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# FINAL ENVIRONMENTAL IMPACT REPORT

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## *NORTH WATT AVENUE CORRIDOR PLAN*



*Control Number: 2008-GPB-CZB-ZOB-00153*

*State Clearinghouse Number: 2009092067*

*April 2012*

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COUNTY OF SACRAMENTO  
COMMUNITY PLANNING AND DEVELOPMENT DEPARTMENT  
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Bradley J. Hudson

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Community Planning and Development Department  
Division of Environmental Review and Assessment

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This Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act of 1970 (Public Resources Code Division 13). The purpose of an EIR is to provide governmental decision makers and the public with detailed information about the effects that a proposed project is likely to have on the environment and to identify ways that environmental damage can be avoided or reduced through the use of alternatives and/or mitigation measures. Prior to project approval, the public agency must protect the environment from any significant impacts identified in the EIR by one or more of the following methods: modify the project, impose conditions, adopt ordinances, or choose an alternative that would not cause a substantial adverse change in the environment. Otherwise, the public agency shall not approve a project unless it finds that changing the project is not feasible and the unavoidable significant damage to the environment is acceptable because of overriding considerations such as social or economic benefits.

Prepared by the  
COUNTY OF SACRAMENTO  
COMMUNITY PLANNING AND DEVELOPMENT DEPARTMENT  
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# TABLE OF CONTENTS

PREFACE .....	1
<b>1 EXECUTIVE SUMMARY AND MITIGATION MEASURES .....</b>	<b>1-1</b>
TERMINOLOGY USED IN THIS EIR .....	1-39
REQUESTS AND REQUIREMENTS OF VARIOUS AGENCIES .....	1-41
MITIGATION MONITORING AND REPORTING PROGRAM .....	1-41
<b>2 PROJECT DESCRIPTION .....</b>	<b>2-1</b>
INTRODUCTION.....	2-1
PROJECT PROPOSAL .....	2-1
PROJECT LOCATION.....	2-2
PROJECT PROPONENTS.....	2-2
PROJECT VISION STATEMENT & OBJECTIVES.....	2-3
ENVIRONMENTAL SETTING.....	2-5
PROJECT DESCRIPTION .....	2-8
INTENDED USES OF THE EIR .....	2-17
<b>3 ALTERNATIVES TO THE PROPOSED PROJECT.....</b>	<b>3-1</b>
INTRODUCTION.....	3-1
RANGE OF ALTERNATIVES .....	3-1
PROJECT OBJECTIVES .....	3-2
DESCRIPTION OF ALTERNATIVES .....	3-4
IMPACT ANALYSIS.....	3-6
SUMMARY COMPARISON OF ALTERNATIVES.....	3-23
ENVIRONMENTALLY SUPERIOR ALTERNATIVE .....	3-24
<b>4 LAND USE .....</b>	<b>4-1</b>
INTRODUCTION.....	4-1
BACKGROUND .....	4-1
ENVIRONMENTAL LAND USE SETTING.....	4-2
PROPOSED LAND USE PLAN.....	4-3
REGULATORY SETTING.....	4-5
SIGNIFICANCE CRITERIA .....	4-5
IMPACTS AND ANALYSIS .....	4-6

**5 AIRPORT COMPATIBILITY ..... 5-1**

**INTRODUCTION..... 5-1**

**AIRPORT ENVIRONMENTAL SETTING..... 5-1**

**SIGNIFICANCE CRITERIA ..... 5-4**

**IMPACTS AND ANALYSIS ..... 5-4**

**6 PUBLIC SERVICES & UTILITIES ..... 6-1**

**INTRODUCTION..... 6-1**

**PUBLIC SERVICES SETTING ..... 6-1**

**PUBLIC SERVICES/UTILITIES REGULATORY SETTING ..... 6-3**

**SIGNIFICANCE CRITERIA ..... 6-22**

**IMPACTS AND ANALYSIS ..... 6-23**

**7 DRAINAGE, HYDROLOGY, AND WATER QUALITY ..... 7-1**

**INTRODUCTION..... 7-1**

**DRAINAGE, HYDROLOGY, AND WATER QUALITY SETTING ..... 7-1**

**RELEVANT PROPOSED CORRIDOR PLAN POLICIES ..... 7-7**

**REGULATORY SETTING..... 7-8**

**SIGNIFICANCE CRITERIA ..... 7-14**

**IMPACTS AND ANALYSIS ..... 7-15**

**8 TRAFFIC AND CIRCULATION ..... 8-1**

**INTRODUCTION..... 8-1**

**TRAFFIC AND CIRCULATION SETTING..... 8-1**

**TRAFFIC STUDY SETTING AND SCOPE ..... 8-10**

**TRAFFIC STUDY METHODOLOGY ..... 8-13**

**SIGNIFICANCE CRITERIA ..... 8-17**

**IMPACTS AND ANALYSIS ..... 8-18**

**MITIGATION MEASURES..... 8-62**

**9 AIR QUALITY ..... 9-1**

**INTRODUCTION..... 9-1**

**AIR QUALITY SETTING ..... 9-1**

**REGULATORY SETTING..... 9-3**

**METHODOLOGY ..... 9-8**

**SIGNIFICANCE CRITERIA ..... 9-8**

**IMPACTS AND ANALYSIS ..... 9-9**

**10 NOISE ..... 10-1**

**INTRODUCTION..... 10-1**

**NOISE ENVIRONMENTAL SETTING..... 10-1**

**NOISE REGULATORY SETTING ..... 10-4**

**SIGNIFICANCE CRITERIA ..... 10-8**

**IMPACTS AND ANALYSIS ..... 10-9**

**11 BIOLOGICAL RESOURCES ..... 11-1**

**INTRODUCTION..... 11-1**

**BIOLOGICAL RESOURCES SETTING ..... 11-1**

**REGULATORY SETTING..... 11-2**

**SIGNIFICANCE CRITERIA ..... 11-7**

**IMPACTS AND ANALYSIS ..... 11-8**

**13 CULTURAL RESOURCES ..... 13-1**

**INTRODUCTION..... 13-1**

**CULTURAL RESOURCES SETTING..... 13-2**

**CULTURAL RESOURCES REGULATORY SETTING..... 13-8**

**METHODOLOGY ..... 13-14**

**SIGNIFICANCE CRITERIA ..... 13-16**

**FIELD ASSESSMENT RESULTS, IMPACTS AND ANALYSIS ..... 13-17**

**14 CLIMATE CHANGE ..... 14-1**

**INTRODUCTION..... 14-1**

**INTRODUCTION TO CLIMATE CHANGE AND GLOBAL WARMING..... 14-1**

**WORLDWIDE, NATIONAL AND STATEWIDE EMISSIONS ..... 14-3**

**SACRAMENTO COUNTY EMISSIONS ..... 14-4**

**EMISSIONS THRESHOLDS ..... 14-5**

**STATE OF CALIFORNIA EMISSION REDUCTION/ADAPTATION STRATEGIES..... 14-8**

**SACRAMENTO COUNTY EMISSION REDUCTION EFFORTS..... 14-10**

**SIGNIFICANCE CRITERIA ..... 14-13**

**METHODOLOGY ..... 14-15**

<b>IMPACTS AND ANALYSIS</b> .....	<b>14-15</b>
<b>15 SUMMARY OF IMPACTS AND THEIR DISPOSITION</b> .....	<b>15-1</b>
<b>SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED</b> .....	<b>15-1</b>
<b>SIGNIFICANT EFFECTS WHICH COULD BE AVOIDED WITH IMPLEMENTATION OF MITIGATION MEASURES</b> .....	<b>15-4</b>
<b>EFFECTS FOUND NOT TO BE SIGNIFICANT</b> .....	<b>15-10</b>
<b>IRREVERSIBLE ENVIRONMENTAL CHANGES</b> .....	<b>15-15</b>
<b>CUMULATIVE IMPACTS</b> .....	<b>15-15</b>
<b>GROWTH INDUCING IMPACTS</b> .....	<b>15-17</b>
<b>16 RESPONSE TO COMMENTS</b> .....	<b>16-1</b>
<b>LETTER 1: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD</b> .....	<b>16-2</b>
<b>LETTER 2: CALIFORNIA DEPARTMENT OF TRANSPORTATION</b> .....	<b>16-2</b>
<b>LETTER 3: LAUREN PRICHARD</b> .....	<b>16-5</b>
<b>17 INITIAL STUDY CHECKLIST</b> .....	<b>1</b>
<b>SUPPLEMENTAL INFORMATION</b> .....	<b>11</b>
<b>18 BIBLIOGRAPHY</b> .....	<b>18-1</b>

**LIST OF PLATES**

**PLATE PD -1: REGIONAL LOCATION EXHIBIT..... 2-6**

**PLATE PD -2: CORRIDOR PLAN AREA AND LOCAL CONTEXT..... 2-7**

**PLATE PD -3: NORTH WATT AVENUE CORRIDOR PLAN LAND USE ..... 2-9**

**PLATE PD -4: APPROVED NORTH HIGHLANDS TOWN CENTER SPA LAND USE MAP ..... 2-12**

**PLATE PD -5: CORRIDOR PLAN AREA OF INFLUENCE..... 2-16**

**PLATE PD -6: ELKHORN DISTRICT CENTER CONCEPTUAL LAND USE PLAN..... 2-18**

**PLATE PD -7: ELKHORN DISTRICT CENTER ILLUSTRATIVE SITE PLAN ..... 2-19**

**PLATE PD -8: TRIANGLE GATEWAY DISTRICT CONCEPTUAL LAND USE PLAN ..... 2-20**

**PLATE PD -9: TRIANGLE GATEWAY DISTRICT URBAN DESIGN FRAMEWORK PLAN..... 2-21**

**PLATE LU -1: NORTH WATT AVENUE CORRIDOR PLAN LAND USE..... 4-4**

**PLATE LU -2: RIO LINDA/ McCLELLAN SACOG BLUEPRINT PREFERRED SCENARIO MAP .. 4-7**

**PLATE LU -3: RIO LINDA/ McCLELLAN SACOG BLUEPRINT PREFERRED SCENARIO CLOSE-  
UP ..... 4-8**

**PLATE LU -4: SACOG BLUEPRINT SUMMARY STATISTICS..... 9**

**PLATE LU -5: GENERAL PLAN LAND USE DESIGNATIONS ..... 4-12**

**PLATE LU -6: PROPOSED GENERAL PLAN LAND USE DESIGNATIONS ..... 4-14**

**PLATE LU -7: 2030 GENERAL PLAN: COMMERCIAL CORRIDORS ..... 4-22**

**PLATE LU -8: PROPOSED CORRIDOR ZONING DESIGNATIONS..... 4-35**

**PLATE LU-9: McCLELLAN AFB/WATT AVENUE REDEVELOPMENT AREA..... 4-40**

**PLATE LU -10: NARS BUFFER AREA..... 4-46**

**PLATE AC -1: EXISTING McCLELLAN FIELD CLUP (BASED ON MILITARY USE) ..... 5-2**

**PLATE AC -2: AERIAL OF AIRPORT PROPERTY ..... 5-3**

**PLATE AC-3: McCLELLAN NOISE COMPATIBILITY MAP (BASED ON NON-MILITARY USE) ..... 5-5**

**PLATE PS -1: URBAN SERVICES BOUNDARY ..... 6-2**



**PLATE PS-2: WATER PURVEYOR MAP..... 6-25**

**PLATE PS-3: POTENTIAL SEWER TRUNK LINE ALIGNMENT..... 6-31**

**PLATE PS -4: PARKS AND OPEN SPACE CONCEPT PLAN ..... 6-37**

**PLATE PS-5: EXISTING RT FACILITIES..... 6-39**

**PLATE PS-6: REGIONAL TRANSIT’S CONCEPTUAL PLAN FOR THE CORRIDOR PLAN AND VICINITY..... 6-43**

**PLATE PS-7: VEHICULAR BARRICADE ALONG UNION PACIFIC TRACKS ..... 6-48**

**PLATE PS-8: PROPOSED TRAIL PLAN ALONG ROSEVILLE ROAD..... 6-49**

**PLATE DH-1: WATERSHEDS IN CORRIDOR PLAN AREA ..... 7-2**

**PLATE DH-2: FEMA MAP FOR ELKHORN DISTRICT AND SURROUNDINGS..... 7-3**

**PLATE DH-3: FEMA MAP FOR NORTH HIGHLANDS TOWN CENTER DISTRICT AND SURROUNDINGS ..... 7-4**

**PLATE DH-4 FEMA MAP FOR TRIANGLE GATEWAY DISTRICT AND SURROUNDINGS..... 7-5**

**PLATE TC-1: NORTH WATT CORRIDOR CIRCULATION CONCEPT PLAN..... 8-3**

**PLATE TC-2: NEAR-TERM WATT AVENUE IMPROVEMENT CONCEPT PLAN ..... 8-4**

**PLATE TC-3: NEAR-TERM 34<sup>TH</sup> STREET IMPROVEMENT CONCEPT PLAN ..... 8-8**

**PLATE TC-4: EXISTING BICYCLE FACILITIES IN CORRIDOR PLAN AREA ..... 8-9**

**PLATE TC-5: NORTH WATT CORRIDOR BICYCLE CIRCULATION PLAN ..... 8-11**

**PLATE TC-6: AVERAGE DAILY TRAFFIC VOLUME AND LOS FOR EXISTING CONDITIONS .... 8-20**

**PLATE TC-7: AVERAGE DAILY TRAFFIC VOLUME AND LOS FOR EXISTING PLUS PROJECT CONDITIONS..... 8-27**

**PLATE TC-8: FREEWAY RAMP AND MAINLINE PEAK HOUR TRAFFIC VOLUME – EXISTING PLUS PROJECT CONDITION..... 8-30**

**PLATE TC-9: AVERAGE DAILY TRAFFIC VOLUME AND LOS – CUMULATIVE NO PROJECT.. 8-43**

**PLATE TC-10: ~~AVERAGE DAILY TRAFFIC VOLUME AND LOS – CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN~~ ..... 8-44**

**PLATE TC -11: AVERAGE DAILY TRAFFIC VOLUME AND LOS – CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN ..... 8-45**

**PLATE TC-12: FREEWAY RAMP AND MAINLINE PEAK HOUR TRAFFIC VOLUME—CUMULATIVE NO PROJECT CONDITIONS ..... 8-49**

**PLATE TC-13: FREEWAY RAMP AND MAINLINE PEAK HOUR TRAFFIC VOLUME—CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN..... 8-50**

**PLATE TC-14: FREEWAY RAMP AND MAINLINE PEAK HOUR TRAFFIC VOLUME—CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN..... 8-51**

