415 cy
- Q_d = DEVELOPED Q
 Q_b = BURIED Q
 Q_{bb} = BURIED & BURIED Q
 Q_{bb+d} = BURIED & DEVELOPED Q
 Q_{bb+d} = BURIED & BURIED & DEVELOPED Q
 DP = DEBRIS PRODUCTION

DRAINAGE CONCEPT NOTES:

1. HYDROLOGIC OPERATIONS AND DESIGN SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
2. ALL DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
3. THE DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
4. THE DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
5. THE DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
6. THE DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.
7. THE DRAINAGE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FEDERAL MANUALS AND STATE REGULATIONS.

| PROPOSED ADOBE PROJECT DRAINAGE | | | | | | | | | | |
|---------------------------------|---------------------------------|------------------------|----------------------|----------------------|----------------------|----------------------|-----------------------------------|-------------------------|------------------------|------------------------|
| SUB-BASIN NUMBER | TIME OF CONCENTRATION (minutes) | INCREMENTAL SUB-BASINS | | | | | DESIGN PRODUCTION FACTOR (CFS/AC) | DESIGN PRODUCTION (CFS) | DESIGN PRODUCTION (CY) | DESIGN PRODUCTION (AC) |
| | | AREA (AC) | Q ₁ (CFS) | Q ₂ (CFS) | Q ₃ (CFS) | Q ₄ (CFS) | | | | |
| ADB-1A | 9 | 28.0 | 28 | 46 | 61 | 284 | 792 | 19 | 19 | |
| ADB-2A | 12 | 12.7 | 13 | 21 | 28 | 127 | 161 | 13 | 13 | |
| ADB-3A | 13 | 25.2 | 26 | 38 | 51 | 226 | 572 | 23 | 23 | |
| ADB-4A | 13 | 22.2 | 23 | 34 | 45 | 200 | 447 | 17 | 17 | |
| ADB-7B | 13 | 28.7 | 29 | 43 | 57 | 254 | 651 | 25 | 25 | |
| ADB-9C | 14 | 30.6 | 31 | 45 | 60 | 271 | 700 | 27 | 27 | |
| ADB-10C | 8 | 8.6 | 9 | 13 | 17 | 75 | 199 | 8 | 8 | |
| ADB-11C | 8 | 13.9 | 14 | 20 | 27 | 120 | 315 | 12 | 12 | |
| TOTAL | | 213.2 | 213 | 308 | 407 | 1808 | 4752 | 181 | 181 | |

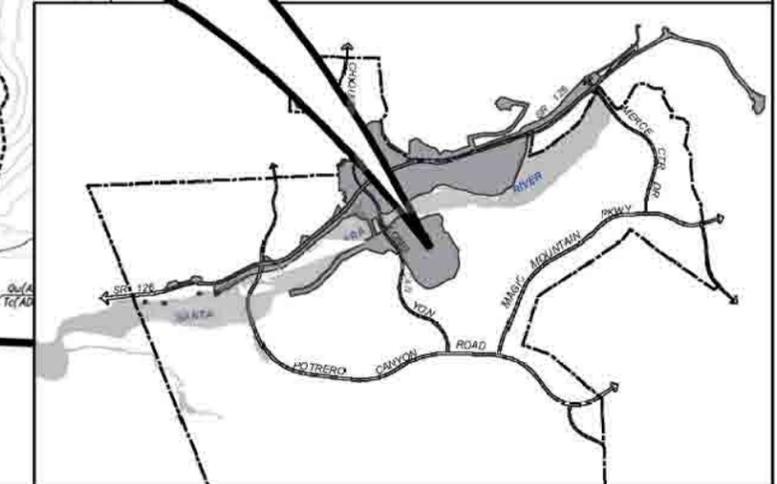
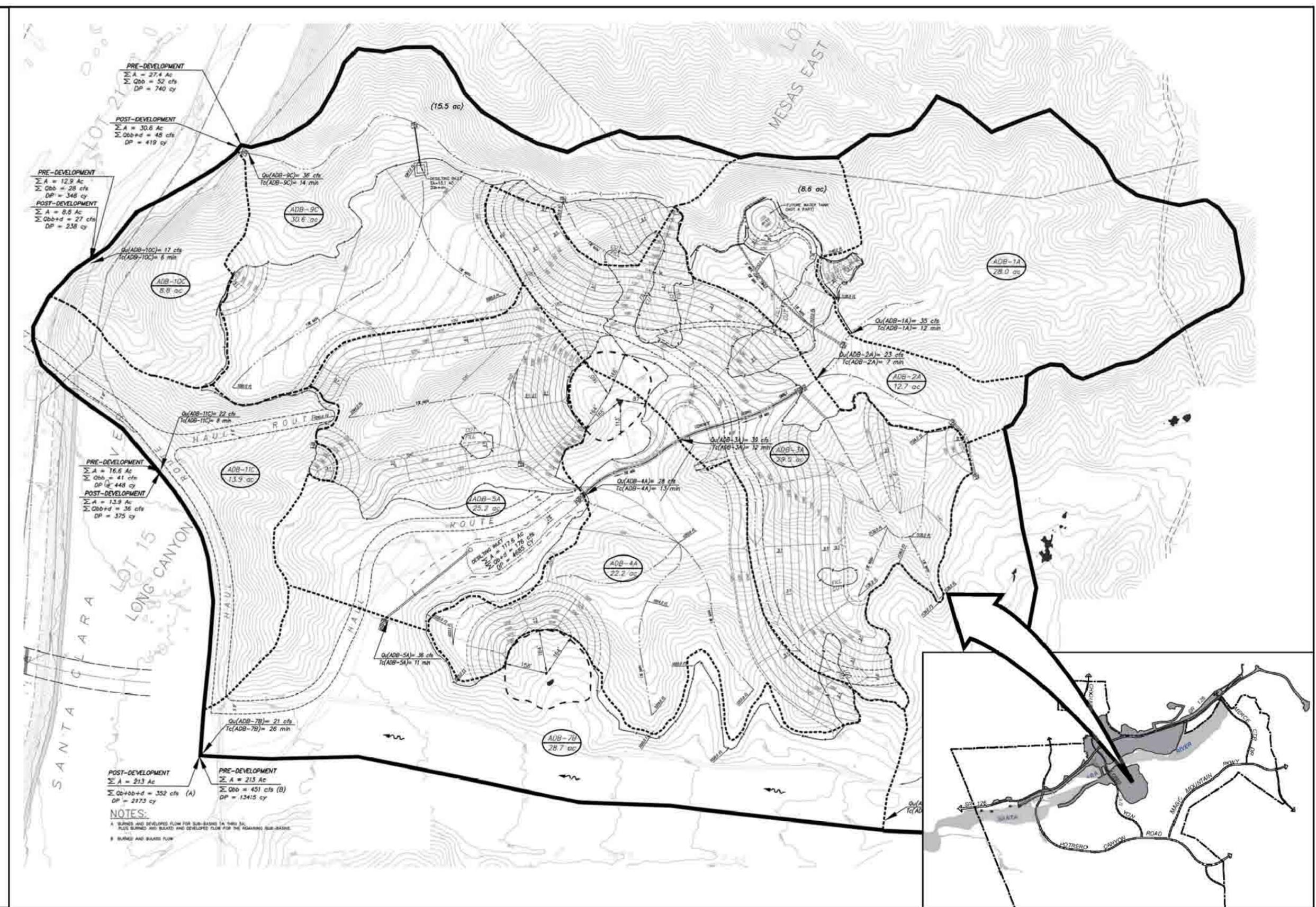
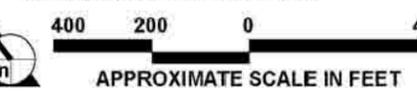
(1) - K = 1.49 from Appendix 4.2.2, K = 1.49
 (2) - Q₁ = 1.49 * (Area)^{0.485}
 (3) - Q₂ = 1.49 * (Area)^{0.485}
 (4) - Q₃ = 1.49 * (Area)^{0.485}
 (5) - Q₄ = 1.49 * (Area)^{0.485}
 (6) - DP = 4128 (2.00) (1.00) = 4128 (2.00)

NOTES:
 A. BURIED AND DEVELOPED FLOW FOR SUB-BASINS 1A THRU 7B.
 B. BURIED AND BURIED AND DEVELOPED FLOW FOR THE REMAINING SUB-BASINS.

SPECIAL WATER QUALITY NOTES:

1. ENGINEERED SLOPES TO BE HYDROSEEDED AND MAINTAINED.
2. DESIGNING SLOPES, CONC. CHANNELS AND OTHER DRAINAGE STRUCTURES TO BE HYDROSEEDED.

Note:
 For a detailed map, please refer to the corresponding map pocket in Appendix 4.2



SOURCE: PSOMAS, Off-Site Borrow Areas (Under Conditional Use Permit) Drainage Concept (March 14, 2005).

FIGURE 4.2-8

Post-Development Drainage Patterns – Adobe Canyon Borrow Site

Legend:

- LEGEND:**
- CQT-5A
4.4 ac
 - EXISTING LOT LINE
 - EXISTING EASEMENT
 - EXISTING CONTOUR
 - DAYLIGHT LINE
 - SUB-BASIN BOUNDARY
 - DRAINAGE AREA BOUNDARY
 - RIGHT OF WAY
 - EASEMENT
 - PROPOSED CONTOUR
 - PROPOSED STORM DRAIN
 - EXISTING STORM DRAIN/CULVERT
 - DEBRIS CHANNEL (8.6 ac)
 - EXISTING FLOWPATH
 - PROPOSED DEBRIS CHANNEL FLOWPATH
 - UNDEVELOPED PORTION OF SUBAREA
 - $Q_u(sub) = 9$ cfs
 - $T_c(sub) = 15$ min
- Q_d = DEVELOPED Q
 Q_b = BURNED Q
 Q_{bb} = BURNED+BULKED Q
 Q_{bb+d} = BURNED & DEVELOPED Q
 Q_{bb+d+d} = BURNED & BULKED & DEVELOPED Q
 DP = DEBRIS PRODUCTION
 Q_{cap} = FULL FLOW CAPACITY

DRAINAGE CONCEPT NOTES:

1. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. ALL STREET DRAINAGE REQUIREMENTS WILL COMPLY WITH THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATION OF THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM SHOWN WILL BE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
4. PAVED VEHICULAR ACCESS WILL BE PROVIDED TO ALL INLETS, OUTLETS AND BASINS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 86500.1 (EXCEPT AS NOTED).
6. DELINEATE THE FLOOD HAZARD AREA AND DEDICATE TO THE COUNTY OF LOS ANGELES THE RIGHT TO RESTRICT BUILDING WITHIN THAT AREA ON THE FINAL MAP.
7. THE PROPOSED DEBRIS BASINS AND STORM DRAIN FACILITIES WILL BE MAINTAINED BY LOS ANGELES COUNTY.

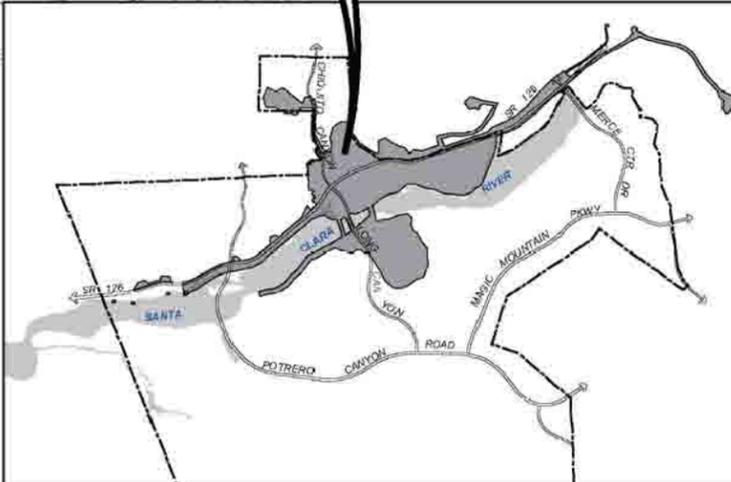
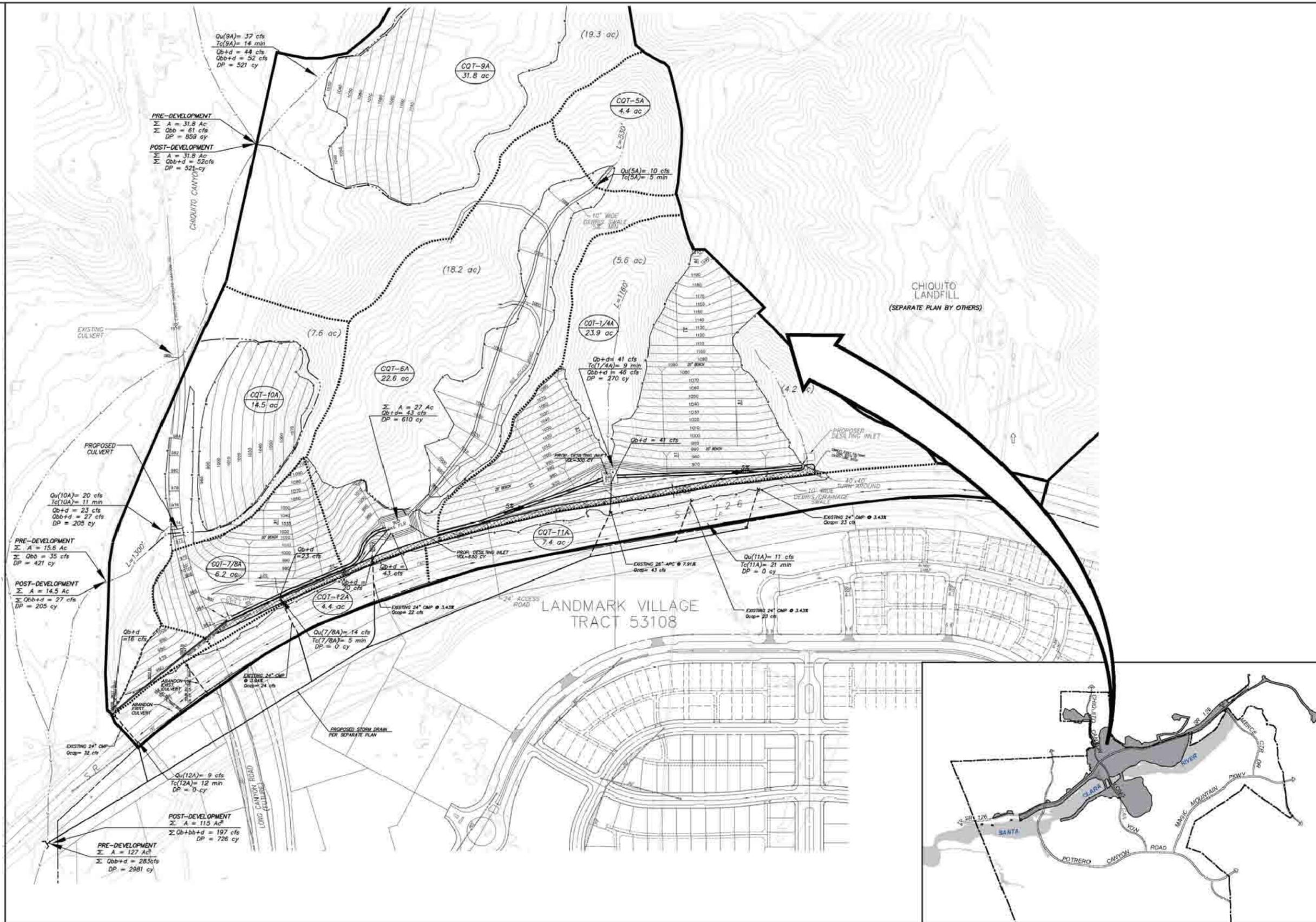
| PROPOSED CHIQUITO PROJECT DRAINAGE | | | | | | | | | |
|------------------------------------|---------------------------------|------------------------|----------------------|----------|-------------------------|----------|---------------------------|----------|------------------------|
| SUB-BASIN NUMBER | TIME OF CONCENTRATION (minutes) | INCREMENTAL SUB-BASINS | | | | | | | |
| | | 50-YEAR STORM EVENT | Q _u (cfs) | | Q _{bb+d} (cfs) | | Q _{bb+d+d} (cfs) | | Q _{cap} (cfs) |
| CQT-1/AA | 9 | 23.0 | 37 | 41 | 96 | 220 | 308 | 41 | |
| CQT-5A | 5 | 4.4 | 10 | 12 | 15 | 119 | 150 | 12 | |
| CQT-6A | 10 | 22.8 | 38 | 41 | 96 | 481 | 610 | 31 | |
| CQT-7/BA | 5 | 6.2 | 14 | 14 | 14 | 0 | 0 | 14 | |
| CQT-8A | 14 | 39.8 | 37 | 44 | 50 | 501 | 501 | 32 | |
| CQT-10A | 11 | 14.5 | 20 | 23 | 27 | 205 | 205 | 27 | |
| CQT-11A | 21 | 7.4 | 11 | 11 | 11 | 0 | 0 | 11 | |
| CQT-12A | 12 | 8.4 | 9 | 9 | 9 | 0 | 0 | 9 | |
| Σ | Σ | Σ | Σ | Σ | Σ | Σ | Σ | Σ | Σ |
| | | 115.9 | 182 | 189 | 213 | 1807 | 197 | | |

$K = 1.49$ (Factor from Appendix 9-2, $K=0.677^{(T_c-10)}$)
 $Q_u = 1.49 C I A^{0.77}$
 $Q_{bb} = 1.27 Q_b$
 $DP = 1.497 C I (DPA \times 2.4 \times 10^4)$

NOTES:

- A. BURNED AND DEVELOPED FLOW FOR SUB-BASINS 1/AA, 5/A, PLUS BURNED AND BULKED AND DEVELOPED FLOW FOR SUB-BASINS 6A, 10A, PLUS DEVELOPED FLOW FOR SUB-BASINS 7/BA, 11A, AND 12A.
- B. DRAINAGE TRIBUTARY AREA IS LESS THAN IN EXISTING CONDITION BECAUSE THE AREA SOUTH OF 30125 IS PART OF LANDMARK VILLAGE DEVELOPMENT TRACT 53108 IN THE PROPOSED CONDITION.
- C. AREAS CQT-6A AND CQT-12A DRAIN DIRECTLY TO CHIQUITO CANYON. EXISTING CONDITION IS MAINTAINED.

Note:
 For a detailed map, please refer to the corresponding map pocket in Appendix 4.2.



SOURCE: PSOMAS, Off-Site Borrow Areas (Under Conditional Use Permit) Drainage Concept (March 14, 2005).

FIGURE 4.2-9

Post-Development Drainage Patterns – Chiquito Canyon Grading Site

As shown, there would be a 98 cfs (22 percent) reduction in runoff from the borrow site under post-graded conditions. This reduction in runoff would be a result of a reduced rate of runoff from the site allowing for greater infiltration, as well as the proposed debris basin that would capture sediment and debris before the runoff discharges off site. As a result of the grading, runoff from the Adobe Canyon borrow site would not result in downstream flooding and, therefore, impacts would be less than significant.

Chiquito Canyon Grading Site

Post-grading runoff flow rates for Chiquito Canyon are presented below in **Table 4.2-8, Post-Grading Drainages and Runoff Discharge – Chiquito Canyon Borrow Site**. The post-development runoff quantities would total 197 cfs for Chiquito Canyon during a 50-year capital storm.

**Table 4.2-8
Post-Grading Drainages and Runoff Discharge – Chiquito Canyon Borrow Site**

| Sub-Basins | Acreage | Time of Conc. (minutes) | Q50u ¹ (cfs) | Q50b+d ² (cfs) | Q50bb+d ³ (cfs) | Qdesign ⁴ (cfs) |
|------------|---------|-------------------------|-------------------------|---------------------------|----------------------------|----------------------------|
| CQT-1/4A | 23.9 | 9 | 37 | 41 | 46 | 41 |
| CQT-5A | 4.4 | 5 | 10 | 12 | 15 | 12 |
| CQT-6A | 22.6 | 15 | 25 | 31 | 39 | 31 |
| CQT-7/8B | 6.2 | 5 | 14 | 14 | 14 | 14 |
| CQT-9B | 31.8 | 14 | 27 | 44 | 52 | 52 |
| CQT-10C | 14.5 | 11 | 20 | 23 | 27 | 27 |
| CQT-11C | 7.4 | 21 | 11 | 11 | 11 | 11 |
| CQT-12C | 4.4 | 12 | 9 | 9 | 9 | 9 |
| Totals | 115.2 | | 163 | 185 | 213 | 197 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (*Appendix 4.2*).

¹ unburned and unbulked runoff

² burned and developed runoff

³ burned and bulked and developed runoff

⁴ burned and developed for Sub-basins 1/4A, 5A, 6A, plus burned and bulked and developed flow for Sub-basins 9A, 10A, plus developed for Sub-basins 7/8A, 11A, 12A.

A comparison of existing and post-grading peak discharge for the Chiquito Canyon grading site is provided below.

| Acreage | | | Q ₅₀ (cfs) | | |
|----------|----------|------------|-----------------------|----------|------------|
| Existing | Proposed | Difference | Existing | Proposed | Difference |
| 127 | 115 | -12 | 283 | 197 | -86 |

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005) (Appendix 4.2).

As shown, there would be an 86 cfs (30 percent) reduction in runoff from the Chiquito Canyon grading site under post-graded conditions. This reduction would be a result of a reduced rate of runoff from the site allowing for greater infiltration, as well as the proposed debris basin that would capture sediment and debris before the runoff discharges off site. As a result of the grading, runoff from the Chiquito Canyon grading site would not result in downstream flooding and, therefore, impacts would be less than significant.

(c) Place Housing or Structures within a 100-Year Flood Hazard Area

Neither the borrow site nor Chiquito Canyon grading site would include housing or habitable structures, which are located within a 100-year flood hazard area; therefore, there would be no significant impacts due to the placement of housing or structures within a 100-year flood hazard area.

(d) Exposure to Significant Risk of Loss, Injury, or Death by Flooding or Mudflow

Grading in Adobe Canyon and Chiquito Canyon would be to standards established by the LACDPW (see **Section 4.1, Geotechnical and Soil Resources**) and all manufactured slopes would be stabilized through standard engineering practice and revegetation. Furthermore, the amount of runoff and debris flow from these sites would be less under post-graded conditions than under existing conditions, thereby reducing the potential for flood impact and mudflow to less than significant levels. As a result of these improvements, impacts resulting from exposure to significant risk of loss, injury, or death by flooding or mudflow would be less than significant.

(3) Utility Corridors

(a) Substantial Alteration of an Existing Drainage Pattern

The proposed utility corridor contains three segments: a westerly segment of approximately 1,200 linear feet extending eastward from the proposed Newhall Ranch WRP (to be protected with soil cement or non-hardened bank protection to be determined with final design); a middle segment of 6,600 linear feet

extending between the Chiquito and Grande tributaries (protected with TRMs or similar non-hardened bank protection methods); and the easterly segment that extends 2,000 linear feet to the existing Valencia WRP along The Old Road. The bank stabilization improvements associated with the eastern segment (protection with soil cement) were approved under the previously adopted Natural River Management Plan Section 404 Permit and Section 1603 Streambed Alteration Agreement for portions of the Santa Clara River and its tributaries (1998).

The analysis for the middle segment evaluated river flow velocities in the reach between Chiquito and Grande on the northern edge of the river corridor, STA 22010 to STA 17785. A uniform distance from the SR-126 road and the rail right-of-way area to the southern edge of the utility corridor was established for the entire reach. The horizontal location of the corridor was determined to be 67 feet from the rail right-of-way area to the edge of the utility corridor. At this location, a vertical levee was created in HEC-RAS to represent the boundary between the river and the utility corridor. The modeled levee affected the hydraulic geometry of 22 cross-sections in the reach from Chiquito west to Grande. One primary simulation was run in HEC-RAS, the Q_{cap} flood event (140,793 cfs), under a mixed flow regime and a mixed Manning's n conditions based on aerial photography analysis. Under these conditions, when the water surface elevation was high enough to reach the banks, the water velocities at the levee were very low, ranging from 0.8 to 4.1 fps. These modeled velocities are not to the level that would require hardened bank protection and so would not substantially alter the existing drainage patterns that could result in substantial erosion or siltation. In this case, approximately 6,600 linear feet of geotextile reinforced bio-engineered erosion protection (possibly TRMs) would be permanently placed on the bank to ensure protection from erosion.

(b) Result in Runoff Flow Rates in Excess of Existing or Planned Drainage Systems

The scope of the utility corridor and adjunct facilities is not such that it would result in runoff flow rates in excess of existing or planned drainage systems. Wherever a water tank is proposed on a graded pad, burned and bulked runoff from the pad would be reduced as a result of overcovering the pad with impervious materials and non-erosive vegetation. Furthermore, the water tank pads would be graded and flattened, which would decrease the coefficient of runoff from the pads. As a result, there would be a net decrease in runoff and the impact of the utility corridor would be less than significant.

(c) Place Housing or Structures Within a 100-Year Flood Hazard Area

Most of the utility corridor would not be located within the existing 100-year flood hazard area and those improvements proposed within the Landmark Village site would be elevated above the 100-year and the

50-year capital floodplains. No portion of the utility corridor includes residential or habitable structures within a flood hazard area. As a result, there would be no impact relative to the utility corridor.

(d) Exposure to Significant Risk of Loss, Injury, or Death by Flooding or Mudflow

Construction of the utility corridor would be to standards set forth by the LACDPW. The utility corridor south of the SR-126 and within proposed "A" Street would be constructed within a trench that would be approximately 10 feet in width with some slope stabilization and remedial grading as necessary. Once the utilities are placed within the trench, the trench would be overcovered with soil, graded and compacted to blend in with existing grades, and revegetated or paved over. Upon completion, runoff from this portion the utility corridor would be channeled through catch basins and storm drains and discharged to the Santa Clara River. Runoff and debris flow would be equal to or less than existing conditions, and there would be no risk of loss, injury, or death. As a result, there would be a less than significant impact for the utility corridor south of the SR-126 and within proposed "A" Street.

The water tanks would be placed in geologically stable locations (see **Section 4.1, Geotechnical and Soil Resources**). All manufactured slopes in the immediate vicinity of the tanks would be stabilized through standard engineering practice and revegetation. Furthermore, the amount of runoff and debris flow from the two off-site grading sites would be less under post-graded conditions than under existing conditions, thereby reducing the potential for flood impact to less than significant. As a result of these improvements, impacts associated with this criterion would be less than significant.

d. Conclusion

Development of the proposed Landmark Village project, off-site grading, and construction of the utility corridor would result in less than significant impacts on drainage patterns because development would not substantially alter existing drainage patterns, significantly modify a drainage channel, or change the rate of flow, currents, or the course and direction of surface waters such that they would cause substantial erosion or siltation, or cause on-site or off-site flooding or mudflow.

Project impacts relative to excess runoff would be less than significant because post-construction and post-grading runoff flow rates would be less than existing conditions. Furthermore, all grading and drainage improvements would be consistent with LACDPW requirements and drainage improvements would be sized for either the 25-year urban or the capital storm events, depending on the source of runoff. As a result, the project would not create or contribute runoff in quantities that would exceed the capacity of existing or planned stormwater drainage systems.

Much of the western portion of the Landmark Village tract map site is within the FEMA 100-year floodplain and within the capital floodplain of the Santa Clara River. This portion of the site would be elevated above the capital floodplain and bank stabilization is proposed along the northern riverbank to protect the proposed improvements from risk of flood, loss, and injury or death. No housing or structures are proposed within the borrow site as part of this project. The water tank sites would not be located within a flood hazard area. Grading and slope stabilization within the two off-site grading sites would be to standards set forth by the LACDPW, and neither site would be subject to flooding or mudflow. The project would not expose people or structures to a significant risk of loss, injury, or death as a result of inundation by a seiche or tsunami. Therefore, project impacts under would be less than significant.

9. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential flood control impacts absent mitigation, the County already has imposed mitigation required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to flood control, are found in the previously certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan and the mitigation measures recommended for the proposed Landmark Village project to ensure that future development of the project site would not result in flood control impacts, and would not adversely affect adjacent properties.

a. **Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project**

The following seven mitigation measures (**Mitigation Measure Nos. 4.2-1 through 4.1-7**, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant flood control impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the LACDPW, Flood Control Division.

- SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the RWQCB for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR).
- SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR).
- SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA floodplain are to be obtained by the applicant ~~before~~^{after} the proposed drainage facilities are constructed.
- SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the LACDPW.
- SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the LACDPW.
- SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the LACDPW. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan

(SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The LACDPW shall monitor compliance with those NPDES requirements.

b. Mitigation Already Incorporated into the Project

The following mitigation measures are already incorporated into the design of the proposed Landmark Village project. To reflect that the measures relate specifically to Landmark Village, each measure is preceded by "LV," which stands for Landmark Village.

- LV 4.2-1 The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed for either the 25-year or 50-year capital storm.
- LV 4.2-2 Debris basins shall be constructed pursuant to LACDPW requirements to intercept flows from undeveloped areas entering into the developed portions of the site.
- LV4.2-3 Energy dissipaters consisting of either rip-rap or larger standard impact type energy dissipaters shall be installed as required by LACDPW at outlet locations to reduce velocities of runoff into the channel where necessary to prevent erosion.
- LV4.2-4 The project is required to comply with the RWQCB Municipal Permit (General MS4 Permit) Order No. 01-182, NPDES No. CAS004001 (adopted December 13, 2001), and with the state's General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002, reissued on April 17, 1997, as amended.

c. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant flood control impacts that may occur with implementation of the proposed Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR.

(1) Construction Mitigation Measures

LV 4.2-5 During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site, within the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor right-of-way, and the bank stabilization areas, as follows:

- Re-vegetate exposed areas as quickly as possible;
- Minimize disturbed areas;
- Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.;
- Reduce velocity through outlet protection, check dams, and slope roughening/terracing;
- Implement dust control measures, such as sand fences, watering, etc.;
- Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments;
- Stabilize construction entrances/exits with aggregate underdrain with filter cloth or other comparable method;
- Place sediment control BMPs at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins); and/or
- Eliminate or reduce, to the extent feasible, non-stormwater discharges (e.g., pipe flushing, and fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down) from the construction site through the use of appropriate sediment control BMPs.

LV 4.2-6 All necessary permits, agreements, letters of exemption from the ACOE and/or the CDFG for project-related development within their respective jurisdictions must be obtained prior to the issuance of grading permits.

LV 4.2-7 By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).

(2) Operational Mitigation Measures

- LV 4.2-8 A final developed condition hydrology analysis (LACDPW Drainage Concept Report (DCR) and Final Design Report (FDR)) shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis will be done to confirm that the final project design is consistent with this analysis. Those final calculations shall establish design features for the project that satisfy the criterion that post-development peak stormwater runoff discharge rates, velocities, and duration in natural drainage systems mimic pre-development conditions. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.
- LV 4.2-9 Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.
- LV 4.2-10 To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control to intercept flows from undeveloped areas entering into the developed portions of the site.

10. CUMULATIVE IMPACTS

As discussed in **Section 3.0, Cumulative Impact Analysis Methodology**, two development scenarios were selected for the cumulative impact analysis that is required by CEQA for this EIR. These scenarios include the County's DMS Build-Out Scenario and the SCV Cumulative Build-Out Scenario (see **Section 3.0** for a detailed description of each of these scenarios). Individual or detailed discussion of these scenarios with respect to cumulative flood impacts is not relevant in this section because (1) the County's DMS does not monitor projects for the County's Flood Control Division of the LACDPW; and (2) the boundary of the approximate 996-acre tributary watershed in which the Landmark Village site is located is the appropriate geographic area for such an analysis at the project level. Therefore, attention is focused in this cumulative impact analysis on the potential flood impacts of the buildout of the tributary watershed in which the Landmark Village site is situated (please refer to **Section 4.5, Floodplain Modifications**, for a discussion of cumulative flood impacts on the Santa Clara River and floodplain).

a. Flood Impacts

The adopted Newhall Ranch Specific Plan and the County of Los Angeles General Plan provide for additional development within the tributary watershed.

Pursuant to LACDPW requirements, all future drainage facilities in the 996-acre tributary watershed must be designed for either the capital storm or the 25-year urban design storm (storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps must be designed for the capital storm). LACDPW also prohibits increases in off-site post-development storm flows and increases in storm flow velocities. As a result of compliance, overall storm runoff discharge quantities from the watershed under post-development runoff conditions would be less than or equal to existing conditions largely because the runoff would include less debris than is typical of undeveloped watersheds and flow velocities would not increase. Because on-site facilities already would have been built for burned and bulked flows from undeveloped areas, they would have more than adequate capacity to accommodate off-site flows as the off-site portions of the drainage areas develop.

Because on-site drainage facilities would have adequate capacity to capture and convey off-site flows from developed upstream areas, and because the storm drainage improvements in the remainder of the watershed would be required to comply with LACDPW design criteria, no significant cumulative project flooding impacts are expected to occur as buildout within the watershed occurs.

Development of the Newhall Ranch Specific Plan would increase runoff from upland areas due to increased impervious surface areas (e.g., pavement, roads, and buildings). The increase in discharges for different return events (2-year, 5-year, 10-year, 20-year, 50-year, and 100-year) would be measurable to a point about 4 miles downstream of Newhall Ranch in Ventura County. Beyond this point, development would have no impact on flows. The increase in runoff would range from 3 percent for high flows to 7 percent for the 2-year event. These data indicate that the proposed project would slightly increase the average flows in the river downstream of Newhall Ranch, consistent with the analysis conducted for the Specific Plan. No significant increases in velocity and related scouring, and no potentially significant cumulative project flooding impacts are expected to occur either in the vicinity of the project or downstream of the site as buildout occurs in the watershed.

Additionally, all development within the portion of the watershed of the Santa Clara River located in Los Angeles County is required to comply with the LACFWD Qcap requirements to ensure that upstream or downstream flooding does not occur. Compliance with these requirements ensures consistency with the County's Qcap model. Pursuant to LACDPW requirements, all drainage systems in developments that carry runoff from developed areas must be designed for the 25-Year Urban Design storm, while storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps must be designed for the capital storm. LACDPW also prohibits significant increases in off-site post-development storm flows and significant increases in storm flow velocities. Development in the Los Angeles County portion of the watershed also must comply with LACDPW design criteria. As a result of this compliance, overall storm runoff discharge quantities from the watershed under post-

development runoff conditions would be less than or equal to existing conditions largely because the runoff would be free of the debris that is typical of undeveloped watersheds and flow velocities would not increase significantly. Because on-site facilities would already have been built for burned and bulked flows from undeveloped areas, they would have more than adequate capacity to accommodate off-site flows as the off-site portions of the drainage areas develop.

Other projects within Los Angeles County would be subject not only to the same general requirements as the proposed Landmark project, but also to such other requirements as LACDPW would specifically identify for them based on their unique topographic and geologic characteristics.

The analysis of project conditions, above, demonstrates that project development, which must comply with all County requirements and previously approved Newhall Ranch Specific Plan EIR mitigation measures, would not create any significant impacts. Compliance with the applicable regulations results in less discharge from the project post-development as compared to pre-development levels, and thus runoff from the project causes no incremental increase in the cumulative impact of watershed-wide development.

Because the cumulative project drainage improvements in Los Angeles County would be required to conform to the requirements of LACDPW in order to accommodate the capital flood from the effected watershed, no potentially significant cumulative project flooding impacts are expected to occur. The development criteria imposed on each project by LACDPW would ensure no potentially significant cumulative impacts.

As to the influence of increased urban area with respect to associated cumulative geomorphic impacts to the Santa Clara River, a study was prepared addressing these issues and is found in **Appendix 4.2**. Assessment of potential impacts resulting from cumulative hydromodification effects in selected reaches of the Santa Clara River is addressed in that study, which was prepared by Balance Hydrologics, Inc, October 2005 (**Appendix 4.2**). In summary, the study concluded that:

“Major perturbations within the Santa Clara River watershed (dam construction, levee construction, changes in flows in response to decadal-scale climatic patterns, and increase in woody vegetation) do not appear to have had a significant impact on the geomorphic expression of the Santa Clara River, as quantified from measurements made from a series of historical aerial photographs flown during the years 1927 through 2005.”