**PLATE AQ-1: SACRAMENTO FEDERAL NONATTAINMENT AREA (SNFA) FOR OZONE ..... 9-2**

**PLATE AQ -2: CORRIDOR AREA WITHIN 100 FEET OF INTERSTATE-80 ..... 9-17**

**PLATE AQ -3: CORRIDOR AREA WITHIN 500 FEET OF INTERSTATE-80 ..... 9-18**

**PLATE AQ -4: CORRIDOR AREA WITHIN 500 FEET OF UP RAILROAD ..... 9-22**

**PLATE NS-1: WATT AVENUE – ANTELOPE TO ELKHORN NOISE CONTOURS ..... 10-14**

**PLATE NS-2: WATT AVENUE – ELKHORN TO DON JULIO NOISE CONTOURS ..... 10-15**

**PLATE NS-3: WATT AVENUE – DON JULIO TO JAMES/A STREET NOISE CONTOURS ..... 10-16**

**PLATE NS-4: WATT AVENUE – JAMES/A STREET TO AIRBASE NOISE CONTOURS ..... 10-17**

**PLATE NS-5: WATT AVENUE – AIRBASE TO ROSEVILLE ROAD NOISE CONTOURS ..... 10-18**

**PLATE NS-6: WATT AVENUE – ROSEVILLE ROAD TO WINONA NOISE CONTOURS ..... 10-19**

**PLATE NS-7: WATT AVENUE – WINONA TO I-80 RAMPS NOISE CONTOURS..... 10-20**

**PLATE BR -1: MAPPED CREEKS, SWALES AND DRAINAGES ..... 11-17**

**PLATE BR -2: POTENTIAL WETLAND SIGNATURES ..... 11-18**

**PLATE BR -3: NORTH WATT CORRIDOR RIPARIAN HABITAT..... 11-23**

**PLATE CR -1: ELKHORN DISTRICT HISTORIC RESOURCES..... 13-19**

**PLATE CR -2: TOWN CENTER DISTRICT HISTORIC RESOURCES ..... 13-22**

**PLATE CR -3: 6099 WATT AVENUE, SOUTH AND EAST FAÇADE..... 13-25**

**PLATE CR -4: SANTA RITA GARDENS, VIEW SOUTHWEST ..... 13-26**

**PLATE CR -5: FRUITVALE ELEMENTARY SCHOOL ..... 13-28**

**PLATE CR -6: TRIANGLE GATEWAY DISTRICT HISTORIC RESOURCES ..... 13-30**

**LIST OF TABLES**

**TABLE ES 1-1 EXECUTIVE SUMMARY OF IMPACTS AND MITIGATION ..... 1-2**

**TABLE PD-1: ELKHORN DISTRICT LAND USE SUMMARY ..... 2-10**

**TABLE PD-2: TOWN CENTER DISTRICT LAND USE SUMMARY..... 2-11**

**TABLE PD-3: TRIANGLE GATEWAY DISTRICT LAND USE SUMMARY ..... 2-14**

**TABLE PD-4: CORRIDOR PLAN LAND USE SUMMARY ..... 2-15**

**TABLE ALT-1: SUMMARY COMPARISON ..... 3-23**

**TABLE LU-1 APPROXIMATE PERCENTAGES OF LAND USE TYPES IN THE PROJECT AREA  
UNDER THE SACOG BLUEPRINT PREFERRED SCENARIO..... 4-10**

**TABLE LU-2: REQUIREMENT OF LU-~~32~~34..... 4-18**

**TABLE LU-3: PERMITTED USES IN THE RMU-1 ZONE ..... 4-34**

**TABLE LU-4: PROHIBITED USES IN THE RMU-1 ZONE ..... 4-34**

**TABLE LU-5: PROHIBITED USES IN THE CMU ZONE..... 4-36**

**TABLE LU-6: PERMITTED USES IN THE TOD ZONE ..... 4-37**

**TABLE LU-7: PROHIBITED USES IN THE TOD ZONE ..... 4-38**

**TABLE PS-1 LAND USE CATEGORIES, DESIGN ESD DENSITIES, AND FLOW ESTIMATES ..... 6-9**

**TABLE PS-2: CALCULATED WASTEWATER FLOWS FROM NORTH WATT CORRIDOR ..... 6-28**

**TABLE TC-1 LEVEL OF SERVICE DEFINITIONS ..... 8-14**

**TABLE TC-2 LEVEL OF SERVICE CRITERIA FOR ROADWAY SEGMENTS ..... 8-14**

**TABLE TC-3: LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS..... 8-15**

**TABLE TC-4: INTERSECTION LOS CRITERIA ..... 8-16**

**TABLE TC-5: DENSITY-BASED FREEWAY MAINLINE, OFF-RAMP DIVERGE, AND ON-RAMP  
MERGE SEGMENTS LEVEL OF SERVICE CRITERIA ..... 8-17**

**TABLE TC-6: NORTH WATT CORRIDOR TRIP GENERATION..... 8-22**

**TABLE TC-7: EXISTING PLUS PROJECT TRIP DISTRIBUTION – ELKHORN AND TOWN CENTER DISTRICTS ..... 8-23**

**TABLE TC-8: EXISTING PLUS PROJECT TRIP DISTRIBUTION – TRIANGLE GATEWAY DISTRICT 8-23**

**TABLE TC-9: PEAK HOUR INTERSECTION LOS – EXISTING PLUS PROJECT CONDITIONS... 8-25**

**TABLE TC-10: ROADWAY SEGMENT VOLUME AND LOS – EXISTING PLUS PROJECT..... 8-26**

**TABLE TC-11: PEAK HOUR FREEWAY FACILITY LOS – EXISTING PLUS PROJECT CONDITIONS ..... 8-29**

**TABLE TC-12: CUMULATIVE PLUS PROJECT TRIP DISTRIBUTION – ELKHORN AND TOWN CENTER DISTRICTS..... 8-38**

**TABLE TC-13: EXISTING PLUS PROJECT TRIP DISTRIBUTION – TRIANGLE GATEWAY DISTRICT ..... 8-39**

**TABLE TC-14: PEAK HOUR INTERSECTION LOS – CUMULATIVE CONDITIONS..... 8-40**

**TABLE TC-15: ROADWAY SEGMENT VOLUME AND LOS – CUMULATIVE CONDITIONS..... 8-46**

**TABLE TC-16: PEAK HOUR FREEWAY FACILITY LOS – CUMULATIVE CONDITIONS ..... 8-52**

**TABLE AQ-1: STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS ..... 9-7**

**TABLE AQ-2: ATTAINMENT STATUS ..... 9-8**

**TABLE AQ-3: OPERATIONAL SUMMER EMISSIONS (MASS EMISSIONS IN LBS/DAY) EXISTING CONDITION..... 9-12**

**TABLE AQ-4: OPERATIONAL WINTER EMISSIONS (MASS EMISSIONS IN LBS/DAY) EXISTING CONDITION..... 9-12**

**TABLE AQ-5: OPERATIONAL SUMMER EMISSIONS (MASS EMISSIONS IN LBS/DAY) FOR THE PROPOSED CORRIDOR PLAN..... 9-13**

**TABLE AQ-6: OPERATIONAL WINTER EMISSIONS (MASS EMISSIONS IN LBS/DAY) FOR THE PROPOSED CORRIDOR PLAN..... 9-13**

**TABLE AQ-7: 2010 DIESEL PM CANCER RISK (POTENTIAL INCREMENTAL CANCER CHANCES PER MILLION PEOPLE) NORTH AND SOUTH OF A EAST-WEST ROADWAY ..... 9-16**

**TABLE NS-1: ACOUSTICAL TERMINOLOGY ..... 10-2**

**TABLE NS-2: SUBJECTIVE REACTION TO CHANGES IN NOISE LEVELS OF SIMILAR SOURCES ..... 10-3**

**TABLE NS-3: NOISE STANDARDS FOR NEW USES AFFECTED BY TRAFFIC AND RAILROAD NOISE (TABLE 1 FROM THE SACRAMENTO COUNTY GENERAL PLAN, NOISE ELEMENT) 10-7**

**TABLE NS-4: NON-TRANSPORTATION NOISE STANDARDS MEDIAN (L50)/MAXIMUM (LMAX)<sup>1</sup> (TABLE 2 FROM THE SACRAMENTO COUNTY GENERAL PLAN, NOISE ELEMENT) ..... 10-7**

**TABLE NS-5: EXISTING NO PROJECT CONDITION NOISE MODEL RESULTS ..... 10-11**

**TABLE NS-6: EXISTING PLUS PROJECT CONDITION NOISE MODEL RESULTS..... 10-11**

**TABLE NS-7: CUMULATIVE NO PROJECT CONDITION NOISE MODEL RESULTS..... 10-12**

**TABLE NS-8: CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN CONDITION NOISE MODEL RESULTS..... 10-12**

**TABLE NS-9: CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN CONDITION NOISE MODEL RESULTS ..... 10-13**

**TABLE NS-10: ESTIMATED DAILY OPERATIONS AND DISTANCES TO RAILROAD CONTOURS. 10-23**

**TABLE CR-1 CATEGORIES OF CULTURAL RESOURCES ..... 13-1**

**TABLE CR-2: ELKHORN DISTRICT – RECORDED ARCHITECTURAL RESOURCES BUILT 1960 OR BEFORE..... 13-20**

**TABLE CR-3: ELKHORN DISTRICT – PROPERTIES BUILT 1961-1965 (NOT RECORDED) ... 13-20**

**TABLE CR-4: TOWN CENTER DISTRICT – RECORDED ARCHITECTURAL RESOURCES BUILT 1960 OR BEFORE ..... 13-23**

**TABLE CR-5: TOWN CENTER DISTRICT – PROPERTIES BUILT 1961-1965 (NOT RECORDED) 13-24**

**TABLE CR-6: TRIANGLE GATEWAY DISTRICT – RECORDED ARCHITECTURAL RESOURCES BUILT 1960 OR BEFORE ..... 13-31**

**TABLE CR-7: SUMMARY OF ELIGIBLE PROPERTIES IN THE NORTH WATT AVENUE CORRIDOR PLANNING AREA ..... 13-32**

**TABLE CC-1: GREENHOUSE GASES EMISSIONS WORLDWIDE, UNITED STATES, AND CALIFORNIA ..... 14-3**

**TABLE CC-2: 2005 COMMUNITY EMISSIONS BY SECTOR..... 14-5**

**TABLE CC-3: SECTOR ANALYSIS (IN MT CO<sub>2</sub>E) AND THRESHOLDS FOR DEVELOPMENT.. 14-14**

**TABLE CC-4: URBEMIS RESULTS FOR CO<sub>2</sub>..... 14-22**

**TABLE CC-5: RELATIVE CO<sub>2</sub> EMISSIONS (IN CO<sub>2</sub> EQUIVALENTS)..... 14-22**

**TABLE CC-6: URBEMIS RESULTS OF CO<sub>2</sub> FOR RESIDENTIAL LAND USE DIFFERENCES. 14-23**

**TABLE CC-7: URBEMIS RESULTS OF CO<sub>2</sub> FOR COMMERCIAL LAND USE DIFFERENCES 14-23**

**TABLE CC-8: QUANTIFIABLE CO<sub>2</sub> EMISSIONS REDUCTIONS ..... 14-26**

**TABLE CC-9: QUALITATIVE (OR CURRENTLY UN-QUANTIFIED) CO<sub>2</sub> EMISSIONS REDUCTIONS  
..... 14-26**

Community Planning &  
Development Department  
Nav Gill, Chief Operations Officer



Bradley J. Hudson, County Executive

Division of Environmental Review  
and Assessment

April 27, 2012

TO: All Interested Parties

**SUBJECT: Final EIR FOR "North Watt Avenue Corridor Plan" (CONTROL NO: 2008-GPB-CZB-ZOB-00153)**

The subject Final Environmental Impact Report (FEIR) is attached for your review. The Sacramento County Board of Supervisors will consider the FEIR and the proposed project in a public hearing to be held at 700 H Street, Room 1450 (Board Chambers). The hearing is scheduled for May 22, 2012. Please contact the Clerk of the Board at 874-5451 for further information.

For questions on this environmental document, please contact Tim Hawkins or Joelle Morales of this office at 874-7914.

Sincerely,

**[Original Signature on File]**

Catherine Hack  
Environmental Coordinator

## PREFACE

The North Watt Avenue Corridor Plan (Corridor Plan) proposes a Special Planning Area Ordinance on approximately 750 acres in the North Highlands community. The proposed SPA is located along a 4 mile segment of Watt Avenue north of Interstate-80 to Antelope Road/U Street within the unincorporated Sacramento County. The plan area is situated entirely within the community of North Highlands adjacent to the former McClellan Air Force Base (now the McClellan Business Park). The Corridor Plan is intended to guide infill growth and public improvements within the plan area within a planning horizon of 20 years. In all, the Corridor Plan could result in the addition of up to 7,200 additional residential units, 1,170,000 square feet of new retail, and 714,700 square feet of new office uses.

The Notice of Preparation (NOP) was issued on September 22, 2009, and issues raised in response to the NOP were addressed in the Draft Environmental Impact Report. The Draft Environmental Impact Report (EIR), which was prepared to assess the environmental effects of the Corridor Plan project, was released for public review and comment on September 9, 2011. The written public comment period ended on October 24, 2011.

The Corridor Plan project and the Draft EIR were heard by the Sacramento County Planning Commission on March 26, 2012. The Planning Commission recommended approval of the Corridor Plan Project including the Corridor Plan amendments recommended by the Planning Division since the publication of the DEIR. Revisions to the Corridor Plan since the publication of the DEIR are enumerated and summarized below.

1. On Page 2-4 of the Plan a paragraph was added to describe the purpose of the “Area of Influence” and to emphasize that the area will not be subject to any rezone or General Plan designation change under the Corridor Plan. Additional language was also added to clarify the intent of the proposed land use designations shown on the Land Use Plan.
2. Section 2.3.3, Page 2-24 and Section 2.5.12, Page 2-33: A discussion and policy pertaining to land use restrictions surrounding the North Area Recovery Station was added. Specifically a 1,000 foot “Buffer Area” is established and specific uses are prohibited and/or restricted in order to protect the NARS facility.
3. Section 2.4, Page 2-26: A paragraph is added to clarify that the development numbers (either dwelling units or square footage) stated as being envisioned for the Plan area, are intended to be an overall intensity cap. Further the cap was provided as a parameter for use in the environmental review process and the associated technical studies.
4. Section 2.6.5 Proposed Zoning Designations: The section entitled “Residential Densities and Nonresidential Floor Area Ratios” within the Residential Mixed-Use



2 Zone, Commercial Mixed-Use Zone and Transit-Oriented Development Zone was modified to state the following:

All new projects shall comply with the following density and intensity standards, as required by General Plan Policy LU-32 (for bus rapid transit and other trunk facilities):

Residential:	Within 1/8 mile: 20 du/net acre
	Within 1/8-1/4 mile: 15 du/net acre
	Within 1/4-1/2 mile: 10 du/net acre
Non-Residential:	Within 1/8 mile: 0.65 FAR
	Within 1/8-1/4 mile: 0.5 FAR
	Within 1/4-1/2 mile: 0.4 FAR

When the Planning Manager of the Planning Division determines that a project does not meet the criteria set forth in the SPA, the project proponent shall make an application for a Special Development Permit subject to discretionary review by the Board of Supervisors. The Board of Supervisors shall be the appropriate hearing body to determine feasibility of consistency with the goals and objectives of the SPA. The Board may consider challenges to the proposed land use patterns defined in Chapter 2 of the North Watt Avenue Corridor Plan. The Special Development Permit will also allow consideration of deviations from the urban design standards outlined in Sections 3.2 and 3.3 of the Corridor Plan.

5. Section 2.6.5, Permitted Uses: A more comprehensive Land Use Table, which lists all permitted, conditionally permitted and prohibited uses for each of the zoning categories was added to the Corridor Plan.
6. Section 2.6.6, Page 2-52: A new section describing the process for variation and exceptions to the Corridor Plan was added.
7. Section 2.6.7, Page 2-52: A new section describing the process of regulating non-conforming uses was added to the Corridor Plan.
8. Section 3.3, Development Standards: As appropriate, the development standard tables by zone were updated to reflect the density and floor area ratio requirements as designated by General Plan Policy LU-32 (see item 4 above).
9. Various locations throughout: minor wording changes for clarification or editing purposes.