The study has further concluded that while there is no expected increase in summer flows due to additional treated effluent discharge to the Santa Clara River, and even if summer baseflows do increase, it is not expected that there would be a significant change within the channel. Generally, large storm events, such as those that occurred in February 1998 and January 2005 can significantly modify the

channel form. However, the study has concluded that the channel morphology of the Santa Clara River mainstem has not adjusted significantly to much larger disturbances in flow, sediment yield, and riparian vegetation growth factors, within the Newhall reach. Consequently, a significant impact is not expected to the geomorphic impact of the Santa Clara River mainstem due to the anticipated increase in urban development.

b. Conclusion

Other projects within the tributary watershed would not only be subject to the same general requirements as the proposed Landmark Village project, but to other requirements that LACDPW Flood Control Division may specifically identify for such projects based on their unique topographic and geologic characteristics. All development within the watershed of the Santa Clara River and within unincorporated Los Angeles County is required to comply with the LACDPW Flood Control Division requirements, which are designed to ensure that upstream or downstream flooding does not occur, and to ensure that downstream erosion and sedimentation do not occur. Therefore, no significant unavoidable cumulative flooding, erosion, and sedimentation impacts would occur. Compliance with these requirements ensures consistency with the County's Qcap model.

11. CUMULATIVE MITIGATION MEASURES

Other projects within Los Angeles County would not only be subject to the same general requirements as the proposed Landmark Village project, but to other requirements that the LACDPW Flood Control Division would specifically identify for such projects based on their unique topographic and geologic characteristics. Therefore, no further mitigation is specified in this section for cumulative development projects relative to downstream flooding, erosion, and sedimentation impacts. Buildout of the tributary watershed in which the Landmark Village site is located would not have an adverse impact on beach sand replenishment at the mouth of the Santa Clara River.

12. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

Implementation of the above mitigation measures to the satisfaction of the LACDPW would reduce storm-related flooding, erosion, and sedimentation impacts to less than significant levels. Therefore, no significant unavoidable impacts are anticipated.

b. Cumulative Impacts

Because all development within the tributary watershed must comply with LACDPW Flood Control Division requirements to ensure that upstream or downstream flooding does not occur, there would be no significant cumulative impacts; and therefore, no significant unavoidable cumulative flooding, erosion, or sedimentation impacts would be created.

1. SUMMARY

The Landmark Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 368.22 acres of land currently used for agricultural purposes, 118.57 acres of non-native grassland, 4.37 acres of coast live oak woodland, 11.94 acres of coastal sage chaparral scrub, 15.77 acres of mulefat scrub, 17.82 acres of southern cottonwood willow riparian forest, 267.27 acres of coastal sage scrub, 6.62 acres of southern willow scrub, 2.55 acres of river wash, 0.16 acre of alluvial scrub, 3.05 acres of great basin scrub, 7.74 acres of elderberry scrub, 5.99 acres of arrow weed scrub, 0.87 acre of freshwater marsh, 136.70 acres of ruderal vegetation, and 6.93 acres of scalebroom scrub.

Significant impacts would occur with respect to the loss of mulefat scrub, coast live oak woodland, coastal sage scrub, elderberry scrub, southern willow scrub, southern cottonwood willow riparian forest, great basin scrub, scalebroom scrub, valley freshwater marsh, wildlife habitat, special-status bird nests, special-status plant species, protected oaks, special-status wildlife species, and California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (ACOE) jurisdictional resources. Significant indirect impacts would occur with respect to increased light and glare, increased non-native plant species and increased human and domestic animal presence.

The direct and indirect impacts associated with development and operation of the Landmark Village project are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999) and Revised Additional Analysis (May 2003). Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan Risk Management Plan (RMP), as well as the additional mitigation measures required by this EIR, would mitigate some, but not all, of the identified project-specific impacts to less than significant levels. However, consistent with the findings of the Newhall Ranch Specific Plan Program EIR, significant unavoidable impacts would occur due to the loss of many sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence. The project would also contribute to a significant unavoidable cumulative impact related to the ongoing loss of biological resources in the project region.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.6 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with biological resources for the entire Newhall Ranch Specific Plan. Subsequent, more detailed review was conducted of the biological effects of the Specific Plan caused by changes to the hydrology and hydraulics of the Santa Clara River in the Newhall Ranch Revised Additional Analysis (2003), Section 2.3, Floodplain Modifications. The Revised

Additional Analysis (Sections 2.2 and 2.4) also examined in greater depth the Salt Creek Corridor and Specific Plan consistency against Los Angeles County (County) General Plan policies pertaining to Significant Ecological Areas (SEA).

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.4** assesses the Landmark Village project's existing conditions, the project's potential environmental impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan would develop approximately 5,793 acres of the 11,963-acre Specific Plan site (or 49 percent of the site), and would preserve as undeveloped land a total of approximately 6,170 acres (or 51 percent of the site). In addition, an off-site condition requires the applicant to dedicate to the public 1,517 acres of land in the remaining Salt Creek watershed in Ventura County, adjacent to the Specific Plan site. This land is also required to be managed in conjunction with and in the same manner as the High Country Special Management Area (SMA)/Significant Ecological Area (SEA) 20. Portions of proposed development within the Specific Plan area would occur in sensitive upland and riparian habitats. Therefore, the Specific Plan was determined to have significant impacts on the biological resources located on the site. Implementation of measures contained in the Specific Plan RMP and those measures contained in the Newhall Ranch certified environmental documentation would reduce some, but not all, Specific Plan impacts to special-status plant and wildlife species, riparian, wetland and aquatic resources (located along the river corridor) to below California Environmental Quality Act (CEQA) thresholds of significance. While mitigation is also provided to reduce the magnitude of impacts to upland resources, certain of these impacts were also expected to remain significant. Also, despite the preservation of the major wildlife corridor along the Santa Clara River, the Specific Plan would significantly impact the ability of some animals to move across portions of the Specific Plan area. **Table 4.4-1, Significant Biological Impacts – Newhall Ranch Specific Plan and WRP**, summarizes the Specific Plan's impacts on biological resources, the applicable mitigation measures, and the significance findings after the mitigation is implemented.

**Table 4.4-1
Significant Biological Impacts – Newhall Ranch Specific Plan and WRP**

| Impact Description | Mitigation Measures | Conclusion After Mitigation |
|--|---|------------------------------------|
| General Wildlife Impacts – Based on the amount of habitat lost (5,132 acres), the impact potential of implementation of the Newhall Ranch Specific Plan on the diminishment of habitat for wildlife or plants is considered significant. | See measures listed below for impacts to sensitive animal species. | Significant |
| The impact potential of implementation of the Newhall Ranch Specific Plan on the movement of resident wildlife species is considered significant due to the reduction in open land available for wildlife movement between the river and upland areas. | See measures listed below for impacts to sensitive animal species and habitats. | Significant |
| Loss of Habitat –As approved, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 42 percent of these vegetation types would be lost). Given the concern for this species (coast horned lizard) in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation. | See measures listed below for impacts to sensitive animal species and habitats. | Significant |
| It is acknowledged that any loss of plant species listed as Rare, Threatened, or Endangered is considered a significant impact. Those include the following | | |
| Slender-horned spineflower (significant if present) | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| California Orcutt grass | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| Lyon's pentachaeta | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| Nevin's barberry | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| Thread-leaved brodiaea | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| Santa Susana tarplant | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| Braunton's milk vetch | Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53 | Not Significant |
| San Fernando Valley spineflower (significant in Additional Analysis) | Mitigation Measures 4.6-53, 59, and 65–80 | Not Significant |
| Short-joint beavertail cactus (significant in Additional Analysis) ^a | Mitigation Measures 4.6-27, 34, 35, 53, and 59 | Not Significant |

| Impact Description | Mitigation Measures | Conclusion After Mitigation |
|--|--|-----------------------------|
| Calochortus (potentially significant in Additional Analysis depending upon actual species present) | Mitigation Measures 4.6-27, 34, 35, 53, and 59 | Not Significant |
| Dudleya (potentially significant depending upon actual species present) ^a | Mitigation Measures 4.6-27, 34, 35, 53, and 59 | Not Significant |
| Based on this analysis of indirect impacts to spineflower and other sensitive plants, seven indirect impacts/edge effects are considered significant in connection with the proposed development of Newhall Ranch. | Mitigation Measures 4.6-53, 4.6-59, and 4.6-65-80 | Not Significant |
| Project construction and operation may have potential significant impacts on a number of sensitive animal species through loss of habitat and/or decrease in water quality if impacts are unmitigated. Species include the following: | | |
| Santa Ana sucker | Mitigation Measures 4.6-44, 4.6-53, 4.6-55, 4.6-57, and 4.6-58 | Not Significant |
| Unarmored threespine stickleback | Mitigation Measures 4.6-53, 4.6-54, 4.6-55, 4.6-57, 4.6-58, and 4.6-59 | Not Significant |
| Arroyo chub | Mitigation Measures 4.6-44, 4.6-53, 4.6-55, 4.6-57, and 4.6-58 | Not Significant |
| Arroyo southwestern toad | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Western spadefoot toad | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-55 | Not Significant |
| Silvery legless lizard | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Southwestern pond turtle | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-55 | Not Significant |
| Coastal rosy boa | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| San Bernardino ringneck snake | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Two-striped garter snake | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-55 | Not Significant |
| California horned lizard | Mitigation Measures 4.6-27-4.6-43, 4.6-53, 4.6-56, and 4.6-55 | Significant |

| Impact Description | Mitigation Measures | Conclusion After Mitigation |
|--|---|-----------------------------|
| San Diego horned lizard | Mitigation Measures 4.6-27-4.6-43, 4.6-53, 4.6-56, and 4.6-55 | Significant |
| Coast patch-nosed snake | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Least Bell's vireo | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-59 | Not Significant |
| Southwestern willow flycatcher | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-59 | Not Significant |
| Northern harrier | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Cooper's hawk | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Vermilion flycatcher | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Yellow warbler | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Summer tanager | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Southern California rufous-crowned sparrow | Mitigation Measures 4.6-27-4.6-43, 4.6-53, 4.6-56, and 4.6-55 | Significant |
| Tricolored blackbird | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-56, and 4.6-55 | Significant |
| Great blue heron | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Great egret | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Snowy egret | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55 and 4.6-56 | Not Significant |
| Black-crowned night heron | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| White-tailed kite | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |

| Impact Description | Mitigation Measures | Conclusion After Mitigation |
|-----------------------------------|---|------------------------------------|
| Swainson's hawk | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Mountain plover | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Western least bittern | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Fulvous whistling duck | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Bell's sage sparrow | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Ferruginous hawk | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Western burrowing owl | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Sharp-shinned hawk | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Golden eagle | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| Pallid bat | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Pocketed free-tailed bat | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Pale Townsend's big-eared bat | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Greater western mastiff bat | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Mountain lion | Mitigation Measures 4.6-27-4.6-43, and 4.6-53 | Significant |
| San Diego black-tailed jackrabbit | Mitigation Measures 4.6-27-4.6-43, 4.6-53, 4.6-56, and 4.6-55 | Significant |
| San Diego desert woodrat | Mitigation Measures 4.6-27-4.6-43, 4.6-53, 4.6-56, and 4.6-55 | Significant |

| Impact Description | Mitigation Measures | Conclusion After Mitigation |
|--|--|-----------------------------|
| Yuma myotis | Mitigation Measures 4.6-1-4.6-26, 4.6-53, 4.6-55, and 4.6-56 | Not Significant |
| Development of the Specific Plan would result in impacts to sensitive habitats including the following: | | |
| Coastal sage scrub | Mitigation Measures 4.6-27-4.6-43 | Significant |
| Valley oak woodland/savanna | Mitigation Measures 4.6-27-4.6-43 | Significant |
| Elderberry scrub | Mitigation Measures 4.6-27-4.6-43, and 4.6-60 | Not Significant |
| Mainland cherry forest | Mitigation Measures 4.6-27-4.6-43, and 4.6-61 | Not Significant |
| Southern willow scrub | Mitigation Measures 4.6-1-4.6-26 | Not Significant |
| Southern cottonwood-willow riparian forest and southern willow riparian woodland | Mitigation Measures 4.6-1-4.6-26 | Not Significant |
| Valley freshwater marsh and ponds | Mitigation Measures 4.6-1-4.6-26 | Not Significant |
| Wetlands | Mitigation Measures 4.6-1-4.6-26 | Not Significant |
| SEA 20 – High Country | Mitigation Measures 4.6-1-26 | Not Significant |
| SEA 23 – River Corridor | Mitigation Measures 4.6-26a-52 | Not Significant |
| Indirect Impacts – Implementation of the Newhall Ranch Specific Plan has the potential to indirectly impact adjacent natural areas and sensitive biological resources that occur proximal to the site. This would occur as a result of increased use of the Santa Clara River and upland areas by humans and domestic animals, increased use of adjacent natural areas by animals typical of an urban environment, and the potential effects of light, glare, sediment, and urban pollutant runoff, unless mitigated. | Mitigation Measures 4.6-18, 4.6-19 and 4.6-56 | Significant |
| Cumulative Biological Impacts | None Proposed/Required | Significant |

Source: Biota Report for the Newhall Ranch Specific Plan (July 1996), Newhall Ranch Specific Plan Program EIR (March 1999) and Revised Additional Analysis (May 2003).

^a It has since been confirmed that this taxon does not occur on the Newhall Ranch Specific Plan site.

Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the Specific Plan would result in impacts (as identified in **Table 4.4-1**, above) that would be unavoidably significant even with implementation of all identified feasible mitigation measures. Consistent with Section 15093 of the *CEQA Guidelines*, the Board of Supervisors found that the Specific

Plan offered overriding economic, legal, social, public benefits that outweighed the identified significant unavoidable impacts and made them acceptable.

4. EXISTING CONDITIONS

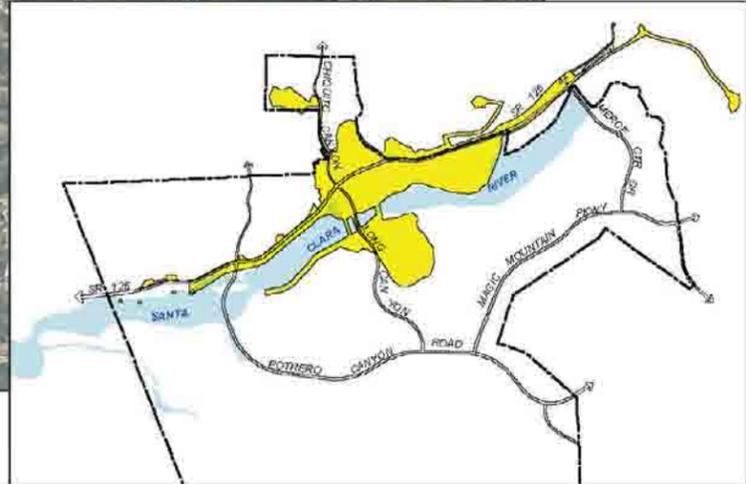
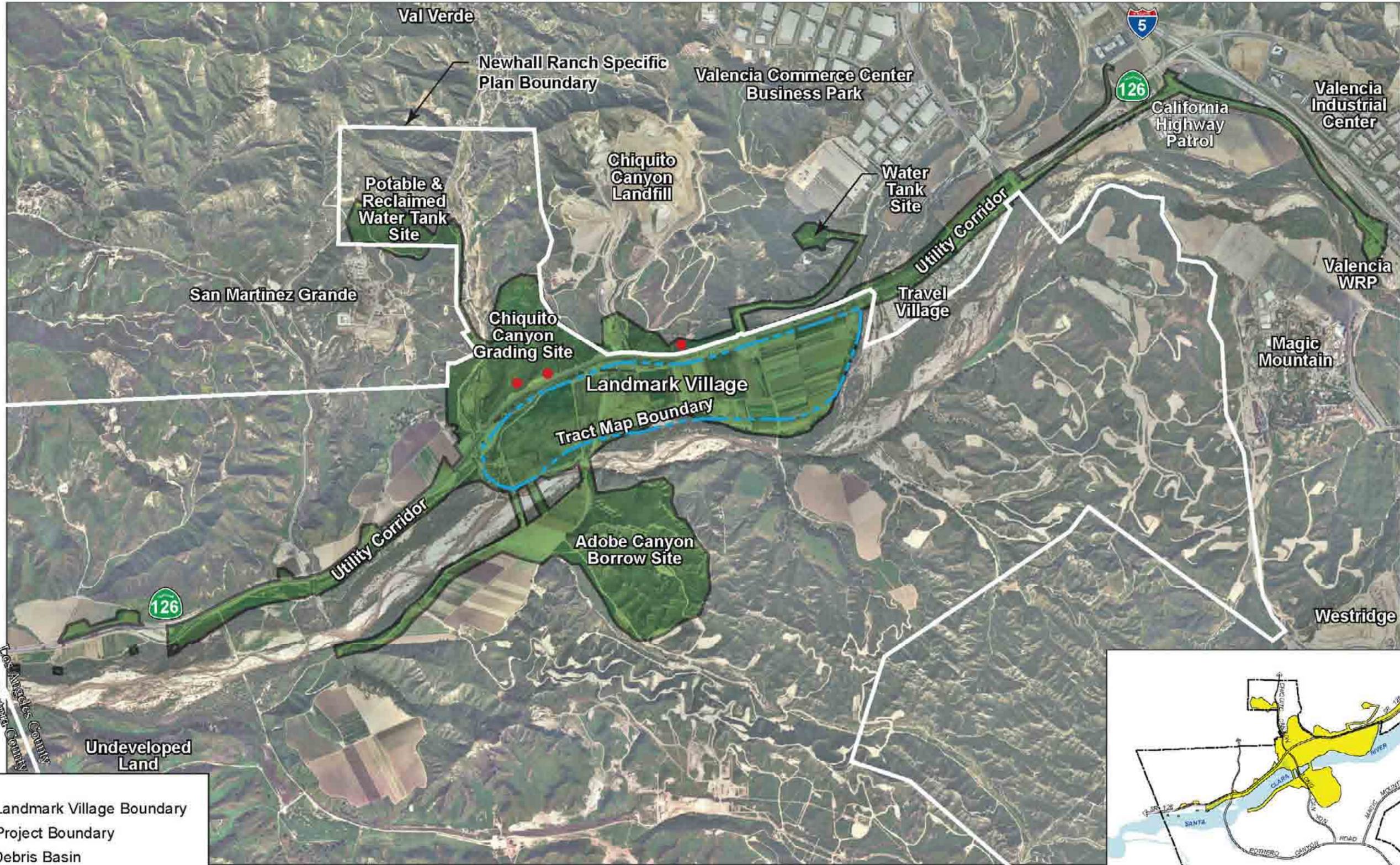
a. General Project Site Characteristics

The 292.6-acre Landmark Village tract map site is located on the Val Verde 7.5-minute U.S. Geological Survey (USGS) quadrangle map (**Figure 4.4-1, Project Vicinity Map**), and is in northwestern Los Angeles County, approximately 30 miles northwest of downtown Los Angeles. The site lies on flat terraces above the Santa Clara River. The majority of the site is currently used for agricultural purposes and is subject to agricultural disking. Topography across the site is relatively flat, with elevations ranging from 800 feet to 960 feet above mean sea level (msl). Habitat on the tract map site varies in quality from high biological value in riparian areas associated with the Santa Clara River channel, to highly disturbed habitat such as upland agricultural areas.

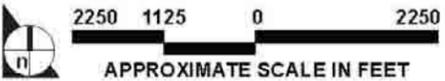
To facilitate development of the Landmark Village tract map site, several off-site, project-related components would be implemented on an additional 750.9 acres of land within the boundaries of the approved Specific Plan (see **Section 8, Proposed Project Improvements**). The Adobe Canyon borrow site south of the river is characterized by sloping hillsides and adjacent agricultural use. The borrow site is dominated by coastal sage scrub, but also includes areas of coastal sage chaparral scrub, non-native grassland, and live oak woodland. Elevations on the borrow site range from approximately 920 feet (near the river) rising to 1,260 feet above msl further south. The Chiquito Canyon grading site is characterized by non-native grassland, coastal sage scrub vegetation, and agricultural/disturbed areas. Elevations at this off-site grading site range from approximately 970 feet near State Route 126 (SR-126) rising to 1,190 feet above msl further north.

The utility corridor alignment and the water tank site in the Valencia Commerce Center represent disturbed, vacant land containing ruderal vegetation and disturbed/developed uses. Vegetation on the reclaimed water tank site within Chiquito Canyon is dominated by coastal sage scrub.

The Long Canyon Road Bridge and portions of the buried bank stabilization would be placed on land within the river corridor. Plant communities such as mule fat scrub, river wash, southern cottonwood/willow riparian forest, and seasonal aquatic habitats dominate these areas. Please refer to **heading 6.a.**, for an in-depth description of the biological character of the project site and related off-site improvements.



- Legend:**
- Landmark Village Boundary
 - Project Boundary
 - Debris Basin



SOURCE: Impact Sciences, Inc. - February 2008

FIGURE 4.4-1

Project Vicinity Map

b. Soil Characteristics

According to the Antelope Valley Area Soil Survey (Soil Conservation Service 1970), 12 soil types occur on the project site: Cortina sandy loam (0 to 2 percent), Sandy alluvial land, Metz sandy loam (0 to 2 percent), Metz sandy loam (2 to 9 percent), Mocho loam (0 to 2 percent), Hanford sandy loam (0 to 2 percent), Hanford sandy loam (2 to 9 percent), Sorrento loam (0 to 2 percent), river wash, Castaic and Saugus soils (30 to 65 percent), Yolo loam (0 to 2 percent), and Zamora loam (9 to 15 percent). These soils are discussed below in **Table 4.4-2, On-Site Soils**, and the location of the mapped soil polygons are shown in **Figure 4.4-2, Site Soils**.

**Table 4.4-2
On-Site Soils**

| Mapped Soil | Soil Characteristics (Descriptive terms are defined as standard terms in SCS soil surveys.) | Associated Project Site Plant Communities |
|--|--|---|
| Cortina Sandy Loam, 0 to 2 % (CYA) | <ul style="list-style-type: none"> • Runoff is very slow; • Hazard of erosion is slight. | Agricultural, mulefat scrub |
| Sandy Alluvial Land (Sa) | <ul style="list-style-type: none"> • Mostly on floodplains along the Santa Clara River and its larger tributaries; • Consists of unconsolidated alluvium; • Ranges from sand to loamy sand in texture; • Hazard of soil blowing is moderate. | Agricultural, mulefat scrub, southern cottonwood willow riparian forest, arrow weed scrub |
| Metz Sandy Loam, 0 to 2% (MfA) | <ul style="list-style-type: none"> • Permeability is rapid; • Runoff is very slow; • Hazard of erosion is slight. | Agricultural |
| Metz Loamy Sand, 2 to 9% (MfC) | <ul style="list-style-type: none"> • Runoff is slow; • Hazard of erosion is slight. | Coastal sage scrub, coast live oak woodland |
| Mocho Loam, 0 to 2% (MpA) | <ul style="list-style-type: none"> • Moderately permeable; • Runoff is very slow; • Hazard of erosion is none to slight. | Agricultural, southern willow scrub |
| Hanford Sandy Loam, 0 to 2% (HcA) | <ul style="list-style-type: none"> • Runoff is slow; • Hazard of erosion is slight. | Agricultural, southern cottonwood willow riparian forest, annual grassland, southern willow scrub, elderberry scrub |
| Hanford Sandy Loam, 2 to 9% (HcC) | <ul style="list-style-type: none"> • Runoff is slow to medium; • Hazard of erosion is slight to moderate. | Agricultural, coastal sage scrub, great basin scrub, scalebroom scrub, non-native grassland |
| Sorrento Loam, 0 to 2% (SsA) | <ul style="list-style-type: none"> • On alluvial fans along the Santa Clara River and its major tributaries; • Runoff is very slow; • Hazard of erosion is slight. | Agricultural, cottonwood willow riparian forest |
| River Wash (Rg) | <ul style="list-style-type: none"> • Consists of sandy material in the beds of intermittent streams; • Hazard of soil blowing is slight to moderate. | River wash |
| Castaic and Saugus Soils, 30 to 65% (CnG3) | <ul style="list-style-type: none"> • Runoff is very rapid; • Hazard of erosion is very high. | Coastal sage scrub, coastal sage chaparral scrub |

| Mapped Soil | Soil Characteristics (Descriptive terms are defined as standard terms in SCS soil surveys.) | Associated Project Site Plant Communities |
|-----------------------------|---|---|
| Zamora Loam, 9 to 15% (ZaD) | <ul style="list-style-type: none"> • Runoff is medium; • Hazard of erosion is moderate. | Coastal sage scrub |
| Yolo Loam, 0 to 2% (YoA) | <ul style="list-style-type: none"> • Permeability is moderate; • Runoff is very slow; • Hazard of erosion is none to slight. | Agricultural, cottonwood willow riparian woodland, freshwater marsh |

Artificial fill has been placed on the tract map portion of the project site as a result of road construction, oil well drilling activities, previous utility line placement, agricultural activities, and the abandoned Southern Pacific railroad line. Artificial fill also exists at various locations on the borrow site and the Chiquito Canyon grading site, ranging from minor spill fills to large dumped fill pads associated with oil well activities.

c. Drainage Patterns

The project site is located within the Santa Clara River basin and its watershed. The river borders the south side of the tract map site and flows from east to west through the Specific Plan area. The Chiquito Canyon drainage area borders the tract map site to the west, and the Castaic Creek drainage area borders the site to the east; both of these drainages are tributaries of the Santa Clara River.

5. METHODS

a. Literature/Database Review

To evaluate the natural resources found or potentially occurring on the Landmark Village project site, literature searches and database reviews were conducted by Impact Sciences. Specifically, reports reviewed included the Biota chapter of the Newhall Ranch Specific Plan Program EIR as revised (March 1999), the Newhall Ranch Biota Report (July 1996), the Newhall Ranch Revised Additional Analysis (May 2003), Section 2.2, Salt Creek Corridor, Section 2.3, Floodplain Modifications, and Section 2.6, Spineflower and Other Sensitive Plant Species, and various technical reports documenting the biological surveys conducted on the project site and greater Newhall Ranch (**Table 4.4-3**). Literature sources specific to descriptions of the common plants and animals, plant communities and special-status species occurring in the County were also reviewed (**Section 10.0, References**).

In addition, the most recent versions of the California Natural Diversity Data Base (CNDDDB) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants were reviewed for the USGS 7.5-minute quadrangle on which the project site is located (i.e., Val Verde) and the eight surrounding quadrangles (i.e., Newhall, Warm Springs Mountain, Whitaker Peak, Cobblestone Mountain, Piru, Simi Valley West, Simi Valley East and Oat Mountain) (**Appendix 4.4**).

b. Field Surveys

All surveys were conducted by biologists qualified and/or permitted to conduct such surveys. Habitat and species observations were noted on data sheets, aerial photographs, and maps. Specific information concerning any special-status species observed on site was recorded on appropriate data sheets. All surveys were conducted in accordance with published resource agency survey protocols, where they exist, or consistent with accepted survey methodologies for the particular species when published protocols did not exist. A summary of surveys dates, surveyors, and methodologies are provided in **Table 4.4-3, Biological Surveys Conducted on the Landmark Village Site and Technical Reports Incorporated into EIR**. The survey reports referenced in **Table 4.4-3**, which includes additional information on specific methods used during the course of field surveys, are included in **Appendix 4.4**.

**Table 4.4-3
Biological Surveys Conducted on the Landmark Village Site and Technical Reports Incorporated into EIR**

| TAXONOMIC GROUP/TECHNICAL REPORT | SURVEYORS | SURVEY DATES/ SEASON | METHODS |
|--|-----------------------------------|---|---|
| <i>Plant Surveys</i> | FLx | May 5–27, 2001; October 16–17, 2002; May 31–June 3, June 15–17, and September 13–16, 2004 | Focused plant surveys were conducted throughout the Newhall Ranch Specific Plan area by FLx in 2001 and 2002. The survey area included the project site (inclusive of the tract map). The 2004 surveys focused on the Santa Clara River Corridor. In addition, vegetation types and plant species associations were noted and their dominant species recorded. The surveys were floristic in nature and were conducted according to accepted scientific protocol. |
| | Dudek & Associates | May–August, 2002; May–August, 2003 April–July, 2004, and ongoing | Focused plant surveys were conducted throughout the Newhall Ranch Specific Plan area for special-status species. The survey area included portions of the Landmark Village site that provide suitable habitat for special-status plants, but did not include the portions of the tract map site currently used for agricultural activities. The surveys were floristic in nature and were conducted according to accepted scientific protocol. |
| <i>Oak Tree Surveys</i> | Impact Sciences | 2005–2006 | Biologists conducted on-site surveys and evaluations of the oak trees pursuant to the Los Angeles County Oak Tree Ordinance throughout the 2005 and 2006 year. The project site was traversed on foot through areas where oak trees occur. Oak trees were surveyed from the base of each tree. Only oak trees subject to the Los Angeles County Oak Tree Ordinance were surveyed. |
| <i>Jurisdictional Delineation of Waters and Streambeds</i> | URS | 1992–2003 | The focus of the delineation was the Santa Clara River and its tributaries within the Newhall Ranch Specific Plan area. Published ACOE/CDFG delineation protocols were utilized in the field. |
| <i>Invertebrates</i> | Compliance Biology, Guy Bruyey | April 10, 21, 25, 29, 30, May 2, 5, 6, 9, 16, 19, 20, 2004 | The Newhall Ranch Specific Plan area was surveyed for a total 32-person days. The survey area included the project site (inclusive of the tract map). The primary focus of the surveys was to determine the presence or absence of San Emigdio blue butterfly, quino checkerspot butterfly, and their associated host plants. A general butterfly inventory was also conducted. |
| <i>Herpetofauna</i> | RECON | March 15–May 30, 1999 | Surveys for arroyo toads were conducted along portions of the Santa Clara River and Castaic Creek on the Newhall Ranch Specific Plan area. The surveys were conducted pursuant to U.S. Fish and Wildlife Service (USFWS) survey protocol. |
| | Ecological Sciences | April–June, 2001 | Surveys for arroyo toad were conducted along portions of the Santa Clara River, Castaic Creek, San Francisquito Creek, Santa Clara River south fork and Bouquet Creek; the Landmark Village site is within survey “Zone 3.” The surveys were conducted pursuant to USFWS survey protocol. |
| | Compliance Biology | March 19–June 25, 2004 | Protocol surveys were conducted for arroyo toad that included the Landmark Village project site (inclusive of the tract map) reach. Surveys for southwestern pond turtle and two-striped garter snake were conducted concurrently with the arroyo toad surveys. |
| | Compliance Biology | March 9 and 23, 2004 | All areas on the project site providing suitable breeding habitat for western spadefoot were identified. These areas were surveyed during the known breeding season of western spadefoot to determine their use by the species. |

| TAXONOMIC GROUP/TECHNICAL REPORT | SURVEYORS | SURVEY DATES/ SEASON | METHODS |
|----------------------------------|-----------------|---|---|
| | ENTRIX | March 31, April 1, November 8, 10, 2004 February 1, 2005 | Reconnaissance-level field surveys were conducted focusing on arroyo toad, California red-legged frog, southwestern pond turtle, two-striped garter snake, and their associated habitat within the Santa Clara River floodplain. The purpose of the field surveys was to identify suitable habitat and to analyze potential effects of the Landmark Village project on these species and their habitat. Limited seining and dip netting was also conducted. |
| | Impact Sciences | April–June, 2001 | Protocol surveys were conducted for arroyo toad that included the Landmark Village project reach. Surveys for southwestern pond turtle and two-striped garter snake were conducted concurrently with the arroyo toad surveys. |
| Reptiles | Impact Sciences | September 2004; August 2006 | Pitfall trap lines were placed throughout the Specific Plan area in representative habitat types, including one drift fence array with pitfall traps on the Landmark Village project site. Five-gallon buckets were placed at 40-foot intervals along transects made of 2-foot-high silt fencing. On average, 10 buckets were placed along each of the 25 transects. Buckets were filled with 3–4 inches of soil, rocks, and leaves to provide cover for trapped animals. An elevated lid was placed over the opening of the buckets to provide shade. Summer season trapping was conducted from August 21–25, 2006, and Fall season trapping was conducted from 29 September – 6 October, 2004. All pitfall traps were active (open) for five consecutive days and nights, and were checked twice per day during the 2006 summer surveys, and once per day (in the morning) during the 2004 surveys. All captured animals were identified and released. Hand raking was conducted to survey for silvery legless lizards (<i>Anniella pulchra pulchra</i>). Raking was conducted in areas with sandy or loose soil within suitable habitat (scrub, chaparral, sycamore, cottonwood, and oak communities). Raking was conducted on portions of the Landmark Village project site containing suitable habitat (including the Chiquito Canyon grading site). Hand raking was conducted in the late afternoons on 3, 4, 5, 6, and 7 of October 2004. A total of 40 hours of raking surveys were conducted. |
| Birds | Daniel Guthrie | 1993–2004; ongoing | Annual bird surveys, including protocol surveys for California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher, have been conducted annually on Newhall Ranch, including the Landmark Village project site (inclusive of the tract map). |

| TAXONOMIC GROUP/TECHNICAL REPORT | SURVEYORS | SURVEY DATES/ SEASON | METHODS |
|----------------------------------|-----------------|----------------------------------|---|
| <i>Mammals</i> | Impact Sciences | March–September, 2004; July 2006 | <p>Field surveys were conducted to sample mammal species in dominant plant communities throughout the Newhall Ranch Specific Plan area during 2004 and 2006. Surveys were conducted within representative plant communities, including locations within the Landmark Village project site (inclusive of the tract map, Chiquito Canyon grading site, water tank sites, and borrow site). Several different survey methods were utilized: small mammal trapping, scent/track stations, spotlighting, cameras, active and passive ANABAT bat detection and mist netting. Within the Landmark Village project site boundaries, two small-mammal trapping grids and 14 scent/track sent stations were utilized, and one active ANABAT station and mist net trap were utilized immediately adjacent to the VTTM at the Santa Clara River crossing.</p> <p>Trapping grids were used to survey for small mammals. Trapping data was collected between July 28 and September 30, 2004, during and immediately after the breeding season when populations are generally at their annual maximum. Sherman Live Traps were used to capture and release small mammal species. A total of 34 live trapping areas (grids) were placed strategically throughout the Newhall Ranch Specific Plan Area to ensure all suitable habitat types were covered. Each grid consisted of four trap lines and each trap line consisted of 20 Sherman traps, spaced approximately 20 feet apart, in a relatively straight line (80 traps per grid). Traps were set at dusk and checked at dawn. Grids were checked each morning for five consecutive days. On average, two to three grids were set per week.</p> <p>As of August 2004, 10 remote motion-activated cameras have been in operation on the Newhall property located near Highway 126 and Castaic Creek. The cameras are located at various canyons that converge into the Santa Clara River. The cameras were checked every other week during the months of April to November, and once every three weeks between November and March.</p> <p>A total of 104-scent/track stations were distributed throughout the Newhall Ranch Specific Plan Area to identify mammal species at varying elevations and within most suitable habitats. Scent/track stations consisted of a thin layer of flour, baited with a food attractant (usually a can of tuna cat food). Approximately 4 square feet of flour was spread on the ground (which had been previously smoothed over) for track detection. The food attractant was then placed in the center of the scent/track station to bait animals. Scent/track stations were set up at dusk and checked at dawn the next morning for five consecutive days between 1 March and 30 September 2004.</p> <p>Spotlight surveys were conducted five days a week throughout the duration of the small mammal live trapping and scent/tract station surveys (summer and fall).</p> <p>The Anabat II Bat Detector was utilized to passively and actively detect bats. Its function is to convert the ultrasonic echolocation signals of bats into audible electronic signals, which can be recorded and processed to assist in identification of bat species. A mist net trap was set across the Santa Clara River to capture and identify bats while foraging. Bat detection surveys were conducted concurrent with the small mammal trapping surveys and at scent/track station locations in the summer and fall months in 2004, and again during the month of July 2006. Mist nets were set during July 2006 as well.</p> |

| TAXONOMIC GROUP/TECHNICAL REPORT | SURVEYORS | SURVEY DATES/ SEASON | METHODS |
|----------------------------------|------------------------------|----------------------|---|
| <i>Fish</i> | Impact Sciences | March–June, 2002 | Focused surveys were conducted for unarmored three-spine stickleback and other special-status fish species in the portion of the Santa Clara River from near its confluence with Castaic Creek, east (upstream) approximately 7.2 miles. (Note: the project site is adjacent to, but not within, the survey area.) |
| <i>Water Quality</i> | GeoSyntec Consultants | June 2005; ongoing | The Landmark Village Water Quality Technical Report addresses the potential impacts of the proposed project on water quality in the Santa Clara River. Potential changes in water quality are addressed for pollutants of concern based on runoff water quality modeling, literature information, and professional judgment. |
| <i>Flood Technical Report</i> | PACE | June 2005 | The Landmark Village Flood Technical Report assesses the hydrology and hydraulics of the Santa Clara River corridor as a result of proposed floodplain modifications associated with the Landmark Village project/tract map. The report analyzes impacts to aquatic and riparian habitats downstream of the project/tract map site. |

6. BIOLOGICAL RESOURCES

a. Plant Communities and Land Uses

A total of 15 plant communities and two existing land use (active agriculture and developed areas) were identified and characterized as occurring on the project site during the field investigations. Twelve of these plant communities, including non-native grassland, southern cottonwood-willow riparian forest, coast live oak woodland, coastal sage scrub, coastal sage chaparral scrub, elderberry scrub, arrow weed scrub, mulefat scrub, southern willow scrub, freshwater marsh, great basin scrub, and scalebroom scrub correspond with the *Vegetation Classification and Mapping Program, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003). The remaining three described communities, ruderal, river wash and alluvial scrub, do not fit a defined plant community classification and, therefore, are defined by their dominant plant species. The plant communities and the land uses occurring on the project site are discussed below. The plant communities and land uses have been mapped on the project site as shown on **Figure 4.4-3, On-Site Plant Communities**. A list of all plant species observed on the project site is included in **Appendix 4.4**.

(1) Agricultural

There are 387.79 acres of land on the project site actively used for agricultural purposes. The majority of the tract map site is used for agricultural purposes. At the time of the 2004 surveys to map the plant communities on the project site, the agricultural fields on the tract map site were fallow and contained non-native grasses and other ruderal vegetation. The agricultural fields are disked regularly.

(2) Non-Native Grassland

There are 120.95 acres of disturbed non-native grasslands on the project site. These grasslands occur along the northwestern portion of the tract map site, and within the Adobe Canyon borrow site and the Chiquito Canyon grading site. These areas are dominated by non-native grasses such as brome grasses (*Bromus diandrus*, *B. madritensis* ssp. *rubens*, *B. hordeaceus*), wild oats (*Avena fatua*, *A. barbata*) and rat-tail fescue (*Vulpia myuros* ssp. *myuros*), but also include herbaceous ruderal species such as red-stemmed filaree (*Erodium cicutarium*), dead nettle (*Lamium amplexicaule*), black mustard (*Brassica nigra*), milk thistle (*Silybum marianum*), and star-thistle (*Centaurea* spp.). Native grass species occurring in low densities (less than 10 percent) within the non-native grasslands include purple needlegrass (*Nasella pulchra*), valley needlegrass (*Nasella lepida*), one-sided bluegrass (*Poa segunda*), and few-flowered fescue (*Vulpia microstachys*).

**Please refer to Figure 4.4-3, On-Site Plant Communities,
in the accompanying map box.**

(3) Southern Cottonwood-Willow Riparian Forest

There are 21.60 acres of southern cottonwood-willow riparian forest on the project site. This community occurs on low terraces above the main channel of the Santa Clara River and along Castaic Creek. It consists of tall, open, broadleaved, winter-deciduous trees and is dominated by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) and willows (*Salix laevigata*, *S. exigua*, *S. lasiolepis*). Understory plants include mulefat (*Baccharis salicifolia*), arrow weed (*Pluchea sericea*), blue elderberry (*Sambucus mexicana*), mugwort (*Artemisia douglasiana*), hoary nettle (*Urtica dioica* ssp. *holosericea*), ripgut grass (*Bromus diandrus*), and alkali rye (*Leymus triticoides*). Two invasive plant species, giant reed (*Arundo donax*) and tamarix (*Tamarix ramosissima*), are common throughout this plant community.

(4) Coast Live Oak Woodland

There are 4.45 acres of coast live oak woodland on the project site. This community occurs at the base of north-facing slopes in Chiquito Canyon and Long Canyon and is dominated by coast live oak (*Quercus agrifolia*). The understory is characterized by annual grasses, spiny redberry (*Rhamnus crocea*), skunkbrush (*Rhus trilobata*), blue elderberry, holly-leaf cherry (*Prunus ilicifolia* ssp. *ilicifolia*), wild cucumber (*Marah macrocarpus* var. *macrocarpus*), eucrypta (*Eucrypta chrysanthemifolia*), clarkias (*Clarkia* spp.), and bedstraw (*Galium* spp.).

(5) Coastal Sage Scrub

There are 271.08 acres of coastal sage scrub on the project site. This community predominantly occurs on gentle to steep hill slopes within the Chiquito Canyon grading site, the water tank sites, and the borrow site, as well as in an isolated area in the northwest portion of the tract map site and within the utility corridor. Dominant native species found in this plant community include California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) and California sagebrush (*Artemisia californica*). Other common plants include various sages (*Salvia leucophylla*, *S. mellifera*, *S. apiana*), California broom (*Lotus scoparius*), California aster (*Lessingia filaginifolia* var. *filaginifolia*), California encelia (*Encelia californica*), giant wild-rye (*Leymus condensatus*), and chaparral mallow (*Malacothamnus fasciculatus*). The understory generally is sparse and contains native grasses, including foothill needlegrass (*Nassella lepida*) and native herbs such as wishbone bush (*Mirabilis californica*) and morning glory (*Calystegia macrostegia*).

Both Venturan and Riversidean coastal sage scrub communities occur on the project site, with the Venturan community occurring more commonly on northerly facing slopes and the Riversidean community being more common on southerly facing slopes. Neither of these sage scrub communities is considered of special status by CDFG as of the most recent *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003).

(6) Coastal Sage Chaparral Scrub

There are approximately 11.94 acres of coastal sage chaparral scrub on the project site. The steepest north-facing slopes in Long Canyon support a mixed association of coastal sage scrub and chaparral species. Species found in this plant community include chamise (*Adenostoma fasciculatum*), hoary leaf ceanothus (*Ceanothus crassifolius*), black sage (*Salvia mellifera*), toyon (*Heteromeles arbutifolia*), California buckwheat, California encelia (*Encelia californica*), bush monkey flower (*Mimulus aurantiacus*), mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), blue elderberry, and heart-leaved penstemon (*Keckiella cordifolia*). The understory is poorly developed due to the dense vegetation cover. This plant community corresponds to the mixed chaparral community described in the Newhall Ranch Specific Plan Program EIR.

(7) Elderberry Scrub

There are 7.74 acres of elderberry scrub on the project site. This plant community occurs in two locations in the northeast portion of the tract map site, as well as at the Commerce Center water tank site, within the utility corridor, and along the southern banks of the Santa Clara River. This community is characterized by thickets of blue elderberry, but also contains annual grasses and arrow weed. A row of large eucalyptus trees (*Eucalyptus globulus*) occurs adjacent to this plant community within the tract map site.

(8) Arrow Weed Scrub

There are six stands of arrow weed scrub on the project site totaling 7.74 acres, located to the south of SR-126 (Figure 4.4-3). This plant community occurs in two locations in the northeast portion of the tract map site, as well as within the utility corridor. This community is characterized by a dense growth of arrow weed, but also contains scattered elderberry shrubs and annual grasses.

(9) Mulefat Scrub

There are 19.58 acres of mulefat scrub on the project site. Several stands of this community occur in the western portion of the tract map site, adjacent to the river floodplain, near the water tank area, as well as within the utility corridor in locations within the floodplain of Castaic Creek and the Santa Clara River. The dominant species in this community are mulefat and arrow weed; tree tobacco (*Nicotiana glauca*), tamarisk and giant reed also are common. The understory is sparse or absent, but when present can include such species as Mexican rush (*Juncus mexicanus*), salt heliotrope (*Heliotropium curassavicum*), and annual grasses.

(10) Southern Willow Scrub

There are 7.77 acres of southern willow scrub vegetation on the project site. This plant community is present in locations within the floodplain of Castaic Creek and the Santa Clara River. This community is dominated by willow shrubs (*Salix exigua*, *S. lasiolepis*, *S. laevigata*), but also includes mulefat and blue elderberry. The understory is sparse, with species such as mugwort, shrubby phacelia (*Phacelia ramosissima*), and annual grasses present.

(11) River Wash

There are 6.72 acres of river wash within the project boundaries. The stretch of the Santa Clara River occurring within and bordering the location of the proposed bridge and haul routes, as well as areas within Chiquito Canyon Creek, are sparsely vegetated and subject to scouring by seasonal storm flows. Soils are sandy riverwash and gravel, and in places form sand bars and low terraces within the channels. Shrub species occurring in and adjacent to the channel include mulefat, sandbar willow, tamarisk, scalebroom, sandwash groundsel (*Senecio flaccidus* var. *douglasii*), big saltbush (*Atriplex lentiformis* ssp. *lentiformis*), and Great Basin sagebrush (*Artemisia tridentata*). Smaller species growing in the riverbed include white sweetclover (*Melilotus albus*), buckwheat (*Eriogonum baileyi*), cocklebur (*Xanthium strumarium*), California croton (*Croton californicus*), California evening primrose (*Oenothera californica* ssp. *californica*), Mediterranean schismus (*Schismus barbata*), foxtail chess, and annual bur-sage (*Ambrosia acanthicarpa*).

(12) Freshwater Marsh

There are three small stands of freshwater marsh on the project site within the main and secondary channels of the Santa Clara River, totaling 1.03 acres. This community typically is dominated by emergent perennial monocots, often up to 5 meters tall and forming closed canopies. Species found in the wettest parts of the channels include cattail (*Typha latifolia*, *T. domingensis*), smartweed (*Polygonum hydropiperoides*, *P. punctatum*), bulrush (*Schoenoplectus acutus* var. *occidentalis*, *S. pungens*), nutsedge (*Cyperus odoratus*), water primrose (*Ludwigia peploides* ssp. *peploides*), watercress (*Nasturtium officinale*), sticky willow-weed (*Epilobium ciliatum* ssp. *ciliatum*), and water speedwell (*Veronica anagallis-aquatica*).

(13) Alluvial Scrub

There is 0.16 acre of alluvial scrub on the project site. This plant community occurs within the Chiquito Canyon water tank site, and in small pockets at the base of Chiquito Canyon and within the utility corridor. This plant community is characterized as a mixture of shrubs that colonize alluvial materials within intermittent creeks, arroyos and the drier terraces within large washes. Plant species observed in

this plant community include big sagebrush, scalebroom (*Lepidospartum squamatum*), blue elderberry, big saltbush (*Atriplex lentiformis*), and squaw bush (*Rhus trilobata*), with some areas having high densities of big sagebrush.

(14) Great Basin Scrub

There are 3.05 acres of great basin scrub on the project site. This plant community occurs along the outer margins of the floodplains of Chiquito Creek and the Santa Clara River. On the site (and within the greater Newhall Ranch landscape), great basin scrub is characterized by almost pure stands of Great Basin sagebrush, including both *Artemisia tridentata* ssp. *tridentata*, *A.T.* ssp. *parishii*, and presumed hybrids of these subspecies (Dudek 2006).

(15) Scalebroom Scrub

There are 6.93 acres of scalebroom scrub on the project site. This plant community occurs along portions of Chiquito Creek. Similar to alluvial scrub, scalebroom scrub is characterized by homogeneous stands of scalebroom that grow in arroyos and washes.

(16) Other Developed Land Uses

There are 20.67 acres of developed lands with the project area. These areas primarily include road corridors, parking lots, and commercial areas along the eastern utility corridor and various impermeable surfaces throughout the project site.

(17) Ruderal Vegetation

A total of 136.70 areas on the project site comprise of ruderal areas. These areas mostly include portions of the site that are mostly void of vegetation located immediately adjacent to SR-126 and Chiquito Canyon Road.

b. Common Wildlife

Discussed below are representative common wildlife species (those not provided a sensitivity status by regulatory agencies) that were observed on the project site during the field surveys. A complete list of wildlife species observed or potentially occurring on the Landmark Village project site is provided in **Appendix 4.4**. Special-status wildlife species observed or potentially occurring on the project site are discussed under **heading 7, Sensitive Biological Resources**.

(1) Amphibians and Reptiles

The Santa Clara River is perennial in the vicinity of the Landmark Village site and provides habitat for amphibians. Western toad (*Bufo boreas*), Pacific chorus frog (*Pseudacris regilla*), and California chorus frog (*Pseudacris cadaverina*), all of which are common in the project area, have been observed in the portion of the river bordering the project site. Additionally, numerous tadpoles, juveniles, and adult forms of the invasive African clawed frog (*Xenopus laevis*) were observed throughout backwater areas of the Santa Clara River along and adjacent to the project site (Compliance Biology 2004). No other amphibian species have been observed or detected during the site surveys. Amphibian populations on the project site are expected to be largely restricted to the riverine and riparian habitats.

Common reptile species observed on the project site include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), red coachwhip (*Masticophis flagellum piceus*), San Diego alligator lizard (*Elgaria multicaerulea webbia*), western skink (*Eumeces skiltonianus*), San Diego gopher snake (*Pituophis catenifer annectens*), California whipsnake (*Masticophis lateralis*), common kingsnake (*Lampropeltis getulus*), Western diamondback rattlesnake (*Crotalus atrox*), and southwestern rattlesnake (*Crotalus viridis helleri*). Reptile populations on the tract map site are limited by ongoing agricultural activities. Common reptile species are expected to be more abundant within the riparian, coastal sage scrub, and chaparral habitats on the project site.

(2) Birds

The agricultural and scattered grassland areas on the tract map site provide foraging habitat for a number of raptor species, including turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and American kestrel (*Falco sparverius*). The eucalyptus trees along the northern portion of the tract map site provide nesting habitat for raptors. Other bird species observed within the agricultural and grassland portions of the project site include American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), savannah sparrow (*Passerculus sandwichensis*), Brewer's blackbird (*Euphagus cyanocephalus*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaidura macroura*), European starling (*Sturnus vulgaris*), and white-throated swift (*Aeronautes saxatalis*).

The riparian habitats on and bordering the project site provide nesting and foraging habitat for numerous bird species. Bird species observed within the riparian plant communities include bushtit (*Psaltriparus minimus*), Wilson's warbler (*Wilsonia pusilla*), orange-crowned warbler (*Vermivora celata*), black phoebe (*Sayornis nigricans*), Bewick's wren (*Thryomanes bewickii*), brown-headed cowbird (*Molothrus ater*), wrentit

(*Chamaea fasciata*), and numerous other species. In addition, cliff swallow (*Petrochelidon pyrrhonota*) has been observed nesting under the SR-126/Castaic Creek Bridge.

Bird species observed within the coastal sage scrub and chaparral habitats on the two off-site grading sites include California towhee (*Pipilo crissalis*), canyon wren (*Catherpes mexicanus*), rock wren (*Salpinctes obsoletus*), western scrub-jay (*Aphelocoma californica*), California thrasher (*Toxostoma redivivum*), and hermit thrush (*Catharus guttatus*).

(3) Mammals

A variety of common mammal species occur in the vicinity of the project site. During mammal surveys (which included small mammal trapping for rodents) conducted at the two off-site grading sites in 2004, the following common species were observed or identified by tracks, scat, or other sign: mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), desert cottontail (*Sylvilagus auduboni*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), dusky-footed woodrat (*Neotoma fuscipes*), California mouse (*Peromyscus californicus*), California pocket mouse (*Chaetodipus californicus*), California vole (*Microtus californicus*), and Pacific kangaroo rat (*Dipodomys agilis*). The medium to larger mammals observed on the site (i.e., mule deer, coyote, bobcat, desert cottontail, raccoon, fox, striped skunk) do not typically rely on a specific single habitat and are presumed to utilize all of the habitat types on the project site. However, based on the results of the 2004 mammal surveys, medium to larger mammals were found to be most abundant in coastal sage scrub, margins of agricultural fields, riparian woodland, and grassland habitats. Similarly, based on the results of the 2004 surveys, small mammals were found to utilize all the habitat types on the project site, but were most abundant in coastal sage scrub, margins of agricultural fields, coast live oak woodland, and dry wash habitats.

In addition, during 2006 bat surveys, observations or vocalizations of the following bats were confirmed in the vicinity of the Landmark Village project site: Pallid bat (*Antrozous pallidus*), Big brown bat (*Eptesicus fuscus*), western mastiff bat (*Eumops perotis*), western red bat (*Lasiurus blossevillii*), Hoary bat (*Lasiurus cinereus*), California myotis (*Myotis californicus*), long-legged bat (*Myotis volans*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), western pipistrelle (*Pipistrellus hesperus*), and Mexican free-tailed bat (*Tadarida brasiliensis*).

c. Wildlife Habitat Linkages

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human induced factors such as urbanization. The fragmentation of natural habitat creates isolated “islands” of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species. These corridors (1) allow animals to move between remaining habitats to replenish depleted populations and increase the available gene pool; (2) provide escape routes from fire, predators, and human disturbances, which reduces the risk that catastrophic events (such as fire or disease) will result in population or species extinction; and (3) serve as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges.

The following discussion of wildlife movement and habitat linkages with respect to the project site and surrounding open space areas is based on extensive field visits of these areas that have occurred during varying seasons over the past decade by numerous biologists surveying and studying the Newhall Ranch Specific Plan area, particularly in association with the Newhall Ranch Specific Plan Program EIR, the Final Additional Analysis and the related Biological Constraints Analysis (BCA) and Biota Report for the Specific Plan. It is also based on (1) a review of available aerial photography and mapping of the Specific Plan and adjacent watersheds in both Los Angeles County and Ventura County; (2) an evaluation of habitat types and distribution associated with the Landmark Village project site and surrounding areas; and (3) a review of the animal species known to use or expected to utilize these habitats. While numerous observations have been made over the past decade of a variety of wildlife species within and adjacent to the Specific Plan area (including the Landmark Village site), the focus of this discussion is from a watershed and habitat perspective as the preservation of habitats within watersheds that link remaining open space areas is critical to providing movement corridors for the variety of wildlife species that occur in the Specific Plan area, inclusive of the Landmark Village project site.

The Landmark Village project site, indeed the Newhall Ranch Specific Plan area, is part of a larger regional wildlife movement interface that exists between the Los Padres/Angeles National Forest, the Santa Clara River, and the Santa Susana Mountains. This interface spans a distance of approximately 35 miles, from approximately Saticoy on the west in Ventura County to Castaic Junction on the east in Los Angeles County. The Santa Clara River forms the central east-west corridor of this interface, extending throughout the Newhall Ranch Specific Plan area and west into Ventura County. As shown on **Figure 4.4-4, Potential Wildlife Movement Corridors**, the Newhall Ranch Specific Plan site represents an approximately 2- to 5-mile-wide portion (6 to 14 percent) of this 35-mile-wide interface.

The Santa Clara River flows from its origins in the San Gabriel Mountains to where it eventually empties into the Pacific Ocean approximately 50 miles to the west. The river is an important migration and genetic dispersion corridor for many wildlife species, including aquatic taxa, riparian obligate species (resident and migratory), and larger more mobile terrestrial animals.

Within the Newhall Ranch Specific Plan area, south of the Santa Clara River, several watersheds, including Long Canyon, Potrero Creek, and Salt Creek, are directly connected to the Santa Clara River through their own drainage systems, providing potential wildlife movement routes between the river and the Santa Susana Mountains to the south. These watersheds serve to provide habitat linkages between the High Country areas (to be preserved) within the Newhall Ranch Specific Plan to the Santa Clara River. Other watersheds, including Chiquito Canyon, San Martinez Grande, and Castaic Creek, connect the river to open space areas to the north and eventually the Angeles/Los Padres National Forests.

Chiquito Canyon borders the project site to the west and the Castaic Creek drainage borders the site to the east. Both of these drainages are tributaries of the Santa Clara River and serve as suitable habitat/movement corridors for wildlife route from the river to the north towards the Angeles and Los Padres National Forests. Given the presence of a tunnel underneath SR-126 (located at the northern end of the agricultural drainage on the project site), wildlife could cross under SR-126 and continue to move north through the northern portion of Chiquito Canyon.

As previously stated, the majority of the tract map site is actively used for agricultural purposes and is disked regularly. These activities, and the lack of native vegetation cover, limit the use of the main portion of the site as a movement corridor for most species of wildlife. While several species are expected to occasionally forage over and within these agricultural areas, most species, with respect to local and regional movement patterns, are expected to use Chiquito Canyon to the west and/or Castaic Creek to the east when moving to or from the Angeles/Los Padres National Forest areas, or when generally moving out of the river corridor into adjacent upland areas. Consequently, the Landmark Village tract map site itself is not expected to serve as a locally or regionally important wildlife movement corridor.

7. SENSITIVE BIOLOGICAL RESOURCES

The following discussion focuses on those species and plant communities considered by state and/or federal resource agencies, and by recognized conservation organizations, to be of special status, that are known to occur, or could potentially occur, on the project site. A list of all plant and wildlife species, both common and special status, observed or expected to potentially occur on the project site is found in **Appendix 4.4**.

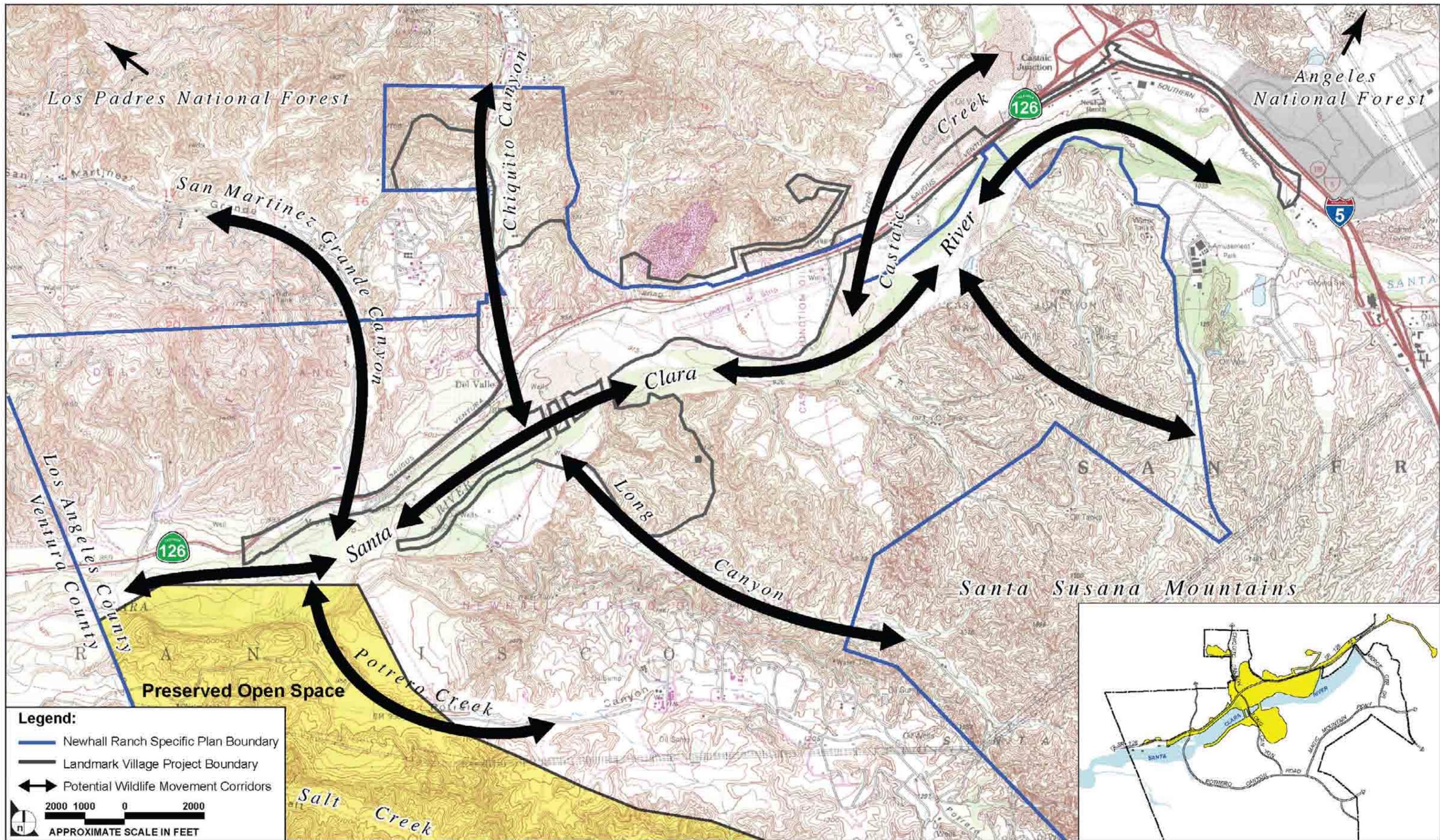


FIGURE 4.4-4

Potential Wildlife Movement Corridors

a. Special-Status Plants

Special-status plants include those species that are state or federally listed as Rare, Threatened or Endangered; federal candidates for listing; proposed for state or federal listing; or included on Lists 1, 2, 3 or 4 of the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory). Plants included on the CNPS Inventory are classified as follows: List 1A: plants presumed extinct in California; List 1B: plants Rare, Threatened, or Endangered in California and elsewhere; List 2: plants Rare, Threatened or Endangered in California, but more common elsewhere; List 3: plants about which more information is needed (a review list); and List 4: plants of limited distribution (a watch list).

Based on a review of the CNDDDB and CNPS databases and the survey reports prepared for the Newhall Ranch Specific Plan area and the project site, a total of 41 special-status plant species were identified as occurring in the region. This list formed the basis of the following analysis, wherein each of the identified species is addressed in one of the following two sections: **Heading 7.a.(1)** addresses the special-status plant species observed on or near the site during focused surveys; and **heading 7.a.(2)** addresses the special-status plant species that are known to occur in the project area, but were not observed on or adjacent to the project site during focused surveys. **Table 4.4-3**, above, details the specificity of the focused surveys.

(1) Special-Status Plant Species Observed on or Adjacent to the Project Site

Special-status plant species that were observed on the project site during focused surveys include slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Peirson's morning-glory (*Calystegia peirsonii*), and California walnut (*Juglans californica* var. *californica*). In addition, a potentially undescribed species of everlasting (*Gnaphalium* sp. *nova*) was observed. While this plant currently has no sensitivity status, it is described in this report because of its unique nature and potential to be assigned a sensitivity status in the future. San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) was observed in areas bordering the borrow site. These five species are discussed in more detail below, and their locations with respect to on the project site are shown in **Figure 4.4-5, Special-Status Plant Species Locations**.

Slender mariposa lily is a CNPS List 1B plant, but has no state or federal status. This species is typically found in chaparral, coastal sage scrub, and grasslands, often on clay and/or rocky soils. Populations of this species have been documented on the project's Adobe Canyon borrow site, the Chiquito Canyon grading site, the Valencia Commerce Center water tank site, and the reclaimed water tank sites in Chiquito Canyon. These populations contain an estimated total of 887 plants (Dudek & Associates 2004). Approximately 68,888 slender mariposa lily plants were observed in the greater Newhall Ranch Specific Plan area during the 2004 plant surveys (Dudek & Associates 2004).

Peirson's morning-glory is a CNPS List 4 plant, but has no state or federal status. This species has been documented within the project's borrow site and the Chiquito Canyon grading site (FLx 2002). While not abundant, Peirson's morning-glory occurs throughout the Newhall Ranch Specific Plan area on virtually all ridges and slopes, weakly climbing over mixed chaparral, California sagebrush, California buckwheat and in annual grasslands (Dudek & Associates 2002). Given its widespread occurrence, individual populations of this species have not been mapped.

Southern California black walnut is a CNPS List 4 plant, but has no state or federal status. The only stand of this species within the project site occurs along Chiquito Canyon, which includes a total of 10 trees.

A potentially undescribed species of **everlasting** (*Gnaphalium* sp. *nova*) was documented within the study area during the 2003 and 2004 field seasons. Two main populations of this undescribed species, totaling about 600 individuals, were documented in 2003 in the Santa Clara River and in Castaic Creek south of SR-126 (Dudek & Associates 2004). During the 2004 surveys conducted by FLx, these two occurrences were noted again with about 700 plants. In addition, a population of about 250 individuals was observed in the portion of Castaic Creek west of the Interstate 5 (I-5) Bridge and east of Commerce Center Drive. One of these populations was documented as partially occurring within the proposed utility corridor (to the east of the tract map site) while the other population was documented within the proposed haul route across the Santa Clara River. On May 27, 2005, Dudek & Associates surveyed the project site to evaluate the current condition of these populations of everlasting. No populations of everlasting were observed on or near the project footprint during these surveys. The large storm events of 2005 and associated large flows within Castaic Creek and the Santa Clara River resulted in extensive scouring and the removal of the terraces and benches on which the plants previously occurred.

On June 7, 2005, Dudek & Associates and County biologists observed five everlasting seedlings on a bench within Castaic Creek within the Valencia Commerce Center north of SR-126, and on a bench within the Creek south of SR-126, outside of the project footprint but within the project study area.

Plants of this undescribed everlasting were previously ascribed to the species *Gnaphalium leucocephalum*, which is now believed not to occur west of the Peninsular and Transverse Ranges in California. It appears that the western California specimens identified as *Gnaphalium leucocephalum* are actually this undescribed taxon. Based on a review of three herbaria (UC Riverside, Rancho Santa Ana Botanic Garden and San Diego Natural History Museum), 14 collections of this plant have been made in Ventura, Orange, Riverside, Los Angeles, and San Diego counties. The *Gnaphalium* plants on the Newhall Ranch

Please refer to Figure 4.4-5, Special-Status Plants, in the accompanying map box.

Specific Plan site differ from *Gnaphalium leucocephalum* in stature, pubescence, and phyllary characters. The western California *Gnaphalium* plants have been collected relatively few times most collections are old. Of the 14 collections, eight date from 1901 to 1987 (1901, 1918, 1922, 1928, 1931, 1959, 1985 and 1987). There are six more recent collections dating from 1994 to 2003 (1994, two from 1995, 1997 and two from 2003). Many are from somewhat vague localities, such as "San Fernando Valley" and "Pasadena," but which are in areas that have now been substantially urbanized. Modern collections, outside of the Castaic Mesas and Santa Clara River plants, have come mostly from the Santa Ana Mountains region and especially Temescal Wash, in western Riverside County with several collections from adjacent San Diego County. The western California plants are almost always associated with alluvial soils, often being found on the benches along major washes.

San Fernando Valley spineflower is a federal candidate plant species, is state listed as Endangered, and is a CNPS List 1B species. This species has been observed in five general areas within the Newhall Ranch Specific Plan area, including Airport Mesa, Grapevine Mesa, Long Canyon, Potrero Canyon, and San Martinez Grande Canyon. A total of 275 polygons were mapped during the 2004 growing season, and included an estimated 478,184 individuals. Most of the plants were found on slopes with a south-facing component in habitat that was characterized as open California sagebrush, California buckwheat, ecotonal California sagebrush/California buckwheat, and California annual grassland series, or at the edge of agricultural fields on mesas. This species has not been documented on the tract map site or other project areas where grading would occur. However, several of the populations in Long Canyon occur in proximity to the project site's disturbance boundary. Specifically, populations occur to the south of the project site at distances between 100 feet and 340 feet. Populations of this species also occur approximately 100 feet west of the Adobe Canyon borrow site's disturbance boundary, and at a location enclosed by the borrow site (but that maintains an approximately 100-foot buffer from areas that would be disturbed by grading). Additionally, a population of this species was identified in proximity to the northern project site boundary (north of SR 126, west of the access road to the Valencia Commerce Center business park) during surveys conducted in 2002; this population has not been observed during subsequent surveys conducted in 2003, 2004, and 2005.¹

(2) Special-Status Plant Species Known to Occur in the Project Area but Not Observed on or Adjacent to the Project Site

The special-status plant species identified in **Table 4.4-4, Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site**, below, are known to occur in the project area and were target species of the focused plant surveys conducted on, and in the vicinity of, the

¹ Miller, Sherri. 2005. Senior Project Manager, Dudek & Associates. August 22-Personal Communication.

project site. None of these species were observed on or adjacent to the project site. Given the thoroughness of the survey efforts (Table 4.4-3), it is unlikely that any of the species identified below are present on the project site, though the potential of some of these species to occur on the site in future seasons cannot be entirely ruled out.