Only one of the above amendments has relevance for the analysis presented in this environmental document. Item #2 above implements mitigation for impacts related to land use compatibility to both the North Area Recovery Station (NARS) facility and potential sensitive land uses as recommended in the Land Use chapter of this EIR. As stated in Chapter 4 (Land Use), with this policy, potential impacts associated with NARS

are reduced to less than significant. In all, the recommended amendments do not substantially change the project beyond what was analyzed in the Draft EIR.

Three comment letters were received on the Draft EIR. These comment letters can be found in full letter form with the corresponding responses in Chapter 15. Comments received at the Planning Commission hearing were focused entirely on the proposed Project and did not pertain to the adequacy of the environmental document.

This Final EIR consists of the full text of the original (September 2011) Draft EIR and the responses to comments on the Draft. Additionally, since the publication of the Draft EIR, the update to the Sacramento County General Plan has been approved and adopted. During the hearing process several goals and policies were revised or removed. Modifications, as appropriate, to the regulatory discussions in each chapter have been made. Also, as a result of the adoption of the 2030 General Plan update, discussions and mitigation in the Traffic and Circulation chapter comparing the Project to the 1993 General Plan configurations are no longer accurate and/or applicable. Thus discussions and mitigation regarding this traffic scenario have been deleted wherever appropriate. The updated information does not affect the adequacy of the DEIR. Changes to the text in the Final EIR are shown as ~~strikeout~~ text for deletions and **bold** text for insertions.

The Sacramento County Board of Supervisors will consider the contents of this Final EIR prior to taking any action on the proposed project.

# 1 EXECUTIVE SUMMARY AND MITIGATION MEASURES

The subject of this Environmental Impact Report (EIR) is a project known as the North Watt Avenue Corridor Plan. The North Watt Avenue Corridor area consists of approximately 750 acres positioned along a 4-mile segment of Watt Avenue north of Interstate-80 to Antelope Road/U Street within the unincorporated Sacramento County. The plan area is situated entirely within the community of North Highlands adjacent to the former McClellan Air Force Base (now the McClellan Business Park). The North Watt Avenue Corridor Plan is a land use plan that is intended to guide infill growth and public improvements within the plan area within a planning horizon of 20 years. In all, the Corridor Plan could result in the addition of up to 7,200 additional residential units, 1,170,000 square feet of new retail, and 714,700 square feet of new office uses.

The following environmental impact and mitigation summary table (*Table ES 1-1 Executive Summary of Impacts and Mitigation on page 1-2*) briefly describes the project impacts and the mitigation measures recommended to eliminate or reduce the impacts. The residual impact after mitigation is also identified. Immediately following the summary table is a list of recommendations/requirements of various agencies pertaining to the project (*see Requests and Requirements of Various Agencies on page 1-41*), and a description of mandated mitigation monitoring requirements (*see Mitigation Monitoring and Reporting Program on page 1-41*). Detailed discussions of each of the identified impacts and mitigation measures, including pertinent support data, can be found in the specific topic sections in the remainder of this report.

This report has identified project-related impacts associated with land use compatibility, water services, sewer services, ozone precursor and diesel particulate emissions caused by construction activities, ozone precursor and diesel particulate emissions caused by high traffic roadways and railroad, interior noise, biological resources, climate change emissions, prehistoric and historic archaeological resources and contamination sites as significant, which could be reduced to a less than significant level through implementation of recommended mitigation measures.

This report identifies significant and unavoidable impacts related to airport safety zones, study road segments and intersections, study freeway facilities, fugitive dust, operational emissions, exterior noise, and historic architectural resources.

Impacts associated with the General Plan, Zoning Code, airport noise, navigable airspace, drainage and hydrology, fire and emergency services, law enforcement, solid waste, schools, park and recreation services, energy services, construction noise, formally evaluated historical resources and exposure to lead based paint and asbestos are considered less than significant.

**Table ES 1-1  
Executive Summary of Impacts and Mitigation**

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>LAND USE</b>			
<b><u>Conflict With Land Use Plan, Policy, or Regulation</u></b>			
<p><b>Sacramento Area Council of Government (SACOG) “Blueprint”</b></p> <p>The proposed project is consistent with the land use assumptions of the Blueprint preferred scenario and no substantial conflicts with the preferred scenario have been identified. The only notable deviation from the preferred scenario occurs within the Triangle Gateway District, where industrial is the major land use envisioned in the preferred scenario within the Triangle District. This deviation is considered minor given that the uses proposed for the Triangle District will support the overall mixed use corridor that is envisioned along Watt Avenue in the preferred scenario.</p>	LS	None Recommended.	LS
<p><b>General Plan</b></p> <p>The proposed Corridor Plan is consistent with General Plan land use designations for the project area. The proposed Corridor is also consistent with the goals and policies of the General Plan, including policies associated with Transit Oriented Developments and smart growth principles.</p>	LS	None Recommended.	LS
<p><b>Smart Growth Street</b></p> <p>The Smart Growth Street Designation will allow for more flexible design standards along certain developed roadways within Sacramento County in order to facilitate smart growth development. Although it is noted that SGSs</p>	LS	None Recommended.	LS

<sup>1</sup> PS = Potentially Significant    S = Significant    SU = Significant and Unavoidable    LS = Less Than Significant

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>may allow for increased traffic congestion in some cases, SGSs are intended to provide support for more compact land uses while providing for low polluting transportation and conserving environmental resources within the surrounding community. SGSs are intended to result in overarching benefits that are assumed to offset perceived negative impacts associated with increased traffic congestion. The overarching benefit is an overall healthier community.</p> <p>The North Watt Avenue Corridor Plan meets the objectives related to the Smart Growth Street policy.</p>			
<p><b>Zoning Code</b></p> <p>Although the proposed Corridor will rezone the properties in the plan area it meets the zoning code requirements to create an SPA and does not conflict with the Sacramento County Zoning Code.</p>	LS	None recommended.	LS
<p><b>McClellan AFB/Watt Avenue Redevelopment Plan</b></p> <p>The North Watt Avenue Corridor Plan would compliment the redevelopment plan, which is mainly a taxation and funding plan for revitalization projects. The proposed Corridor Plan functions as an implementation mechanism for the redevelopment plan.</p>	LS	None recommended.	LS
<p><b>North Watt Avenue Beautification Master Plan</b></p> <p>The Beautification Plan was written with the intent that a Corridor Plan would occur on Watt Avenue. The differences in beautification techniques is trumped by the fact that both Plans are intended to redevelop and enhance the Corridor; as such, the Plans do not conflict.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b><u>Physical Disruption or Division of an Established Community</u></b>			
<p><b>Existing/Future Land Use Compatibility</b></p> <p>There is some potential for on-site and off-site land use conflicts. Residents may perceive a nuisance from parking lot lighting associated with development in the plan area and may also experience nuisances from on-site commercial operations, such as noisy customers and deliveries. Likewise, the commercial tenants may experience nuisances arising from the residential uses such as entertainment noise and lack of parking. The proposed Corridor Plan calls for extensive design review and includes specific development standards. Design review and development standards are intended to avoid land use conflicts in order to plan a cohesive community.</p>	LS	None recommended.	LS
<p><i>North Area Recovery Station</i></p> <p>The Department of Waste Management &amp; Recycling (DWMR) has expressed concern over siting incompatible uses adjacent to the NARS facility. In particular residential uses and other sensitive land uses would conflict with operations at NARS. DWMR has requested a 1,000 foot land use buffer around the NARS facility. Specific details of the land use buffer will be coordinated between DWMR and the Community Planning and Development's Planning Division.</p>	PS	<p><b>LU-1: North Area Recovery Station</b></p> <p>A policy shall be added to the North Watt Avenue Corridor Plan establishing a 1,000 foot North Area Recovery Station Buffer Zone. In consultation with and to the satisfaction of the Department of Waste Management &amp; Recycling, specific land use restrictions and design guidelines shall be established for the NARS Buffer Zone.</p>	LS
<p><i>Union Pacific Railroad</i></p> <p>Some of the sensitive land uses, such as residential uses, could consider the UP line a nuisance due to noise or air quality associated with rail operations. However, it is not uncommon for railroad operations to be sited adjacent to all of the land uses proposed within the Corridor. Impacts associated with noise and air quality from rail operations are discussed in the appropriate impact section. Additionally due to the separation the Corridor Plan has</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>from rail operations provided by Roseville Road there is no immediate significant land use compatibility issue.</p>			
<p><b><u>Displacement of Substantial Numbers of Existing Housing, Necessitating the Construction of Replacement Housing Elsewhere</u></b></p> <p>The Corridor Plan is not expected to displace existing housing.</p>	LS	None recommended.	LS
<p><b><u>Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Uses or Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract.</u></b></p> <p>The Corridor Plan will not convert prime farmland nor will it conflict with agriculturally zoned properties or Williamson Act contracts.</p>	LS	None recommended.	LS
<b>AIRPORT COMPATIBILITY</b>			
<p><b><u>Airport Noise</u></b></p> <p>As shown on the Board-adopted noise contours for McClellan Field, the project site is located outside of the 60 dB CNEL noise contours. The proposed project is not expected to expose people residing or working in the project area to aircraft noise levels in excess of applicable standards.</p>	LS	None recommended.	LS
<p><b><u>Navigable Airspace</u></b></p> <p>Based on the most restrictive height allowed for aircraft safety within the Corridor, or 150 feet, and the highest building allowed within the Corridor, the Corridor Plan does not propose building heights that exceed building height requirements of the FAA; thus the project is not expected to impact navigable airspace.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b><u>Safety Hazard</u></b>			
<p><b>Overflight Zone</b></p> <p>According to the General Plan’s “Land Use Compatibility for Airport Safety” table, the proposed uses of the Corridor Plan appear to be compatible within the overflight zone. Some of the uses would be subject to special conditions as listed within the safety table.</p>	LS	None recommended.	LS
<p><b>Approach Departure Zone</b></p> <p>The project area is partially located within the approach/departure zone of McClellan Airport. Many of the uses and densities of the proposed project are not allowed within this zone due to the fact that any uses within the approach/departure zone that may result in even a moderate concentration of people, is considered a substantial safety issue that could result from aircraft crashes or emergency landings.</p> <p>Although the airport policy can be overridden through Board discretion, the safety impact would still occur.</p>	S	None available.	SU
<p><b>Clear Zone</b></p> <p>A small corner of the Clear Zone is located within Subdistrict 3 of the Triangle Gateway District. Ideally the Clear Zone should be completely void of all structures and objects. Any deviation from this is considered a safety impact.</p> <p>Although the airport policy can be overridden through Board discretion, the safety impact would still occur.</p>	S	None available.	SU
<p><b><u>Air Traffic Patterns</u></b></p> <p>The proposed project does not involve changes in air traffic patterns nor will it affect levels of air traffic at the nearby airport.</p>	LS	None recommended.	LS