**Table 4.4-4
Special-Status Plant Species Documented in the Project Area but
Not Observed on or Adjacent to the Project Site**

| Common Name Scientific Name | Sensitivity Status | | | Habitat | Growth Form (Blooming) |
|---|--------------------|-------|------|---|---------------------------|
| | Federal | State | CNPS | | |
| Marsh sandwort <i>Arenaria paludicola</i> | FE | CE | 1B | Bogs and fens, marshes and swamps (freshwater). | PH (May–August) |
| Braunton’s milk-vetch <i>Astragalus brauntonii</i> | FE | -- | 1B | Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland/recently burned or disturbed areas, and carbonate soils. | PH-b (March–July) |
| Coulter’s saltbrush <i>Atriplex coulteri</i> | -- | -- | 1B | Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland/alkaline, or clay. | PH (March–October) |
| Davidson’s saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i> | -- | -- | 1B | Coastal bluff scrub, coastal scrub/alkaline. | AH (April–October) |
| Malibu baccharis <i>Baccharis malibuensis</i> | -- | -- | 1B | Chaparral, cismontane woodland, coastal scrub. | Sh-d (August) |
| Nevin’s barberry <i>Berberis nevinii</i> | FE | CE | 1B | Chaparral, coastal scrub, cismontane woodland, riparian scrub. | Sh-e (March–April) |
| Thread-leaved brodiaea <i>Brodiaea filifolia</i> | -- | -- | 1B | Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools/often associated with clay soils. | PH-b (March–June) |
| Plummer’s mariposa lily <i>Calochortus plummerae</i> | -- | -- | 1B | Chaparral, cismontane woodland, coastal scrub, lower coniferous forests, grasslands, valley granitic soils. | PH-b (May–July) |
| Late-flowering mariposa lily <i>Calochortus weedii</i> var. <i>vestus</i> | -- | -- | 1B | Chaparral, cismontane woodland, riparian woodland/often associated with serpentinite soils. | PH-b (May–July) |
| Southern tarplant <i>Centromadia parryi</i> ssp. <i>Australis</i> | -- | -- | 1B | Chaparral, coastal scrub, sandstone rocky outcrops. | Sh-d (July–November) |
| Island mountain-mahogany <i>Cercocarpus betuloides</i> var. <i>blancheae</i> | -- | -- | -- | Closed-cone coniferous forest, chaparral. | Sh-e (February–May) |

| Common Name Scientific Name | Sensitivity Status | | | Habitat | Growth Form (Blooming) |
|---|--------------------|-------|------|---|----------------------------|
| | Federal | State | CNPS | | |
| Santa Susana tarplant <i>Deinandra minthornii</i> | -- | CR | 1B | Chaparral, coastal scrub, sandstone rocky outcrops. | Sh-d (July–November) |
| Slender-horned spineflower <i>Dodecahema leptoceras</i> | FE | CE | 1B | Chaparral, coastal scrub (alluvial fan), cismontane woodland, sandy soils. | AH (April–June) |
| Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>Blochmaniae</i> | -- | -- | 1B | Coastal bluff scrub, coastal scrub, rocky, often associated with clay or serpentinite soils. | PH (April–June) |
| Marcescent dudleya <i>Dudleya cymosa</i> ssp. <i>marcescens</i> | FT | CR | 1B | Chaparral, volcanic. | PH (April–June) |
| Santa Monica Mountains dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> | FT | -- | 1B | Chaparral, coastal scrub/volcanic. | PH (March–June) |
| Many-stemmed dudleya <i>Dudleya multicaulis</i> | -- | -- | 1B | Chaparral, coastal scrub, grasslands, often associated with clay soils. | PH (May–July) |
| Conejo dudleya <i>Dudleya parva</i> | FT | -- | 1B | Chaparral, coastal scrub, often associated with clay soils. | PH (May–July) |
| Palmer's grappling hook <i>Harpagonella palmeri</i> var. <i>palmeri</i> | -- | -- | 4 | Chaparral, coastal scrub, valley and foothill grasslands. | AH (March–April) |
| Round-leaved filaree <i>Erodium macrophyllum</i> | -- | -- | 2 | Cismontane woodland, valley and foothill grassland, clay soils. | AH (March–May) |
| Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>Parishii</i> | -- | -- | 1A | Coastal salt, freshwater marshes and swamps. | PH |
| Mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i> | -- | -- | 1B | Chaparral, cismontane woodland, coastal scrub/sandy or gravelly. | PH (February–September) |
| Southwestern spiny rush <i>Juncus acutus</i> sp. <i>leopoldii</i> | -- | -- | 4 | Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt). | PH (May–June) |
| Davidson's bush mallow <i>Malacothamnus davidsonii</i> | -- | -- | 1B | Chaparral, cismontane woodland, coastal sage scrub, riparian woodland. | Sh-d (June–January) |

| Common Name Scientific Name | Sensitivity Status | | | Habitat | Growth Form (Blooming) |
|---|--------------------|-------|------|---|-----------------------------|
| | Federal | State | CNPS | | |
| California Muhly <i>Muhlenbergia californica</i> | -- | -- | 4 | Chaparral, coastal scrub, lower mountain coniferous forest, meadows and seeps/mesic, seeps and streambanks. | PH-r (July–September) |
| Mud nama <i>Nama strenocarpum</i> | -- | -- | 2 | Marshes and swamps (lake margins, river banks). | A/PH (January–July) |
| Spreading navarretia <i>Navarretia fossalis</i> | FT | -- | 1B | Chenopod scrub, marshes and swamps, playas, vernal pools. | AH (April–June) |
| Chaparral nolina <i>Nolina cismontana</i> | -- | -- | 1B | Chaparral, coastal scrub, sandstone gabbro soils. | SH-e (April–June) |
| Short-joint beavertail cactus <i>Opuntia basilaris</i> var. <i>brachyclada</i> | -- | -- | 1B | Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. | Sh-ss (April–June) |
| California Orcutt grass <i>Orcuttia californica</i> | FE | CE | 1B | Vernal pools. | AH (April–August) |
| Lyon's pentachaeta <i>Pentachaeta lyonii</i> | FE | CE | 1B | Chaparral, coastal scrub, valley and foothill grassland, volcanic endemic soils. | AH (March–August) |
| Pringle's yampah <i>Perideridia pringlei</i> | -- | -- | 4 | Chaparral, cismontane woodland, coastal scrub, pinyon, and juniper woodlands, serpentinite, clay soils. | PH (April–August) |
| Gambel's watercress <i>Rorippa gambelii</i> | FE | CT | 1B | Marshes and swamps (freshwater or brackish). | PH-r (April–September) |
| Rayless ragwort <i>Senecio aphanactis</i> | -- | -- | 2 | Cismontane woodland, coastal scrub/alkaline. | AH (January–April) |
| Salt spring checkerbloom <i>Sidalcea neomexicana</i> | -- | -- | 2 | Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas/alkaline, mesic. | PH (March–June) |
| Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i> | -- | -- | 2 | Meadows and seeps (seeps and streams). | PH-r (January–September) |

Key:**Status:**

Federal: FE = Federal Endangered; FC = Federal Candidate

State: CE = California Endangered; CT = California Threatened; CR = California Rare

CNPS: List 1A = Presumed extinct

List 1B = Plants Rare and Endangered in California and elsewhere

List 2 = Plants Rare, Threatened, or Endangered in California, but more common elsewhere

List 4 = Plants of limited distribution (watch list)

Growth Form:

AH = Annual Herb

Sh = Shrub

r = rhizomatous

PH = Perennial Herb

b = bulb

e = evergreen

d = deciduous

ss = stem succulent

b. Oaks

The County of Los Angeles Oak Tree Ordinance (CLATO), Sections 22.56.2050–22.56.2260, protects oak trees that are at least 8 inches in diameter, as well as trees that have two trunks totaling at least 12 inches in diameter, as measured 4.5 feet above natural ground. A heritage oak, as defined by CLATO, is any species in the genus *Quercus* that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or less in diameter having a significant historical or cultural importance to the community. CLATO requires that all potential impacts to oak trees regulated by this ordinance be preceded by an application to the County that includes a detailed oak tree report (see **Appendix 4.4**). Mitigation for impacts to oak trees is usually required as a condition of an Oak Tree Permit issued by the County.

In addition, Senate Bill (SB) 1334, Kuehl, Oak Woodlands Conservations, contains the following three elements: (a) counties must determine whether a project may result in the conversion of oak woodlands; (b) if so, the county must determine if the conversion will have a significant impact on the environment; and (c) if there is a conversion, and it has a significant impact, the county must impose one or more of the following mitigation measures:

- (1) Conserve oak woodlands, through the use of conservation easements.
- (2) Plant an appropriate number of trees, including maintaining plantings and replacing dead trees.
 - (a) Maintain planted oak trees for seven years.
 - (b) The planting of oak trees shall not fulfill more than one-half of the mitigation requirement for the project.
- (3) Contribute funds to the Oak Woodlands Conservation fund.
- (4) Other mitigation measures developed by the County.

During 2005 and 2006, an oak tree survey was conducted of the on-site oak trees occurring within 200 feet of the proposed grading limits (see **Appendix 4.4**). The survey identified 200 oaks potentially regulated by CLATO. The vast majority of the oaks on the site are coast live oak, but valley oaks (*Quercus lobata*), scrub oaks (*Q. berberidifolia*), and one MacDonald oak (*Q. x macdonaldii*) [a hybrid of a valley oak and a scrub oak] also occur. Of the 200 oaks, 11 are heritage oaks as defined by CLATO.

c. Sensitive Plant Communities

CDFG Wildlife and Habitat Data Analysis Branch has developed a *List of California Terrestrial Natural Communities*. The most recent version of this list, dated September 2003, is derived from the CNDDDB and

is intended to supersede all other lists developed from the CNDDDB. It is based on the detailed classification put forth in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). It is also structured to be compatible with previous CNDDDB lists (e.g., Holland 1986).

The primary purpose of the CNDDDB classification is to assist in the characterization and rarity of various vegetation types. For the purposes of this Biota Report, plant communities denoted on the list as “high priority for inventory in CNDDDB” in the September 2003 version, or that are otherwise regulated by local, state, and/or federal resource agencies, are considered of “special status.”

Of the 14 plant communities occurring on the Landmark Village project site, southern willow scrub, southern cottonwood willow riparian forest, valley freshwater marsh, and scalebroom scrub are currently considered of “high priority” and, therefore, are considered of special-status. Additionally, given the occurrence of *Artemisia tridentata* ssp. *parishii* (which is considered sensitive by the County of Los Angeles) within the great basin scrub community, for the purposes of this report, great basin scrub is also considered to be a sensitive plant community. Please see **heading 6.0**, above, for a more detailed discussion of these plant communities and their distribution on the project site.

It should be noted that the Newhall Ranch Specific Plan Program EIR, Section 4.6, Biota, and the associated Biota Report, dated July 1996, identified coastal sage scrub and elderberry scrub as sensitive plant communities. The identification of these two plant communities as sensitive was based on a previous CDFG list of terrestrial natural communities, which has been superseded by the current *List of California Terrestrial Natural Communities*, dated September 2003. Consequently, these two communities, as labeled, are not considered of special status in this Biota Report.

d. Special-Status Wildlife

Special-status wildlife species include those that are state or federally listed as Threatened or Endangered, proposed for listing as Threatened or Endangered, designated as state or federal candidates for listing, considered state Species of Special Concern, or that are considered a state Fully Protected Animal.

Based on a review of the CNDDDB and the biological documentation prepared for the project site and the greater Newhall Ranch Specific Plan area, a total of 49 special-status wildlife species were identified that are known to occur in the project region. This list formed the basis of the following analysis, wherein each of the identified species is addressed under one of the following three headings: **Heading 7.d.(1)** addresses the special-status wildlife species that were observed on or adjacent to the project site during the course of various field surveys; **heading 7.d.(2)** addresses the special-status wildlife species that have not been observed on the site, but based on the presence of suitable habitat and known occurrences in the

area, have the potential to occur on the site as a resident, over-wintering or nesting species, and **heading 7.d.(3)** addresses the special-status wildlife species known to occur in the project area, but for which the project site does not provide suitable habitat to support the species as a resident or nesting species.

(1) **Special-Status Wildlife Species Observed on the Project Site**

During the course of various field surveys conducted for the proposed project or greater Newhall Ranch Specific Plan area (Table 4.4-3), 22 special-status wildlife species were observed on or bordering the project site. Table 4.4-5, **Special-Status Wildlife Species Observed on or Adjacent to the Project Site**, identifies these species and provides the species' listing status, habitat requirements, and observation information.

**Table 4.4-5
Special-Status Wildlife Species Observed on or Adjacent to the Project Site**

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | On-Site Status |
|---|---------|---------|--|---|
| | Federal | State | | |
| FISH | | | | |
| Santa Ana sucker <i>Catostomus santaanae</i> | -- | CSC | Occupies small- to medium-sized perennial streams with water ranging in depth from a few centimeters to a meter or more. | This species is known to occur in the Santa Clara River and has been observed during focused fish surveys (CNDDDB, Impact Sciences 2002); and it is expected to occur in the portion of the river bordering the project site. Population in the Santa Clara River system is not considered to be of Threatened status because it is introduced to the area. |
| Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i> | FE | CE, CFP | Slow-moving and backwater areas. | This species is known to occur in the Santa Clara River and has been observed in the portion of the river bordering the Landmark Village tract map site (ENTRIX 2005). |
| Arroyo chub <i>Gila orcutti</i> | -- | CSC | Slow-moving or backwater sections of warm to cool streams with mud or sand substrates. | This species is known to occur in the Santa Clara River and has been observed in the portion of the river bordering the Landmark Village tract map site (ENTRIX 2005). |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | On-Site Status |
|--|---------|-------|--|--|
| | Federal | State | | |
| REPTILES | | | | |
| Silvery legless lizard <i>Anniella pulchra pulchra</i> | -- | CSC | Stabilized dunes, beaches, dry washes, chaparral, pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils. | This species has been observed on the project site in Chiquito Canyon (Impact Sciences 2006); suitable habitat occurs on the project site in association with coastal sage scrub, chaparral, oak woodland, and riverbank habitats. |
| Coastal western whiptail <i>Aspidoscelis tigris stejnegeri</i> | -- | *** | Open areas in semiarid grasslands, scrublands, and woodlands. | Observed on the project site; suitable habitat occurs on site in association with grassland, scrub, oak woodland and riverbank habitats. |
| Southwestern pond turtle <i>Clemmys marmorata pallida</i> | -- | CSC | Streams, ponds, freshwater marshes, and lakes with growth of aquatic vegetation. | This species was observed in the reach of the Santa Clara River bordering the project site (Compliance Biology 2004); river and riparian habitats on and bordering the project site provide suitable habitat. |
| Coast (San Diego) horned lizard <i>Phrynosoma coronatum blainvillei</i> | -- | CSC | Coastal sage scrub and chaparral in arid and semi-arid climates. Prefers friable, rocky, or shallow sandy soils. | This species was observed in the vicinity of the project site during 2006 reptile surveys (Impact Sciences 2006). This species has also been observed periodically during other biological surveys. |
| Two-striped garter snake <i>Thamnophis hammondi</i> | -- | CSC | Perennial and intermittent streams with rocky or sandy beds and artificially-created aquatic habitats (manmade lakes and stock ponds); requires dense riparian vegetation. | This species was observed in the reach of the Santa Clara River bordering the project site (Compliance Biology 2004); river and riparian habitats on and bordering the project site provide suitable habitat. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | On-Site Status |
|---|---------|-------|---|---|
| | Federal | State | | |
| BIRDS | | | | |
| Cooper's hawk (nesting) <i>Accipiter cooperi</i> | -- | CSC | Dense stands of live oak, riparian woodlands, or other woodland habitats near water. | This species was observed adjacent to the Santa Clara River on the Landmark Village site (Guthrie 2004); the site provides foraging and nesting habitat for the species. |
| Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i> | -- | CSC | Coastal sage scrub. | This species was observed to be a fairly common resident at the off-site grading sites (Guthrie 2004); suitable nesting and foraging habitat is present at these locations. |
| Lawrence's goldfinch <i>Carduelis lawrencei</i> | BCC | -- | Valley foothill hardwood, valley foothill hardwood-conifer; and, in S. CA., desert riparian, palm oasis, pinyon-juniper and lower montane habitats. | Observed within the riparian habitats on the site during bird surveys (Guthrie 2004); suitable nesting and foraging habitat present on site. |
| Northern harrier (nesting) <i>Circus cyaneus</i> | -- | CSC | Coastal salt marsh, freshwater marsh, grasslands, and agricultural fields. | This species has been observed foraging on the site (Impact Sciences 2004); suitable foraging and nesting habitat is present on site. |
| Yellow warbler (nesting) <i>Dendroica petechia brewsteri</i> | -- | CSC | Riparian thickets and woodlands. | Observed on several occasions during the 2004 bird surveys; likely nests in the riparian areas on the site (Guthrie 2004). |
| White-tailed kite (nesting) <i>Elanus leucurus</i> | -- | CFP | Inhabits herbaceous and open stages of most habitats, common in cismontane in California. Nests are placed near top of dense oak, willow or other tree stand; usually 6–20 meters (20–100 feet) above ground. Nest located near open foraging area. | Species was observed on the site adjacent to the Santa Clara River during surveys in 2004 (Guthrie 2004); the site provides foraging and nesting habitat for the species. |
| California horned lark <i>Eremophila alpestris actia</i> | -- | CSC | Grasslands, disturbed areas, agriculture fields, and beach areas. | This species has been observed foraging on the site (Impact Sciences 2004); suitable nesting and foraging habitat is present on site. |
| Yellow-breasted chat (nesting) <i>Icteria virens</i> | -- | CSC | Riparian thickets and riparian woodlands with a dense understory. | Observed on several occasions during the 2004 bird surveys; likely nests in the riparian areas on the site (Guthrie 2004). |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | On-Site Status |
|--|---------|-------|---|--|
| | Federal | State | | |
| BIRDS (continued) | | | | |
| Loggerhead shrike <i>Lanius leudovicianus</i> | -- | CSC | (Nesting) broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning. | This species has been observed on and adjacent to the project site during reptile and oak tree surveys conducted by Impact Sciences during 2006. |
| Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i> | FE | CE | Riparian vegetation with extensive willows below 2,000 feet. | No individuals have been observed nesting within the project boundaries, but individuals have been observed nesting a short distance to the west and east of the project site (Guthrie 2004); suitable nesting habitat is present on the project site. |
| MAMMALS | | | | |
| Pallid bat <i>Antrozous pallidus</i> | -- | CSC | Arid habitats, including grasslands, shrublands, woodlands and forests; prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging. | This species was detected on the project site during active Anabat surveys (Impact Sciences 2006); on-site habitats and structures (e.g., oak woodlands, buildings, SR-126 bridge) provide suitable roosting habitat. |
| Western mastiff bat <i>Eumops perotis</i> | -- | CSC | Low elevations in the coastal basins of southern California, often in rugged, rocky areas where suitable crevices are available for day-roosts. | This species was detected in the vicinity of the project site during active Anabat surveys (Impact Sciences 2006). Marginal roosting habitat occurs in rocky outcrops in the vicinity; however, no roosting habitat occurs on the Landmark Village project site. |
| Mountain lion <i>Felis concolor browni</i> | -- | CFP | Occurs in a variety of scrub and forested habitats. | This species is known to occur in the project region and has been observed on the Newhall Ranch Specific Plan area during 2004 mammal surveys (outside of the project site); project site could host transient individuals and be part of a local lion's home range. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | On-Site Status |
|--|---------|-------|---|---|
| | Federal | State | | |
| MAMMALS (continued) | | | | |
| San Diego desert woodrat <i>Neotoma lepida intermedia</i> | -- | CSC | Chaparral, coastal sage scrub, and the understory of tree thickets. | A species of desert woodrat was observed on both off-site grading locations during 2004 surveys (Impact Sciences 2004); it is assumed that the animals observed were the San Diego (<i>intermedia</i>) subspecies. |
| Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i> | -- | CSC | Rocky, desert areas with relatively high cliffs. Generally use crevices in rocks as day-roosts, although they sometimes are found in man-made structures. | This species was detected in the vicinity of the project site during active Anabat surveys (Impact Sciences 2006). Marginal roosting habitat occurs in rocky outcrops and abandoned structures in the vicinity; however, no roosting habitat occurs on the Landmark Village project site. |

STATUS KEY:
Federal:

FE: Federally Endangered

BCC: Bird of Conservation Concern

State:

CE: California Endangered

CFP: California Fully Protected

CSC: California Species of Special Concern

(2) Special-Status Wildlife Species with Potential to Occur on the Project Site

Eighteen special-status wildlife species have been identified as having the potential to occur on the site, based on the presence of suitable habitat and known occurrences in the area, despite the fact that they have not been observed during general or focused surveys of the project site. **Table 4.4-6, Special-Status Wildlife Species with Potential to Occur on the Project Site**, identifies these species and provides the species' listing status, habitat requirements, and an explanation of why the species has the potential to occur on the site as a resident, over-wintering, nesting, or roosting species.

**Table 4.4-6
Special-Status Wildlife Species with Potential to Occur on the Project Site**

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|---|---------|-------|---|--|
| | Federal | State | | |
| AMPHIBIANS | | | | |
| Arroyo toad <i>Bufo californicus</i> | FE | CSC | Restricted to rivers with shallow, gravely pools adjacent to sandy terraces that have a nearly complete closure of cottonwoods, oaks or willows, and almost no herbaceous cover. Requires shallow pools with minimal current, little to no emergent vegetation and a sand or pea gravel substrate overlain with flocculent silt for egg deposition. | Based on the result of protocol surveys, it appears that arroyo toads are not breeding or otherwise utilizing habitats on or adjacent to the project site (Compliance Biology 2004). Given the presence of some suitable habitat and that this species has been recorded in low numbers upstream of the project site, the species could occupy habitats on or bordering the site. |
| Western spadefoot <i>Spea hammondi</i> | -- | CSC | Open areas in lowland grasslands, chaparral and pine-oak woodlands; requires temporary rain pools that last approximately three weeks and lack exotic predators. | Seasonal backwater areas associated with the drainages on and bordering the site, as well as depressions within existing dirt roads, provide breeding habitat; no spadefoot were observed in these areas during appropriately timed surveys (Compliance Biology 2004). Given documented occurrences of the species in the project area, and the presence of some suitable breeding habitat, the species could occupy habitats on the site. |
| REPTILES | | | | |
| Rosy boa <i>Charina trivirgata</i> | -- | *** | Inhabits desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes and mountains. | Suitable habitat occurs on site in association with scrub, chaparral, oak woodland and riverbank habitats; species is known to occur in the project region. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|---|-----------|-------|--|--|
| | Federal | State | | |
| REPTILES (continued) | | | | |
| San Bernardino ringneck snake <i>Diadophis punctatus modestus</i> | -- | *** | Inhabits open, relatively rocky areas, often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation. | Suitable habitat occurs on site in association with oak woodland and riverbank habitats; species is known to occur in the project region. |
| Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i> | -- | CSC | Inhabits brushy or shrubby vegetation. Requires small mammal burrows for refuge and overwintering sites. | Suitable habitat occurs on site in association with shrub habitats. |
| BIRDS | | | | |
| Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i> | BCC | CSC | Freshwater marshes and riparian scrub. | Suitable nesting and foraging habitat present on and bordering the project site. |
| Bell's sage sparrow (nesting) <i>Amphispiza belli belli</i> | BCC | CSC | Saltbush scrub and chaparral. | Suitable nesting and foraging habitat present. |
| Long-eared owl (nesting) <i>Asio otus</i> | -- | CSC | Dense, riparian and live oak thickets near meadow edges, nearby woodland and forest habitats. Also found in dense conifer stands at higher elevations. | Suitable nesting and foraging habitat is present on the project site. |
| Western burrowing owl (burrow sites) <i>Athene cunicularia</i> | BCC | CSC | Grasslands and open scrub, particularly with ground squirrel burrows. | Site provides suitable foraging and nesting habitat for the species; California ground squirrels occur on the project site. |
| BIRDS (continued) | | | | |
| Western yellow-billed cuckoo (nesting) <i>Coccyzus americanus occidentalis</i> | FC BCC | CE | Nests along the broad, lower flood-bottoms of larger river systems. Also nests in riparian forests and riparian jungles of willow often mixed with cottonwoods, with an understory of blackberry, nettles, or wild grape. | Suitable nesting and foraging habitat occurs on the project site; this species has not been observed nesting on or near the project site during focused surveys; however, one individual (thought to be a migrant) was observed during surveys in the project area (Guthrie 1997). |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|---|---------|-------|---|---|
| | Federal | State | | |
| Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i> | FE | -- | Riparian woodlands that contain water and low willow thickets. | Suitable nesting and foraging habitat is present on the project site. A single willow flycatcher was observed foraging along the Santa Clara River east of the project site; however given the timing of this observation (May 31), and lacking any subsequent evidence of nesting, the observed willow flycatcher cannot be positively identified as belonging to the southwestern form of willow flycatcher (Guthrie 2004). |
| Merlin (wintering) <i>Falco columbarius</i> | -- | CSC | Coastlines, wetlands, woodlands, agricultural fields, and grasslands. | Although this species does not nest in California, the CDFG considers wintering birds to be of Special Concern; could occur on the site as a winter migrant. |
| Summer tanager (nesting) <i>Piranga rubra</i> | -- | CSC | Cottonwood-willow riparian habitats, especially older, dense stands along rivers and streams. | Suitable nesting and foraging habitat present on and bordering the site. |
| Coastal California gnatcatcher <i>Polioptila californica californica</i> | FT | CSC | Various sage scrub communities, often dominated by California sage and buckwheat; generally avoids nesting in areas with a slope of greater than 40 percent. | Suitable nesting and foraging habitat is present within the borrow site, the Chiquito Canyon grading site, and the Chiquito Canyon water tank site; however, the species was not observed in these areas during USFWS protocol surveys conducted between March 15 and June 30, 2004 (Guthrie 2004). |
| MAMMALS | | | | |
| Pale big-eared bat <i>Corynorhinus townsendii pallescens</i> | -- | CSC | Utilizes a variety of communities, including conifer and oak woodlands and forests, arid grasslands and deserts and high-elevation forests and meadows. Requires appropriate roosting, maternity and hibernacula sites free from human disturbance. | This species was not detected on the project site during Anabat surveys (Impact Sciences 2004). Suitable roosting and foraging habitat is present on the site. |
| San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i> | -- | CSC | Chaparral and coastal sage scrub. | Suitable habitat is present within on-site coastal sage scrub and chaparral habitats. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|--|---------|-------|--|--|
| | Federal | State | | |
| MAMMALS (continued) | | | | |
| Fringed myotis <i>Myotis thysanodes</i> | -- | *** | Occurs in a wide variety of habitats. Optimal habitats include pinyon-juniper, valley foothill hardwood and hardwood-conifer woodlands. Forms maternity colonies and roosts in caves, mines, buildings and crevices. | This species was not detected on the project site during Anabat surveys (Impact Sciences 2004); suitable roosting and foraging habitat is present on site. |
| Yuma myotis <i>Myotis yumanensis</i> | -- | *** | Inhabits open forests and woodlands with sources of water. Species is closely tied to bodies of water, over which it feeds. Forms maternity colonies in caves, mines, buildings, or crevices. | This species was not detected on the project site during Anabat surveys (Impact Sciences 2004); suitable roosting and foraging habitat is present on the site. |
| American badger <i>Taxidea taxus</i> | -- | CSC | Drier open stages of shrub, forest, and herbaceous habitats with friable soils. | Suitable habitat is present. |

STATUS KEY:

Federal

FE: Federally Endangered
 FT: Federally Threatened
 FC: Federal Candidate for listing as Threatened or Endangered
 BCC: Bird of Conservation Concern

State

CE: California Endangered
 CT: California Threatened
 CFP: California Fully Protected
 CSC: California Species of Special Concern
 **: Over wintering (or roosting) sites should be protected, butterfly probably not at risk currently
 ***: Special Animal

(3) Special-Status Wildlife Species Not Expected or Rarely Occurring on the Project Site

The project site lacks suitable habitat to support the species addressed in **Table 4.4-7, Special-Status Wildlife Species Not Expected on the Project Site**, as a resident or nesting species. **Table 4.4-7** provides the species' regulatory status, habitat requirements, and an explanation of why the species is not expected to reside or substantially utilize the project site. As these species are not expected to breed, nest, or otherwise reside on or substantially utilize the project site, they are not discussed further in this document.

**Table 4.4-7
Special-Status Wildlife Species Not Expected on the Project Site**

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|--|---------|-------|--|---|
| | Federal | State | | |
| INVERTEBRATES | | | | |
| Crustacea Order Anostraca (fairy shrimp) | | | | |
| San Diego fairy shrimp <i>Branchinecta sandiegoensis</i> | FE | -- | Vernal pools. | No indication of vernal or other seasonal pools were detected during site surveys. Soils present on site are not suitable to support vernal/seasonal pools. |
| Riverside fairy shrimp <i>Streptocephalus woottoni</i> | FE | -- | Vernal pools. | No indication of vernal or other seasonal pools were detected during site surveys. Soils present on site are not suitable to support vernal/seasonal pools. |
| INVERTEBRATES (continued) | | | | |
| Insecta Order Lepidoptera (butterflies and moths) | | | | |
| Monarch butterfly <i>Danaus plexippus</i> | -- | ** | Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. | The eucalyptus trees on the site are considered of limited roosting value as they occur within an agricultural field and are not wind protected; no winter roosts have been observed on the site. |
| San Emigdio blue butterfly <i>Plebulina emigdionis</i> | -- | -- | Often near streambeds, washes, or alkaline areas. Associated with four-wing saltbrush (<i>Atriplex canescens</i>). | No individuals or suitable habitat (i.e., stands of four-winged saltbrush) were observed during focused surveys (Compliance Biology 2004). |
| Quino checkerspot butterfly (Wright's <i>Euphydryas</i>) <i>Euphydryas editha quino</i> | FE | -- | Occurs in localized colonies, always closely associated with the larval foodplant dot-seed plantain (<i>Plantago erecta</i>) and clay or cryptobiotic soils. | The main larval food plant does not occur on the site (Compliance Biology 2004). This butterfly was last documented in Los Angeles County in 1954. |
| FISH | | | | |
| Steelhead rainbow trout (Southern California ESU) <i>Oncorhynchus mykiss</i> | FE | CSC | Clean, clear, cool well-oxygenated streams. Needs relatively deep pools in migration and gravelly substrate in which to spawn. | Known to occur in the Santa Clara River west of Piru Creek, but not documented in the portion of the creek in the project area; not observed during numerous surveys near the project site. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|--|---------|-------|---|---|
| | Federal | State | | |
| AMPHIBIANS | | | | |
| California red-legged frog <i>Rana aurora draytonii</i> | FT | CSC | Permanent water sources such as ponds, lakes, reservoirs, streams, and adjacent riparian woodlands. | Field investigations indicate that potential breeding or summer habitat is absent from the portion of the Santa Clara River bordering the project site (ENTRIX 2005); generally avoids large river channels with widely fluctuating flows because such habitat does not permit successful reproductive activity (Hays and Jennings 1989). Not documented in the Santa Clara River (CNDDDB), but documented within the Piru Creek and San Francisquito Creek tributaries to the river. |
| BIRDS | | | | |
| Sharp-shinned hawk (nesting) <i>Accipiter striatus</i> | -- | CSC | Nests in woodlands and forages over dense chaparral and scrublands. | The project area is outside the known breeding range for this species. However, because this species forages in woodlands, chaparral, scrublands, and edge/ecotone areas between habitats, it could occasionally forage at the site during winter months or during migration periods. |
| Great egret (rookery) <i>Ardea alba</i> | -- | *** | Nests colonially in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. | No rookery sites have been observed on or near the project site during annual bird surveys. |
| Great blue heron (rookery) <i>Ardea herodias</i> | -- | *** | Nests colonially in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are usually in close proximity to foraging areas such as marshes, lake margins, tide-flats, wet meadows, rivers, and streams. | No rookery sites have been observed on or near the project site during annual bird surveys. |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|--|---------|-------|--|--|
| | Federal | State | | |
| BIRDS (continued) | | | | |
| Ferruginous hawk (wintering) <i>Buteo regalis</i> | -- | CSC | Grasslands, agricultural fields, and open scrublands. | This species is an infrequent seasonal migrant. Although suitable foraging habitat is present on the site, this species does not nest in California and is only expected to rarely forage or otherwise occur on the site. |
| Prairie falcon (nesting) <i>Falco mexicanus</i> | -- | CSC | Grasslands, savannas, rangeland, agricultural fields, and desert scrub; requires sheltered cliff faces for shelter and nesting. | No suitable nesting habitat on or bordering the project site. Could forage on the site. |
| Least bittern (nesting) <i>Ixobrychus exilis</i> | -- | CSC | Dense emergent wetlands of cattails and tules are essential. | Cattails and tules occur within the Santa Clara River corridor; however, these areas do not contain the dense emergent vegetation characteristic of nesting habitat of this species. |
| Bank swallow (nesting) <i>Riparia riparia</i> | -- | CT | Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, or the ocean to dig a nesting hole. | No suitable nesting habitat on or bordering the project site and no recent records of nesting in the area. |
| MAMMALS | | | | |
| Spotted bat <i>Euderma maculata</i> | -- | CSC | Occupies a wide variety of habitats from arid deserts and grasslands, to mixed conifer forests. Feeds over water and along washes. Needs rock crevices in cliffs or caves for roosting. | This species was not detected on the project site during ANABAT surveys conducted in 2004 (Impact Sciences 2004). No suitable roosting habitat on or bordering the project site. Only rare to occasional spotted bat sightings have been recorded in the project vicinity. |
| Southern grasshopper mouse <i>Onychomys torridus ramona</i> | -- | CSC | Inhabits desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. | This species has not been detected on the project site or the greater Newhall Ranch Specific Plan area during small mammal trapping (Impact Sciences 2004). |

| Common Name <i>Scientific Name</i> | Status | | Habitat Requirements | Habitat Suitability |
|--|---------|-------|---|---|
| | Federal | State | | |
| MAMMALS (continued) | | | | |
| Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i> | -- | CSC | Inhabits lower elevation grasslands and coastal sage communities on open ground with fine sandy soils. May not dig extensive burrows, hiding instead under weeds and dead leaves. | This species has not been detected on the project site or the greater Newhall Ranch Specific Plan area during small mammal trapping (Impact Sciences 2004). |

STATUS KEY:
Federal

FE: Federally Endangered

FT: Federally Threatened

State

CT: California Threatened

CFP: California Fully Protected

CSC: California Species of Special Concern

***: Special Animal

e. Jurisdictional Wetlands and Drainages
(1) ACOE Jurisdiction

Wetlands, creeks, streams, and permanent and intermittent drainages are generally subject to the jurisdiction of the ACOE under Section 404 of the federal Clean Water Act. The ACOE has jurisdiction up to the "ordinary high water mark" of rivers, creeks, and streams that are considered "waters of the U.S." as defined by the Clean Water Act. If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. Wetlands are defined by ACOE as "those areas that are inundated or saturated by surface or groundwater at a frequency or duration to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (ACOE 1987) The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The ACOE definition of wetlands requires that all three wetland identification parameters be met.

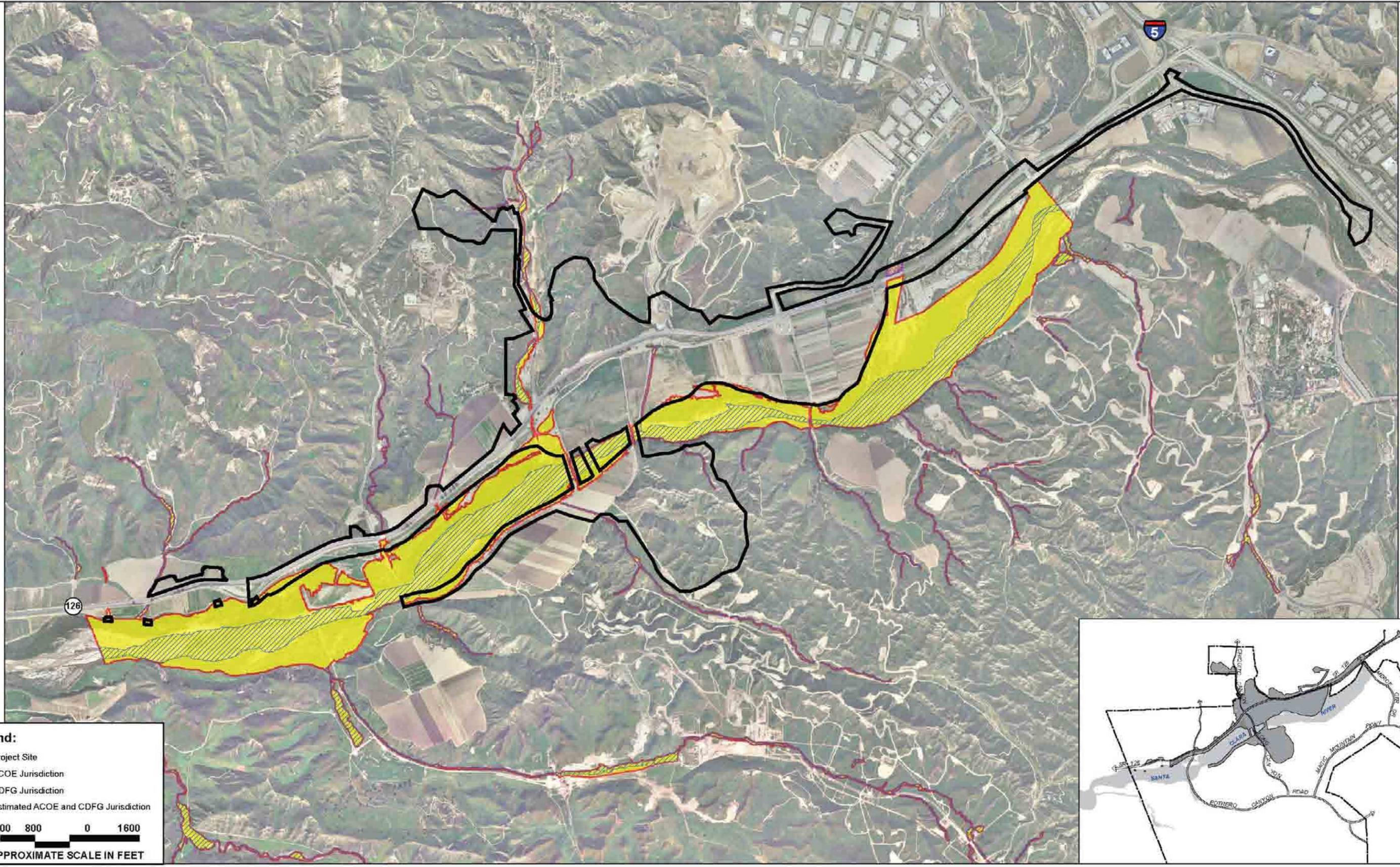
A jurisdictional delineation of "waters of the U.S." associated with the Santa Clara River and Chiquito Canyon Creek within the Specific Plan was conducted by URS in 2003 in accordance with ACOE protocol. Castaic Creek was not delineated at that time. The jurisdictional delineation conducted by URS (December 2003) for the proposed project (as well as the greater Newhall Ranch Specific Plan Area) was verified by the ACOE on February 4, 2004. The ACOE verification was based on the review of the Jurisdictional Delineation Permit Package submitted by URS (December 15, 2003), as well as on site visits conducted on August 7, August 19, and October 27, 2003.

The tract map site is generally bordered to the east by Castaic Creek, to the south by the Santa Clara River and to the west by Chiquito Canyon Creek. As shown in **Figure 4.4-6, Jurisdictional Resources**, portions of Chiquito Canyon Creek and the Santa Clara River are within the project boundaries, as well as portions of Castaic Creek. All of these drainages are considered to be under ACOE jurisdiction. Additionally, the following features on the project site also have been determined to be under the jurisdiction of the ACOE: portions of five seasonal tributaries of the Santa Clara River, one seasonal tributary of Chiquito Canyon Creek, and two agricultural drains. The delineation conducted by URS indicated a total of 13.06 acres on the project site under the jurisdiction of the ACOE. Based on an interpretation of an aerial photograph of the site, it is estimated that approximately 1.70 acres of Castaic Creek occur within the project boundary, just north and south of SR-126, which are also expected to be under ACOE jurisdiction, for a total estimated 14.76 acres of ACOE jurisdiction within the project site boundary. There are no other features within the proposed project boundaries that are under the jurisdiction of the ACOE.

(2) CDFG Jurisdiction

Streambeds within the project site are subject to regulation by CDFG under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that flows at least periodically or intermittently through a bed or channel having banks, and that supports fish or other aquatic life.

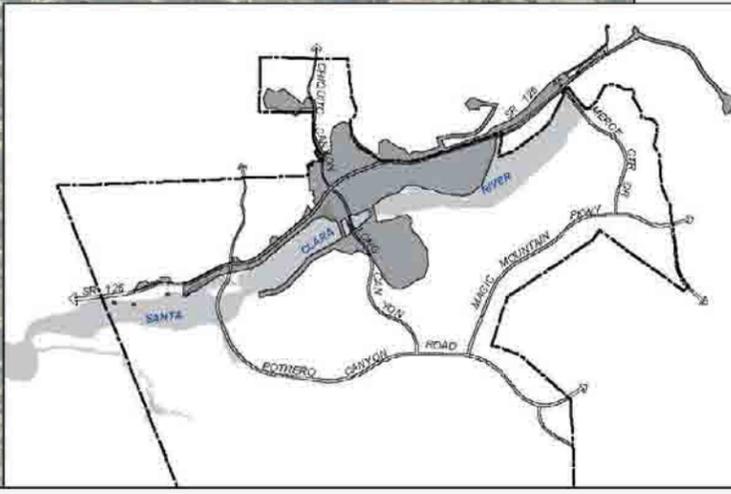
The jurisdictional delineation conducted by URS (2003) identified areas under the jurisdiction of CDFG (see **Figure 4.4-6**). CDFG jurisdiction on the project site encompasses the 14.76 acres under ACOE jurisdiction (as discussed above), but because CDFG also takes jurisdiction over all riparian vegetation associated with creeks, drainages, and rivers, there is an additional 46.66 acres of riparian vegetation on the site under CDFG jurisdiction. The Landmark Village applicant is seeking approval of a Master Section 404 Permit from the ACOE and a Master 1600 Agreement from the CDFG for the Newhall Ranch Specific Plan area, including the Landmark Village project site. The draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is expected to be released for public review late 2006.



Legend:

- Project Site
- ACOE Jurisdiction
- CDFG Jurisdiction
- Estimated ACOE and CDFG Jurisdiction

1600 800 0 1600
 APPROXIMATE SCALE IN FEET



SOURCE: URS Corporation – November 2005, AirPhoto USA – 2003, Impact Sciences, Inc – June 2006

FIGURE 4.4-6

Jurisdictional Resources

8. PROPOSED PROJECT IMPROVEMENTS

The Landmark Village project is proposed on 292.6 acres of land, located within the boundaries of the approved Specific Plan. At buildout, the project would contain 1,444 dwelling units, 1,033,000 square feet of commercial space, a 9-acre elementary school, 16-acre Community Park, four private recreation facilities, open space, and trails. To facilitate development of this site, several off-site, project-related components would be implemented on an additional 750.9 acres of land within the boundaries of the approved Specific Plan. These project-related components include:

- (1) a cut and fill grading operation, which includes fill imported to the Landmark Village tract map site from a 215-acre borrow site located south of the Santa Clara River, and grading to accommodate roadway improvements to SR-126 adjacent to the tract map site and debris basins for stormwater flows collected by the project's storm drainage system on approximately 120 acres of land, located off site directly north of SR-126 within Chiquito Canyon (and related haul routes);
- (2) a 222.5-acre underground utility corridor proposed along the south side of SR-126 extending from the Valencia Water Reclamation Plant (WRP) (Plant 32) on the east to the proposed Newhall Ranch WRP on the west, which would serve to extend municipal services to the tract map site;
- (3) water tank sites, one within the Valencia Commerce Center and another within the proposed Chiquito Canyon grading site, to convey potable and recycled water to the tract map site; and
- (4) construction of the Long Canyon Road Bridge, approximately 17,400 linear feet of associated bank stabilization, 6,600 linear feet of turf-reinforcement mats (TRMs), and storm drainage improvements.

For the purposes of this report, the "tract map site" refers only to the proposed location of the Landmark Village development site itself, and the "project site" includes the tract map site, plus the borrow site, the Chiquito Canyon grading site, the utility corridor, the potable and reclaimed water tank sites, the Long Canyon Road Bridge, bank stabilization, drainage improvements and related haul routes (on a total of 1,034.8 acres).

9. PROJECT IMPACTS

a. Significance Threshold Criteria

Significant impacts of proposed development on the project site were determined from criteria included in the *CEQA Guidelines*. As stated in Appendix G of the 2005 *CEQA Guidelines*, a project could have a significant impact on the environment if it would result in any of the following:

- 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 CDFG or USFWS;

- Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS;
- Substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Section 15065(a) of the *CEQA Guidelines* also states that a project may have a significant effect on the environment when the project has the potential for the following:

- Substantially degrade the quality of the environment;
- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community; or
- Substantially reduce the number or restrict the range of an Endangered, Rare, or Threatened species.

These significance criteria are applied to the proposed project.

b. Impact Analysis

Direct impacts represent the physical alteration (i.e., typically habitat degradation or loss) of biological resources that occur on site as a result of project implementation. Indirect impacts are those reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources. The significance of this alteration, with respect to CEQA, is determined by evaluating the impact in terms of each of the significance threshold criteria defined above. For example, if habitat alteration results in a direct or indirect loss or causes an otherwise substantial adverse effect on a species identified as a “candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS,” impacts would be considered significant, assuming appropriate compensatory or other mitigation is not available or feasible. Similarly, if the alteration of habitat results in a substantial adverse effect on a natural community identified as sensitive “...in local or regional plans, policies, or regulations, or by the CDFG or USFWS,” then this alteration would be considered a significant impact.

An evaluation of whether an impact on biological resources would be “substantial,” and, therefore, a significant impact, must consider both the resource itself and the significance threshold criteria being evaluated. For example, because most plant and animal species are dependent on native habitats to satisfy various life cycle requirements, a habitat-based approach that addresses the overall biological value of a particular vegetation community or habitat area is appropriate when determining whether or not alteration of that habitat will “substantially” affect special-status species, sensitive habitats, wetlands, or movement corridors. The relative biological value of a particular habitat area—its functions and values—can be determined by such factors as disturbance history, biological diversity, its importance to particular plant and wildlife species, its uniqueness or sensitivity status, the surrounding environment and the presence or absence of special-status resources.

However, direct impacts to specific plant and wildlife resources (e.g., active nests and individual plants and animals) are also evaluated and discussed when impacts to these resources, in and of themselves, could be considered significant or conflict with local, state, and federal statutes or regulations. The significance of direct impacts on individuals or populations of plant and animal species takes into consideration the number of individual plants or animals potentially affected, how common or uncommon the species is both on the project site and from a regional perspective and the species' sensitivity status according to resource agencies. These factors are evaluated based on the results of on-site biological surveys and studies, results of literature and database reviews, discussions with biological experts, and established and recognized ecological and biodiversity theory and assumptions.

(1) Direct Impacts

The following section focuses on the direct effects of proposed project implementation on plant communities, common and special-status plant and wildlife species, special-status habitats, and wildlife movement corridors. The calculation of impacts to plant communities includes required fire/fuel management areas. **Table 4.4-8, Plant Community/Land Use Impact Summary** (below), shows the acreage of each plant community/land use that would be developed and/or temporarily disturbed during construction of the proposed project.

**Table 4.4-8
Plant Community/Land Use Impact Summary**

| Plant Community/Land Use | Total Acres Present | Acres Developed | Acres Temporarily Disturbed² | Total Acres Developed/Disturbed |
|--|----------------------------|------------------------|--|--|
| Agricultural | 387.79 | 341.01 | 27.21 | 368.22 |
| Non-Native Grassland | 120.95 | 115.89 | 2.68 | 118.57 |
| Southern Cottonwood Willow Riparian Forest | 21.60 | 8.78 | 9.04 | 17.82 |
| Coast Live Oak Woodland | 4.45 | 4.30 | 0.06 | 4.37 |
| Coastal Sage Scrub | 271.08 | 267.27 | 0.01 | 267.27 |
| Coastal Sage Chaparral Scrub (Mixed Chaparral) | 11.94 | 11.94 | 0.00 | 11.94 |
| Elderberry Scrub | 7.74 | 7.74 | 0.00 | 7.74 |
| Arrow Weed Scrub | 6.61 | 5.73 | 0.26 | 5.99 |
| Mulefat Scrub | 19.58 | 10.91 | 4.86 | 15.77 |
| Southern Willow Scrub | 7.77 | 0.58 | 6.05 | 6.62 |
| River Wash | 6.72 | 1.71 | 0.85 | 2.55 |
| Freshwater Marsh | 1.03 | 0.12 | 0.75 | 0.87 |
| Alluvial Scrub | 0.16 | 0.08 | 0.08 | 0.16 |
| Great Basin Scrub | 3.05 | 2.52 | 0.53 | 3.05 |
| Scalebroom Scrub | 6.93 | 4.27 | 2.67 | 6.93 |
| Other Developed Land Uses (e.g., parking lots) | 20.67 | 20.67 | 0.00 | 119.51 |
| Ruderal | 136.70 | 135.99 | 0.71 | 136.70 |
| | | | | |
| TOTAL: | 1,034.77 | 939.15 | 55.74 | 995.25 |

² Temporarily disturbed by bank stabilization, utility corridor, and/or haul roads, but would be revegetated to native vegetation following completion of construction.

An analysis of the “significance” of project impacts on biological resources is provided below. In addition, each impact discussion, notes whether the findings of this report are consistent with the findings of the previously certified Newhall Ranch Specific Plan Program EIR. If approved, the Landmark Village project would be subject to the mitigation measures/conditions of approval contained in the RMP of the Newhall Ranch Specific Plan and the Newhall Ranch Specific Plan Program EIR. These mitigation measures and conditions were adopted by the County Board of Supervisors in association with approval of the Newhall Ranch Specific Plan and WRP (May 27, 2003). These adopted measures, as well as additional mitigation measures proposed to further mitigate significant impacts, are included in **Section 10.0**.

(a) Common Plant Communities

Agricultural

The proposed project would result in the permanent conversion of 341.01 acres of land currently used for agricultural purposes. An additional 27.21 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated to native vegetation following completion of construction. Given the disturbed condition of the area, and that this habitat type is not considered a natural community by resource agencies, the loss of agricultural land would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

Non-Native Grassland

The proposed project would result in the permanent conversion of 115.89 acres of non-native grasslands. An additional 2.68 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Small pockets of grassland occur in scattered locations along the eastern portion of the project site and within both off-site grading locations. Given the altered condition of these areas, and that this habitat type is not considered a sensitive natural community by resource agencies, the loss of non-native grassland would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

Mulefat Scrub

The proposed project would result in the permanent conversion of 10.91 acres of mulefat scrub. An additional 4.86 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Although mulefat scrub is not recognized as a

sensitive natural community by resource agencies, given the extent of this plant community on the project site, and the ongoing loss of riparian plant communities in the project area, without mitigation, the loss of mulefat scrub is considered to be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26 and Mitigation Measure 4.6-63 would, however, reduce impacts to this plant community to a less than significant level. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

Coastal Sage Scrub

The proposed project would result in the permanent conversion of 267.27 acres of coastal sage scrub. An additional 0.01 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated as coastal sage scrub following completion of construction. Given the acreage that would be removed in the off-site grading sites and the reclaimed water tank site, and because of the habitat value this plant community provides for common and special-status plant and wildlife species, the loss of coastal sage scrub vegetation would be a significant impact. There are no feasible mitigation measures that could replace the net loss of 267.27 acres of coastal sage scrub habitat. Therefore, impacts to coastal sage scrub habitat are considered to be significant and unavoidable. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that identified the loss of coastal sage scrub habitat as a significant unavoidable impact.

Elderberry Scrub

The proposed project would result in the permanent conversion of 7.74 acres of elderberry scrub. Given that this plant community is relatively uncommon in the project area, without mitigation, the loss of elderberry scrub would be a significant impact. Implementation of Specific Plan Mitigation Measure 4.6-43, as well as proposed **Mitigation Measure LV 4.4-16**, would reduce impacts to elderberry scrub to a less than significant level. This finding is consistent with the finding of the Newhall Ranch Specific Plan that impacts to elderberry scrub could be mitigated to below a level of significance.

Arrow Weed Scrub

The proposed project would result in the permanent conversion of 5.73 acres of arrow weed scrub from the project site. An additional 0.26 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Given the disturbance nature of this plant community, and that this habitat type is not considered a sensitive natural community by resource agencies, the loss of arrow weed scrub would be a less than significant impact. The Newhall

Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

Alluvial Scrub

The proposed project would result in the loss of 0.08 acre of alluvial scrub and the temporary disturbance to an additional 0.08 acre. Given the small area to be impacted and that this habitat type is not considered a sensitive natural community by resource agencies, the loss of alluvial scrub would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

Coastal Sage Chaparral Scrub

The proposed project would result in the development of 11.94 acres of coastal sage chaparral scrub. This plant community is a dominant natural vegetation type in the region and is not considered a sensitive natural community in Southern California by resource agencies. Given the small amount of acreage that would be removed, and the common nature of this plant community in the project region, the loss of this plant community would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (Wildlife Habitat Loss, below).

(b) Wildlife Habitat Loss

The proposed project would result in the permanent conversion of 918.84 acres of wildlife habitat (see Common Plant Communities, above; and Sensitive Plant Communities, below). While the plant communities occurring on the site are of varying botanical value, each of these plant communities provides habitat for a variety of wildlife species. When viewed individually, the loss of an individual plant community on the project site may not represent a substantial loss of wildlife habitat. However, as most wildlife species depend on a variety of habitat types to meet various ecological and life history requirements (i.e., food, shelter, nesting), when considered together, the loss of habitat provided by the on-site plant communities is substantial. Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, the loss wildlife habitat would adversely affect numerous common and special-status wildlife species, including silvery legless lizard, rosy boa, San Bernardino ringneck snake, coast horned lizard, coast patch-nosed snake, northern harrier, white-tailed kite, southern rufous-crowned sparrow, Bell's sage sparrow, western burrowing owl, San Diego desert woodrat, pallid bat, mountain lion, and San Diego black-tailed jackrabbit (see **Special-Status Wildlife Species**, for a discussion of direct impacts to these species). Therefore, the permanent net loss of 918.84 acres of currently undeveloped land represents a substantial loss of habitat for wildlife species and is considered a significant impact. There

are no feasible mitigation measures that could replace the net loss of 918.84 acres of wildlife habitat. Therefore, this net loss of wildlife habitat is considered to be significant and unavoidable. This finding is consistent with the findings of the Newhall Ranch Program EIR that identified the loss of wildlife habitat as a significant unavoidable impact.

(c) Setbacks from Riparian Resources

The structural diversity of the various riparian and aquatic vegetation communities in the Santa Clara River drainage provides habitat for a large variety of wildlife species, including a number of special-status bird species. Each of these species has differing home range and natural history requirements. While some species are riparian-obligate (i.e., satisfy their forage, cover, and breeding habitat needs almost entirely within riparian vegetation communities), other species utilize both the riparian habitat as well as adjacent upland vegetation as part of their home range. A number of studies have found that even the more riparian-dependent wildlife species also require adjacent upland habitats to meet home range foraging and breeding requirements (Doyle 1990; Schaefer and Brown 1992), indicating that the overall viability of riparian associated wildlife species extends beyond the riparian canopy and includes adjacent upland habitat.

However, the characteristics, quality, and extent of upland habitat that is necessary to protect the diversity of wildlife species dependent upon riparian habitat may differ depending on the geographic region and the particular requirements of the riparian species to be protected. A previous study conducted along the Santa Clara River recommended preserving (and restoring, if necessary) a minimum of at least 100 feet of high quality upland habitat (upland preserve zone), as measured from the outer edge of the riparian habitat associated with the Santa Clara River (“resource line”), to adequately provide for the foraging and breeding habitat requirements of riparian-associated bird and small mammal species and to maintain species diversity within the riparian ecosystem, inclusive of the riparian/upland ecotone (Impact Sciences 1997). The conclusions of this study were partially based on focused bird surveys (1,100 man-hours over a 62-calendar-day period) and small mammal trapping (a total of 1,210 cumulative trap nights were conducted).

Arroyo toads generally burrow within sand or loam substrates with no associated canopy cover, within mule fat scrub, willow patches, or under woody debris left by fallen, dead willows, or woodrat nests (Ramirez 2003). Accordingly, should arroyo toad occur on the project site, most would be expected to burrow within the riparian habitats to be preserved. Arroyo toads have been found in agricultural fields (Griffin 1999) and could occur within portions of the site outside of the proposed riparian setback zone. However, agricultural fields may constitute sinks (areas where mortality rates are higher than reproduction rates) over the long term, due to tilling, pesticide and fertilizer applications, and heavy

equipment use (Griffin and Case 2001); consequently, the agricultural portions of the project site are not expected to be essential to the species' persistence on the site.

In regards to western spadefoot, movements by the species to and from breeding ponds are rarely extensive (California Wildlife Habitat Relationships System, 2002). Accordingly, should western spadefoot breed in seasonal pools located within the riparian zone, the proposed riparian setbacks would be expected to preserve associated burrow habitat.

As shown in **Figure 4.4-7, Riparian Habitat Buffers**, the proposed project maintains a buffer between the edge of existing riparian resources and proposed development on the tract map site ranging in width from 700 feet to 70 feet. This buffer is measured from the top of riverside bank stabilization to the lot line of proposed residential, mixed-use, and commercial development. While the buffer is generally greater than 100 feet, the buffer is reduced to 70 feet for approximately 100 feet along the western boundary of the tract map site (just to the south of SR-126). This area is located adjacent to Chiquito Canyon Creek in an area that has been disturbed by the construction and operation of SR-126, as well as by agricultural-related activities. The reduced buffer area is characterized by disturbed sandy soils and areas of sparse, disturbed riparian vegetation. This area is located to the north of the well-developed cottonwood willow riparian forest associated with the confluence of Chiquito Canyon Creek and the Santa Clara River.

Given the proximity of the reduced buffer area to SR-126, and the disturbed condition and limited extent of riparian habitat present, use of the area by special-status bird or other wildlife species is expected to be limited. A minimum of a 100-foot buffer is present along all other portions of the tract map site and in all areas bordering mature cottonwood willow riparian forest and willow scrub habitats. Furthermore, the vegetation within portions of the setback or buffer area will be restored and/or enhanced to increase habitat values when compared to existing conditions. Given the above, the proposed riparian buffers are sufficient to maintain the function and values of the adjacent riparian habitat and to protect the diversity of riparian-associated wildlife species occurring within these areas. This finding is consistent with the findings of the Newhall Ranch Final Additional Analysis (May 2003) that concluded the proposed land use plan and other design features were sufficient to maintain the function and values of the riparian habitat within the SMA/SEA 23.

(d) Loss of Common Wildlife

In addition to the loss of vegetation and wildlife habitat, construction and grading activities associated with the proposed project would directly disturb common wildlife species on the project site. In particular, species of low mobility (particularly small mammals, amphibians, and reptiles) would be eliminated during site preparation and construction. During the construction period, some wildlife species may emigrate from the project site and become vulnerable to mortality by predation, auto collisions, and unsuccessful competition for food and territory.

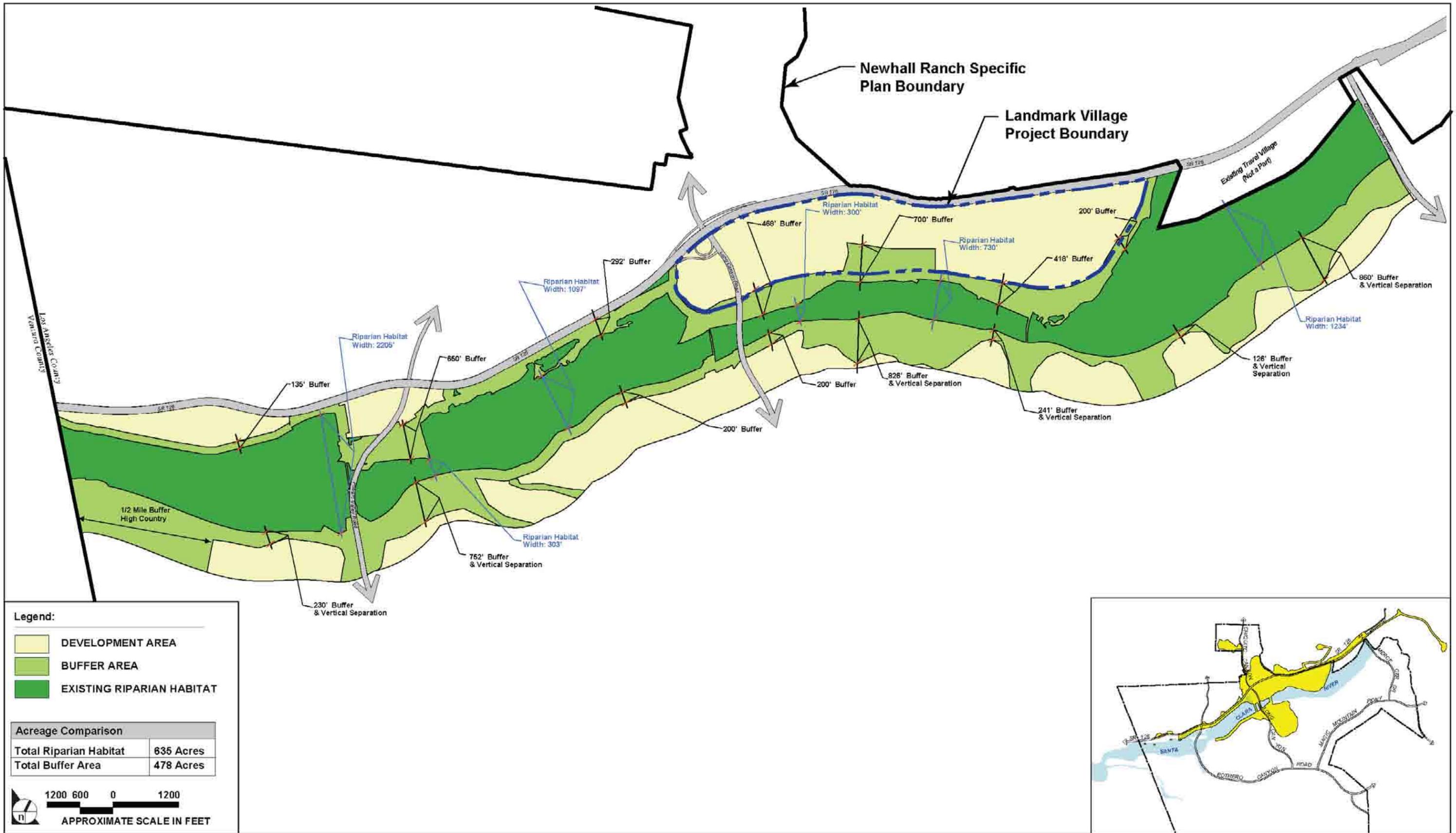
Because of the common nature of wildlife species that would be displaced or inadvertently lost by construction activities, project implementation is not expected to reduce regional populations to below self-sustaining levels or otherwise substantially affect common fish, mammal or reptile species populations on or adjacent to the project site. Consequently, impacts to common fish, mammal, and reptile species would be less than significant. The Newhall Ranch Specific Plan Program EIR did not address the construction-related loss of common wildlife as an individual topic, but did include an analysis of the overall loss of wildlife habitat (**Wildlife Habitat Loss**).

Construction activities could result in the direct loss or abandonment of active nests by adult birds of common bird species. The Migratory Bird Treaty Act and the California Fish and Game Code protect active nests of native bird species. (See 16 United States Code (USC) Sections 703–712; see also California Fish and Game Code Sections 3503, 3513.) Therefore, any construction-related loss of active nests of common bird species would conflict with these federal and state laws. Implementation of proposed **Mitigation Measure LV 4.4-8** would ensure compliance with state and federal laws protecting active bird nests.

(e) Wildlife Habitat Linkages

The proposed project design would preserve the integrity of the Santa Clara River as a wildlife movement corridor and minimize impacts on local and regional wildlife movement by maintaining nearly all of the Santa Clara River as open space. The Specific Plan RMP includes measures (Mitigation Measures 4.6-1 to 4.6-26) that will minimize impacts to riparian vegetation and replace any vegetation temporarily or permanently removed. Therefore, the riparian vegetation that will be removed as a result of project implementation will not substantially affect the long-term ability of resident and non-resident species to use the river as a movement corridor.

The Long Canyon Road Bridge is proposed to be approximately 1,000 feet in length and a maximum of 100 feet in width. It will range from approximately 11–22 feet in height above the riverbed with an estimated 11 vertical support columns or piers extending into the riverbed. The piers will be approximately 100 feet apart from one another. When confronted with bridges or overpasses along a preferred movement corridor, wildlife, particularly larger mammals, will generally move under these structures as long as there is adequate vertical and horizontal spacing, a natural (dirt, sand, vegetation) substrate on which to travel while under the structure, and an “openness” effect that allows the animal to detect light, open space and habitat at the exiting end of the structure. The proposed bridge will adequately meet these requirements and is not expected to significantly alter wildlife movement along the river corridor.



SOURCE: FORMA - August 2001

FIGURE 4.4-7

Riparian Habitat Buffer

Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, development of the proposed project would limit northern access to or disbursement from the Santa Clara River for wildlife. However, given that the tract map site is currently used for agriculture and is frequently devoid of cover, the tract map site is not expected to be a substantial part of a regional north-south wildlife movement corridor. In light of the above, impacts to regional wildlife movement would be less than significant.

(f) Special-Status Plant Species

As shown in **Table 4.4-4**, above, the following special-status plant species were eliminated from further consideration because they were not observed on or adjacent to the project site during focused plant surveys conducted on the site in 2001, 2002, and 2004: marsh sandwort, Braunton's milkvetch, Coulter's saltbrush, Davidson's saltscale, Malibu baccharis, Nevin's barberry, thread-leaved brodiaea, Plummer's mariposa lily, late-flowering mariposa lily, southern tarplant, island mountain-mahogany, Santa Susana tarplant, slender-horned spineflower, Blochman's dudleya, marcescent dudleya, Santa Monica Mountains dudleya, many-stemmed dudleya, Conejo dudleya, Palmer's grappling hook, round-leaved filaree, Los Angeles sunflower, mesa horkelia, southwestern spiny rush, Davidson's bush mallow, California muhly, mud nama, spreading navarretia, chaparral nolina, short-joint beavertail cactus, California orcutt grass, Lyon's pentachaeta, Pringle's yampah, Gambel's watercress, rayless ragwort, Salt Spring checkerbloom, and Sonoran maiden fern. Given the thoroughness of the previous survey efforts (**Table 4.4-3**), it is unlikely that any of these species are present on the site and, therefore, no significant impacts to these plant species are expected to occur.

Special-status plant species that were observed on the project site during the focused special-status plant surveys include slender mariposa lily, Peirson's morning-glory, and Southern California black walnut. In addition, as stated above, a previously undescribed species of everlasting was observed and several populations of San Fernando Valley spineflower have been documented near the disturbance boundary of the Adobe Canyon borrow site south of the Santa Clara River. Impacts to these species are discussed below.

Everlasting. While the undescribed species of everlasting that was observed on the project site currently has no sensitivity status, because of its apparent rarity, it is expected to be assigned a sensitivity status by CNPS or state/federal resource agencies in the future. The County has been informed of the presence of this undescribed species on the Newhall Ranch Specific Plan area and work is being conducted by UC Riverside herbarium staff to describe this species and to learn more about its distribution in California. This species has been collected relatively few times and most collections are old. Of the 14 collections, eight date from 1901 to 1987 and six more recent collections date from 1994 to 2003. Many are from somewhat vague localities, such as "San Fernando Valley" and "Pasadena," but are in areas that have now

been substantially urbanized. Modern collections, outside of the Newhall Ranch Specific Plan area, have come mostly from the Santa Ana Mountains region and especially Temescal Wash, in western Riverside County with several collections from adjacent San Diego County.

As previously discussed, two populations of this undescribed species were observed on the project site (within the Santa Clara River and Castaic Creek) during surveys conducted in 2003 and 2004. One of these populations was documented as partially occurring within the proposed utility corridor (to the east of the tract map site) while the other population was documented within the proposed haul route across the Santa Clara River. On May 27, 2005, Dudek & Associates surveyed the project site to evaluate the current condition of these populations of everlasting. No populations of everlasting were observed on or near the project footprint during these surveys. The large storm events of 2005 and associated large flows within Castaic Creek and the Santa Clara River resulted in extensive scouring and the removal of the terraces and benches on which the plants previously occurred. As several feet of channel bottom was washed away, the existing seedbank within these locations was also presumably washed downstream. On June 7, 2005, Dudek & Associates and County biologists observed many everlasting plants and seedlings within Castaic Creek north of SR-126 and five everlasting seedlings on a bench within Castaic Creek, south of SR-126, outside of the project footprint but within the project study area. Based on current conditions, the proposed project would not result in the loss of any extant populations of this undescribed species of everlasting. However, given the potential of seeds from plant populations upstream of the project site to be washed onto the site, there is potential that this species could occur within the project boundaries in the future. Should this occur, the loss of individual plants of this undescribed species would be considered a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-20** would reduce impacts to below a level of significance. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

Slender mariposa lily. This species has no state or federal status, but is a CNPS List 1B plant. Los Angeles County considers it a “species of special concern” as this species appears to be endemic to Los Angeles County and is threatened by urban development. The proposed project would result in the loss of an estimated 887 individual above-ground plants, representing an unknown percentage of the total population (including seed bank) present at that location (see, **Figure 4.4-6**). Given the sensitivity of this species, and that Los Angeles County considers it a “species of special concern,” impacts to this species would be significant. Dudek & Associates evaluated the suitability of potential mitigation sites for

slender mariposa lily in the High Country SMA.³ A total of 238 acres of “high suitability” areas and 189 acres of “moderate suitability” areas were identified.⁴ Given the availability of suitable mitigation sites, implementation of proposed **Mitigation Measure LV 4.4-19** (see **heading 10.0**) would reduce impacts to this species to below a level of significance. The finding that impacts to this species can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis.

Peirson’s morning-glory. This species has no state or federal status, but is a CNPS List 4 plant. This species has been documented on the project site within the off-site grading sites (FLx 2002). The proposed project would result in the loss of Peirson’s morning-glory from these locations. While never abundant, Peirson’s morning-glory occurs throughout the Newhall Ranch Specific Plan area on virtually all ridges and slopes (Dudek & Associates 2004). Because of the common occurrence of Peirson’s morning-glory within the Newhall Ranch Specific Plan area, and because CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened or Endangered pursuant to the California Endangered Species Act, are not eligible for state listing as Threatened or Endangered, and the vulnerability or susceptibility to threats on a statewide basis are considered low at this time (CNPS 2004), the loss of Peirson’s morning-glory would not be considered a substantial adverse effect on a special-status species, nor would it be expected to reduce regional populations of the species to below self-sustaining numbers. Therefore, impacts to Peirson’s morning-glory would be less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis, which found that impacts to this species would not be significant assuming implementation of Specific Plan **Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53.**

Southern California black walnut. This species has no state or federal status, but is a CNPS List 4 plant. The proposed project would result in the removal of 10 black walnut trees. CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened or Endangered pursuant to the California Endangered Species Act, are not eligible for state listing as Threatened or Endangered, and the vulnerability or susceptibility to threats on a statewide basis are considered low at this time (CDFG 2000). Implementation of RMP Measure 4.6-48 would reduce impacts to this species to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

³ February 2006. Dudek & Associates. *Newhall Ranch High Country Specific Management Area Biological Resources Technical Report.*

⁴ Potential mitigation sites were evaluated based on suitable soils, slopes, habitat types, and aspects.

San Fernando Valley Spineflower. No populations of San Fernando Valley spineflower occur within 100 feet of the project site's disturbance boundaries. Therefore, no direct impacts to this species would occur. One population occurs at a location surrounded by the Adobe Canyon borrow site (but this location maintains an approximately 100-foot buffer from areas that would be disturbed by grading). Other populations occur to the west and the south of the borrow site's disturbance boundary, but also maintain a minimum 100-foot buffer from areas that would be disturbed. Additionally, a population of this species was identified in proximity to the northern project site boundary (north of SR-126, west of the access road to the Valencia Commerce Center business park) during surveys conducted in 2002; this population has not been observed during subsequent surveys conducted in 2003, 2004, and 2005.⁵ Given the proximity of populations of San Fernando Valley spineflower to areas that would be graded or cleared of vegetation, without the incorporation of avoidance measures, these populations of San Fernando Valley spineflower could be indirectly impacted by development of the proposed project.

In 2000, the Conservation Biology Institute (CBI) prepared a report that assessed the potential indirect impacts to the San Fernando Valley spineflower from proposed adjacent development on the Ahmanson Ranch project site in Ventura County.⁶ The report focused on potential "risk factors" on edge effects to sensitive plants, particularly those factors that may adversely affect the spineflower, based on current knowledge of the spineflower's biology. The report identified seven overlapping risk factors, or edge effects, which could threaten the spineflower. These factors include (a) the presence of non-native invasive plant species; (b) the presence of non-native invasive animal species; (c) vegetation clearing for fuel management or for the creation of roads and trails; (d) trampling; (e) changes in hydrological conditions (i.e., increases in water supply due to urban irrigation and runoff); (f) chemical pollutants (e.g., herbicides, pesticides, fertilizers); and (g) increased fire frequency. The CBI report concluded that the ability of buffer areas to be effective in minimizing each of these edge effects, without additional management actions and to the exclusion of any other factors, depends upon the width of the buffer between the development edge and spineflower populations. For chemicals, buffers need to be from 30–50 feet in width to be moderately effective; for invasive plants, vegetation clearing, hydrological changes, and trampling, buffers need to be at least 80–100 feet to be moderately effective; and buffers need to be at least 200 feet in width to be moderately effective against invasive animals and increased fire frequency.

However, the CBI report also concluded that a number of other biological and geomorphological factors can influence the overall ability of buffers at varying widths to minimize indirect impacts of development on spineflower populations. These factors included the size and juxtaposition of spineflower preserves to

⁵ Miller, Sherri. 2005. Senior Project Manager, Dudek & Associates. August 22-Personal Communication.

⁶ The CBI report entitled, *Review of Potential Edge Effects on the San Fernando Valley Spineflower*, January 19, 2000, is included in Appendix 2.6 of the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003).

developed areas; the degree of fragmentation or continuity between preserved spineflower populations and to open space areas; the percentage of non-native vegetation to native vegetation in proposed buffer and preserve areas; soil chemistry and type; and the disturbance history of proposed buffers and preserves. In addition, the implementation of various short- and long-term management actions to buffers and along the development edge can result in buffers being more effective at shorter widths, up to a point, than if the actions were not taken. Depending on the degree to which other factors discussed above are present, and to the extent management actions are implemented, buffers can be effective at smaller widths than those discussed above.

Without the implementation of various measures included in the Newhall Ranch Specific Plan EIR and Revised Additional Analysis (May 2003), proposed grading and vegetation clearing could result in indirect impacts to preserved populations of San Fernando Valley spineflower, despite the inclusion of a 100-foot buffer between these activities and the nearest spineflower populations. However, Specific Plan Mitigation Measures 4.6-65 through 4.6-80 contain management actions that would increase the effectiveness of the buffers to be maintained around San Fernando Valley spineflower populations. Specifically, consistent with the requirements of the mitigation program (Mitigation Measure 4.6-68), the spineflower buffer areas would be fenced with temporary orange fencing during grading/construction to ensure that no disturbance will take place within this buffer. A biological monitor (subject to approval by the CDFG and County) would monitor all grading activities and fence installation adjacent to the preserved spineflower populations (Mitigation Measure 4.6-74). As also required by the mitigation program (Mitigation Measure 4.6-67), the buffer area would be revegetated with a native seed mix to prevent erosion and reduce the potential of invasive plants from encroaching on the preserved spineflower populations. Consistent with requirements of the mitigation program (Mitigation Measure 4.6-69), the grading concept considered the effects of indirect impacts associated with altered hydrologic patterns. Manufactured slopes surrounding the plant population have been contoured to direct storm water runoff away from the plants. Since the population occurs at a high point, the amount and location of runoff received by these populations would not be affected in the post-developed condition.