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>DRAINAGE, HYDROLOGY AND WAYER QUALITY</b>			
<p><b>Drainage and Floodplains</b></p> <p>Pursuant to the County of Sacramento Improvement Standards and Floodplain Management Ordinance, all infill projects require an analysis of how their grading impacts the surrounding area in which they are located, including identification and preservation of floodplain storage, and determination of minimum construction elevations necessary to protect the new development. Any proposed loss of floodplain storage will be analyzed to determine if there are impacts to water surface elevations on any adjacent properties. In addition, larger infill projects will be required to broaden their study approach to determine any impacts on a regional basis. With conformance with applicable standards, future development associated with the Corridor will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity.</p>	LS	None recommended.	LS
<p><b>Drainage and Infrastructure</b></p> <p>Individual drainage plans would be needed to identify site-specific or very localized constraints, rather than Plan-wide facility needs, these studies can be completed at improvement plan stage. The Sacramento County Department of Water Resources reviews improvement plans for consistency with adopted Ordinances, and will require a focused drainage plan at that time, if necessary. Improvements will all take place in existing developed areas or areas that will already be developed for other purposes. With conformance with applicable standards, future development associated with the Corridor will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b>Water Quality</b></p> <p>Future projects will be required to adhere to all applicable stormwater quality standards. Conformance with applicable standards and regulations will ensure that future development/redevelopment projects do not significantly impact stormwater quality.</p>	LS	None recommended.	LS
<b>PUBLIC FACILITIES AND SERVICES</b>			
<p><b><u>Water Services</u></b></p> <p>The proposed project area is currently provided water and has existing infrastructure supporting the site. Sacramento Suburban Water District has indicated that water supply is adequate to serve existing zoning; however may need additional supplies for final build out of the proposed project. Additionally, the water infrastructure study indicated that some upgrades to water infrastructure will be required to serve the Corridor Plan.</p> <p>To ensure that adequate water facility improvements are identified prior to the initiation of development, a phasing plan is suggested. Additionally, mitigation is added to secure water supply needs when water thresholds, identified in the phasing plan, are met.</p>	S	<p><b>PS-1: Public Service Infrastructure</b></p> <p>Prior to Development Plan Review or issuance of building permits for projects resulting in intensification of use or increased square footage associated with development pursuant to the North Watt Avenue Corridor Plan, the Sacramento County Municipal Services Agency (MSA) shall prepare, or facilitate the preparation of, a phasing plan that identifies thresholds of development for when necessary improvements are required. The phasing plan shall also identify a mechanism to track when thresholds are met so infrastructure improvements are constructed when needed.</p> <p>If private applicants/developers wish to proceed with development ahead of MSA's phasing plan, project specific analyses (i.e. sewer study, water study, traffic study) will be required to ensure that the existing infrastructure can accommodate the proposed development. Infrastructure improvements that are needed to accommodate proposed development shall be constructed prior to issuing building permits.</p> <p><b>PS-2: Water Supply</b></p> <p>When water supply thresholds are met, as identified in the MSA phasing plan, no further development in accordance with the Corridor Plan shall occur until additional water supply is secured to support future Corridor Plan development and necessary fire flows.</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Sewer Services</u></b></p> <p>The Sacramento Area Sewer District (SASD) prepared a level 2 sewer study for the Corridor Plan. Existing public sewer service is limited to the Triangle Gateway District. Large portions of the project area north of the Triangle are currently on private septic systems. The sewer study indicated that existing sewer services are constrained and identified necessary system upgrades in order to serve the proposed Corridor. These upgrades would provide relief to capacity constrained facilities in the project area. SASD characterizes the necessary improvements required to serve the entire Corridor at proposed land use densities as major infrastructure projects.</p> <p>To ensure that adequate sewer facility upgrades are identified prior to the initiation of development, a phasing plan is suggested.</p>	S	See PS-1 above	LS
<p><b><u>Fire Protection and Emergency Services</u></b></p> <p>Development or redevelopment projects will be subject to additional design requirements specified by the Fire District during the application or design phases of individual projects. With adherence to fire standards, there are no anticipated impacts associated with the provision of fire protection and emergency services.</p>	LS	None recommended.	LS
<p><b><u>Law Enforcement Services</u></b></p> <p>The proposed Corridor Plan area is served by the Sacramento County Sheriff's Department. The Sheriff's Department was given the opportunity to review the project but submitted no written comments or conditions. Development/redevelopment projects in the area may be subject to design requirements specified by the Sheriff's Department during the application or design phases of individual projects including concepts of Crime Prevention Through Environmental Design to increase the feeling and reality of safety.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Solid Waste Services</u></b></p> <p>The Corridor Plan project area is provided with solid waste collection service by the County. The Kiefer Landfill is the primary municipal solid waste disposal facility in Sacramento County. The County landfill is estimated to have enough capacity to meet demand through the year 2035 or later. Existing and planned solid waste facilities will be sufficient to serve the development/redevelopment of the project area in accordance with the proposed Corridor.</p>	LS	None recommended.	LS
<p><b><u>School Services</u></b></p> <p>In regard to impacts of development on school facilities, established case law, <i>Goleta Union School District v. The Regents of the University of California</i> (36 Cal-App. 4<sup>th</sup> 1121, 1995), indicates that school overcrowding, standing alone, is not a change in the physical conditions, and cannot be treated as an impact on the environment.</p> <p>Furthermore, financial impacts to school districts for facilities are mitigated under California Government Code Sections 65995(h) and 65996(b). Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code is deemed to be full and complete mitigation of the impacts for the planning, use, development, or the provisions of adequate school facilities. Section 65996(b) finds that these provisions provide full and complete school facilities mitigation.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Parks and Recreation Services</u></b></p> <p>Since precise development/redevelopment is uncertain at this time, parkland assessments will be conducted at the time specific individual projects move forward. It should be noted that, pursuant to the County Land Development Ordinance (Title 22 of Sacramento County Code) all future Tentative Subdivision Maps and Tentative Parcel Maps will be conditioned to dedicate land, pay a fee in lieu thereof, or provide a combination of dedication and in-lieu fees.</p>	LS	None recommended.	LS
<p><b><u>Energy Services</u></b></p> <p>The project site is currently provided gas and electric services and the proposed project is expected to continue to be adequately supported by these service providers. However, future development/redevelopment may require that new gas and electric connections be made to serve users in the plan area and also may require the relocation of existing facilities. These modifications will be subject to specific design requirements as dictated by the service providers.</p> <p>It should be acknowledged that all utility improvements shall be to the standards of the California Public Utilities Commission, utility company/district and to Sacramento County standards.</p>	LS	None recommended.	LS
<p><b><u>Public Transit Services</u></b></p> <p>The Corridor Plan is proposed in an area of existing residential and commercial development with existing public transit service. The Corridor Plan is also consistent with LU-34 which encourages higher densities near transit stops to encourage transit use. The proposed project does not preclude the use of public transit nor impede existing routes.</p>	LS	None recommended.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Rail Services</u></b></p> <p>The Corridor Plan is located adjacent to existing rail services. Existing rail crossings are not at-grade crossings, which can affect rail services. Additionally, any planned crossings envisioned in the Corridor Plan are not at-grade crossings. The proposed project does not preclude the use or directly impede the rail line; however, by adding new, more dense uses adjacent to the UP rail line, indirect impacts could occur. Thus mitigation is added to reduce any potential undesired interfaces between rail services and Corridor Plan residents and customers.</p>	LS	<p><b>PS-2: Railroad Policy</b></p> <p>A policy shall be added to the North Watt Avenue Corridor Plan that requires Planning Division review of uses proposed adjacent to UP rail operations. The review is intended to result in appropriate conditions being placed on development projects in close proximity to rail operations so that safety and rail operations are fully considered and accommodated. Appropriate conditions may include requiring the placement of warning signage in suitable locations, installation of fencing or barriers along Roseville Road, or providing education to future property owners.</p>	LS
<b>TRAFFIC AND CIRCULATION</b>			
<p><b><u>Existing Plus Project</u></b></p> <p>In the Existing Plus Project condition four study intersections would exceed the volume thresholds and operate at unacceptable levels of service:</p> <ul style="list-style-type: none"> <li>• Watt Avenue / Don Julio Boulevard intersection will operate unacceptably during both the AM and PM peak hour.</li> <li>• Watt Avenue / Airbase Drive intersection will operate unacceptably during the PM pear hour.</li> <li>• Elkhorn Boulevard / 34<sup>th</sup> Street intersection will operate unacceptably during both the AM and PM peak hour.</li> <li>• 34<sup>th</sup> Street / Freedom Park Drive intersection will operate unacceptably during both the AM and PM peak hour.</li> </ul> <p>Eight study roadway segments and one freeway facility would exceed the volume thresholds and operate at unacceptable levels of service:</p> <ul style="list-style-type: none"> <li>• Watt Avenue from Antelope Road to Elkhorn</li> </ul>	S	<p><b>TC-1: Traffic Improvements</b></p> <p>Prior to Development Plan Review or issuance of building permits for projects resulting in intensification of use or increased square footage associated with development pursuant to the North Watt Avenue Corridor Plan, the Sacramento County Municipal Services Agency (MSA) shall prepare, or facilitate the preparation of, a phasing plan that identifies thresholds of development for when necessary improvements are required. The phasing plan shall also identify a mechanism to track when thresholds are met so infrastructure improvements are constructed when needed.</p> <p>If private applicants/developers wish to proceed with development ahead of MSA's phasing plan, project specific analyses (i.e. sewer study, water study, traffic study) will be required to ensure that the existing infrastructure can accommodate the proposed development. Infrastructure improvements that are needed to accommodate proposed development shall be constructed prior to issuing building permits.</p> <p>The following improvements shall be installed:</p> <ul style="list-style-type: none"> <li>• (EP 1) North Watt Avenue / Don Julio Boulevard – provide the following improvements: <ul style="list-style-type: none"> <li>i. Widen the northbound approach to provide</li> </ul> </li> </ul>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>Boulevard</p> <ul style="list-style-type: none"> <li>• Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard.</li> <li>• Watt Avenue from Don Julio Boulevard to James Way/A Street</li> <li>• Watt Avenue from James Way/A Street to Airbase Drive</li> <li>• Watt Avenue from Airbase Drive to Roseville Road</li> <li>• Watt Avenue from Roseville Road to Winona Way</li> <li>• Watt Avenue from Winona Way to I-80 Ramps</li> <li>• Watt Avenue from I-80 Ramps to Auburn Boulevard</li> </ul> <p>Mitigation is proposed for each of the impacted intersections and for two of the impacted roadway segments. This mitigation would reduce impacts at these facilities to less than significant. There is no feasible mitigation for six of the impacted roadway segments as additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.</p> <p>Although the Corridor Plan implements some of the corridor mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”, there is no feasible mitigation for the impacted freeway segment that will directly improve the freeway facility. This impact is considered significant and unavoidable.</p> <p>Measures applicable to the Existing Plus Project scenario in Mitigation Measure TC-1 are EP-1 thru EP-6.</p>		<p>dual left-turn pockets, 2-through lanes, and 1-shared through/right lane, which is partially based on measure EP-6. The construction of a second left-turn pocket would require Don Julio Boulevard to provide 2-departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;</p> <ul style="list-style-type: none"> <li>ii. Widen the southbound approach to provide 1-right-turn pocket;</li> <li>iii. Widen the eastbound approach to provide 1-left-turn pocket, 1-through lane, and dual right-turn pockets;</li> <li>iv. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.</li> </ul> <ul style="list-style-type: none"> <li>• (EP 2) North Watt Avenue / Airbase Drive – modify the lane striping of the westbound approach to provide 1-left-turn pocket and 2-right-turn lanes.</li> <li>• (EP 3) Elkhorn Boulevard / 34th Street – signalize the intersection. Widen the northbound and southbound approaches to provide an exclusive left-turn pocket and 1-shared-through/right lane. Allow protected left-turns on all approaches.</li> <li>• (EP 4) 34th Street / Freedom Park Drive – signalize the intersection and widen all of the approaches to provide 1-left-turn pocket and 1-shared through/right lane. Allow protected left-turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.</li> <li>• (EP 5) North Watt Avenue from Antelope Road to Elkhorn Boulevard – widen the roadway from 4-lanes to 6-lanes.</li> </ul>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>(EP 6) North Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard – widen the roadway from 4-lanes to 6-lanes.</li> </ul>	
<p><b>Cumulative Plus Project Plus Existing General Plan</b></p> <p>The following nine intersections would be significantly impacted under Cumulative Plus Project Plus Existing General Plan Conditions during the AM and/or PM peak hour:</p> <ul style="list-style-type: none"> <li>Watt Avenue / Elkhorn Boulevard (AM peak hour)</li> <li>Watt Avenue / Don Julio Boulevard (AM and PM peak hour)</li> <li>Watt Avenue / Freedom Park Drive (AM peak hour)</li> <li>Watt Avenue / A Street/James Way (AM and PM peak hour)</li> <li>Elkhorn Boulevard / 32nd Street (PM peak Hour)</li> <li>34th Street / Q Street (AM and PM peak hour)</li> <li>Elkhorn Boulevard / 34th Street (AM and PM peak hour)</li> <li>34th Street / Freedom Park Drive (AM and PM peak hour)</li> <li>Dudley Boulevard / James Way (AM and PM peak hour)</li> </ul> <p>The following five roadway segments would be significantly impacted based on the results of the Cumulative Plus Project Plus Existing General Plan Conditions:</p> <ul style="list-style-type: none"> <li>North Watt Avenue from Don Julio Boulevard to James Way/A Street</li> <li>North Watt Avenue from James Way/A Street to</li> </ul>	<p>S</p>	<ul style="list-style-type: none"> <li>(CP 1-1) North Watt Avenue / Elkhorn Boulevard – widen the southbound approach to provide an exclusive right-turn pocket. This improvement may require relocating the traffic signal head at the northwest corner of the intersection.</li> <li>(CP 1-2) North Watt Avenue / Don Julio Boulevard – provide the following improvements:             <ul style="list-style-type: none"> <li>i. <del>Widen the northbound approach to provide dual left-turn pockets. The construction of a second left-turn pocket would require Don Julio Boulevard to provide 2-departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;</del></li> <li>ii. Widen the eastbound approach to provide 1-left-turn pocket, 1-through lane, and dual right-turn pockets.</li> </ul> </li> <li>(CP 1-3) North Watt Avenue / Freedom Park Drive – widen the southbound approach to provide an exclusive right-turn pocket. This improvement may require relocating a utility pole and traffic signal head at the northwest corner of the intersection. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.</li> <li>(CP 1-4) North Watt Avenue / A Street / James Way – widen the northbound and southbound approaches to provide an exclusive right-turn pocket. These improvements may require relocating a utility pole and traffic signal head at the northwest corner of the intersection and a traffic signal head at the southeast corner of the intersection.</li> </ul>	<p>SU</p>



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>Airbase Drive</p> <ul style="list-style-type: none"> <li>• North Watt Avenue from Airbase Drive to Roseville Road</li> <li>• North Watt Avenue from Winona Way to I-80 Ramps</li> <li>• 32nd Street from Elkhorn Boulevard to Freedom Park Drive</li> </ul> <p>Mitigation is proposed for each of the impacted intersections and one of the impacted roadway segments. This mitigation would reduce impacts at these facilities to less than significant. There is no feasible mitigation for four of the impacted roadway segments as additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.</p> <p>Although the Corridor Plan implements some of the corridor mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”, there is no feasible mitigation for the three impacted freeway facilities that will directly improve the freeway facility. These impacts are considered significant and unavoidable.</p> <p>Measures applicable to the Cumulative Plus Project Plus Existing General Plan scenario in Mitigation Measure TC-1 are CP 1-1 through CP 1-14.</p>		<ul style="list-style-type: none"> <li>• (CP 1-5) Elkhorn Boulevard / 32nd Street – Installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34th Street.</li> <li>• (CP 1-6) 34th Street / Q Street – signalize the intersection and widen all of the approaches to provide 1-left-turn pocket and 1-shared through/right lane. Allow protected left-turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.</li> <li>• (CP 1-7) Elkhorn Boulevard / 34th Street –signalize the intersection and widen the northbound and southbound approaches to provide 1-left turn pocket and 1-through-right turn lane. Allow protected left-turns on all approaches.</li> <li>• (CP 1-8) 34th Street / Freedom Park Drive – signalize the intersection and widen all of the approaches to provide 1-left-turn pocket and 1-shared through/right lane. Allow protected left-turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.</li> <li>• (CP 1-9) Dudley Boulevard / James Way – provide the following improvements:             <ul style="list-style-type: none"> <li>i. Signalize the intersection;</li> <li>ii. Modify the striping of the southbound approach to provide 1-left-turn pocket and 1-through/right lane;</li> <li>iii. Modify the striping of the northbound approach to provide 1-left-turn pocket, 1-through lane and 1-right lane;</li> <li>iv. Modify the striping on the eastbound approach to provide 1-left-turn lane and 1-through/right lane;</li> <li>v. Modify the striping of the westbound</li> </ul> </li> </ul>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>approach to provide 1-left-turn lane, 1-through lane, and 1-right-turn pocket;</p> <p>vi. Allow protected left-turns on all approaches.</p> <ul style="list-style-type: none"> <li>• (CP 1-14) 32nd Street from Elkhorn Boulevard to Freedom Park Drive – installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34<sup>th</sup> Street.</li> </ul>	
<p><b>Cumulative Plus Project Plus Proposed General Plan</b>                      The following five intersections would be significantly impacted under Cumulative Plus Project Plus Proposed General Plan Conditions during the AM and/or PM peak hour:</p> <ul style="list-style-type: none"> <li>• Watt Avenue / Antelope Road (PM peak hour)</li> <li>• Watt Avenue / Don Julio Boulevard (AM and PM peak hour)</li> <li>• Watt Avenue / A Street/James Way (AM and PM peak hour)</li> <li>• Watt Avenue / Palm Street (PM peak hour)</li> <li>• Elkhorn Boulevard / 32nd Street (PM peak hour)</li> <li>• 34th Street / Q Street (AM and PM peak hour)</li> </ul> <p>The following six roadway segments would be significantly impacted based on the results of the Cumulative Plus Project Plus Proposed General Plan Conditions:</p> <ul style="list-style-type: none"> <li>• North Watt Avenue from Antelope Road to Elkhorn Boulevard</li> <li>• North Watt Avenue from Elkhorn Boulevard to Don</li> </ul>	<p>S</p>	<ul style="list-style-type: none"> <li>• (CP 2-1) North Watt Avenue / Antelope Road – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.</li> <li>• (CP 2-2) North Watt Avenue / Don Julio Boulevard – Widen the eastbound approach to provide dual left-turn pockets and two through lanes.</li> <li>• (CP 2-3) North Watt Avenue / A Street/James Way – provide the following improvements:                             <ul style="list-style-type: none"> <li>i. Provide an overlap phase for the eastbound right-turn movement during the northbound phase. This would require prohibiting northbound u-turn movements;</li> <li>ii. Widen the northbound approach to provide an exclusive right-turn pocket.</li> </ul> </li> <li>• (CP 2-4) North Watt Avenue / Palm Street – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.</li> <li>• (CP 2-5) Elkhorn Boulevard / 32nd Street – provide the following improvements:                             <ul style="list-style-type: none"> <li>i. Widen the westbound approach to provide a second left-turn pocket. Widening 32<sup>nd</sup> Street from 2- to 4-lanes between Freedom</li> </ul> </li> </ul>	<p>SU</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>Julio Boulevard</p> <ul style="list-style-type: none"> <li>• North Watt Avenue from Don Julio Boulevard to James Way/A Street</li> <li>• North Watt Avenue from Roseville Road to Winona Way</li> <li>• North Watt Avenue from Winona Way to I-80 Ramps</li> <li>• 32nd Street from Elkhorn Boulevard to Freedom Park Drive</li> </ul> <p>In the Cumulative Plus Project Plus proposed General Plan condition six study intersections, six study roadway segments and three impacted freeway facilities would exceed volume thresholds and operate at unacceptable levels of service. These impacts are considered significant impacts. Of the impacted roadway segments, five are located on Watt Avenue, which is proposed to be a Smart Growth Street. Additionally, four of the intersections that will operate at unacceptable levels are located within Watt Avenue, which is proposed to be designated as a Smart Growth Street.</p> <p>Mitigation is proposed for each of the impacted intersections and one of the impacted roadway segments. This mitigation would reduce impacts at these facilities to less than significant. There is no feasible mitigation for five of the impacted roadway segments as additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.</p> <p>Although the Corridor Plan implements some of the corridor</p>		<p>Park Drive and Elkhorn Boulevard as specified in roadway segment measure CP 2-12 would provide the additional required receiving lane on the south-leg of the intersection;</p> <p>ii. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.</p> <ul style="list-style-type: none"> <li>• (CP 2-6) 34<sup>th</sup> Street / Q Street – widen the southbound and eastbound approaches to provide 1-shared through/left-turn lane and 1-right-turn pocket.</li> <li>• <del>(CP 2-12) 32nd Street from Elkhorn Boulevard to Freedom Park Drive – widen the roadway from 2-lanes to 4-lanes.</del></li> </ul>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”, there is no feasible mitigation for the three impacted freeway facilities that will directly improve the freeway facility. These impacts are considered significant and unavoidable.</p> <p>Measures applicable to the Cumulative Plus Project Plus Proposed General Plan scenario in Mitigation Measure TC-1 are CP 2-1 through CP 2-12.</p>			
<b>AIR QUALITY</b>			
<p><b><u>Impacts to Air Quality Resulting from Fugitive Dust During Constructions Activities for Redevelopment.</u></b></p> <p>The SMAQMD <i>Guide to Air Quality Assessment in Sacramento County</i> includes a list of Basic Construction Emissions Control Practices that should be implemented on all projects, regardless of size. Dust abatement practices are required pursuant to SMAQMD Rule 403 and California Code of Regulations, Title 13, sections 2449(d)(3) and 2485. The SMAQMD Guide simply lays out the basic practices needed to comply. Since these are already required by existing rules and regulations, it is not necessary to include them as mitigation.</p> <p>Because the proposed project covers a large area in which construction could occur on multiple sites at any given time the amount of construction activity on any given day within the project area cannot be predicted and could be greater than 15 acres.</p>	S	None available.	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Impacts to Air Quality Resulting from Ozone Precursor Emissions and Diesel Particulate Caused by Construction Activities for Redevelopment.</u></b></p> <p>Implementation of the proposed project could include construction activities on numerous sites on any given day. Therefore, calculating the daily emissions is not possible. However, given the size of the project area, exceedance of SMAQMD standards is possible.</p>	<p>S</p>	<p><b>AQ-1: Ozone Precursors and Diesel Particulates</b></p> <p>All future construction projects shall include an ozone precursor analysis. If the analysis results indicate that the project will generate ozone precursors that exceed the current Sacramento Metropolitan Air Quality Management District thresholds this mitigation shall apply. This mitigation may be modified if guidance from the Sacramento Metropolitan Air Quality Management District changes in the future.</p> <p>A. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (50 horsepower [hp] or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NO<sub>x</sub> reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The District's <u>Construction Mitigation Calculator</u> can be used to identify an equipment fleet that achieves this reduction.</p> <p>B. The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and District shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except</p>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other District or state rules or regulations.</p> <p>C. If at the time of construction, the District has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with the District prior to construction will be necessary to make this determination.</p>	
<p><b><u>Long-term (Operational) Air Quality Impacts From Redevelopment</u></b></p> <p>The modeling results indicate that the project’s mass emissions of ROG, and NO<sub>x</sub> exceed the SMAQMD threshold of 65 lbs/day in the summer and winter. Under proposed General Plan policy, developments which meet or exceed thresholds of significance for ozone precursor pollutants shall be deemed to have a significant environmental impact and an Air Quality Management Plan shall be provided. The goal of the review is to achieve a 15 percent reduction of emissions from the base-case level. A plan has been prepared for this project.</p> <p>Even with a 15% reduction in operational emissions, the estimated ROG and NO<sub>x</sub> levels would exceed the operational threshold of 65 lbs/day.</p>	S	<p><b>AQ-2: Operational Emissions</b></p> <p>All development projects within the North Watt Avenue Corridor Plan shall comply with the SMAQMD endorsed Air Quality Mitigation Plan (7-16-2010), which requires implementation of reduction measures that will achieve a minimum of 15.75 percent reduction in operational and area source emissions, consistent with General Plan Policy.</p>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Cancer Risk Associated with High-Traffic Roadways and UP Railroad</u></b></p> <p><i>High-Traffic Roadways</i></p> <p>Vehicles and Trucks associated with Interstate 80 are a source of several toxic air contaminants including but not limited to: nitrogen oxides, diesel particulate matter, and carbon monoxide. Impacts to air quality and health of adjacent land uses are considered potentially significant when sensitive land uses (i.e. residential, etc.) are located within 500 feet of a high-traffic roadway.</p> <p><i>UP Railroad</i></p> <p>Locomotives associated with the UP rail line are a source of several toxic air contaminants including but not limited to: nitrogen oxides, diesel particulate matter, and carbon monoxide. Impacts to air quality and health of adjacent land uses are considered potentially significant when sensitive land uses (i.e. residential, etc.) are located within 500 feet of the rail line.</p>	<p>PS</p>	<p><b>AQ-3:</b></p> <p>All projects within 500 feet of I-80 or the UP rail line which involve sensitive uses (residential uses, and those with concentrations of the very young, elderly, or infirm such as parks, daycares, nursing homes, or hospitals), shall develop a mitigation plan to reduce impacts associated with toxic air contaminants, in consultation with SMAQMD. The mitigation plan may include measures such as vegetative plantings, the installation of electrostatic filters, and/or site redesign.</p> <p><b>AQ-4:</b></p> <p>The following policy shall be added to the Corridor Plan: To avoid significant health impacts due to chronic pollutant exposure related to I-80, new sensitive uses (residential uses, and those with concentrations of the very young, elderly, or infirm such as parks, daycares, nursing homes, or hospitals) shall not be permissible within 200 feet of the nearest I-80 travel lane. The location of this restricted area may be altered consistent with any new protocols for major roadways that may be published by the Sacramento Metropolitan Air Quality Management District which alters the location of the evaluation criterion (currently 281 chances per million).</p>	<p>LS</p>
<b>NOISE</b>			
<p><b><u>Construction Noise</u></b></p> <p>Future construction within the North Watt Corridor Plan area would temporarily increase noise levels in the vicinity of construction activities intermittently over the construction period. Construction noise may be considered a nuisance by existing community members; however, the environmental impact would be considered less than significant.</p>	<p>LS</p>	<p>None recommended.</p>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b><u>Operational Noise: Transportation Sources</u></b>			
<p><b>Traffic Noise Impacts to Residential Exteriors</b></p> <p>While it is encouraged that outdoor living areas are shielded to the extent possible to reduce impacts due to excessive noise levels, it is foreseeable that in some instances it may be infeasible to reduce impacts to a less than significant level consistent with General Plan policy.</p>	S	None available.	SU
<p><b>Traffic Noise Impacts to Residential Interiors</b></p> <p>Indoor residential areas at the 70 dB contour and farther away are considered to be in compliance with the 45 dB indoor General Plan requirement because at least a 25 dB reduction in noise is provided by standard construction methods. Because interior noise levels can be mitigated without the use of exterior noise barriers that may be inconsistent with the intent of the Corridor, and due to the fact that interior noise levels are considered paramount to individuals sleep patterns, health and overall well-being, mitigation is provided to reduce potential impacts.</p>	S	<p><b>NS-1: Traffic Noise Impacts to Residential Uses: Interior</b></p> <p>To ensure compliance with General Plan Noise Element standards of 45 dB L<sub>dn</sub> or less for residential interiors, the following measure shall apply: Any/all new residential construction shall be located at or beyond the 70 dB noise contours, as found in the Cumulative Plus Project conditions tables describing noise contour locations (Table NS-8 and Table NS-9 of this EIR).</p> <p>Any departure or deviation from the above measure must be accompanied by an acoustical analysis, prepared by a qualified acoustical consultant and verified by the Division of Environmental Review and Assessment, substantiating that the General Plan Noise Element standard cited above is met.</p>	LS
<p><b>Traffic Noise Impacts to Non Residential Exteriors</b></p> <p>Although it is encouraged to provide some shielding through site design for non-residential uses (i.e. churches, office buildings, schools, and industrial uses), there are foreseeable noise impacts that can not be mitigated without compromising the proposed plan.</p>	S	None available.	SU



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b>Traffic Noise Impacts to Non Residential Interiors</b></p> <p>Depending on the particular use, noise levels could be in excess of applicable standards. Interior noise levels can be mitigated without the use of exterior noise barriers in ways that are consistent with the intent of the Corridor Plan.</p>	<p>S</p>	<p><b>NS-2: Traffic Noise Impacts to Non-Residential Uses: Interior</b></p> <p>To ensure compliance with General Plan Noise Element standards for non-residential interiors, as indicated in Table I of the Sacramento County General Plan, the following measure shall apply: Any/all new non-residential construction shall remain outside the 60 to 75 dB contour, as applicable, assuming a 25 dB standard construction reduction, unless sound resistant construction materials are utilized such that interior noise levels do not exceed the applicable noise level standards.</p> <p>Any departure or deviation from the above measure must be accompanied by an acoustical analysis, prepared by a qualified acoustical consultant and verified by the Division of Environmental Review and Assessment, substantiating that the General Plan Noise Element standard cited above is met.</p>	<p>LS</p>
<p><b>Railroad Noise</b></p> <p>The Corridor is subject to noise from the Union Pacific Railroad. In particular, the Triangle Gateway district would be impacted by rail noise.</p>	<p>S</p>	<p><b>NS-3: Railroad Noise</b></p> <p>To ensure compliance with General Plan Noise Element standards for interior noise levels at sensitive residential receptors subjected to railroad noise, the following policy shall be added to the Corridor Plan:</p> <p>No use shall be operated or constructed that would result in interior noise levels at sensitive residential receptors that exceed the General Plan Noise Element noise standards. Proponents applying for sensitive uses in close proximity to the Union Pacific Railroad shall submit a noise analysis substantiating compliance with interior noise standards of the General Plan Noise Element noise standards.</p>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Operational Noise: Community Generated Noise</u></b></p> <p>Community generated noise will inevitably be produced by the myriad of activities in the Corridor; and the associated noises will be perceived differently by individuals. Since it is the intent of the Corridor to mix uses within the plan area in a cohesive way, policy should be in place within the Corridor which would protect the Plan Area receptors as well as immediately adjacent residential properties from excessive noise generators or provide provisions to mitigate such noises.</p> <p>Thus, mitigation is suggested that requires the addition of a Corridor policy that addresses community noise.</p>	S	<p><b>NS-4: Community Generated Noise</b></p> <p>To ensure compliance with General Plan Noise Element standards for non-transportation sources, the following policy shall be added to the Corridor Plan:</p> <p>No use shall be operated so as to generate recurring noises that are unreasonably loud, cause injury, or create a nuisance to any person of ordinary sensitivities. No nonresidential use shall be operated so as to generate any noise in an adjacent residential area, as detected in that area without instruments, that is louder than the noise which could be generally expected from uses permitted in that area.</p>	LS
<b>BIOLOGICAL RESOURCES</b>			
<p><b><u>Native Trees</u></b></p> <p>There are a number of oaks and other large native and non-native trees in the vicinity of Watt Avenue and throughout the project area. Many of these trees are located within private property and an evaluation of the species and size is not currently possible. These trees may be subject to impacts related to future project related activities.</p>	S	<p><b>BR-1: Oak Tree Protection</b></p> <p>Prior to execution of redevelopment/ development projects within the Corridor Plan area, the project proponent(s) shall submit an arborist report for the project impact areas if appropriate habitat exists. The report shall include the species, diameter, dripline, and health of the trees, and shall be prepared by an ISA certified arborist. The report shall include an exhibit that shows the trees and their dripline in proximity to the project improvements. The report shall identify any tree that will be removed and quantify the dripline encroachment from project equipment or facilities.</p> <p>A) With the exception of the trees removed and compensated for through Part B below, all healthy native trees that are 6 inches dbh or larger on the project site, all portions of adjacent off-site healthy native oak trees that are 6 inches dbh or larger which have driplines that extend onto the project site, and all off-site healthy native oak trees that are 6 inches dbh or larger which may be impacted by utility installation and/or improvements</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>associated with this project, shall be preserved and protected as follows:</p> <ul style="list-style-type: none"> <li>i) A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.</li> <li>ii) Any protected trees on the site that require pruning shall be pruned by a certified arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."</li> <li>iii) Prior to initiating construction, temporary protective fencing shall be installed at least one foot outside the driplines of the protected trees within 100-feet of construction related activities, in order to avoid damage to the tree canopies and root systems. Where encroachment occurs, temporary high visibility protective fencing shall be installed a maximum of one foot outside the work areas in order to minimize damage to the tree canopies and root systems.</li> <li>iv) Any removal of paving or structures (i.e. demolition) that occurs within the dripline of a protected oak tree shall be done under the</li> </ul>	

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		<p>direct supervision of a certified arborist. To the maximum extent feasible, demolition work within the dripline protection area of the oak tree shall be performed by hand. If the certified arborist determines that it is not feasible to perform some portion(s) of this work by hand, then the smallest/lightest weight equipment that will adequately perform the demolition work shall be used.</p> <p>v) No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of preparing tree reports and inventories shall be allowed.</p> <p>vi) No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.</p> <p>vii) No grading (grade cuts or fills) shall be allowed within the driplines of protected trees, except for the minimum required for construction and streetscape improvements.</p> <p>viii) Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.</p> <p>ix) No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line</p>	