Other potential indirect impacts resulting from trampling, domestic animals, incidental application of chemicals, increased fire frequency, and supplemental irrigation would be mitigated by the design of the proposed project. Specifically, the proposed project has been designed such that areas that would be occupied by humans (e.g., residences, business, schools, parks) are separated from preserved populations of San Fernando Valley spineflower by the Santa Clara River or SR-126. Additionally, no landscaping or other uses involving the application of chemicals or irrigation are proposed near preserved spineflower populations. Therefore, it is not expected that the occupancy or operation of the proposed project would result in trampling, a substantial increase in domestic animals (i.e., cats and dogs), incidental application

of chemicals, increased fire frequency, or supplemental irrigation (and a corresponding increase in Argentine ants) to preserved spineflower populations. For the reasons discussed above, the proposed project design, grading concept, buffers, and implementation of the measures contained in the Newhall Ranch Specific Plan EIR and Revised Additional Analysis, would reduce the potential for indirect impacts to San Fernando Valley spineflower to below a level of significance.

(g) Protected Oaks and Live Oak Woodland

As previously discussed (**heading 7.b., Oaks**), CLATO protects any species in the genus *Quercus* that are at least 8 inches in diameter or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade. A heritage oak, as defined by CLATO, is an oak tree that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or greater in diameter having a significant historical or cultural importance to the community. CLATO requires that all potential impacts to oak trees be preceded by an application to the County that includes a detailed oak tree report, and that loss of or damage to protected oaks be mitigated at a minimum 2:1 ratio.

Based on the proposed grading plan, 4.45 acres of coast live oak woodland would be removed (this includes approximately 10 “heritage” and 57 non-heritage oak trees). An additional 14 oak trees (including 3 “heritage” and 11 non-heritage oak trees) may be subjected to damage (i.e., impacts from operations occurring within the protective zone of the tree). A total of 120 oak trees occur within 200 feet from the grading limit line and will not be removed or subjected to damage. Given the biological value of oak woodlands, and that the project would result in the removal or impacts to oak trees, the loss of oak woodland and protected oak trees is considered a significant impact under CLATO.

SB 1334, Kuehl, Oak Woodlands Conservation, contains provisions for counties to mitigate impacts to oak woodlands that would be significant under CEQA. SB 1334 provides for several mitigation alternatives that can be implemented to mitigate significant impacts on oak woodlands. Among the options are the preservation of oak woodlands under conservation easements and the planting of oak trees to replace those lost or damaged.

As discussed in the Newhall Ranch Specific Plan, 2.6 Resource Management Plan, an estimated 13,660 oak trees would be protected within the SMA, particularly in the High Country SMA. Further, as discussed in the *Newhall Ranch High Country Specific Management Area Biological Resources Technical Report* (Dudek & Associates 2006), the High Country SMA includes 19 acres of live oak woodland that are considered suitable for incorporation of additional oak trees as mitigation. In addition to existing oak communities, 198 acres within the High Country SMA are identified as suitable for planting oak trees (see

Appendix 4.4). Oak trees would be planted in these areas such that a minimum of 4.45 acres of oak woodland would be enhanced and/or created. The actual number of trees to be planted would be that number necessary to comply with the requirements stipulated in the Oak Tree Permit issued by the County pursuant to CLATO and CEQA acres of oak woodland. Compliance with the permit conditions and implementation of Specific Plan Mitigation Measure 4.6-48, as well as proposed **Mitigation Measures LV 4.4-14** and **LV 4.4-21** (see **heading 10**), would reduce impacts to oak trees and oak woodland habitat to below a level of significance. These measures would also meet the requirements of SB 1334. The finding that impacts to protected oaks can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

(h) Special-Status Wildlife Species

Certain special-status wildlife species that are known to occur in the project region were eliminated from further consideration in this report because the project site lacks suitable habitat to support the species as a resident or nesting species or because surveys have established that the species is not expected to frequently utilize the project site. As a result, the species are not expected to reside on or substantially utilize the project site. As shown in **Table 4.4-7**, these species include the following: San Diego fairy shrimp, Riverside fairy shrimp, monarch butterfly, San Emigdio blue butterfly, quino checkerspot butterfly, steelhead rainbow trout, California red-legged frog, sharp-shinned hawk, great egret, great blue heron, ferruginous hawk, prairie falcon, least bittern, bank swallow, spotted bat, southern grasshopper mouse, and Los Angeles pocket mouse.

As noted in **Table 4.4-5**, above, the following special-status wildlife species were observed during the course of various field surveys conducted on or adjacent to the project site: Santa Ana sucker, unarmored threespine stickleback, arroyo chub, silvery legless lizard, coast horned lizard, coastal western whiptail, southwestern pond turtle, two-striped garter snake, Cooper's hawk, Southern California rufous-crowned sparrow, Lawrence's goldfinch, northern harrier, yellow warbler, white-tailed kite, California horned lark, yellow-breasted chat, least Bell's vireo, loggerhead shrike, pallid bat, pocketed free-tailed bat, western mastiff bat, San Diego desert woodrat, and mountain lion.

Based on the presence of suitable habitat on the project site, it is reasonable to conclude that certain special-status species could potentially occur on site prior to grading or construction activities associated with project implementation. (**Table 4.4-6**, above.) Although not observed during surveys, the following species could occur on the project site: arroyo toad, western spadefoot toad, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, tricolored blackbird, Bell's sage sparrow, long-eared owl, western burrowing owl, western yellow-billed cuckoo, southwestern willow flycatcher, merlin, summer

tanager, California gnatcatcher, pale big-eared bat, San Diego black-tailed jackrabbit, fringed myotis, yuma myotis, and American badger.

Impacts to Species Observed On or Adjacent to the Landmark Village Site

Santa Ana sucker (*Catostomus santaanae*), *California Species of Special Concern*. This species has been documented in the Santa Clara River and could occur in the portion of the river on and adjacent to the project site. Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could result in the loss of individual fish. The location of the proposed bank stabilization features is set back beyond the existing riparian corridor in a majority of the project site and would not interface with the active stream channel. Depending on the number and extent of this species that may be disturbed or removed during construction of the bridge, the loss of Santa Ana sucker would be a significant impact. Implementation of Specific Plan Mitigation Measure 4.6-57, as well as proposed **Mitigation Measures LV 4.4-1, LV 4.4-2, LV 4.4-3, LV 4.4-4, LV 4.4-5, and LV 4.4-6**, would reduce direct impacts to the Santa Ana sucker to below a level of significance. The finding that impacts to Santa Ana sucker can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), *Federal Endangered, California Endangered, California Fully Protected*. This species has been documented in the Santa Clara River adjacent to the project site. Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could result in the loss of individual fish. The location of the proposed bank stabilization features is set back beyond the existing riparian corridor in a majority of the project site and would not interface with the active stream channel. The loss of unarmored threespine stickleback would be a significant impact. Implementation of Newhall Ranch Specific Plan Program EIR Mitigation Measures 4.6-54, 4.6-57, 4.6-59, as well as the proposed **Mitigation Measures LV 4.4-1, LV 4.4-2, LV 4.4-3, LV 4.4-4, LV 4.4-5 and LV 4.4-6** would reduce direct impacts to the unarmored threespine stickleback to below a level of significance. The finding that impacts to unarmored threespine stickleback can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Arroyo chub (*Gila orcutti*), *California Species of Special Concern*. This species has been documented in the Santa Clara River and could occur in the portion of the river adjacent to the project site. Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could result in the loss of individual fish. The location of the proposed bank stabilization features is set back beyond the existing riparian corridor in a majority of the project site and would not interface with the active stream channel. Depending on the number and extent of this species that may be

disturbed or removed during construction of the bridge, the loss of arroyo chub would be a significant impact. Implementation of Specific Plan Mitigation Measure 4.6-57, as well as the proposed **Mitigation Measures LV 4.4-1, LV 4.4-2, LV 4.4-3, LV 4.4 -4, LV 4.4-5, and LV 4.4-6**, would reduce direct impacts to the arroyo chub to a less than significant level. The finding that impacts to arroyo chub can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Silvery legless lizard (*Anniella pulchra pulchra*), *California Species of Special Concern*. This species has been observed on the project site in Chiquito Canyon. Because suitable habitat occurs on site in the form of riparian and riverbank habitats within the SMA/SEA 23, as well as scrub, chaparral and oak woodland habitats outside of the SMA/SEA boundary, silvery legless lizard could occur throughout those portions of the site with these habitat types. Construction-related activities could result in the direct loss of individual lizards. Implementation of proposed **Mitigation Measure LV 4.4-9 and LV 4.4-18** would reduce the magnitude of direct impacts. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coast horned lizard (*Phrynosoma coronatum*), *California Species of Special Concern*. Suitable habitat occurs in association with scrub, chaparral, and riverbank habitats on site; coast horned lizard is presumed to occur in areas supporting these habitat types. Construction-related activities could result in the direct loss of individual horned lizards. Implementation of proposed **Mitigation Measures LV 4.4-9 and LV 4.4-18** would reduce the magnitude of impacts to the coast horned lizard. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coastal western whiptail (*Aspidoscelis tigris stehnegeri*), *California Special Animal*. This species has been observed on the project site. Suitable on-site habitat occurs in association with grassland, scrub, riverbank, and oak woodland habitats. Construction-related activities could result in the direct loss of individual whiptails. Implementation of proposed **Mitigation Measures LV 4.4-9 and LV 4.4-18** would reduce the magnitude of impacts to the coastal western whiptail. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still

be considered significant. This finding is consistent with the findings of the Newhall Ranch Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered a significant unavoidable impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Southwestern pond turtle (*Clemmys marmorata pallida*), *California Species of Special Concern*. This species has been observed in the portion of the Santa Clara River bordering the project site (Compliance Biology 2004), and could also occur within the riparian habitats on and bordering the project site. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in the loss of individual pond turtles. Depending on the number and extent of this species that may be disturbed or removed, the loss of pond turtles would be a potentially significant impact. Implementation of proposed **Mitigation Measures LV 4.4-1, LV 4.-2, LV 4.4-3, LV 4.4-4, LV 4.4-5, LV 4.4-9, and LV 4.4-18** would reduce impacts to the southwestern pond turtle to a less than significant level. The finding that impacts to southwestern pond turtle can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Two-striped garter snake (*Thamnophis hammondi*), *California Species of Special Concern*. This species has been documented in the Santa Clara River and could occur within the portion of the river bordering the project site and within the riparian habitats on and bordering the project site. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in the loss of individual two-striped garter snakes. Depending on the number and extent of this species that may be disturbed or removed, the loss of two-striped garter snake would be a potentially significant impact. Implementation of proposed **Mitigation Measures LV 4.4-1, LV 4.4-2, LV 4.4-3, LV 4.4-4, LV 4.4-5, LV 4.4-9, and LV 4.4-18** would reduce impacts to the two-striped garter snake to a less than significant level. The finding that impacts to two-striped garter snake can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Cooper's hawk (*Accipiter cooperii*), *California Species of Special Concern*. The riparian woodland on and bordering the project site provides suitable nesting habitat for this species. Cooper's hawks have been observed nesting on the project site (Guthrie 2004). If present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting Cooper's hawks to below a level of significance. The finding that impacts to Cooper's hawk can be reduced to

below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), *California Species of Special Concern*. This species is a fairly common resident at the off-site grading sites and could nest at these locations (Guthrie 2004). Construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting Southern California rufous-crowned sparrows to a less than significant level. The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to Southern California rufous-crowned sparrow would be considered unavoidably significant impact. See **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Lawrence's goldfinch (*Carduelis lawrencei*), *Federal Bird of Conservation Concern*. This species has been observed in the riparian and oak woodland habitats on and bordering the project site, which provide suitable nesting habitat for this species (Guthrie 2004). If present, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting Lawrence's goldfinches to below a level of significance. Impacts to this species were not previously analyzed as an individual topic at the program level in the Newhall Ranch Specific Plan Program EIR.

Northern harrier (*Circus cyaneus*), *California Species of Special Concern*. This species has been observed foraging on the project site (Impact Sciences 2004). Suitable nesting habitat occurs in association with the agricultural and grassland habitats on site. Should this species nest on the project site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of this species' active nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting northern harriers to a less than significant level. The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to northern harrier would be considered a significant unavoidable impact. See **Wildlife Habitat Loss**, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Yellow warbler (*Dendroica petechia brewsteri*), *California Species of Special Concern*. The riparian habitats on and bordering the project site provide suitable nesting habitat for this species, which has been observed on the project site (Guthrie 2004). If present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting yellow warblers to below a level of significance. The finding that impacts to yellow warbler can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

White-tailed kite (*Elanus leucurus*), *California Fully Protected*. This species has been observed on the project site (Guthrie 2004). The riparian and oak woodland habitats, as well as the eucalyptus trees on the project site provide suitable nesting habitat. If present, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting white-tailed kites to a less than significant level. The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to white-tailed kite would be considered unavoidably significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

California horned lark (*Eremophila alpestris*), *California Species of Special Concern*. This species has been observed foraging on the project site (Impact Sciences 2004). Suitable nesting habitat occurs in association with the agricultural and grassland habitats on site. Should this species nest on the project site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting California horned larks to below a level of significance. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Yellow-breasted chat (*Icteria virens*), *California Species of Special Concern*. The riparian habitats on and bordering the project site provide suitable nesting habitat, which has been observed on the project site (Guthrie 2004). If present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests

would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting yellow-breasted chats to a less than significant level. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Least's Bell's vireo (*Vireo bellii pusillus*), *Federal Endangered, California Endangered*. The riparian habitats on and bordering the project site provide suitable nesting habitat. Although no individuals have been observed nesting on the site, this species has been observed nesting a short distance to the east and west of the tract map boundaries (Guthrie 2004). If present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting least Bell's vireos to below a level of significance. The finding that impacts to least Bell's vireo can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Loggerhead shrike (*Lanius ludovicianus*), *California Species of Special Concern*. This species has not been observed nesting on the project site during annual bird surveys; however, this species has been observed foraging on, and adjacent to, the project site. Suitable nesting habitat occurs in association with the grassland and scrub habitats on site, and loggerhead shrike could nest in those areas. Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting loggerhead shrikes to below a level of significance. The finding that impacts to loggerhead shrike can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Pallid bat (*Antrozous pallidus*), *California Species of Special Concern*; **western mastiff bat** (*Eumops perotis*), *California Species of Special Concern*; **pocketed free-tailed bat** (*Nyctinomops femorosaccus*). These species were observed and/or detected in the vicinity of the project site during active Anabat surveys conducted in 2004 and 2006. Suitable western mastiff bat and pocketed free-tailed bat roosting habitat does not occur on or adjacent to the project site; however, the SR-126 bridge provide suitable roosting habitat for the pallid bat. Should active bat roosts be present, construction-related activity could result in the direct loss or abandonment of active roost sites. Implementation of proposed **Mitigation Measure LV 4.4-10** would reduce impacts to this bat species to below a level of significance. The finding that impacts to special-status bats can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Program EIR.

San Diego desert woodrat (*Neotoma lepida intermedia*), *California Species of Special Concern*. Desert woodrats were observed on both off-site grading sites during mammal surveys conducted in 2004. In the absence of contrary evidence, it is assumed that the animals observed were the San Diego (*intermedia*) subspecies. Construction-related activities would result in the direct loss of individual woodrats or active woodrat nests (stick houses). Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce the magnitude of impacts to the San Diego desert woodrat. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss if individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Mountain lion (*Felis concolor*), *California Fully Protected*. The project site could be part of a lion's home range or host transient individuals. However, given the mobility of this species, the proposed project is not expected to result in the direct loss of individual mountain lions. Therefore, direct impacts to this species would be less than significant. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Impacts to Species Potentially Occurring on the Landmark Village Site

Arroyo toad (*Bufo californicus*), *Federal Endangered, California Species of Special Concern*. The riparian areas on and adjacent to the project site provide suitable habitat for this species. However, based on the results of protocol surveys, it appears that arroyo toads are not breeding or otherwise utilizing habitats on or bordering the project site (Compliance Biology 2004). In addition, on April 13, 2005, the USFWS issued a revised critical habitat designation for the arroyo toad. (See 70 Fed. Reg. 19562.) In that Final Rule, effective May 13, 2005, the USFWS deleted the entire Newhall Ranch Specific Plan area from the designated critical habitat for the arroyo toad. However, arroyo toad have been documented in low numbers upstream of the project site, and given the presence of suitable habitat, it is possible that arroyo toad could occupy habitats on or adjacent to the project site prior to the commencement of construction activities. Should arroyo toad occur, construction-related activities could result in the loss of individual toads, which would be a significant impact. Implementation of proposed **Mitigation Measures LV 4.4-1, LV 4.4-2, LV 4.4-3, LV 4.4-4, LV 4.4-5, and LV 4.4-22** would reduce impacts to the arroyo toad to below a level of significance. The finding that impacts to arroyo toad can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Western spadefoot (*Scaphiopus hammondi*), *California Species of Special Concern*. This species was not observed on the project site during focused surveys (Compliance Biology 2004). Seasonal backwater areas associated with the drainages on and bordering the site, as well as depressions within existing dirt roads, provide breeding habitat. Given documented occurrences of the species in the project area and the presence of suitable breeding habitat, western spadefoot could occur on the project site. Depending on the number and extent of western spadefoot on the site that may be disturbed or removed, the loss of this species would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-17** would reduce impacts to western spadefoot to a less than significant level. This mitigation measure has successfully been implemented on the River Park project site. The two seasonal rain pools created on the River Park site as mitigation (using the methods described in **LV 4.4-17**) were used by breeding western spadefoot during the winter/spring following their creation (Compliance Biology 2006). The finding that impacts to western spadefoot can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Rosy boa (*Charina trivirgata*), *California Special Animal*. Suitable habitat occurs in association with scrub, chaparral, riverbank and oak woodland habitats, and rosy boa is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in the direct loss of individual animals. Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce the magnitude of impacts to the rosy boa. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

San Bernardino ringneck snake (*Diadophis punctatus modestus*), *California Special Animal*. Suitable habitat occurs in association with scrub, chaparral, riverbank and oak woodland habitats, and San Bernardino ringneck snake is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in the direct loss of individual animals. Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce the magnitude of impacts to the San Bernardino ringneck. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coast patch-nosed snake (*Salvadora hexalepis virgulata*), *California Species of Special Concern*. Suitable habitat occurs in association with scrub habitat on site, and coast patch-nosed snake is presumed to occur in areas supporting this habitat type. Construction-related activities could result in the direct loss of individual animals. Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce the magnitude of impacts to the coast patch-nosed snake. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Tricolored blackbird (*Agelaius tricolor*), *Federal Bird of Conservation Concern, California Species of Special Concern*. Although the riparian habitats on and bordering the project site provide suitable nesting habitat, no individuals or nesting colonies have been observed on site. However, should this species nest on the site prior to development, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting tricolored blackbirds to a less than significant level.

The Newhall Ranch Specific Plan Program EIR concludes that given the potential to relocate breeding colonies at new locations is relatively low, impacts to breeding colonies (if present) would remain significant. However, given that no breeding colonies have been documented on or adjacent to the project site during annual bird surveys, and the requirements of proposed Mitigation Measure 4.6-88, impacts to nesting tricolored blackbird (if present) can be reduced to below a level of significance at the project level.

Bell's sage sparrow (*Amphispiza belli belli*), *Federal Bird of Conservation Concern, California Species of Special Concern*. The scrub habitats on the off-site grading sites provide suitable nesting habitat for this species. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting Bell's sage sparrows to below a level of significance. The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat, and potentially the direct loss of individuals, resulting from buildout of the Specific Plan, impacts to Bell's sage sparrow would be considered unavoidably significant impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Long-eared owl (*Asio otus*), *California Species of Special Concern*. The riparian and oak woodland habitats on and bordering the project site provide suitable nesting habitat for this species. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting long-eared owls to a less than significant level. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

Western burrowing owl (*Athene cunicularia*), *Federal Bird of Conservation Concern, California Species of Special Concern*. This species has not been observed on the project site. However, suitable nesting habitat (i.e., ground squirrel burrows) occurs on the project site. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active burrows. Depending on the number and extent of active burrows on the site that may be disturbed or removed, the loss of active burrows would be a potentially significant impact. Implementation of proposed Mitigation Measure 4.4-8 would reduce impacts to nesting western burrowing owls to below a level of significance. The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat, and potentially the direct loss of individuals resulting from buildout of the Specific Plan, impacts to western burrowing owl would be considered a significant unavoidable impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), *Federal Candidate for Listing, Federal Bird of Conservation Concern, California Species of Special Concern*. This species has not been observed nesting on the project site; however, one individual, thought to be a migrant, was observed during surveys in the project area (Guthrie 1997). In addition, suitable habitat does occur in association with the riparian habitats on site, and western yellow-billed cuckoo could nest in those areas. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting western yellow-billed cuckoos to a less than significant level. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

Southwestern willow flycatcher (*Empidonax trailii extimus*), *Federal Endangered*. This species has not been observed nesting on the project site during annual bird surveys. A single willow flycatcher was observed east of the project site foraging along the Santa Clara River on May 31, 2004 (Guthrie 2004); however, given the timing of this observation and lacking any subsequent evidence of nesting, the observed willow flycatcher cannot be positively identified as belonging to the southwestern category of willow flycatchers (Guthrie 2004). However, suitable nesting habitat does occur in association with the riparian habitats on site, and southwestern willow flycatcher could nest in those areas. Should this species occur on site,

construction-related activities could result in the loss or abandonment of active nests. The loss of active nests would be a significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting southwestern willow flycatchers to a less than significant level. The finding that impacts to southwestern willow flycatcher can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Merlin (*Falco columbarius*), *California Species of Special Concern*. This species is not known to nest in California, but CDFG considers wintering merlins in California to be of Special Concern. The woodland and open areas on the site provide suitable habitat to support this species as a winter migrant; however, given the mobility of the species, the proposed project is not expected to result in the direct loss of individual merlins. Therefore, direct impacts to this species would be less than significant. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

Summer tanager (*Piranga rubra*), *California Species of Special Concern*. This species has not been observed nesting on the project site during annual bird surveys. However, suitable habitat occurs in association with the riparian habitats on the site, and summer tanager could nest in those areas. Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of this species' active nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting summer tanagers to a less than significant level. The finding that impacts to summer tanager can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Coastal California gnatcatcher (*Polioptila californica californica*), *Federal Threatened, California Species of Special Concern*. The scrub habitats on and bordering the project site provide suitable nesting habitat. No California gnatcatchers were documented on the project site or greater Newhall Ranch Specific Plan Area during recent protocol surveys (Guthrie 2004) and none are expected to occur given the historical absence of this species on Newhall Ranch. If present, the proposed removal of scrub vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. The loss of active California gnatcatcher nests (if the species initiated nesting on the site since the time of the 2004 surveys) would be a significant impact. Implementation of proposed **Mitigation Measure LV 4.4-8** would reduce impacts to nesting gnatcatcher to below a level of significance. The Newhall Ranch Specific Plan Program EIR did not address impacts to this species given its low potential to occur.

Pale big-eared bat (*Corynorhinus townsendii pallescens*), *California Species of Special Concern*; **fringed myotis** (*Myotis thysanodes*), *Special Animal*; **yuma myotis** (*Myotis yumanensis*), *Special Animal*. These bat species have not been observed on the project site, but given the presence of suitable habitat, these species could roost and/or forage on or adjacent to the site. Should active bat roosts be present, construction-related

activity could result in the direct loss or abandonment of active roost sites. Implementation of proposed **Mitigation Measure LV 4.4-10** would reduce impacts to roosting bats to below a level of significance. The finding that impacts to special-status bats can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), *California Species of Special Concern*. Suitable habitat occurs on the off-site grading sites in association with the grassland, coastal sage scrub and chaparral vegetation, and San Diego black-tailed jackrabbit could occur in these areas. Should this species occur on site, construction-related activities could result in the direct loss of individual black-tailed jackrabbit. Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce the magnitude of impacts to San Diego black tailed jackrabbit. However, given the amount of potentially occupied habitat to be developed and/or disturbed, direct impacts to this species would still be considered significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR that concludes the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered a significant unavoidable impact. See Wildlife Habitat Loss, above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

American badger (*Taxidea taxus*), *California Species of Special Concern*. Suitable habitat occurs on the off-site grading sites in association with the grassland and coastal sage scrub plant communities. Should this species occur on the site, construction-related activities could result in the direct loss of individual American badger. Depending on the number and extent of the species on site that may be disturbed or removed, without mitigation, the loss of American badgers would be a potentially significant impact. Implementation of proposed **Mitigation Measures LV 4.4-9** and **LV 4.4-18** would reduce impacts to the American badger to a less than significant level. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

Impacts to Special-Status Wildlife Species Occurring Downstream of the Project Site

The following special-status wildlife species are known to, or could, occur within the Santa Clara River downstream of the Landmark Village project site: Santa Ana sucker, unarmored threespine stickleback, arroyo chub, southwestern pond turtle, and two-striped garter snake. The *Flood Technical Report for the Landmark Village Project* (PACE 2006) found that there would be no significant changes in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the project site as a result of the proposed project (see **Appendix 4.2**). These hydraulic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. The technical analysis further determined that the river would still retain sufficient width to allow natural fluvial processes to continue; consequently, the mosaic of habitats in the river that support various sensitive species would be maintained and the population of the

species within and immediately adjacent to the river corridor would not be significantly affected. Based on that technical assessment, and the analysis of these species and their habitat described in the PACE 2006 (these conclusions were reached by Entrix based upon the PACE report) report, no significant impacts to downstream populations of these special-status wildlife species are expected to occur.

(i) **Sensitive Plant Communities**

As discussed under **heading 9.1.2**, five of the plant communities found within the Landmark Village project site are considered sensitive by CDFG: southern willow scrub, southern cottonwood willow riparian forest, valley freshwater marsh, scalebroom scrub, and Great Basin scrub. Impacts to these sensitive plant communities are discussed below.

Southern Willow Scrub

The proposed project would result in the permanent loss of 0.58 acre of southern willow scrub from the project site. An additional 6.05 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Given the biological value of this habitat, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of southern willow scrub would be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26, and Mitigation Measures 4.6-55 and 4.6-63, as well as proposed **Mitigation Measure LV 4.4-7**, would reduce impacts to this plant community to below a level of significance. The finding that impacts to southern willow scrub can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Southern Cottonwood-Willow Riparian Forest

The proposed project would result in the permanent loss of 8.78 acres of southern cottonwood willow riparian forest from the project site. An additional 9.04 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Given the biological value of this riparian habitat, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of southern cottonwood willow riparian forest would be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26, and Mitigation Measures 4.6-55 and 4.6-63, as well as proposed **Mitigation Measure LV 4.4-7**, would reduce impacts to this plant community to below a level of significance. The finding that impacts to southern cottonwood willow riparian forest can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Valley Freshwater Marsh

The proposed project would result in the loss of 0.12 acre of valley freshwater marsh from the project site. An additional 0.75 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Given the biological value of this plant community, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of valley freshwater marsh is considered to be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26, and Measures 4.6-55 and 4.6-63, as well as proposed **Mitigation Measure LV 4.4-7**, would reduce impacts to this plant community to below a level of significance. The finding that impacts to valley freshwater marsh can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Scalebroom Scrub

The proposed project would result in the loss of 4.27 acres of scalebroom from the project site. An additional 2.67 acres of scalebroom scrub would be temporarily disturbed. Given the biological value of this riparian plant community, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of scalebroom scrub is considered to be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26, and Measures 4.6-55 and 4.6-63, as well as proposed **Mitigation Measure LV 4.4-7**, would reduce impacts to this plant community to below a level of significance. The finding that impacts to riparian plant communities can be mitigated to below a level of significance is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Great Basin Scrub

The proposed project would result in the development of 2.52 acres of Great Basin scrub and the temporary disturbance to an additional 0.53 acre. Given the occurrence of *Artemisia tridentate* ssp. *parishii* (which is considered sensitive by the County of Los Angeles) within the Great Basin scrub, the loss of this vegetation community would be a significant impact. Implementation of proposed **Mitigation Measure LV 4.4-23** would reduce impacts to Great Basin scrub to a less than significant level. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (**Wildlife Habitat Loss**).

(j) **Jurisdictional Resources**

The proposed project would result in the permanent fill of 5.43 acres and the temporary disturbance of an additional 2.82 acres of drainages under the jurisdiction of the ACOE (**Figure 4.4-8, Impacted Jurisdictional Resources**). Areas to be permanently filled include 1.97 acres of agricultural drains, 1.95 acres within Chiquito Creek, 0.13 acre of a seasonal tributary to Chiquito Creek, 0.78 acre within the Santa

Clara River, and 0.60 acre of tributaries to the Santa Clara River. Temporary impacts (resulting from haul routes, utility corridor, and bank stabilization) would occur to 1.36 acres of Chiquito Canyon Creek, 0.09 acre of an agricultural drain, 1.35 acres of the Santa Clara River, 0.03 acre of tributaries to the Santa Clara River, and approximately 1.36 acres of Castaic Creek (Castaic Creek was not delineated in the field; the approximate acreage was estimated using Geographic Information Systems [GIS]).

These areas, as well as 46.66 acres of associated riparian vegetation to be disturbed (**Common Plant Communities** and **Sensitive Plant Communities**), are also under the jurisdiction of CDFG. The fill/removal of these jurisdictional resources would be a significant impact. Implementation of Specific Plan Mitigation Measures 4.6-1 through 4.6-26, and Measures 4.6-55 and 4.6-63, as well as proposed **Mitigation Measure LV 4.4-7**, would reduce impacts to jurisdictional resources to below a level of significance. The finding that impacts to jurisdictional resources can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR. As previously described, the Landmark Village applicant is seeking approval of a Master 404 Permit from the ACOE and a Master 1600 Agreement from the CDFG for the Newhall Ranch Specific Plan area, including the Landmark Village site. The environmental document is in process at this time and a draft of the EIR/EIS is expected to be released for public review late 2006.

(2) Indirect Impacts

Indirect impacts to biological resources would occur in those habitat areas surrounding the development envelope, as well as in remaining habitat areas within the proposed development area, both during and after the completion of the proposed project. Indirect impacts on biological resources as a result of project development on the site can include the following: (1) increased lighting and glare effects on wildlife species in remaining and adjacent open space areas; (2) a potential increase in pesticides, herbicides and pollutants into adjacent drainages, creeks, rivers and wetlands, as a result of landscaping irrigation and stormwater runoff; (3) an increase in non-native plant and wildlife species that are adapted to more urban environments and can out compete native species for available resources, thus reducing the distribution and population of native species; (4) increased human activity and domestic animal presence that can disturb natural habitat areas and displace wildlife populations; and (5) erosion and dust resulting from construction/grading activities.

Indirect impacts associated with the proposed project are not quantifiable, but are reasonably foreseeable. As such, the following discussion identifies expected types of secondary impacts and their relative magnitude, such that decision makers and the general public are aware of the indirect impact potential associated with implementation of the proposed project. This type of analysis is consistent with the requirements of CEQA.

**Please refer to Figure 4.4-8, Impacted Jurisdictional Resources,
in the accompanying map box.**

(a) Increased Light and Glare

The development of a residential community would increase the number of nighttime light and glare sources on the site over current levels, which are very low to nonexistent. Nighttime lighting can disturb resting and foraging behavior and can potentially alter breeding cycles and nesting behavior. If uncontrolled, such light where proximal to riparian areas associated with the Santa Clara River and Castaic Creek could adversely impact the composition and behavior of the animal species that occur in these areas. Because of the potential disruption to breeding, movement, and foraging behavior of wildlife species, without mitigation, increased nighttime lighting and glare associated with the proposed project is a significant impact. Implementation of Specific Plan Mitigation Measure 4.6-56 would reduce potential impacts resulting from increased light and glare to below a level of significance.

(b) Landscaping Irrigation and Stormwater Runoff

Overirrigation of landscaped areas, especially when combined with the use of chemicals, could lead to runoff that contains pesticides, herbicides, nitrates, and other contaminants. Any runoff that flows into the river corridor containing high levels of nutrients, particularly fertilizers and waste products such as nitrogen and phosphorous, could result in eutrophication (excessive nutrient buildup). This, in turn, could result in a depletion of available oxygen due to increased biological oxygen demand (BOD) and reduce available dissolved oxygen for aquatic organisms. Other chemicals, pesticides, and herbicides could also adversely affect aquatic systems. In addition, paved surfaces would contribute runoff into the river corridor during storm events. Depending on the magnitude and frequency of storm events and the overall level of water quality, this runoff could cause increased eutrophication, depleted oxygen levels, long-term buildup of toxic compounds and heavy metals, and other adverse effects to biological resources associated with aquatic systems.

Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). Stormwater runoff from all urban areas within the proposed project will be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs.

The effectiveness of these proposed measures to maintain water quality in the Santa Clara River was analyzed by GeoSyntec Consultants.⁷ The following summarizes the efficacy of these PDFs in reducing impacts on surface water quality.

⁷ GeoSyntec Consultants. September 2006. *Landmark Village Water Quality Technical Report (Appendix 4.3)*.

Nutrients (Phosphorus and Nitrogen (Nitrate+Nitrite-N and Ammonia-N)): MS4 Permit, General Construction Permit, Dewatering General Permit, and Standard Urban Stormwater Mitigation Plan (SUSMP)-compliant BMPs will be incorporated into the project to address nutrients in both the construction phase and post development. Nitrate-nitrogen plus nitrite-nitrogen concentrations and loads are predicted to decrease in the post-developed condition. Total phosphorus concentration is predicted to be below the minimum observed value in the Santa Clara River. Nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to be well below LA Basin Plan objectives and below or in the low range of observed values in the Santa Clara River Reach 7E. The predicted nutrient concentrations are not expected to cause increased algae growth. On this basis, the impact of the project on nutrients is considered less than significant.

Trace Metals: MS4 Permit, General Construction Permit, General Dewatering Permit, and SUSMP-compliant BMPs will be incorporated into the project to address trace metals in both the construction phase and post-development. The mean loads of dissolved copper and dissolved zinc are predicted to increase with project development, while all trace metal concentrations and the mean load of total lead are predicted to decrease. Mean concentrations of dissolved copper, total lead, and dissolved zinc are below benchmark Basin Plan objectives and California Toxics Rule criteria. Cadmium is not expected to be present in runoff discharges from the project. On this basis, the impact of the project on trace metals is considered less than significant.

Pesticides: Pesticides in runoff may or may not increase with development as a result of landscape applications. Proposed pesticide management practices including source control, removal with sediments in infiltration basins, and advanced irrigation controls in compliance with the requirements of the MS4 Permit and the SUSMP will minimize the presence of pesticides in runoff. Final site stabilization will limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant.

Pathogens: Pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. A reduction in open space within the project area will reduce the bacteria produced by wildlife. The project will not include septic systems and the sewer system will be designed to current standards, which minimizes the potential for leaks. Thus pet wastes are the primary source of concern. The PDFs will include source controls and treatment controls, which in combination should help to reduce pathogen indicator levels in stormwater runoff. On this basis, the projects impact on pathogen and pathogen indicators is considered less than significant.

Hydrocarbons: Hydrocarbon concentrations will likely increase with development because of vehicular emissions and leaks. In stormwater runoff hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed infiltration basins and vegetated swales. Source control BMPs incorporated in compliance with the MS4 Permit, the General Construction Permit, and the SUSMP will also minimize the presence of hydrocarbons in runoff. On this basis, the impact of the project on hydrocarbons is considered less than significant.

Chloride: MS4 Permit, General Construction Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address chloride in both the construction phase and post development. The mean concentration and load of chloride is predicted to decrease with development, the predicted concentration is well below the Los Angeles Basin Plan objective and is near the low range of observed values in the Santa Clara River Reach 7E. On this basis, the impact of the project on chloride is considered less than significant.