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		<p>shall be bored and jacked under the supervision of a certified arborist.</p> <ul style="list-style-type: none"> <li>x) The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per County standard detail shall be installed under the supervision of a certified arborist.</li> <li>xi) All portions of any masonry wall that will encroach into the dripline protection area of any protected tree shall be constructed using grade beam wall panels and posts set no closer than 10 feet on center. Any wrought iron fencing shall be similarly installed, with posts set no closer than 10 feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the trees.</li> <li>xii) Trunk protection measures, per Sacramento County standards, shall be used for all protected trees where development/construction activity, including installation of any masonry wall and wrought iron fence, occurs within 10 feet of the trunk of a tree.</li> <li>xiii) No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An above ground drip irrigation system is recommended.</li> <li>xiv) Landscaping beneath oak trees may include</li> </ul>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>non-plant materials such as bark mulch, wood chips, boulders, etc. The only plant species which shall be planted within the driplines of oak trees are those which are tolerant of the natural semi-arid environs of the trees. A list of such drought-tolerant plant species is available at the Division of Environmental Review and Assessment. Limited drip irrigation approximately twice per summer is recommended for the understory plants.</p> <p>B) To the maximum extent feasible, all on-site healthy native oak trees shall be protected and preserved. Any substantial (&gt;20%) encroachment and/or removal of native oak trees shall be compensated by planting native trees (valley oak/<i>Quercus lobata</i>, interior live oak/<i>Quercus wislizenii</i>, blue oak/<i>Quercus douglasii</i>, and California black walnut), equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Division of Environmental Review and Assessment. On-site preservation of native oak trees that are less than 6 inches (&lt;6 inches) dbh, may also be used to meet this compensation requirement. Encroachment of over 20 percent within the dripline radius of native trees will require compensatory mitigation based on the percentage of encroachment multiplied by the dbh. Encroachment over 50 percent will require compensation for the entire tree.</p> <p>Equivalent compensation based on the following ratio is required:</p> <ul style="list-style-type: none"> <li>• one preserved native oak tree &lt; 6 inches dbh on-site = 1 inch dbh</li> <li>• one deepot seedling (40 cubic inches or larger)</li> </ul>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>= 1 inch dbh</p> <ul style="list-style-type: none"> <li>• one 15-gallon tree = 1 inch dbh</li> <li>• one 24-inch box tree = 2 inches dbh</li> <li>• one 36-inch box tree = 3 inches dbh</li> </ul> <p>Replacement tree planting shall be completed prior to the issuance of building permits or a bond shall be posted by the applicant in order to provide funding for purchase, planting, irrigation, and 3-year maintenance period, should the applicant default on replacement tree mitigation. The bond shall be in an amount equal to the prevailing rate of the County Tree Preservation Fund.</p> <p>Prior to the approval of Improvement Plans or building permits, a Replacement Oak Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Oak Tree Planting Plan(s) shall include the following minimum elements:</p> <ol style="list-style-type: none"> <li>1. Species, size and locations of all replacement plantings and &lt; 6-inch dbh trees to be preserved;</li> <li>2. Method of irrigation;</li> <li>3. The Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage;</li> <li>4. Planting, irrigation, and maintenance schedules;</li> <li>5. Identification of the maintenance entity</li> </ol>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>and a written agreement with that entity to provide care and irrigation of the trees for a 3-year establishment period, and to replace any of the replacement oak trees which do not survive during that period.</p> <p>6. Designation of 20 foot root zone radius and landscaping to occur within the radius of oak trees &lt; 6-inches dbh to be preserved on-site.</p> <p>No replacement tree shall be planted within 15 feet of the driplines of existing oak trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement oak trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.</p> <p>Oak trees &lt;6 inches dbh to be retained on-site shall have at least a 20-foot radius suitable root zone. The suitable root zone shall not have impermeable surfaces, turf/lawn, dense plantings, soil compaction, drainage conditions that create ponding, utility easements, or other overstory tree(s) within 20 feet of the tree to be preserved. Trees to be retained shall be determined to be healthy and structurally sound for future growth, by an ISA Certified Arborist subject to Division of Environmental Review and Assessment approval.</p>	



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>If oak tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.</p>	
<p><b><u>Streams Wetlands and Other Surface Waters</u></b></p> <p>The potential wetland features on the project site could be removed, rerouted, or be subject to indirect impacts due to construction-related activities in accordance with the proposed Corridor Plan. Consultation with the U.S. Army Corps of Engineers would be required if wetland features in the Corridor Plan area are impacted as a result of development or redevelopment. At that time, through consultation, a determination will be made as to whether the particular impacted wetlands are Waters of the United States, or isolated wetlands. Regardless of this determination, if any wetlands within the Corridor are impacted, compensation will be required per General Plan Policy CO-71, the County's no net loss of wetland acreage policy.</p>	<p>S</p>	<p><b>BR-2: Potential Wetland Features</b></p> <p>Prior to execution of redevelopment/ development projects within the Corridor Plan area or installation of public service infrastructure, the project proponent(s) shall submit a wetland delineation to the Division of Environmental Review and Assessment for the project impact areas if appropriate habitat exists. The wetland delineation shall be prepared by a qualified biologist.</p> <p>When a construction level project is proposed in the future, and appropriate habitat exists on the project site, to compensate for the loss of wetlands and Waters of the U.S., one of the following measures shall be implemented:</p> <ol style="list-style-type: none"> <li>1. Preserve or create wetlands sufficient to result in no net loss of wetland acreage, and protect their required watersheds as is necessary for the continued function of wetlands on the project site. The project design, configuration, and wetland management plan shall provide reasonable assurances that the wetlands will be protected and their long-term ecological health maintained.</li> <li>2. Where a Section 404 Permit has been issued by the Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of satisfying Paragraph 1, provided a no net loss of wetlands is achieved.</li> <li>3. Pay to the County an amount based on a rate of \$35,000 per</li> </ol>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		acre of the unmitigated/uncompensated wetlands, which shall constitute mitigation for purposes of implementing adopted no net loss policies and CEQA required mitigation. The payment shall be collected by the Community Planning and Development Department at the time of Improvement Plan or Building Permit approval, whichever occurs first, and deposited into the Wetlands Restoration Trust Fund.	
<p><b><u>Riparian Habitat</u></b></p> <p>Riparian habitat, which coincides with one of the non-concrete-lined watercourses in the plan area, will be re-designated in the proposed Corridor. This designation change does not in itself impact the riparian habitat; however, future development in accordance with the Corridor Plan could impact this resource.</p>	S	<p><b>BR-3: Riparian Habitat</b></p> <p>Where riparian habitat exists, the project proponent(s) of redevelopment/ development projects within the Corridor Plan area shall submit a biological assessment performed by a qualified biologist or botanist to the Division of Environmental Review and Assessment delineating the extent of on-site riparian habitat and shall ensure no net loss of habitat consistent with County Policies with the following mitigation:</p> <ol style="list-style-type: none"> <li>1. Prior to initiating project construction install chain link fencing or a similar protective barrier at the limits of any on site riparian zone as dictated by the biological assessment in order to protect and preserve the riparian habitat. No earthwork shall be conducted within the protection area and fencing shall remain in place for the duration of all construction work.</li> </ol> <p>Or,</p> <ol style="list-style-type: none"> <li>2. Where preservation is found to be infeasible, prior to the issuance of building, grading or other improvement permits, the applicant shall prepare a re-vegetation plan for any altered riparian habitat, consistent with General Plan Policies, that compensates for riparian habitat removals.</li> </ol> <p>The re-vegetation plan shall be prepared by a qualified biologist or botanist and provide quantifiable success criteria and include at least a one year monitoring and adaptive management program as well as implementation and funding mechanisms. The plan shall be subject to the approval of the Division of Environmental Review and</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		Assessment. Or, 3. Any mitigation required by the state or federal permitting agencies that compensates for the loss of riparian vegetation, functions and values and that provides for a native re-vegetation plan consistent with or exceeding the requirements of measure 1 above shall be deemed mitigation sufficient to reduce impacts to a less than significant level and may be utilized in place of items 1 and 2 above.	
<p><b><u>Special Status Species</u></b></p> <p>Although there are no known special status species within the project area and no raptor nests were observed during site surveys, there are a number of large trees on the project site which may provide suitable nesting habitat for protected raptor species that may be disturbed by project development and redevelopment.</p> <p>Construction activities during the nesting period could result in the removal active nests and in the take of members of protected raptor species. Also, noise generated by project related construction activities could lead to other direct impacts such as nest abandonment.</p>	S	<p><b>BR-4 Raptor Nesting Habitat</b></p> <p>Where appropriate raptor nesting habitat exists, if construction, grading, or project-related improvements are to occur between March 1 and September 15, a focused survey for raptor nests on the site and on nearby trees shall take place within ½ mile of the project site and shall be conducted by a qualified biologist within 14 days prior to the start of construction work (including clearing and grubbing). If active nests are found, the California Department of Fish and Game (CDFG) shall be contacted to determine appropriate protective measures. If no active nests are found during the focused survey, no further mitigation will be required.</p>	LS
<b>HAZARDOUS MATERIALS</b>			
<p><b><u>Contaminated Sites</u></b></p> <p>According to the State GeoTracker and Envirostor databases, there are known toxic sites within the plan area. Of those sites, some are still actively monitored by the appropriate jurisdiction and are in various degrees of assessment.</p> <p>With redevelopment, there is potential for residential uses to be located on these sites. However, since specific parcel</p>	S	<p><b>HM-1: Contamination Sites</b></p> <p>Prior to the issuance of any building or grading permits on the properties listed in Table HM-1 or Table HM-2 the project applicant shall consult with the Sacramento County Environmental Management Department (EMD), to obtain a site evaluation and to determine the need for a Phase II Environmental Site Assessment, Soil Management Plan or a Health Risk Assessment. If said analyses are required, all site clean-up recommendations, in consultation with EMD, shall be completed prior to the issuance of</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>redevelopment and development plans are not part of the proposed Corridor Plan, impacts associated with the toxic sites can not be determined at this time. Due to the uncertainty of impacts to human health and environment, development on known toxic sites is considered a potentially significant impact. Mitigation is included to require consultation with the Environmental Management Department prior to any development or redevelopment on any parcels known to contain toxic sites.</p>		<p>any building or grading permit, unless EMD approves clearance due to extenuating circumstances.</p>	
<p><b><u>Exposure to Asbestos Through Renovation or Demolition of Existing Structures That Contain Asbestos</u></b></p> <p>The renovation or demolition of existing structures constructed prior to 1989 can pose an exposure risk to workers from asbestos-containing material if the material is chipped away and then accidentally ingested, or if it becomes airborne and is inhaled. When an individual applies for a demolition or renovation permit through the County, the applicant will be required to get a permit from the Sacramento Municipal Air Quality Management District. As part of the permit process, the applicant will need to show compliance with federal regulations and Air District Rule 902, which require a survey for asbestos prior to demolition. Any asbestos found would require abatement.</p>	<p>LS</p>	<p>None recommended.</p>	<p>LS</p>
<p><b><u>Exposure to Lead through Renovation or Demolition of Existing Structures That Contain Lead-Based Paint</u></b></p> <p>The renovation or demolition of existing structures constructed prior to 1978 can pose an exposure risk of workers to lead-based paint if the paint were chipped away and then accidentally ingested, or if the paint became an airborne dust and was inhaled. Also, lead can deposit on exposed soil, which can then be tracked into the home, and ingested by children and adults. As with asbestos in older homes, there are existing rules and regulations to ensure that workers are apprised of the risk of lead exposure</p>	<p>LS</p>	<p>None recommended.</p>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
before renovation or demolition can begin, and are given protocols to avoid exposure.			
<b>CULTURAL RESOURCES</b>			
<p><b><u>Impacts to Historic Architectural Resources</u></b></p> <p><b>Evaluated Historical Architectural Resources</b></p> <p>Three properties older than 50 years of age appear to meet criteria of the California Register and are considered historical resources for the purposes of CEQA. At present there are no plans to impact the three eligible properties. If future projects propose impacts to these significant properties, impacts would be considered significant.</p>	S	<p><b>CR-1: Evaluated Historical Architectural Resources</b></p> <p>Significant historical architectural resources within North Watt Avenue Corridor Plan shall be preserved in situ with all proposed modifications carried out to <i>The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings</i>. In the instance that demolition of a significant historical architectural resource is proposed, the applicant shall have a qualified architectural historian prepare a historical report with archival prints of the structure, including architectural details, for CRHR Criterion 3 eligible properties and/or preparation of public interpretation documents (video, articles, local history) for treatment of CRHR Criterion 1 eligible properties. All documentation shall be archived with the Sacramento Archives and Museum Collection Center (SAMCC) and the County of Sacramento.</p>	SU
<p><b>Unevaluated Historical Architectural Resources</b></p> <p>The Corridor Plan contains several potential resources that have not been subject to a prior review (due to age at time of the current study). Given the sensitivity of the area for historical structures there is a potential for additional resources to be located within the plan area that have not been previously evaluated. Loss of any significant resources is a significant impact.</p>	S	<p><b>CR-2: Unevaluated Historical Architectural Resources</b></p> <p>Properties that have not been subject to a previous architectural evaluation and are at least 50 years or older shall have a historic architectural study performed by a qualified, professional architectural historian if potential historic structures present on the project site are subject to demolition or otherwise impacted. The resulting report should include results of a background literature search and field survey, an historic context statement, and analysis of the potential significance of the noted resource, and recommendations for preservation and/or mitigation. If the structure is considered significant and demolition is proposed, mitigation documentation, as detailed in Mitigation Measure CR-1, shall be prepared, reviewed and endorsed by the Planning Division.</p>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Prehistoric and Historic Archaeological Resources</u></b></p> <p>Based on the historical understanding of Native American and historical settlement patterns in the project area, prior results of archaeological surveys within the project area and communication with the North Central Information Center, the project area is considered unlikely (low-to-moderate) to contain significant prehistoric archaeological resources. In addition, farming practices and historic-era development in the project area would have disturbed most near surface deposits.</p> <p>However, the ethnographic record shows that the project area has a history of Native American habitation. Native people would have hunted and gathered in the project area, and may have established temporary camps along area creeks or other nearby drainages. Additionally, historic use of the project area is well documented. As a result, the potential exists for grading and excavation associated with buildout of the Corridor to unearth subsurface prehistoric and historic archaeological resources.</p>	<p>S</p>	<p><b>CR-3: Unanticipated Discoveries of Cultural Resources</b></p> <p>If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior’s Professional Qualification Standards for prehistoric and historic archaeology, shall be retained at the Applicant’s expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed, and the monitor shall be retained at the Applicant’s expense.</p> <p>Work cannot continue within the 200-foot radius of the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.</p> <p>If a potentially-eligible resource is encountered, then the archaeologist, DERA, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination shall be formally documented in writing and submitted to DERA as verification that the provisions of CEQA for managing unanticipated discoveries have been met.</p> <p>In addition, pursuant to Section 5097.97 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	<p>LS</p>

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><b><u>Human Remains</u></b></p> <p>Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification.</p>	S	See Mitigation Measure CR-3	LS
<b>CLIMATE CHANGE</b>			
<p><b><u>Impacts to the Project from Climate Change</u></b></p> <p>The effects of climatic changes on the region are potentially significant, and can only be mitigated through both adaptation and reduction strategies. Since climate change is a global issue and many of the necessary adaption and reduction strategies that would be required to ensure less than significant impacts are outside of the control of the proposed project impacts are considered significant.</p>	S	None available.	SU
<p><b><u>Impacts to Climate Change from the Project</u></b></p>			
<p>Any increase in development could potentially aggravate existing climate change conditions. Based on the specific modeling, such as URBEMIS, the Corridor Plan could result in an increase in greenhouse gas emissions over existing conditions. Impacts are broken down by each proposed land use below; however, overall, with implementation of mitigation measures, which include recommendations from the Attorney General and SMAQMD, the proposed project is expected to result in a less than significant climate change impact. Because the project is “infill” and is consistent with smart growth principles, it is inherently a</p>		See below.	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
benefit to climate change. Out of an abundance of caution, the specific impacts are listed below.			
<p><b>Residential Transportation Sector Emissions</b></p> <p>Project related Residential Transportation Sector Emissions equal 3.87 MT per capita and are below the 4.56 MT per capita threshold by 0.69 MT.</p>	LS	None recommended.	LS
<p><b>Residential Energy Sector Emissions</b></p> <p>The proposed Corridor Plan will lead to additional residential development that will ultimately aggravate an existing climate change problem. Using URBEMIS modeling and standard residential energy use estimates, it was determined that GHG emissions were 0.54 MT per capita over the 1.30 MT per capita standard as determined by Sacramento County. With a reduction due to implementation of the Air Quality Management Plan the per capita reduction required for future residential projects is 0.25 MT CO<sub>2</sub> per capita.</p>	S	<p><b>CC-1: Residential Energy Sector Emission Reductions</b></p> <p>Add a policy to the North Watt Corridor Plan requiring that future applicants for residential projects reduce residential emissions by 0.25 MT CO<sub>2</sub> per capita. In consultation with the Division of Environmental Review and Assessment and Sacramento Metropolitan Air Quality Management District, applicants shall submit a plan detailing a set of quantitative and/or qualitative measures that achieve the reduction in CO<sub>2</sub> emissions per capita, prior to the issuance of building permits or prior to obtaining any discretionary entitlements. This mitigation may be modified to conform with current Sacramento County climate change standards, including but not limited to a Green Building Program and Climate Action Plan. Additionally, applicants may choose to submit revised, project-specific, residential energy-use emissions factors; however, the applicant will be required to provide adequate data to support the revised emission factor.</p>	LS
<p><b>Commercial Transportation Sector Emissions</b></p> <p>Although emissions are shown to be generated by commercial businesses, the commercial businesses that would be within the Project area are not seen as creating new trips that would not exist without the project, rather they are seen as only accommodating trips that would already be generated but going elsewhere.</p> <p>Additionally, it is assumed that most of the vehicular travel to and from commercial projects within the Corridor Plan area will be internal trips made by residents located within</p>	LS	None recommended.	LS



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>the Corridor or within the community immediately adjacent to it. Thus, in an effort to avoid “double-counting” emissions, commercial projects will not be required to mitigate the transportation impacts associated from trips related to the residents in the community to their sites.</p>			
<p><b>Commercial Energy Sector Emissions</b>                      The proposed Corridor Plan will lead to additional commercial development that will ultimately aggravate an existing climate change problem. Using URBEMIS modeling, it was determined that GHG emissions were 3.59 MT per Kft<sup>2</sup> over the 8.08 MT per Kft<sup>2</sup> standard. With a reduction due to implementation of the Air Quality Management Plan the per Kft<sup>2</sup> reduction required for future commercial projects is 1.75 MT CO<sub>2</sub> per Kft<sup>2</sup>.</p>	<p>S</p>	<p><b>CC-2: Commercial Energy Sector Emission Reductions</b>                      Add a policy to the North Watt Corridor Plan requiring that future applicants for commercial projects reduce commercial emissions by 1.75 MT CO<sub>2</sub> per Kft<sup>2</sup>. In consultation with the Division of Environmental Review and Assessment and Sacramento Metropolitan Air Quality Management District, applicants shall submit a plan detailing a set of quantitative and/or qualitative measures that achieve the reduction in CO<sub>2</sub> emissions per Kft<sup>2</sup>, prior to the issuance of building permits or prior to obtaining any discretionary entitlements. This mitigation may be modified to conform with current Sacramento County climate change standards, including but not limited to a Green Building Program and Climate Action Plan. Additionally, applicants may choose to submit revised, project-specific, commercial energy-use emissions factors; however, the applicant will be required to provide adequate data to support the revised emission factor.</p>	<p>LS</p>

TERMINOLOGY USED IN THIS EIR

This EIR uses the following terminology to describe environmental effects of the project.

- Significance Criteria.** A set of criteria used by the lead agency to determine at what level, or “threshold,” an impact would be considered significant. Significance criteria used in this EIR include those that are set forth in the CEQA Guidelines, or can be discerned from the CEQA Guidelines; criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the Sacramento County General Plan.

- **Less-than-Significant Impact.** A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environment. No mitigation is required for less-than-significant impacts.
- **Potentially Significant Impact.** A potentially significant impact is a substantial, or potentially substantial, adverse change in the environment. Physical conditions which exist within the area will be directly or indirectly affected by the proposed project. Impacts may also be short-term or long-term. A project impact is considered significant if it reaches the threshold of significance identified in the EIR. Mitigation measures may reduce a potentially significant impact to less than significant.
- **Significant Unavoidable Impact.** A project impact is considered significant and unavoidable if it is significant and cannot be avoided or mitigated to a less-than-significant level once the project is implemented.
- **Cumulative Significant Impact.** A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.
- **Mitigation.** Mitigation measures are revisions to the project that would minimize, avoid, or reduce a significant effect on the environment. CEQA Guidelines §15370 identifies 5 types of mitigation:
  - a) Avoiding the impact altogether by not taking a certain action or parts of an action.
  - b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
  - c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
  - d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
  - e) Compensating for the impact by replacing or providing substitute resources or environments.

## REQUESTS AND REQUIREMENTS OF VARIOUS AGENCIES

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None.

## MITIGATION MONITORING AND REPORTING PROGRAM

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Comply with the Mitigation Monitoring and Reporting Program for this project, including the payment of 100% of the Sacramento County Division of Environmental Review and Assessment staff costs, and the costs of any technical consultant services incurred during implementation of that Program.

## 2 PROJECT DESCRIPTION

### INTRODUCTION

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The project is a request for a General Plan Amendment to change the existing General Plan designations in the project area to Neighborhood Transit Oriented Development. The project also requests to create the “Smart Growth Street” General Plan designation and to designate Watt Avenue from I-80 north to U Street a “Smart Growth Street”. Additionally, the project is a request for a Community Plan Amendment and corresponding Rezone of the corridor areas parcel’s to the Special Planning Area designation. In order to implement the above requested Rezone, the project is also a request for a Zoning Ordinance Amendment to create the North Watt Corridor Special Planning Area (SPA).

This section of the Environmental Impact Report (EIR) is the Project Description of the proposed North Watt Avenue Corridor Plan. The purpose of the Project Description is to describe the project in a way that will be meaningful to the public, reviewing agencies and decision-makers. As described in Section 15124 of the State CEQA Guidelines, a complete project description must contain the following information but is not required to supply extensive detail beyond that needed for evaluation and review of the environmental impact: (1) The location and boundaries of the proposed project on a regional and detail map; (2) A statement of objectives sought by the proposed project; (3) A general description of the project’s technical, economic and environmental characteristics; and, (4) A statement briefly describing the intended uses of the EIR. For a complete discussion of the CEQA requirements for a project description, please refer to State CEQA Guidelines Section 15124.

### PROJECT PROPOSAL

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#### REQUESTED ENTITLEMENTS

1. A **General Plan Amendment** to change the General Plan designation from Agricultural Residential (36.18 acres), Commercial Offices (285.70 acres), Industrial Intensive (310.57 acres), Low Density Residential (68.30 acres), Medium Density Residential (11.28 acres) and Recreation (8.74 acres) to Neighborhood Transit Oriented Development. (Note: it is anticipated that the new General Plan designation will be Mixed-Use Corridor as defined in the General Plan Update.)
2. A **General Plan Amendment** to create the “Smart Growth Street” General Plan designation.

3. A **General Plan Amendment** to change the General Plan Transportation Plan to add the “Smart Growth Street” designation for Watt Avenue from I-80 north to U Street.
4. A **Community Plan Amendment** and **Corresponding Rezone** to Special Planning Area from Auto Commercial (AC) (9.03 acres), Business and Professional (BP) (6.84 acres), General Commercial (GC) (145.47 acres), Highway Travel Commercial (TC) (14.60 acres), Limited Commercial (LC) (59.96 acres), Shopping Center (SC) (53.19 acres), Recreation (O) (7.24 acres), Agricultural-Residential (AR-1) (0.10 acres), Residential Density 2 (RD-2) (32.80 acres), Residential Density 5 (RD-5) (5.43 acres), Residential Density 10 (RD-10) (0.16 acres), Residential Density 20 (RD-20) (9.27 acres), Residential Density 30 (RD-30) (5.37 acres), Mobilehome Subdivision (RM-1) (1.41 acres), Light Industrial (M-1) (293.68 acres), Office Park (MP) (25.14 acres), Special Planning Area (SPA) (55.24 acres), and Neighborhood Preservation Area (NPA) (0.28 acres), on approximately 722.29 acres.
5. A **Zoning Ordinance Amendment** to create the North Watt Corridor Special Planning Area (SPA).

## PROJECT LOCATION

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The North Watt Avenue Corridor is located along Watt Avenue from Interstate-80 on the south end to Antelope Road/U Street on the north end. The Corridor Plan consists of approximately 750 acres distributed along a 4-mile stretch of Watt Avenue located within the North Highlands community of the unincorporated Sacramento County. The Corridor Plan area is generally situated between the McClellan Business Park and an area informally called “West of Watt” (a 2030 General Plan Update proposed new growth area) to the west and single-family residential neighborhoods in the North Highlands community to the east. (See Plate PD -1 and Plate PD -2)

## PROJECT PROPONENTS

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### APPLICANT

Sacramento County  
 Community Planning and Development Department  
 Planning Division  
 827 7<sup>th</sup> Street, Room 120  
 Sacramento, CA 95814

Contact:  
 Tricia Stevens, Principal Planner

## OWNERS

Various

## PROJECT VISION STATEMENT & OBJECTIVES

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The North Watt Avenue Corridor Plan states the following Vision Statement for the plan:

The Corridor Plan is a comprehensive guide to the implementation of the community's vision for a vibrant, economically healthy corridor that enhances the quality of life in North Highlands and the greater Sacramento region.

The Corridor Plan is intended to guide growth and public improvements in the Plan area within a planning period of 20 years.

The following objectives were provided by the Sacramento County Department of Planning and Community Development's Planning Division for the North Watt Avenue Corridor Plan:

**1. Concentrate development at three transit-oriented, mixed-use district centers (Elkhorn, North Highlands Town Center, and Triangle Gateway) with land densities and intensities sufficient to support regional transit.**

Each district center will serve as an activity hub with a unique character and mix of land uses. Higher density residential and higher intensity commercial/retail, office, and civic/public uses should be concentrated at the district centers to support local and regional bus rapid transit services. Residential and nonresidential uses should be mixed to encourage local pedestrian, bicycle, and light-duty vehicle access.

**2. Revitalize vacant and underutilized sites to promote vibrant district centers and neighborhoods.**

Vacant and underutilized sites within the district centers should be given redevelopment priority to create local employment opportunities and promote the availability of a full range of goods and services. Neighborhoods outside of the district centers should be redeveloped with a variety of housing choices, with neighborhood-serving commercial and office uses anchoring important intersections.

**3. Create a balanced circulation system with multimodal transportation opportunities serving local and regional users.**

Transit options, including local and bus rapid transit, should serve the district centers, which will be developed as transit-oriented developments. A network of automobile, bus transit, light-duty and low-speed vehicle, bicycle, and pedestrian routes will be available throughout the Corridor Plan area. New east-west streets

and trails will be developed, with extensions of existing streets, where appropriate. Connections to the regional bicycle and pedestrian network will also be enhanced.

**4. Attract land uses that will serve both the North Highlands community and McClellan Business Park.**

The North Highlands community is fortunate to include McClellan Business Park, which is a rapidly growing regional employment center. Employment opportunities that complement those in McClellan Business Park shall be actively sought for the Corridor Plan area and located in the district centers, particularly the Triangle Gateway TOD.

**5. Preserve and enhance the quality of air, water, sensitive species habitat, and other natural resources within the Corridor Plan area to promote its long-term sustainability and that of the North Highlands community.**

Maintaining the long-term viability of environmental resources within the Corridor Plan area contributes to the overall quality of life for North Highlands residents and visitors and increases the sustainability of the community and the Sacramento region. The Corridor Plan identifies sustainability goals and policies, and should be implemented in a manner that effectively preserves and enhances finite local resources. Although almost all of the Corridor Plan area is already urbanized, opportunities to improve air and water quality; preserve open space, creeks, and drainage ways; and protect sensitive species habitat shall be actively pursued.

**6. Create a sense of place. Promote the rich and varied character of the North Highlands community to encourage a strong, local sense of place and attract regional visitation.**

The history of North Highlands and the Corridor Plan area are intricately tied to McClellan Air Force Base and its evolution to McClellan Business Park, with McClellan's aeronautic history celebrated at the Aeronautic Museum of California. More recent ethnic immigration to the North Highlands community, particularly from Southeast Asia, Eastern Europe and Latin America, has added richness to the community's character. The community seeks to develop these and other aspects of local character to create a sense of place that is both appealing to local residents and can serve to attract regional visitation.

**7. Attract exemplary and sustainable urban design to the Corridor Plan area resulting in high-quality buildings and an inviting public realm.**

Well-designed buildings and an attractive public realm can attract users and entice additional development. The latest technology and design techniques should be incorporated into all buildings and landscaping to minimize energy and

water use, while also ensuring the high quality construction of an aesthetically pleasing built environment.

## ENVIRONMENTAL SETTING

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The North Watt Avenue Corridor area consists of approximately 750 acres positioned along a 4-mile segment of Watt Avenue north of Interstate-80 to Antelope Road within unincorporated Sacramento County. The plan area is situated entirely within the community of North Highlands adjacent to the former McClellan Air Force Base (now the McClellan Business Park) (see Plate PD -1 and Plate PD -2). The Corridor is located within Sections 32 and 34-39 of Township 9 and 10 North, Range 5 East, on the Rio Linda, California USGS 7.5' Quadrangle Map.

The general character of the Corridor area is that of an aging auto-oriented development that was built with the intent of serving employees of the former McClellan Air Force Base. The plan area consists of numerous shopping strips and services that sit well back from Watt Avenue with expansive parking areas fronting the corridor. The Corridor Plan claims that while the auto-oriented theme served former employees of the base, it disenfranchised non-motorists so alternate forms of transportation are limited. Further, the Plan contends that the existing corridor does not provide needed services, such as a wide range of commercial and retail uses or community amenities, such as open space, bikeways, and transit opportunities. Finally the Plan notes that the existing development pattern does not serve the existing needs of the post-Air Base North Highlands Community.

Access to the central corridor, North Watt Avenue, is via numerous roadways such as Roseville Road, I Street, Elkhorn Boulevard and Antelope Road. Additionally, Interstate 80 (I-80), which generally defines the southern boundary of the Corridor, provides direct access to the area from the Watt Avenue off-ramp. Non-vehicular access to the project area is provided by two light rail stations located at Watt Avenue and I-80 and at Longview and I-80, and from local and regional bus service. There are some intermittent bicycle lanes and sidewalks within the project area.

Existing zoning in the plan area consists of Auto Commercial (AC), Business and Professional (BP), General Commercial (GC), Highway Travel Commercial (TC), Limited Commercial (LC), Shopping Center (SC), Recreation (O), Agricultural-Residential (AR-1), Residential Density 2 (RD-2), Residential Density 5 (RD-5), Residential Density 10 (RD-10), Residential Density 20 (RD-20), Residential Density 30 (RD-30), Mobilehome Subdivision (RM-1), Light Industrial (M-1), Office Park (MP), Special Planning Area (SPA), and Neighborhood Preservation Area (NPA). Adjacent land use zones are TC, M-1, RD-2, RD-5, RD-10, RD-20, RD-30, RM-1, MP, SPA and AR-1. The majority of the properties adjacent to the project site are zoned RD-5.