Methylene Blue Activated Substances (MBAS): The presence of soap in runoff from the project will be controlled through the source control PDFs, including a public education program on residential and charity car washing. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.

Bioaccumulation: In the literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. Selenium and mercury will not be introduced by the project and are not naturally present at levels of concern in the Santa Clara River watershed (GeoSyntec 2005). On that basis, the potential for bioaccumulation in the project PDFs or in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant.

(c) Increase in Populations of Non-Native Plant and Wildlife Species

After project completion, a number of non-native plant species that are more adapted to urban environments could increase in population and potentially displace native species within the riparian corridor because of the ability of non natives to compete more effectively for resources. It is unknown to what degree non-native plant species will displace native species in adjacent habitat areas. However, because non-native and exotic plants are commonly included in landscaping plans of both common areas and private lots of new development projects, it can be reasonably concluded that project development could result in identifiable increases in non-native and/or exotic plant populations.

In particular, these plant species are often more adapted to a wider variety of growing conditions and can outcompete native plant populations for available nutrients, prime growing locations and other resources. Because these plants reproduce so quickly and in such large amounts, these species can quickly replace many native plant populations, resulting in lower species diversity, loss of suitable breeding and/or nesting habitat for common and special-status wildlife species, changes to the riparian ecosystem, and overall reductions in habitat values. Therefore, the impact on native biological resources as a result of increased non-native plant species is considered potentially significant. Implementation of proposed **Mitigation Measure LV 4.4-11** would reduce the magnitude of impacts resulting from an increased non-native population to below a level of significance.

Urban development also tends to attract wildlife species that are more typical of, and more adaptable to, urban settings, including house sparrows, European starlings, rock doves, brown-headed cowbirds, American crows, ravens, striped skunks, opossum, red fox, raccoons, and Norway rats. An increase in meso-predators (i.e., skunk, opossum, fox) in an area can adversely impact native rodent and bird populations. Additionally, a number of native species are not adapted to urban development and their populations tend to decrease in the vicinity of residential or recreational developments.

Developed areas also attract and encourage non-native Argentine ants. These ants have the potential to negatively impact native ant populations, which serve as secondary pollinators and seed dispersers of many native flower species. Additionally, as coast horned lizard primarily feed on native ants, the reduction of native ant populations due to the introduction of Argentine ants could adversely affect the local coast horned lizard population. As discussed in the Newhall Ranch Specific Plan Program EIR, wildlife species typical of an urban environment currently occur in the area. Accordingly, development of the proposed project would further exacerbate an already adverse condition. Therefore, the impact on native biological resources as a result of increased non-native animal species is considered significant. Implementation of proposed **Mitigation Measures LV 4.4-11, LV 4.4-12, LV 4.4-13, and LV 4.4-15** would reduce the magnitude of the project's contribution towards an already adverse condition to below a level of significance.

(d) Increased Human and Domestic Animal Presence

The proposed project would increase the number of people living and recreating adjacent to the Santa Clara River. The effect of this increase in human population would be the potential for increased human disturbances to, and ongoing degradation of, adjacent riparian habitats associated with the Santa Clara River. Increased recreation and other human activity along proposed trails and unauthorized entry into the riparian area could result in increased noise disturbances to wildlife (especially during the breeding season of birds) which can result in nest abandonment; the harassment and/or capture of slower moving

species, including certain reptiles and amphibians; the displacement of other wildlife species; an increase in the amount of refuse and pollutants in the area; compaction of soils; and trampling of ground-dwelling flora and fauna.

Increased use of the project site by future residents of Landmark Village would also result in a corresponding increase in use of the area by domestic animals. Dogs can disturb nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Should this activity occur frequently, and over a long period, these disturbances may have a long-term effect on the behavior of both common and special-status species and can result in their extirpation from the area. Feral cats and house cats can cause substantial damage to the species composition of natural areas, including the populations of special-status species, through predation. Implementation of Specific Plan Mitigation Measures 4.6-17 through 4.6-19 would reduce the magnitude of impacts related to increased human and domestic animal presence. However, consistent with the findings of the Newhall Ranch Specific Plan Program EIR, impacts caused by increased human and domestic animal presence would still be considered significant.

(e) Construction and Grading Activities

Construction and grading activities associated with project implementation that are proposed adjacent to or within the Santa Clara River ecosystem could adversely affect sensitive vegetation and wildlife within portions of the ecosystem not directly affected. These activities can result in the following impacts: (1) siltation and erosion into creek and river drainages that could adversely affect fish spawning and movement; (2) excessive dust accumulation on vegetation that could result in the degradation or loss of some plant species; and (3) soil compaction around remaining trees. These impacts will be minimized through implementation of construction BMPs that will meet or exceed measures required by the General Construction Permit. A Stormwater Pollution and Prevention Plan (SWPPP) will be developed as required by, and in compliance with, the General Construction Permit and Los Angeles County Standard Conditions. The General Construction Permit requires the SWPPP to include a menu of BMPs to be selected, implemented, and maintained, based on the phase of construction and weather conditions, to effectively control erosion and sediment to the Best Available Technology Economically Achievable and

Best Conventional Pollutant Control Technology (BAT/BCT).⁸ BMPs to be included in this menu include: slope stabilization using rock or vegetation; revegetation; hydroseeding or using tackifiers on exposed areas; installation of energy dissipaters; drop structures; catch basin inlet protection; construction materials management and cover; and containment of construction materials and wastes. On this basis, the construction-related impacts of the project are considered less than significant.

10. PROJECT MITIGATION MEASURES

While development of the Newhall Ranch Specific Plan has the potential to result in significant biological impacts, the County of Los Angeles adopted mitigation measures for potential impacts as part of the Newhall Ranch Specific Plan. These mitigation measures are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing these mitigation measures.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The Los Angeles County Board of Supervisors adopted the following mitigation measures in connection with its approval of the Newhall Ranch Specific Plan (May 2003). Those mitigation measures applicable to the Landmark Village project will be implemented, as appropriate.

Mitigation measures are separated into three categories. The first includes an overview of those design features that are incorporated as part of the Specific Plan to reduce the biological impact potential. The second category includes specific mitigation measures incorporated as part of the Resource Management Plan. The last category includes additional mitigation measures recommended as part of the Newhall Ranch Specific Plan Program EIR. The specific mitigation measures in each of these categories are defined below.

⁸ BAT/BCT are Clean Water Act technology-based standards that are applicable to construction site stormwater discharges. Federal law specifies factors relating to the assessment of BAT including: age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving effluent reduction; non-water quality environmental impacts (including energy requirements); and other factors as the administrator of the U.S. Environmental Protection Agency (EPA) deems appropriate. Clean Water Act section 304(b)(2)(B). Factors relating to the assessment of BCT include reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; the age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; non-water quality environmental impact (including energy requirements); and other factors as the administrator deems appropriate. Clean Water Act section 304(b)(4)(B). The administrator of the U.S. EPA has not issued regulations specifying BAT or BCT for construction site discharges.

(1) Specific Plan Mitigation Measures

The Specific Plan was designed to partially mitigate potential impacts to sensitive biological resources through avoidance in order to maximize the conservation of important biological features of the site. Specific elements of Specific Plan design that are intended to reduce impacts to plants, animals, and habitat would be implemented through adoption and approval of the Specific Plan.

The habitat types and associated plant and wildlife species, which occur on the property have become an integral part of the overall Specific Plan design, through the formulation of a conservation strategy that allows for the development of the site in a way that minimizes the effects to sensitive biological resources. In addition, this conservation strategy incorporates the design and management of important open areas in a way that conserves biological values. An important aspect of this approach was an analysis of the conservation value of habitats on the property, which used conservation principles and a GIS mapping methodology. An additional component of the conservation strategy was the consideration of the larger regional context in the conservation design of biological resources on the site. Newhall Ranch, which extends from the ridgeline of the Santa Susana Mountains across the Santa Clara River to the uplands on the north, offers the potential for significant habitat contributions to a Santa Susana Mountains open area and a key segment of the Santa Clara River system, as well as regionally important connections between these habitat areas and across the river.

The biological resource conservation strategy developed for the Newhall Ranch property addresses the sequencing recommended by the resource agencies: avoidance, minimization, and mitigation for unavoidable impacts to key sensitive resources. The proposed large, open areas on the Newhall Ranch property avoid impacts to many of the highly sensitive species present or potentially occurring on the site and their habitats. Further design, with respect to potential unavoidable impacts to biological resources, has minimized encroachments into key areas of the property, decreasing the overall impacts. Indirect impacts to biological resources are minimized through the dedication of large blocks of habitat that decreases the edge-area ratio, and thus, buffers the habitat from noise, lighting, and encroachment by domestic pets, non-native plants, and humans. The result of these design efforts has produced a biological resource conservation strategy that has focused conservation and mitigation efforts on the Newhall Ranch property into two Special Management Areas and their connection:

- The Santa Clara River Corridor (River Corridor SMA);
- The large block of relatively undisturbed habitats on higher elevations into the Santa Susana Mountains (High Country SMA); and
- The connection between these two areas along the Salt Creek drainage.

In this design, the Conceptual Grading Plan (Draft EIR, **Figure 1.0-14**) has been developed to allow for preservation of significantly large areas of sensitive native habitats associated with the natural drainage areas of the site, and major landforms have been maintained. Large contiguous blocks of valuable habitat have been avoided and provided with direct linkage. The Specific Plan has focused on putting the two key habitat resource areas into consolidated blocks (connected by the Salt Creek drainage), resulting in minimal boundaries with developed areas. The assembly of these three elements will facilitate their management as a single special management area system within the Specific Plan Area, as well as allowing coordination and interface with other programs outside the boundary of Newhall Ranch. The transitions between development and the special management areas will be the focus of special design treatments to protect the integrity of the conserved areas. As indicated above, the “edges” of urban development areas have been minimized to reduce the indirect impact potential of the Specific Plan, and native and compatible species will be used for landscaping in these areas.

The open area system for Newhall Ranch includes the most important habitat areas of the Santa Clara River (River Corridor SMA) and the areas which have been least impacted by agricultural, oil, and natural gas production activities (High Country SMA). It also includes the largest, least fragmented patches of each habitat type that remain on Newhall Ranch. In addition to consolidating the habitat on the Ranch into two major interconnected blocks, the open areas include the largest remaining individual blocks of each of the important habitat types. Substantial proportions of each of the habitat types and vegetation associations that occur on the Ranch will be conserved within the open area system. The incorporation of the river, the mountains, and connection provides for conservation of the entire range of terrain and vegetation types on Newhall Ranch.

By connecting the open areas into two major blocks with a major linkage, the land use plan for the Ranch provides for a minimum edge-to-area ratio within the Specific Plan area. The least accessible portion of the property, in terms of topography and presence of roads, is the High Country SMA. In addition, there is limited existing access to the river and to the Salt Creek corridor area. The topography along the High Country and river provide the opportunity to focus management activities to effectively limit access to the habitat in these key resource areas. Additional management practices are intended to restrict future access as the Specific Plan is implemented.

A critical component of the open area system within the Newhall Ranch property and in the region is the connection between the High Country and the River Corridor along Salt Creek. The corridor will provide continuity between the habitats and the wildlife populations within the property, as well as forming a permanent regional linkage between the Santa Clara River and the Santa Susana Mountains. Salt Creek is the most appropriate location for such a wildlife corridor connection because of several distinguishing characteristics. These include (1) provision of a direct link between the two major open areas; (2) less

disturbance than any of the other potential connections; (3) it is bound through most of its length by open area on the north side and, therefore, will not be surrounded by development in the future; (4) it is the only drainage that would provide more than a discontinuous, narrow connection; (5) it includes both upland and riparian vegetation through most of the corridor; and (6) it is topographically isolated from areas of development on Newhall Ranch. Currently, a portion of the wildlife corridor is situated in Ventura County. Future land use decisions will be required to define the corridor's final configuration in areas that occur outside the County of Los Angeles.

(2) Specific Plan Resource Management Plan Mitigation

Approval of the Specific Plan and its associated Resource Management Plan (RMP) involved an amendment to the Los Angeles County zoning ordinance such that the provisions of the Specific Plan and RMP are binding. Specific measures to mitigate impacts to biological resources are incorporated as part of the RMP that is part of the Newhall Ranch Specific Plan. These measures are identified below: These measures are preceded by "SP," which stands for Specific Plan.

(3) Santa Clara River (River Corridor) SMA

Mitigation for impacts for the Specific Plan on riparian resources will include restoration of riparian habitat and may include enhancement activities as well. In addition, a mitigation bank may be established as discussed in this section. The general areas in which riparian mitigation activities may take place are shown on Exhibit 2.6-3, Candidate Riparian Restoration/Enhancement Areas, of the Specific Plan.

The mitigation of Specific Plan impacts through restoration of habitat and enhancement of existing habitat quality shall conform to the requirements set forth below:

(a) Mitigation through Restoration

Habitat restoration as referred to in the Specific Plan means the revegetation of native plant communities on sites that have had the habitat removed due to past activities, such as agricultural or oil and natural gas operations.

Riparian resources along the Santa Clara River that are impacted by the Newhall Ranch Specific Plan will require restoration of similar habitat and values. Avoidance of impacts to riparian resources shall be the primary goal during the design of the individual stages of the Specific Plan. Unavoidable impacts to riparian resources shall be minimized through Specific Plan design, and then mitigated by the implementation of a revegetation plan. The revegetation plan may be prepared as part of a California

Department of Fish and Game 1603 Streambed Alteration Agreement or ACOE Section 404 Permit and shall include the following:

- SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly Endangered or Threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species.
- SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase.
- SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:
- Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met.
 - The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency.
- SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any.
- SP 4.6-5 Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting State and Federal agencies.

- SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout.
- SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.
- SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting State and/or Federal agency.
- SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting State and/or Federal agency.
- SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.

(b) Mitigation through Enhancement

- SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.).
- SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR.
- SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will

be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1).

SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid “natural” reestablishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values.

SP 4.6-15 Removal of non-native species such as giant cane (*Arundo donax*), salt cedar or tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), castor bean (*Ricans communis*), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards:

- First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly Endangered or Threatened species.
- All non-native species removals shall be conducted according to a resource agency approved exotics removal program.
- Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.

(c) Mitigation Banking

SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(d) Management Requirements

Recreation and Access

The quality of the habitat values that are conserved in the River Corridor SMA will benefit from the control of access to riparian areas. Guidelines for the control of access to the River Corridor SMA include the following:

SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan.

- The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to

riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8.

- Access to the River Corridor SMA will be limited to day time use of the designated trail system.
- Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA.
- No hunting, fishing, or motor or off-trail bike riding shall be permitted.
- The trail system shall be designed and constructed to minimize impacts on native habitats.

Transition Areas

SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the river the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village).

SP 4.6-19 The following are the standards for design of transition areas:

- In all locations where there is no steep grade separation between the River Corridor SMA and development, a trail shall be provided along this edge.
- Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]).
- Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures.
- Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection.

- A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor, or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as: flood control access; sewer, water and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.

SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA:

- Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA.
- The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources.

(4) Grading Activities Long-Term Management Plan

SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.

SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable *conservation and public access easement* shall be offered to the County of Los Angeles pursuant to Mitigation Measure 4.6-23, below, over the portion of the River Corridor SMA within that subdivision.

SP 4.6-23 The River Corridor SMA *Conservation and Public Access Easement* shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26, below.

SP 4.6-24 The River Corridor SMA *Conservation and Public Access Easement* shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.

Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first.

SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.

SP 4.6-26 Prior to the recordation of the River Corridor SMA *Conservation and Public Access Easement* as specified in Mitigation Measure 4.6-23, above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members).

(5) High Country Special Management Area (SMA)

SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs.

- Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16, above.
- Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48, below.

(a) Mitigation Requirements

Mitigation activities that may occur in the High Country SMA, either for impacts associated with the construction of Estate lots, trails, or access roads, or for impacts identified during the subdivision process

in other portions of the Specific Plan Area, include restoration of habitat and enhancement to existing habitat (see discussion below). Mitigation banking may be established as provided below. In addition, Salt Creek Canyon is a high priority area for riparian mitigation.

Mitigation through Restoration

Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak resource replacement in, or adjacent to, existing oak woodlands and savannas.

Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth above.

Mitigation requirements for oak resource replacement are set forth in Specific Plan Section 2.6, paragraph 3b of the Oak Tree Replacement Program of the Resource Management Program.

Enhancement of Habitat

SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland, and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b)4 Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.

Mitigation Banking

SP 4.6-28 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources, shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. *(This measure is not applicable to the Landmark Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

(b) Management Requirements***Recreation and Access***

The recreation opportunities presented by the High Country SMA are a major benefit of the SMA. However, recreational needs must be balanced with the preservation of the habitat values, which are conserved in the SMA. Recreation and access will be governed by the following standards:

- SP 4.6-29 Access to the High Country SMA will be limited to day time use of the designated trail system. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*
- SP 4.6-30 No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*
- SP 4.6-31 No hunting, fishing, or motor or trail bike riding shall be permitted. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*
- SP 4.6-32 The trail system shall be designed and constructed to minimize impacts on native habitats. *(This measure is not applicable to the Landmark Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

Transition/Fuel Modification Areas

Development areas are generally separated from the High Country SMA by steep slopes. Specific Plan Exhibit 2.6-7 of the Resource Management Program, Salt Creek Wildlife Corridor Land Use Perspective, illustrates that development adjacent to the Salt Creek Wildlife Corridor is significantly separated vertically from the corridor.

- SP 4.6-33 Construction of buildings and other structures (such as patios, decks, etc.) shall only be permitted upon developed pads within Planning Areas OV-04, OV-10, PV-02, and PV-28 and shall not be permitted on southerly slopes facing the High Country SMA (Planning

Area HC-01) or in the area between the original SEA 20 boundary and the High Country boundary. If disturbed by grading, all southerly facing slopes which adjoin the High Country SMA within those Planning Areas shall have the disturbed areas revegetated with compatible trees, shrubs, and herbs from the list of plant species for south and west facing slopes as shown in Table 2.6-3, Recommended Plant Species For Use In Enhancement Areas In The High Country.

Transition from the development edge to the natural area shall also be controlled by the standards of wildfire fuel modification zones as set forth in Mitigation Measure 4.6-49. Within fuel modification areas, trees and herbs from Table 2.6-3 of the Resource Management Plan should be planted toward the top of slopes; and trees at lesser densities and shrubs planted on lower slopes. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

Grading Activities

- SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.
- SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.

Long-Term Management

- SP 4.6-36 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*
- SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows:
1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch;
 2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and

3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch.
4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number.

- SP 4.6-38 Prior to dedication of the High Country SMA, a *conservation and public access easement* shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA *Conservation and Public Access Easement* shall be consistent in its provisions with any other *conservation easements* to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.
- SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system.
- SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.
- SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The *joint powers authority* will have overall responsibility for recreation within and conservation of the High Country.
- SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to \$24 per single family detached dwelling unit per year and \$15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the *joint powers authority* for the purposes of recreation, maintenance, construction, conservation and related activities within the *High Country Special Management Area*.

(6) Open Area Mitigation Requirements

SP 4.6-43 Suitable portions of *Open Area* may be used for mitigation of riparian, *oak resources*, or elderberry scrub. Mitigation activities within *Open Area* shall be subject to the following requirements, as applicable.

- River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and
- High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42, and
- Mitigation Banking — Mitigation Measure 4.6-16.

(a) Management Requirements

SP 4.6-44 Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. *(This measure is not applicable to the Landmark Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

SP 4.6-45 The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction. *(This measure is not applicable to the Landmark Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

SP 4.6-46 While *Open Area* is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within *Open Area*. *(This measure is not applicable to the Landmark Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

SP 4.6-47 At the time that final subdivision maps permitting construction are recorded, the *Open Area* within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within *Open Area* are intended to be public parks. Prior to the offer of dedication of *Open Area* to the Center for Natural Lands Management, all necessary *conservation and public access easements*, as well as easements for infrastructure shall be

offered to the County. *(This measure is not applicable to the Landmark Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Landmark Village project.)*

(b) Mitigation Banking

SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the *Open Area land use designations*, subject to the following requirements:

- Mitigation banking activities for riparian habitats will be subject to State and Federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above.
- Mitigation banking for oak resources shall be conducted pursuant to 4.6-48, below.
- Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(c) Oak Resources Replacement Program

SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, and mainland cherry trees/shrubs):

- To mitigate the impacts to oak resources that may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time.
- Oak resource species obtained from the local gene pool shall be used in restoration or enhancement.
- Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program.
- All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.

(7) Wildfire Fuel Modification

The Specific Plan Area is within the extreme and moderate fire hazard zones as identified in the County of Los Angeles General Plan. The moderate fire hazard zone extends to those areas of Newhall Ranch where native brush can be found growing in its natural state. This is most common in the hillside areas. The extreme fire hazard zone includes high brush and woodlands, and all steep slopes regardless of vegetation (refer to **Section 4.14, Fire Protection Services**, for a detailed description of on-site fire zones).

Development of Newhall Ranch will reduce the amount of native flammable vegetation present within the Specific Plan Area. Fire fighting capabilities will be provided by two fire stations on the Specific Plan site (see **Figure 1.0-3, Land Use Plan**), other nearby stations, and a system of improved roads and an urban water system with fire flows as required by the County Fire Department. Existing and proposed off-site fire facilities will also serve the Specific Plan Area.

Property damage and public safety risks associated with wildfire are greatest where homes and other structures will be located adjacent to large open areas dominated by native vegetation. This condition will occur primarily in the southern portion of the Specific Plan site and where portions of the development area in the northwest section of Riverwood Village abut large natural open areas.

Access is currently provided to the Los Angeles County Fire Department for fire prevention control of the Specific Plan Area. Access will continue to be provided as the Specific Plan is implemented.

Fuel modification mitigation includes:

SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.

SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance.

- SP 4.6-51 In order to enhance the habitat value of plant communities that require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list, which shall be reviewed by the County Forester.
- SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements.

(8) EIR Mitigation Measures

To further reduce impacts to biological resources that would result from Specific Plan implementation the following mitigation measures are proposed:

- SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be Rare, Threatened or Endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur.

The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other Rare, Sensitive, Threatened, or Endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any Rare, Sensitive, Threatened, or Endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States

Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.

All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the Rare, Threatened or Endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with CEQA (*CEQA Guidelines* Section 15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts."

- SP 4.6-54 Prior to development within or disturbance to occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur.
- SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent Federal and State agencies and the Specific Plan shall conform to the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats.
- SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.
- SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete.

- SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California Regional Water Quality Control Board.
- SP 4.6-59 Consultation shall occur with the County of Los Angeles ("County") and California Department of Fish and Game ("CDFG") at each of the following milestones:
1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used.
 2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work.
 3. Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County.
 4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by Rare, Threatened, or Endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the Federal and State permits will impose conditions and mitigation measures required by Federal and State law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by Federal and State law for project-related impacts on Endangered, Rare or Threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level.
- SP 4.6-60 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. *(This measure is not applicable to Landmark Village because the project impact to elderberry scrub is addressed by project specific **Mitigation Measure LV 4.4-16.**)*

- SP 4.6-61 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. *(This measure is not applicable to Landmark Village because the project would not impact cherry trees.)*
- SP 4.6-62 When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit would result in changes to an approved oak tree permit, then the oak tree report for that oak tree permit must be amended for the area of change, and the addendum must be approved by the County Forester prior to issuance of grading permits for the area of the map or CUP being changed. *(This measure is not applicable to the Landmark Village project because the project does not propose any change to an existing oak tree permit.)*
- SP 4.6-63 Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost. *(This measure is not applicable to Landmark Village because the project impact to riparian resources is addressed by project-specific **Mitigation Measure LV 4.4-7.**)*
- SP 4.6-64 The operator of the golf course shall prepare a Golf Course Maintenance Plan which shall include procedures to control storm water quality and ground water quality as a result of golf course maintenance practices, including irrigation, fertilizer, pesticide and herbicide use. This Plan shall be prepared in coordination with the County biologist and approved by the County Planning Director prior to the issuance of a Certificate of Occupancy. *(This measure is not applicable to the Landmark Village project because the project does not include construction and operation of a golf course.)*

(9) Spineflower Special Study Mitigation Overlay

- SP 4.6-65 In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown below in **Figure 2.6-8**, Spineflower Mitigation Area Overlay. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (**Figure 2.6-8**), changes will likely occur to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the

spineflower and all other Endangered plant species that may be found on the Specific Plan site. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(a) Spineflower Preserves

SP 4.6-66 Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (**Figure 2.6-8**).

Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.

A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b).

In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.

Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure 4.6-53, above.) The yearly spineflower population census documentation shall be submitted

to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations. If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG.

Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional 5 years. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(b) Connectivity, Reserve Design, and Buffers

SP 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into

account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors.

Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.

For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "*Review of Potential Edge Effects on the San Fernando Valley Spineflower*," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.

Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s).

The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG.

(c) Preserve Protection/Fencing

SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities.

Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.

The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).

(d) Preserve Protection/Hydrological Alterations

SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.

Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.

The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.

(e) Road Construction Measures

SP 4.6-70 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include:

- (a) Commerce Center Drive;
- (b) Magic Mountain Parkway;
- (c) Chiquito Canyon Road;
- (d) Long Canyon Road;
- (e) San Martinez Grande Road;

- (f) Potrero Valley Road;
- (g) Valencia Boulevard; and
- (h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations.

Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. *(This measure is not applicable to the Landmark Village project, because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(f) Engineering, Design and Grading Modifications

- SP 4.6-71 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67 for all future Newhall Ranch subdivision maps that encompass identified spineflower populations. *(This measure is not applicable to the Landmark Village project, because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(g) Fire Management Plan

- SP 4.6-72 A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers.

The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve.

The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps.

Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(h) Water Flow Diversion and Management

SP 4.6-73 At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure implementation of the following design measures:

- (a) During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in Mitigation Measures 4.6-66 and 4.6-67;
- (b) Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s);
- (c) French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s);
- (d) Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s);

- (e) Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;
- (f) Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spinesflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and
- (g) Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize moisture collection. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spinesflower populations within the Newhall Ranch Specific Plan.)*

(i) Biological Monitor

SP 4.6-74 A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spinesflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to.

Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).

The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spinesflower populations within the preserve(s). *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spinesflower populations within the Newhall Ranch Specific Plan.)*

(j) Construction Impact Avoidance Measures

SP 4.6-75 The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction:

- (a) **Water Control.** Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s).
- (b) **Storm Water Flow Redirection.** Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s).
- (c) **Treatment of Exposed Graded Slopes.** Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion. *(This measure has been omitted because the project design directly incorporates these measures.).*

(k) Reassessment Requirement

SP 4.6-76 In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR Mitigation Measure 4.6-53).

This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code

Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(I) Newhall Ranch Monitoring and Management

SP 4.6-77 Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see Mitigation Measures 4.6-66 and 4.6-67). The criteria set forth below shall be included in the plan.

Monitoring. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).

The monitoring component of the plan shall investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions.

The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with southern California flora and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include: (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five-year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.

For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species.

Monitoring/Reporting. An annual report will be submitted to the County and CDFG by December 31st of each year. The report will include a description of the monitoring methods, an analysis of the findings, effectiveness of the mitigation program, site photographs, and adoptive management measures, based on the findings. Any significant adverse impacts, signage, fencing or compliance problems identified during monitoring visits will be reported to the County and CDFG for corrective action by the project applicant, or its designee.

Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over 5 consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non-native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance.

After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the

bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete: (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, as approved by the County and CDFG.

The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(m) Translocation/Reintroduction Program

SP 4.6-78 To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.

Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort

Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas.

Direct seeding. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon. Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period.

Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program.

Translocation. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period.

Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program. *(This measure is not applicable to the Landmark Village project because the project has been designed to avoid significant direct and indirect impacts to spineflower populations within the Newhall Ranch Specific Plan.)*

(n) On-Going Agricultural Activities

SP 4.6-79 The project applicant, or its designee, shall engage in regular and ongoing consultation with the County and CDFG in connection with its ongoing agricultural operations in order to avoid or minimize significant direct impacts to the spineflower.

In addition, the project applicant, or its designee, shall provide 30 days advance written notice to the County and CDFG of the proposed conversion of its ongoing rangeland operations on Newhall Ranch to more intensive agricultural uses. The purpose of the advance notice requirement is to allow the applicant, or its designee, to coordinate with the County and CDFG to avoid or minimize significant impacts to the spineflower prior to the applicant's proposed conversion of its ongoing rangeland operations to more intensive agricultural uses. This coordination component will be implemented by or through the County's Department of Regional Planning and/or the Regional Manager of CDFG. Implementation will consist of the County and/or CDFG conducting a site visit of the proposed conversion area(s) within the 30-day period, and making a determination of whether the proposed conversion area(s) would destroy or significantly impact spineflower population in or adjacent to those areas. If it is determined that the conversion area(s) do not destroy or significantly impact spineflower populations, then the County and/or CDFG will authorize such conversion activities in the proposed conversion area(s). However, if it is determined that the conversion area(s) may destroy or significantly impact spineflower populations, then the County and/or CDFG will issue a stop work order to the applicant, or its designee. If such an order is issued, the applicant, or its designee, shall not proceed with any conversion activities in the proposed conversion area(s). However, the applicant, or the designee, may take steps to relocate the proposed conversion activities in an alternate conversion area(s). In doing so, the applicant, or its designee, shall follow the same notice and coordination provisions identified above. This conversion shall not include ordinary pasture maintenance and renovation or dry land farming operations consistent with rangeland management. *(This measure is not applicable to the Landmark Village project because the project does not include an agricultural component.)*

(o) San Martinez Population

SP 4.6-80 Upon approval of tentative tract map(s) impacting the San Martinez portion of the Specific Plan site, the applicant shall work with the Department of Regional Planning staff and SEATAC to establish an appropriately sized preserve area to protect the spineflower population at San Martinez Canyon. *(This measure is not applicable to the Landmark Village project because the project is not proposed within the San Martinez portion of the Newhall Ranch Specific Plan.)*

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant biological impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the certified Newhall Ranch Specific Plan Program EIR. To reflect that the mitigation relates specifically to the Landmark Village project, the following designation is used below, "LV 4.4-1."

(1) Natural River Management Plan Mitigation Measures

Measures are included below from the Natural River Management Plan (NRMP) Final EIS/EIR, Section 404 Permit, and Section 1603 Streambed Alteration Agreement for portions of the Santa Clara River and its tributaries (1998) prepared by ACOE and CDFG. The NRMP analyzes impacts associated with the implementation of various public improvements (bank stabilization, trails, bridges, utility crossings, etc.) along and within portions of the Santa Clara River adjacent to upstream Newhall Land properties. Although the NRMP did not cover the portion of the river bordering the Landmark Village tract map site, the NRMP provides relevant guidance and methods approved by CDFG, ACOE, and the County to address impacts on sensitive biological resources associated with the Santa Clara River and its environs. The Landmark Village applicant is seeking approval of a Master Section 404 Permit from the ACOE and a Master 1600 Agreement from the CDFG for the Newhall Ranch Specific Plan area, including the Landmark Village site. The Draft EIS/EIR is expected to be released for public review in late 2006.

To further reduce impacts to biological resources that would result from project implementation, the following mitigation measures from the NRMP are recommended and incorporated into this report. (Note: These measures have been modified to address all of the special-status wildlife species potentially occurring on the Landmark Village project site and other site-specific conditions.)

LV 4.4-1 Construction activities in the riverbed shall be restricted to the following areas of temporary disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap

gunite or soil cement bank protection from where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) 50-foot-wide corridor for all utility lines; and (4) 20-foot-wide temporary access ramps and roads to reach construction sites. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the Verification Request Letter submitted to the ACOE and CDFG for individual project approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed and the post-construction activities to facilitate natural revegetation of the temporarily disturbed areas.

- LV 4.4-2 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, and/or bank protection, all construction sites and access roads within the riverbed, as well as all riverbed areas within 300 feet of the construction site and access road, shall be inspected by a qualified biologist for the presence of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker and arroyo chub. The ACOE, USFWS, and the CDFG shall be notified of the inspection and shall have the option of attending. If any of the above agencies is not represented, the biologist shall file a written report of the inspection with the agency not in attendance within 14 days of the survey and no sooner than 30 days prior to any construction work in the riverbed.
- LV 4.4-3 Construction work areas and access roads shall be cleared of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker and arroyo chub immediately before the prescribed work is to be carried out, immediately before any equipment is moved into or through the stream or habitat areas, and immediately before diverting any stream water. The removal of such species shall be conducted by a qualified biologist using procedures approved by the ACOE, USFWS, and CDFG, and with the appropriate collection and handling permits. Species shall be relocated to nearby suitable habitat areas. A plan to relocate these species shall be submitted to the ACOE, USFWS, and CDFG for review and approval no later than 30 days prior to construction. Under no circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.
- LV 4.4-4 A qualified biologist shall be present when any stream/river diversion takes place, or when blocking nets and seines are used (see also EIR Mitigation Measure 4.6-57), and shall patrol the areas both within, upstream and downstream of the work area to rescue any species stranded by the diversion of the stream water or trapped by the nets/seines. Species that are collected shall be relocated to suitable locations downstream of the work area. Under no

circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.

LV 4.4-5 Blocking nets, or fences with 1/8-inch-square mesh, 18 inches high and buried 6 inches, shall be placed downstream of the work area to assure that none of the species move into the construction area.

LV 4.4-6 Installation of bridges, culverts or other structures shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade.

(2) Additional Mitigation Measures

To further reduce the magnitude of impacts to biological resources that would result from project implementation, the following mitigation measures are recommended and incorporated into this report:

LV 4.4-7 The riparian revegetation plan to be developed by the applicant shall demonstrate the feasibility of creating the required mitigation acreage (see Mitigation Measure 4.6-63). The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the riparian creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of CDFG, ACOE, and the County, and approved prior to issuance of the grading permit.

LV 4.4-8 Within 30 days of ground disturbance activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. The surveys shall continue on a weekly basis with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur. The results of the surveys, and any avoidance measures taken, shall be submitted to the County of Los Angeles within 30 days of completion of the pre-construction surveys and/or construction monitoring to document compliance with applicable State and Federal laws pertaining to the protection of native birds.

- LV 4.4-9 A pre-ground disturbance survey shall be conducted by a qualified biologist (subject to approval by the County) within 14 days of any disturbance activities in all areas on the project site containing suitable habitat for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, southwestern pond turtle, two-striped garter snake, American badger, San Diego black-tailed jackrabbit and San Diego desert woodrat. If any of these species are observed within the disturbance zone, they shall be relocated to a suitable area outside of the disturbance zone. Results of the surveys and relocation efforts shall be provided to CDFG and the County. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

If active San Diego desert woodrat nests (stick houses) with young are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site with a 100-foot minimum buffer from construction activities. This buffer may be greater, if determined to be appropriate by the biologist. At the discretion of the biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If San Diego desert woodrats are observed within the grading footprint outside of the breeding period, individuals shall be relocated to a suitable location on or in proximity to the project site by a qualified biologist in possession of a scientific collecting permit.

- LV 4.4-10 No earlier than 20 days prior to any grading activity that would occur during the breeding season of native bat species potentially utilizing the site (April 1 through August 31), a field

survey shall be conducted by a qualified biologist (retained by the applicant, with selection reviewed by the County) to determine if active roosts of special-status bats such as pallid bat, western mastiff bat, pocketed free-tailed bat, fringed myotis and yuma myotis are present in areas of the project site containing suitable roosting habitat, such as woodlands and buildings. If active maternity roosts are found, construction within 200 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. Implementation of this measure would ensure that no loss of active maternity roosts of special-status bat species will occur and, therefore, will reduce impacts on bat species to a less than significant level.

- LV 4.4-11 Prior to the issuance of a grading permit, the applicant shall prepare a landscaping plan. This plan will be subject to review and approval by the County and CDFG and will include a plant palette composed of native, non-invasive species that are adapted to the conditions found on the Landmark Village site, without requiring high irrigation rates. Irrigation of perimeter landscaping shall be limited to temporary (i.e., until plants become established) drip irrigation. The landscaping plan will also include a list of invasive plant species prohibited from being planted on the project site. This list of prohibited plants will be compiled in cooperation with a qualified restoration specialist and will be distributed to future occupants of the Landmark Village site.
- LV 4.4-12 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark Village site.
- LV 4.4-13 The Landmark Village Home Owners Association shall supply educational information to future residents of the Landmark Village site regarding the importance of not feeding wildlife, ensuring that trash (containing food) is not accessible to wildlife, keeping the ground free of fallen fruit from trees and not leaving pet food outside.
- LV 4.4-14 All oaks with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or half again as large as the distance from the trunk to the drip line, whichever distance is greater). No parking or storage of equipment, solvents or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project biologist confirms the health of preserved trees.

- LV 4.4-15 Prior to use and placement on the Landmark Village site, all landscaping materials (including organic mulches) shall be inspected and certified “free” of Argentine ants.
- LV 4.4-16 A mitigation plan for elderberry scrub shall be developed and implemented by the applicant. The plan shall demonstrate the feasibility of replacing the acreage of this plant community to be removed at a 1:1 ratio. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of grading permits.
- LV 4.4-17 Prior to the issuance of a grading permit for ground disturbance, construction or site preparation activities, the applicant shall retain the services of a qualified biologist, approved by the CDFG and Los Angeles County, to conduct appropriately timed focused surveys for spadefoot toad within all portions of the project site containing suitable breeding habitat. If western spadefoot are not identified on the project site, no further measures would be required. Should western spadefoot be identified on the project site, the following measures would be implemented:
- (a) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Newhall Ranch Specific Plan area, outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Landmark Village project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG and consist of a shallow excavated pond(s) utilizing an artificial rubber pond liner as a base. The location shall be as far away as possible from any of the homes and roads to be built. The relocation pond(s) shall be designed such that it only supports standing water for several weeks following seasonal rains in order that aquatic predators (i.e., fish, bullfrogs, crayfish, etc.) cannot become established. The size and number of ponds shall be determined by CDFG. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as possible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and the relocation of all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat to the satisfaction of the monitoring biologist and CDFG.
 - (b) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct a series of surveys in all appropriate

habitats within the development envelope prior to the initiation of construction activities. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified relocation pond(s) described above.

- (c) The qualified biologist shall monitor the relocation site for a minimum period of five years, or as otherwise directed by CDFG. Specific monitoring requirements and success criteria shall be approved by CDFG. It is expected that minimum requirements will include annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses, larval and post larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.

LV 4.4-18 For all grading and construction activities a qualified biologist shall be retained by the applicant (with selection reviewed by the County) to ensure that incidental construction impacts on special-status wildlife species are avoided or minimized. The biologist shall be in possession of a Scientific Collecting permit and relocate any wildlife species (for which they are permitted to handle) that may be destroyed or adversely affected as a result of construction and/or site preparation activities. Should a State or Federally listed species be encountered, construction shall be halted until a permitted biologist can relocate the animal(s). Responsibilities of the construction biological monitor include the following:

- Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds). Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas.
- Discuss procedures for minimizing harm/harassment of wildlife encountered during construction.
- Review/designate the construction area in the field with the contractor in accordance with the final grading plan. Haul roads, access roads, and on-site staging and storage areas shall be sited within grading areas to minimize degradation of habitat adjacent to these areas. If activities outside these limits are necessary, they shall be evaluated by the biologist to ensure no special-status species or habitat will be affected.
- Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity. Any construction activity areas immediately adjacent to riparian areas or other special-status resources (such as large trees or bird nests) may be flagged or temporarily fenced by the monitor, at his/her discretion.

- Periodically visit the site during construction to coordinate and monitor compliance with the above provisions.
- Submit to the County an immediate report of any conflicts or errors resulting in impacts to special-status resources as well as a final report on the results of construction and any recommendations for improving the process.

LV 4.4-19 A mitigation plan for slender mariposa lily shall be developed prior to the issuance of a grading permit and implemented by the applicant. The plan shall incorporate the findings of the *Biological Resources Technical Report, Newhall Ranch High Country Specific Management Area* (Dudek & Associates 2006), and areas identified in the technical report as “high suitability” for slender mariposa lily shall be used as receptor sites for transplanted bulbs (see **Appendix 4.4**). The plan shall demonstrate the feasibility of replacing the number of individual plants to be removed at a 1:1 ratio and/or enhancing and protecting existing populations of the species. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites in protected/preserved areas within the Newhall Ranch Specific Plan area; (2) methods for harvesting seeds and salvaging and transplantation of individual bulbs/plants to be impacted; (3) site preparation procedures for the mitigation site; (4) a schedule and action plan to maintain and monitor the mitigation area; (5) a list of criteria and performance standards by which to measure success of the mitigation site; (6) measures to exclude unauthorized entry into the mitigation areas; and (7) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.

LV 4.4-20 Appropriately timed focused surveys for the undescribed species of *Gnaphalium* (Special-Status Plant Species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities within suitable habitat (primarily river terraces) of the species to determine if plants have established within potential impacted areas since the time of the 2005 survey. No longer than one year shall elapse between completion of the survey and commencement of construction activities. Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize impacts to individual plants. These measures shall include adjusting the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then available methods for salvaging seeds and/or transplantation of individual plants to be impacted will be evaluated and implemented. All seed collection and/or transplantation methods, as well as the location of the receiver site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara

River), shall be coordinated and approved by the County prior to the issuance of a grading permit.

- LV 4.4-21 The Oak Resource Replacement Plan to be prepared (as described in Mitigation Measure 4.6-48) shall include measures to create, enhance, and/or restore 4.45 acres of coast live oak woodland within the High Country SMA. The plan shall be subject to the requirements outlined in Mitigation Measure 4.6-48.
- LV 4.4-22 In addition to the arroyo toad survey areas specified in **Mitigation Measures LV 4.4-2 and LV 4.4-3**, clearance surveys for arroyo toad shall be conducted within portions of the Landmark Village project site containing agricultural fields. Should arroyo toad be identified, the USFWS shall be contacted immediately and construction activities shall be halted. Under no circumstances shall arroyo toad be collected or relocated unless approved by, and under the supervision of, the USFWS.
- LV 4.4-23 A mitigation plan for *Artemisia tridentata* ssp. *parishii* shall be developed prior to the issuance of a grading permit and implemented by the applicant. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites in protected/preserved areas within the Newhall Ranch Specific Plan area; (2) methods for harvesting seeds of plants to be impacted; (3) site preparation procedures for the mitigation site; (4) a schedule and action plan to maintain and monitor the mitigation area; (5) a list of criteria and performance standards by which to measure success of the mitigation site; (6) measures to exclude unauthorized entry into the mitigation areas; and (7) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.

11. CUMULATIVE IMPACTS

a. Approved, Proposed, and Reasonably Foreseeable Future Projects

The Landmark Village project is a component of the Newhall Ranch Specific Plan. The Specific Plan guides the long-term development of the 11,963-acre Newhall Ranch community, comprising a broad range of residential, mixed-use, and non-residential land uses developed within five village areas. Buildout of the Newhall Ranch Specific Plan will occur through submission of individual tentative subdivision maps. Landmark Village represents the first subdivision map filed within the Specific Plan area. Other subdivision maps on file with the County or that are considered reasonably foreseeable include Mission Village and Homestead.

Buildout of the Specific Plan would permanently convert approximately 5,132 acres of land from a natural, albeit partially disturbed habitat condition, to that of a suburban/urban environment. Buildout of individual tracts filed under the Specific Plan would significantly impact the following vegetation communities absent mitigation: Coastal Sage Scrub, Great Basin Scrub, Oak Communities, Elderberry Scrub, Mainland Cherry Forest, Riparian Scrub, Riparian Woodland, Valley Freshwater Marsh, Cottonwood Oak Woodland, Alluvial Scrub, and Mesic Meadow.

Construction and operation of uses developed within the Specific Plan would directly disturb wildlife on and near the site. Within the planned development areas, species of low mobility would be lost during site preparation. Conversion of existing open space to developed uses consisting of structures and ornamental landscaping would eliminate natural communities on developed portions of the site and result in a reduction in native wildlife species diversity. Buildout of uses within the Specific Plan would also limit the local movement of wildlife species that currently make use of areas proposed for development.

Other proposed and reasonably foreseeable projects beside those uses in the Newhall Ranch Specific Plan are described below. Where the potential impacts are known, the impacts likely to be associated with these projects are first identified. The potential for these impacts to combine with similar impacts due to the proposed project is also evaluated. This list of projects is not intended to include all projects that are proposed in the project region. Instead, the analysis focuses on those projects that support or would potentially affect similar plant communities, jurisdictional resources, and special-status plant and animal species that occur on the Landmark Village project site. In particular, those projects that are adjacent to or that otherwise may affect resources associated with the Santa Clara River were included.

(1) Valencia Commerce Center

This project consists of a light industrial and commercial development over 1,500 acres on undeveloped farmlands north of the Newhall Ranch Specific Plan site and SR-126, and west of I-5. Castaic Creek traverses the site. The County approved this project in 1992 and a considerable portion of the site is now developed. A 404 Permit was issued for this project by the ACOE to line the existing banks with gunite bank protection. Castaic Creek contains dense riparian woodland and supports the least Bell's vireo and arroyo toad. As such, construction of the Valencia Commerce Center and the development projects associated with the proposed Valencia Company 404 Permit could cause the following potentially significant cumulative impacts: (1) loss of riparian habitat from the study area; (2) disturbance of riparian wildlife due to the proximity of urban development; (3) potential degradation of water quality in the Santa Clara River due to urban stormwater runoff; (4) permanent loss of prime farmlands; (5) temporary and permanent disturbance to habitat for the least Bell's vireo; (6) impacts to mariposa lily, everlasting,

and San Fernando Valley spineflower; and (7) modification of visual qualities due to urban development, bank protection, and bridges.

(2) West Creek Project

The proposed West Creek project is located on the west side of San Francisquito Creek, north of Newhall Ranch Road and south of the Copperhill Road Bridge. The proposed project consists of a maximum total of 2,545 residential units, along with a total of 180,000 square feet of neighborhood serving commercial uses, an elementary school and other related development. Circulation will be provided by a series of internal collector roadways that connect to the previously constructed extension of Copper Hill Drive, a public street that represents the primary roadway providing ingress and egress to the site. Private recreational facilities will be provided in the central portion of the project site and a network of hiking/biking trails will extend both throughout the project site and along San Francisquito Creek. Buried bank stabilization has been installed along the west side of San Francisquito Creek and the Decoro Drive Bridge over the creek has been completed. The project site lies partially within SEA 19.

Development of the West Creek project and the other projects along San Francisquito Creek could combine to cause the following potentially significant cumulative impacts: (1) loss of riparian habitat along the margins of the creek; (2) disturbance of riparian wildlife breeding, foraging, and movement due to the proximity of urban development and short-term construction activities; (3) potential degradation of water quality in San Francisquito Creek due to urban stormwater runoff; (4) localized alteration in channel velocities in areas where the existing channel is narrowed; (5) loss of native upland habitats due to land development; (6) permanent loss of prime farmlands; (7) modification of visual qualities due to urban development, bank protection, and bridges; and (8) potential disturbance to habitat for the unarmored threespine stickleback.

(3) Entrada

The approximately 820-acre project site is located within unincorporated Los Angeles County in the Santa Clarita Valley. More specifically the project site is located directly west of I-5, both north and south of Magic Mountain Parkway. The project applicant proposes to develop the property with up to 3,300 residential units and 3.1 million square feet of commercial floor area. Approximately 48 percent of the site would be retained as open space. Bank stabilization along a portion of the Santa Clara River would be constructed in conjunction with the project. Construction and development of this project could cause potentially significant cumulative impacts to mariposa lily, everlasting, San Fernando Valley spineflower, and valley oak savannah.

(4) Tesoro del Valle (Upper San Francisquito Creek)

The approved project presently under construction is a master planned community of about 2,500 units on a 1,795-acre site on the west side of San Francisquito Creek. When completed, this development would include single- and multi-unit residences, commercial sites, schools, parks, and a fire station. About 1,002 acres of the site would remain in open space, and about 672 acres would remain in a natural undeveloped condition. The project required and received a General Plan Amendment from Los Angeles County, a Conditional Use Permit (CUP), and other local approvals. The project requires substantial grading of hills and the removal of upland habitats and numerous oak trees. The project encroaches into San Francisquito Creek at two locations. About 3.5 acres of the creek will be filled for slopes and a bridge crossing. The lower slopes will contain rip-rap bank protection. Runoff from the project will be directed to water quality basins where aquatic vegetation will be maintained to uptake urban stormwater pollutants before the stormwater is discharged into the creek. The project site lies partially within SEA 19.

Development of the Tesoro del Valle and the projects along San Francisquito Creek associated with the approved Valencia Company 404 Permit could combine to cause the following potentially significant cumulative impacts: (1) loss of riparian habitat along the margins of the creek; (2) disturbance of riparian wildlife breeding, foraging, and movement, due to the proximity of urban development and short-term construction activities; (3) potential degradation of water quality in San Francisquito Creek due to urban stormwater runoff; (4) localized alteration in channel velocities in areas where the existing channel is narrowed; (5) loss of native upland habitats due to land development; (6) permanent loss of prime farmlands; (7) modification of visual qualities due to urban development, bank protection, and bridges; and (8) potential disturbance to habitat for the unarmored threespine stickleback.

(5) Cross Valley Connector (Newhall Ranch Road including the Newhall Ranch Road/Golden Valley Road Bridge)

This project would involve the extension of Newhall Ranch Road, including the Newhall Ranch Road/Golden Valley Road Bridge. Newhall Ranch Road would be extended by approximately 2 miles to the east of Bouquet Canyon Road including a bridge over the Santa Clara River connecting with Golden Valley Road. The proposed typical section of the alignment would include a six-lane roadway of approximately 120 feet in width, with a 14-foot median island and pedestrian and bicycle lanes. The proposed Golden Valley Road segment would require the construction of a bridge across the Santa Clara River and would traverse undeveloped open space (e.g., vacant lot, natural riverbed, scrub habitat) parallel to an overhead power line corridor. The proposed roadway is included as Major Arterial Highways in the City's General Plan.

(6) North Valencia Specific Plan No. I (Industrial Park)

While a majority of the North Valencia Specific Plan, located approximately 2 miles east (upstream) of the Newhall Ranch Specific Plan site and adjacent to the north and south side of the Santa Clara River and east and west side of San Francisquito Creek, is already constructed, a relatively small portion remains to be built. The remaining portion of the project would result in the construction of 167,000 square feet of industrial/business park uses on 7.7 acres. The Business Park designation is intended for industrial type uses per the North Valencia No. I Specific Plan. These uses will allow general industrial, research and development, limited retail/commercial, warehousing and office use related to these uses. Primary access to the site is through Avenue Tibbitts, Anza Drive, and Avenue Hopkins. No significant biological resources occur within the 7 acres of vacant land remaining within this Business Park.

(7) North Valencia Specific Plan No. II

This approved project, located approximately 2 miles east (upstream) of the Newhall Ranch Specific Plan on the east side of San Francisquito Creek, entailed the annexation of 596.2 acres of land and the entitlement to develop the undeveloped portion of the annexation area (391.2 acres). Approximately 205 acres of this area is already developed with commercial and industrial uses. The remaining portions of the Specific Plan area are presently under development. The project approvals allow the developer to construct 1,900 dwelling units (1,400 single-family detached, 500 multi-family attached), 210,000 square feet of commercial/retail uses, a 15.9-acre community park, 20-acre school site, 4.1 acres of private neighborhood parks, 93.4 acres of natural open space and over 9 miles of trails and paseos. The 596.2-acre project includes approximately 391.2 acres of Specific Plan area and 205 acres of existing industrial and commercial development in the Valencia Industrial Center. The SEA in the project area is the San Francisquito Creek SEA (SEA 19). The General Plan states that, "...[t]his area was designated as an SEA primarily because of the threat of loss of suitable habitat for the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), a federally and state listed Endangered species."

The project is a diverse and balanced mix of land uses ranging from commercial retail to high density multi-family and low to medium density single-family residential uses. These uses support the local vicinity and region (e.g., new housing would be provided to support existing and new employment opportunities expected to occur in the Santa Clarita Valley); commercial land uses which provide services for new residents; neighborhood parks and a school site to provide local recreational and educational support for new and existing residents. The trail system will serve the recreational needs of both a local and regional area. The creek area on the site is devoted to conservation (approximately 93.4 acres of the 596.2-acre site). This area, termed the San Francisquito Creek Conservation Area, is intended to respond to the City's desire to maintain the creek and SEA as an area devoted to the protection and preservation

of important biological resources. Nevertheless, impacts on riparian resources and the riparian ecosystem and impacts on SEA 19 are considered cumulatively significant. Also, human and domestic animal use of riparian and upland habitat areas is expected to continue to occur as a result of project implementation and, therefore, will remain cumulatively significant.

(8) Riverpark

The Newhall Land and Farming Company will develop the Riverpark (Panhandle) project on a 695.4-acre site in the City of Santa Clarita in Los Angeles County. This project was approved by the City of Santa Clarita in May 2005. The project site is located in the central part of the City at the eastern terminus of Newhall Ranch Road, east of Bouquet Canyon Road between the Castaic Lake Water Agency (CLWA) property and Soledad Canyon Road.

The project includes the development of 695.4 acres of land for single- and multi-family residential dwellings and supporting commercial uses. The entitlement, as approved by the City, allows the applicant to construct a residential community with 1,089 dwelling units, a maximum of 16,000 square feet of commercial uses, a trail system (Santa Clara River Trail, Newhall Ranch Road and Santa Clarita Parkway Class I trails, and trail connections from the interior planning areas), and a 29-acre active/passive park along the Santa Clara River. The project would also provide for utility easements (electric, water, wastewater, etc.), public street rights-of-way, and roughly 707 acres of City dedicated on and off-site open space area, including significant portions of the Santa Clara River. Buildout of the project necessitates the extension of Newhall Ranch Road, (full grading, four to six lanes) including the Newhall Ranch Road/Golden Valley Road Bridge over the Santa Clara River, to the Golden Valley Road/Soledad Canyon Road flyover. A portion of Newhall Ranch Road is located off site on property owned by CLWA. The project would include the construction of a portion of Santa Clarita Parkway (full grading, four vehicle lanes, Class I trail) from Newhall Ranch Road south for approximately 1,500 feet. The project will not include construction of the Santa Clarita Parkway Bridge over the Santa Clara River or its connection to Soledad Canyon Road.

Significant impacts associated with this project include: conversion of 280 acres of wildlife habitat/natural open space; Impacts to riverine habitat (as identified by the resource line) and associated riverbed, and; impacts to adjacent upland habitat within 100 feet of the riparian resource line.

(9) Bouquet Canyon Bridge Widening

This project would result in the widening of the Bouquet Canyon Road Bridge over the Santa Clara River to eight lanes, which would add one lane in each direction. The project consists of design and construction of roadway improvements, including the median, the relocation of a 36-inch effluent line on

the south side of the bridge, the relocation of three sewer siphons on the east side of the bridge, a bike lane undercrossing on the north end of the bridge and a bike ramp from the bridge to the bike lane undercrossing on the north end of the bridge. Bridge improvements would not permanently alter the river hydrology because the widening retains the existing span of the bridge. Thus, hydrological and biological impacts would be short-term construction-related impacts.

(10) Whittaker – Bermite (Porta Bella Project)

Specific Plan No. 91-001, proposes a comprehensive plan for development of a 996-acre site with approximately 1,678 single-family homes and 1,560 multi-family units on 399 acres. Approximately 91 acres is planned for commercial and industrial uses, 14 acres for institutional uses, and 58 acres consisting of streets. The remaining 434 acres would be devoted to natural open space and recreational uses. Traffic/transportation, geological, air quality and biological resource impacts could occur with project implementation.

(11) Synergy Project

This project is proposed in the City of Santa Clarita and is located at terminus of Ermine Road, adjacent to the Riverpark project site. The project site is 208 acres in size and would consist of 916 multi-family and 95 single-family dwelling units. Hydrology, transportation/access, biological resources, water quality, and air quality are expected to be potentially significant impacts.

(12) Tick Canyon

This project is proposed at the northern terminus of Shadow Pines Boulevard, outside of the present City limits. It proposes the development of 492 single-family units and a 34-acre park site on 500 acres. Traffic/transportation, geological, air quality and biological resource impacts could occur with project implementation. An EIR is presently underway for this project.

(13) Bee Canyon

The Bee Canyon project is proposed on a 211-acre parcel of land located between the Transit Mix project indicated above and State Route 14 (SR-14), easterly of Soledad Canyon Road. The applicant is requesting 556 single-family modular units, and the project would require the lengthy extension of public utilities. Traffic/transportation, geological, air quality and biological resource impacts could occur with project implementation. An EIR has yet to be completed for this project.

(14) Tract 42670

This project consists of a mixed commercial/industrial project to be located along Golden Valley Road in the center of the City of Santa Clarita. The 220-acre site would be developed with up to six million square feet of buildings. This project has been approved by the City and is under construction. Transportation/access and air quality are potential impacts associated with the project.

(15) Fair Oaks Ranch

The Fair Oaks project (Tentative Tract Map No. 52833) involves the construction of 1,033 residential units on 602 acres just outside the eastern boundary of the City of Santa Clarita. Phase II of the Fair Oaks Ranch development involves the construction of 738 single-family homes, 336 multi-family dwellings, 153 luxury apartments, a 6-acre public park, and dedication of 321 acres of open space just outside the eastern boundary of the City of Santa Clarita. Traffic/transportation, air quality and biological resource impacts could occur with project implementation.

(16) Santa Clara River Enhancement and Management Plan

In 1994, a multi-agency committee formally initiated the Santa Clara River Enhancement and Management Plan. The committee consists of various parties and "stakeholders" along the river, including federal, state, and local agencies; water districts; farmers; property owners; and environmental organizations. The plan is designed to provide information on the land use, governmental, and resource conflicts along the river and its 500-year floodplain, extending from near Acton to the Pacific Ocean. A 26-member Project Steering Committee consisting of representatives of the counties, communities, state and federal agencies, property owners, aggregate producers, water agencies and Friends of the Santa Clara River directs plan preparation. The Steering Committee began by identifying the river's critical issue areas. Reports were developed by subcommittees covering biology, water resources, flood control, agriculture, aggregate mining, and recreation that provide background information, goals and recommendations for the river on the various issue areas. A series of computer-based maps covering the entire river were produced, and have been used in a GIS overlay process to identify conflicts and opportunities, and to facilitate decisions regarding uses of the river floodplain. The Steering Committee, in early 1999, approved a set of river-wide and reach-by-reach recommendations, which are to be incorporated into the plan. A draft plan was completed in January 2004 and is presently under review.

(17) Gate King Project

The applicant is proposing to subdivide a 584-acre site into 60 lots and is requesting General Plan Amendments to change the land use designations in several areas of the site. The site is situated in the

southern portion of Santa Clarita, within the community of Newhall, west of SR-14 and Sierra Highway and south of San Fernando Road. The proposal involves amending the land use designation on about 223 acres, or about 38 percent of the site. The proposed changes would eliminate the Residential (RE) and Commercial (CC) designations from the site, and would increase the area designated Industrial Commercial (IC) from 337.5 acres to about 344 acres. The area designated open space (OS) would increase from 93.2 acres to about 240 acres. The project site includes an estimated 10,680 live oaks and an additional 1,041 oaks that are either dead or have experienced severe fire damage. The proposed development would directly remove 1,000 oaks, or about 9 percent of the total number of oaks on site. Oaks to be removed include 696 coast live oaks and 304 scrub oaks. In addition to the oaks that would be directly removed by grading, site grading and development could indirectly affect 336 oaks, or about 3 percent of the total. Other impacts associated with the project include traffic, air quality, and increased demand for public services and utilities.

(18) Transit Mix Soledad Canyon Mine

Transit Mix, Inc. has proposed a new aggregate mine for a hillside at the entrance to Soledad Canyon. The surface mine would encompass about 300 acres on mostly private land. The Bureau of Land Management and Los Angeles County Department of Regional Planning have prepared a separate EIR and EIS.

These documents found that the project would result in significant impacts to upland habitats. Use of groundwater at the mine site could also affect the amount of surface water at the mouth of Soledad Canyon where a population of the unarmored threespine stickleback is present. A long-term significant impact to this species is not anticipated because the applicant has agreed to a continuous water quality and depth-monitoring program designed to detect and prevent any adverse impacts from groundwater pumping. Other impacts associated with mine operation include increased truck traffic on SR-14 and localized air quality and noise impacts on nearby residential dwellings.

(19) Los Angeles County Sanitation Districts' Facilities Plan

Most wastewater generated within the Santa Clarita Valley is treated at two existing WRPs that are operated by the County Sanitation Districts of Los Angeles County (CSDLAC). These two treatment facilities, the Saugus WRP (District 26) located at 26200 Springbrook Avenue in Saugus, and the Valencia WRP (District 32), located at 28185 The Old Road in Valencia have been interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The relationship between the two districts was established through a joint powers agreement that created the regional treatment system and permits the Valencia WRP to accept flows that exceed the capacity of the Saugus

WRP. These two facilities provide primary, secondary, and tertiary treatment. The SCVJSS has a combined permitted treatment capacity of 19.1 million gallons per day (mgd) and treated an average of 18.1 mgd.⁹ Existing facilities can be expanded to handle a daily capacity of 34.1 mgd, which is sufficient to meet demand up until 2015.¹⁰

The CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the Santa Clarita Valley Joint Sewerage System and a Draft EIR. The Facilities Plan estimates future wastewater generation for the probable future service area of County Sanitation Districts 26 and 32 in order to anticipate future treatment capacity and wastewater conveyance needs. According to CSDLAC estimates, total flows projected from the Santa Clarita Valley in 2015, exclusive of Newhall Ranch, would be 34.1 mgd. This projection is based upon Southern California Association of Governments (SCAG) 96 population projections exclusive of Newhall Ranch. As a result of this finding, CSDLAC proposed to incrementally expand the treatment facilities to meet future needs in two expansions to a total of 34.1 mgd.¹¹ This two-phase expansion plan, which would increase treatment capacity by approximately 15 mgd, was recently approved. The first phase would expand treatment capacity by approximately 9 mgd, or approximately a 47 percent increase over existing capacity. This expansion, when complete, will meet the expected wastewater treatment demand through 2010. The second phase, would increase treatment capacity an additional 6 mgd.

The proposed facilities plan is not expected to result in any significant impacts beyond localized and temporary impacts due to physical improvements to the systems. Hence, the potential for significant cumulative impacts with the proposed project is considered very low.

(20) Castaic Lake Water Agency Reclaimed Water Master Plan

CLWA has prepared a draft Reclaimed Water Master Plan (1993) as part of their plan to increase the amount and reliability of the overall water supply (see **Appendix 4.10**). In October 2004, CLWA began CEQA analysis of the *Recycled Water Master Plan* (2002). This analysis will result in a Program Environmental Impact Report covering the various options for a recycled water system outlined in the Master Plan. A Notice of Preparation was released for public review in April 2005. The project would use effluent from County Sanitation Districts of Los Angeles' two local wastewater treatment plants (Saugus and Valencia). Treated wastewater would be diverted from discharge to the river and instead, conveyed by pipelines to customers of reclaimed water such as golf courses, landscaped areas, and certain industrial uses. At this time, CLWA has approval from the Regional Board and Sanitation

⁹ Written correspondence from the County Sanitation Districts of Los Angeles County, March 29, 2004.

¹⁰ Written correspondence from the County Sanitation Districts of Los Angeles County, October 1, 2002.

¹¹ Ibid.

Districts to reclaim up to 1,700 acre-feet per year. The Master Plan indicates that up to 10,000 acre-feet per year may be feasibly reclaimed and used in the study area in the next 10 years.

Diverting effluent from the river could reduce surface flows, groundwater recharge, and habitat for the unarmored threespine stickleback and other sensitive aquatic species. The significance of this impact is unknown pending further environmental studies. However, it is likely that diversion from the river will only offset the past, present, and future increases in imported water use in the region that result in steadily increasing discharges of treated wastewater into the river. Hence, the effects on surface water, groundwater, and aquatic habitat may be negligible. To the extent that this conclusion is supported by future studies, no significant cumulative impact is anticipated with the proposed project.

(21) Castaic Junction

The 114.2-acre site is located within unincorporated Los Angeles County in the Santa Clarita Valley. The irregularly shaped parcel is immediately south of the intersection of Henry Mayo Road and The Old Road. North of this intersection is the I-5/SR-126 interchange. The Santa Clara River defines the southern project boundary. The project applicant proposes the development of up to 1,377,200 square feet of light industrial building space, 446,600 square feet of office space, and 55,700 square feet of retail space totaling 1,879,500 square feet.

The site is within the 100-year floodplain of the Santa Clara River and a portion is also within SEA 23, which includes habitat for the protected unarmored three-spine stickleback. Buildout of uses proposed would potentially alter river hydraulics, as the development pads must be protected from flooding. Flood protection improvements could impact riparian species known to occur within SEA 23. Other impacts include increased traffic on I-5 and SR-126, increased air emissions, and increased demand for public services and utilities.

(22) Newhall Ranch Habitat Management Plan and Spineflower Conservation Plan

The Landmark Village applicant is currently processing federal and state permit applications and the preparation of a combined EIS/EIR under both the National Environmental Policy Act (NEPA) and CEQA to assess the environmental implications of implementing the Newhall Ranch Habitat Management Plan (HMP) and Spineflower Conservation Plan (SCP). This project's HMP component consists of those improvements, facilities, and activities associated with implementation of the Newhall Ranch Specific Plan, which will require federal and state permits and agreements from the ACOE and the CDFG. The proposed HMP consists specifically of various flood control improvements, stream bank protection, drainage facilities, roads, building pads, pipeline and utility river crossings, nature trails, new and widened bridges, and the Newhall Ranch Water Reclamation Plant outfall facilities. The proposed

SCP component consists of a conservation management framework to permanently protect and manage designated preserve areas designed to maximize the long-term persistence of the spineflower.

The proposed federal action required to implement this project consists of the issuance of a long-term Section 404 permit for the Newhall Ranch HMP facilities and improvements associated with the Newhall Ranch Specific Plan that would potentially result in the discharge of fill or dredged material in and adjacent to the Santa Clara River and its side drainages. As part of the federal permit review process, the ACOE also will comply with Section 7 of the Endangered Species Act, which requires consultation with the USFWS and the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) for any federal permit that may affect an ESA-listed species or their critical habitat. In addition, a federal Clean Water Act Section 401 water quality certification will be required from the Los Angeles Regional Water Quality Control Board (RWQCB) as part of the ACOE' permit review process. The USFWS also will review a candidate conservation agreement and related SCP for the spineflower and consider whether to enter into such an agreement for the long-term conservation of the spineflower.

The proposed state action consists of the issuance by CDFG of a long-term master streambed alteration agreement under Section 1600 of the California Fish and Game Code for Newhall Ranch HMP construction activities associated with the Newhall Ranch Specific Plan that occur within the bed, bank, or streambed channel of the Santa Clara River and its side drainages. The proposed state action would also include issuance by CDFG of an incidental take permit for Newhall Ranch HMP construction activities that impact state-listed species under the California Endangered Species Act. The proposed state action includes CDFG's review and possible approval of the SCP and issuance of a Section 2081 incidental take permit for spineflower.

b. Cumulative Development Impact Analysis

Development in the region has been cumulatively reducing the amount of open area and extent of sensitive habitats, and has been constricting wildlife movement. This trend has been occurring in the region since the early 1950s. Major open areas that remain undeveloped include the Angeles National Forest and Los Padres National Forest. Several large development projects are proposed for the Los Angeles/Ventura County region, including the Newhall Ranch Specific Plan.

The Newhall Ranch Specific Plan will permanently convert approximately 5,132 acres of land from a largely natural, albeit partially disturbed, habitat condition, to that of a suburban/urban environment and, at the same time, dedicate 6,170 acres (51 percent of the total Specific Plan area) in the Santa Clara River Corridor and the Santa Susana Mountains as open space. That conversion, when added to all the other such conversions of open area that are proposed, will permanently decrease the amount of land

available for natural habitats and the flora and fauna that inhabit them. In some cases, specific natural habitats and plant and animal species occur in relative abundance despite the amount of development that is on the horizon; however, other habitat and species are not as abundant. In these latter cases, incremental development has been contributing to habitat loss.

When viewed individually, it may be possible for each of the projects to mitigate potential project-specific significant impacts through the implementation of habitat replacement programs and the requirements of the regulatory processes to which each of the projects may be subject (e.g., ACOE Section 404 permit process, California Fish and Game Code 1602 permit process, etc.). However, neither implementation of the Newhall Ranch Specific Plan (including the Landmark Village project), nor any other similar large-scale project proposed on the edge of the existing urban environment, can mitigate from a biological perspective the permanent conversion of large blocks of open space area and its associated plant and wildlife habitat. For this reason, the cumulative impacts identified above are considered significant unavoidable impacts.

12. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, significant unavoidable impacts would occur with respect to the loss of many sensitive animal species, loss of coastal sage scrub, the overall loss of wildlife habitat and increased human and domestic animal presence.

b. Cumulative Impacts

The project would contribute to a significant unavoidable cumulative impact related to the ongoing loss of biological resources in the project region.



Los Angeles County
Department of Regional Planning



Planning for the Challenges Ahead

**NOTICE OF COMPLETION AND AVAILABILITY
DRAFT ENVIRONMENTAL IMPACT REPORT**

Bruce W. McClendon FAICP
Director of Planning

**LANDMARK VILLAGE
County Project No. 00-196
Tentative Tract Map No. TR53108
RCUP-CP00-196/ROAK-OT00-196
RPA-SP00-196/ RPA-LP00-196
RCUP-T200500112/RHWY-HR00-196/RPA-PA00-196
STATE CLEARINGHOUSE NO. 2004021002**

The County of Los Angeles Department of Regional Planning acting in the capacity of "Lead County Agency" under the County of Los Angeles Environmental Document Reporting Procedures and Guidelines, Chapter III, Section 304, has filed a "Notice of Completion" of a Draft Environmental Impact Report (DEIR) for the **Landmark Village Project**. This document has been prepared in accordance with, and pursuant to, the California Environmental Quality Act (CEQA), as amended; Public Resources Code, Sections 21000-21178; and the "Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) as amended, California Code of Regulations, Title 14, Chapter 3, 15000-15387.

SITE LOCATION AND PROPOSED PROJECT

The attached DEIR has been prepared for the above project located within the Newhall Ranch Specific Plan in western unincorporated Los Angeles County, north of the Santa Clara River, South and north of Highway 126, east of Ventura County boundary and west of Interstate 5 ("I-5"). The project consists of 418 lots to include a maximum of 1,444 residential units, a maximum of 1,353,000 square feet of non-residential mixed-used space, an elementary school, a community park, three private recreational facilities, open space and river trail uses. The site is currently used for agricultural purposes and contains miscellaneous, ancillary sheds for agricultural storage and dirt roads. There is southern willow and cottonwood riparian habitat that extends to the central portion of the site along the southern boundary of the tract map. Three oak trees exist on site. Chiquita Canyon Landfill is located to the north of the project site. Several active and abandoned oil wells are located within the tract boundary. Some off-site infrastructure improvements will be within SEA 23, Santa Clara River, containing habitat for the endangered stickleback.

REVIEWING LOCATIONS

The formal public review period for the DEIR will be from **November 20, 2006 to January 22, 2007** (60 days). A public hearing on this Draft Environmental Impact Report and the proposed project has been scheduled before the Los Angeles County Regional Planning Commission at 9:00 a.m. on Wednesday, **January 31, 2007** in the Regional Planning Commission Hearing

Room, 320 West Temple Street, Los Angeles, CA 90012. All written comments received on the DEIR prior to the close of the public hearing on the project will be considered in the Final EIR.

To ensure public access to the DEIR, copies of the document will available for review at the County libraries listed below:

Newhall County Library
22704 West 9th Street
Newhall, CA 91321

Canyon County Jo Anne Darcy Library
18601 Soledad Canyon Road
Canyon Country, CA 91351-3721

Valencia County Library
223743 West Valencia Boulevard
Valencia, CA 91355

Copies of the DEIR will also be available for public review Monday through Thursday, 7:30 a.m. to 6:00 p.m. at:

County of Los Angeles
Department of Regional Planning
Impact Analysis Section, Room 1348
320 West Temple Street
Los Angeles, CA 90012

Please submit written comments on the DEIR to Mr. Daniel Fierros of the Department of Regional Planning at the above address.