Plate PD -1: Regional Location Exhibit

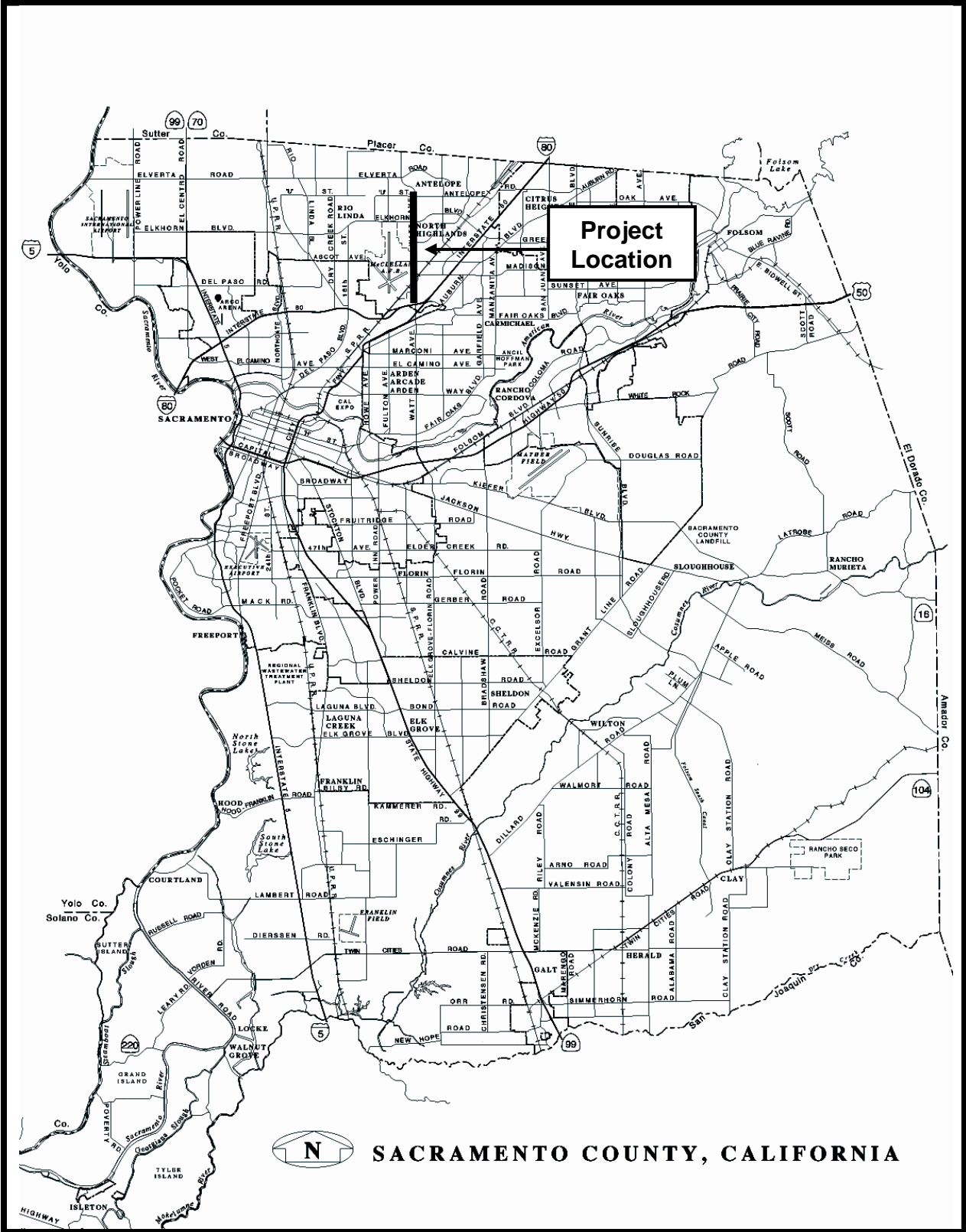
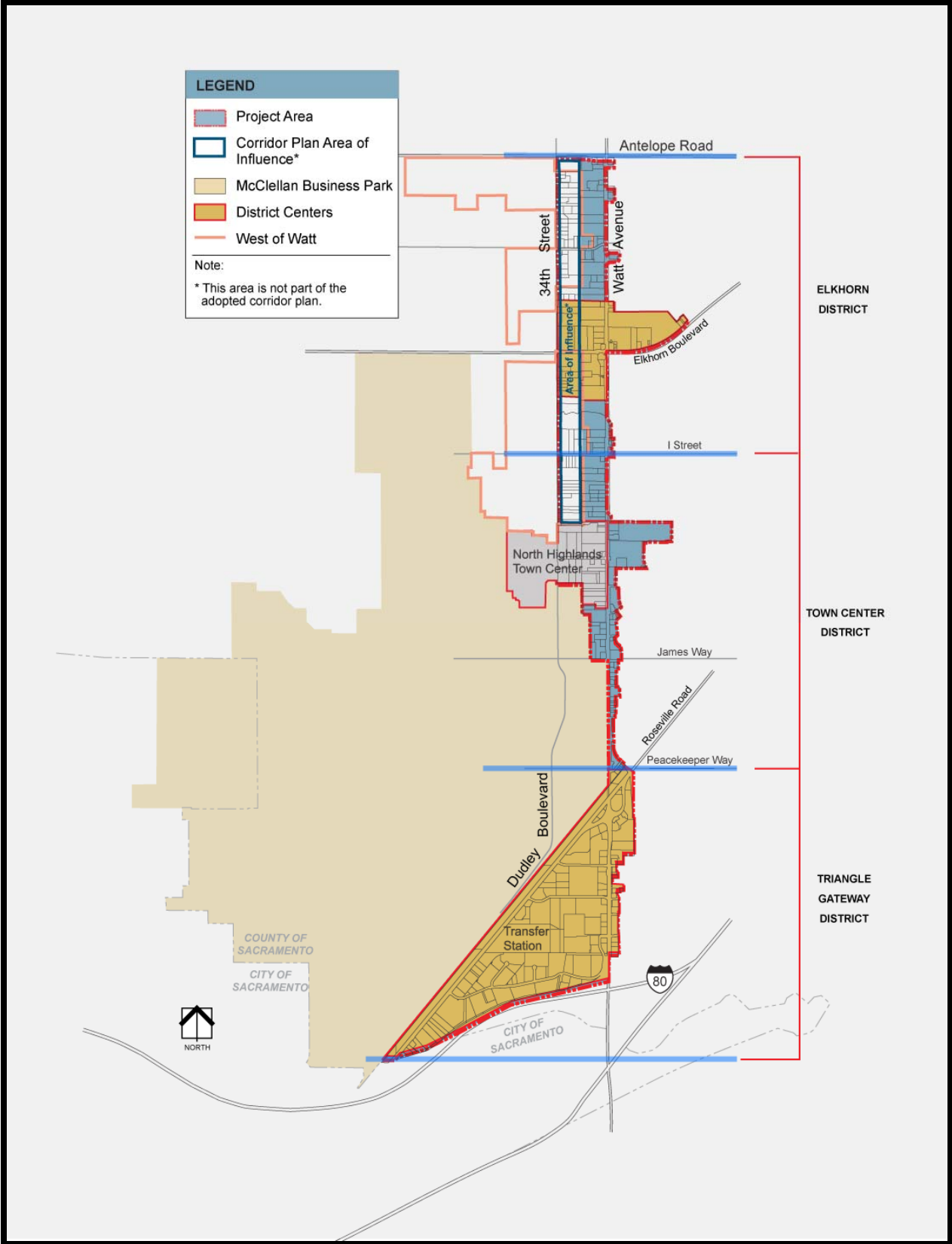


Plate PD -2: Corridor Plan Area and Local Context



There are also a substantial number of AR-1 and SPA properties adjacent to the plan area. The SPA area is the McClellan Business Park (formerly McClellan Air Force Base).

## PROJECT DESCRIPTION

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### LAND USE PLAN

The North Watt Avenue Corridor Plan is a land use plan (Plate PD -3) that is intended to guide infill growth and public improvements within the plan area within a planning horizon of 20 years. In all, the Corridor Plan could result in the addition of up to 7,200 additional residential units, 1,170,000 square feet of new retail, and 714,700 square feet of new office uses.

The previously stated project objectives and overall project vision are addressed in depth and are incorporated into the various chapters of the Corridor Plan. The specific components of the plan are identified with a cursory description of covered content, below.

Land Use: The land use section provides detailed definitions of each of the proposed districts within the corridor, and provides target densities and land uses that should be achieved in each designation.

Urban Design: This chapter provides specific development standards and design guidelines, specific to each district within the corridor that will be required of future development.

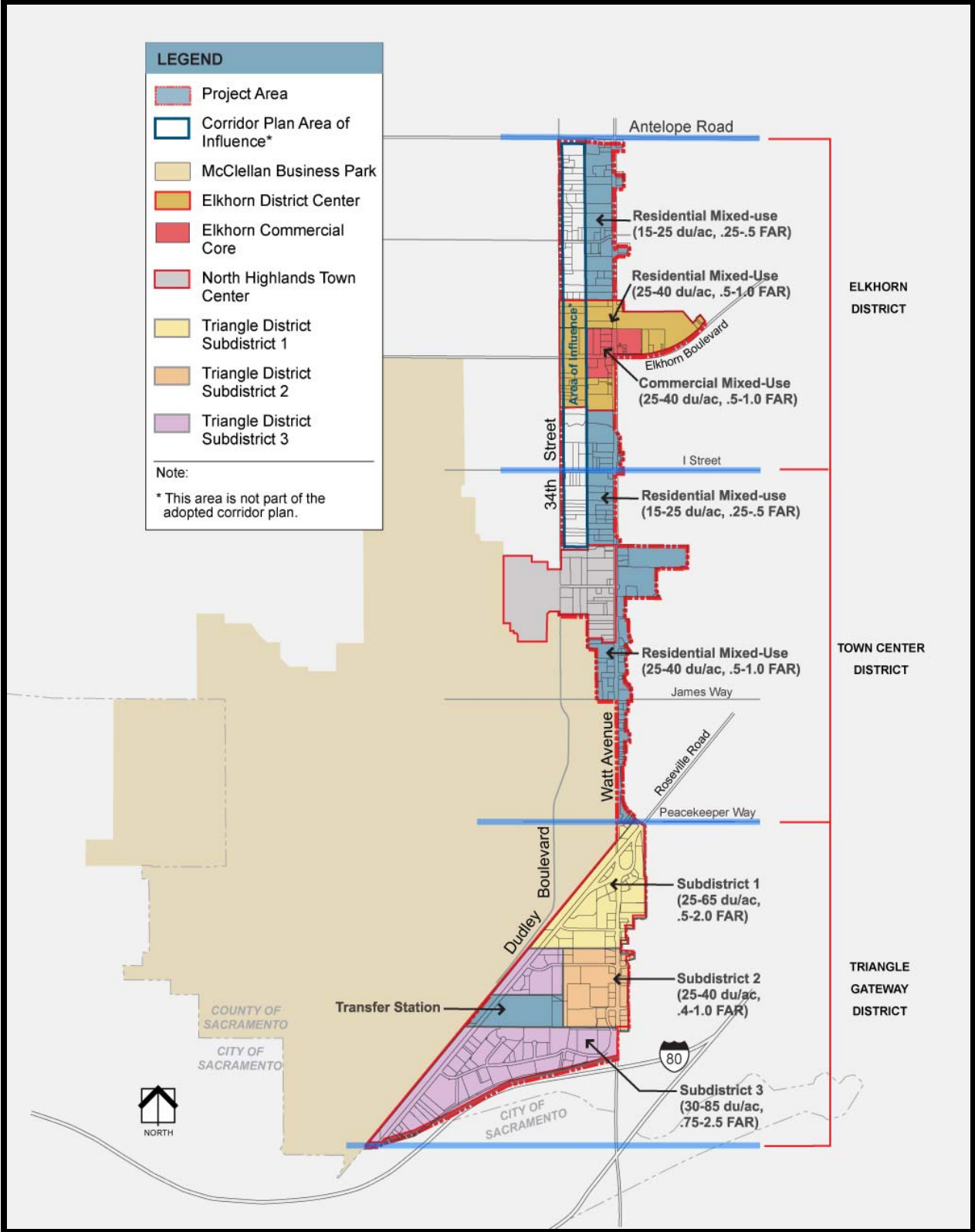
Circulation: This chapter describes auto, transit, neighborhood electric vehicle, bicycle and pedestrian mobility within the Corridor.

Public Realm Design: This chapter provides fundamental guidelines for the design of any outdoor activity areas that will be accessible to the general public. Streetscape improvements, landscape, parks, open space, signage, lighting and public art are some of the elements that are specifically addressed.

Infrastructure: This chapter is intended to address the sewer, water, and stormwater infrastructure improvements that will be necessary to support the build-out of the Corridor.

The above components of the plan will be discussed separately in the appropriate EIR chapters that follow this chapter.

Plate PD -3: North Watt Avenue Corridor Plan Land Use



*LAND USE: CORRIDOR DISTRICTS*

The North Watt Avenue Corridor is broken up into three districts: the Elkhorn District, the Town Center District, and the Triangle Gateway District. Each of the districts is envisioned as being a unique urban village, with districts centers that are higher in density and more intensely developed. A generalized summary of the goals, vision, and expected land uses in each of the districts is provided below.

**ELKHORN DISTRICT**

The Elkhorn District is located in the northernmost section of the corridor area between I Street (southern boundary) and Antelope Road (northern boundary). Elkhorn Boulevard bisects the district at what is envisioned to be the high density Elkhorn District Center. The intersection of Watt Avenue and Elkhorn Boulevard is particularly important because there is existing local bus transit, existing water and sewer infrastructure, several undeveloped or underutilized parcels, and there is existing visibility from two major roadways. All of these factors led to the Elkhorn District Center being planned as a major transit-oriented neighborhood center. The emphasis within the District Center is on the incorporation of ground floor commercial uses fronting on Elkhorn Boulevard. While office or residential uses are allowed within the District Center, they are to be located above or behind the commercial frontage on Elkhorn Boulevard. In general, the District Center is described as a commercial/retail core that will provide an active pedestrian shopping environment. Residential uses within the Center will be of high density (25-40 du/ac).

The areas north and south of the district center are envisioned as being new residential mixed-use neighborhoods. These areas will consist of medium-density residential uses (15-25 du/ac) with small-scale neighborhood serving commercial/retail uses at smaller local-street intersections.

The Elkhorn District Land Use Summary is illustrated in **Table PD-1**.

**Table PD-1: Elkhorn District Land Use Summary**

Land Use	Entire District	District Center	Remainder of District
	Dwelling Units or Square Footage	Dwelling Units or Square Footage	Dwelling Units or Square Footage
<b>Residential</b>	2,363	945	1,418
<b>Retail</b>	292,500	204,750	87,750
<b>Office</b>	220,255	198,230	22,026

**TOWN CENTER DISTRICT AND NORTH HIGHLANDS TOWN CENTER**

The North Highlands Town Center is an existing Special Planning Area (SPA) located along Freedom Park Drive between Watt Avenue and 32<sup>nd</sup> Street. The North Highlands Town Center is not included in the Corridor Plan; however, it does act as the village center of the Corridor Plan’s Town Center District; and, the Corridor Plan was devised to work in conjunction, compliment and add onto the existing North Highlands Town Center SPA. The Town Center District is located north and south of the North Highlands Town Center. The approved North Highlands Town Center land use map can be viewed in Plate PD -4.

The Corridor’s Town Center District is described as being made up of two discrete areas: the area between I Street and the North Highlands Town Center and the area between the Town Center and Peacekeeper Way. The northern portion of the District has a fair amount of existing commercial/retail uses and is similar to the Elkhorn District in that medium-density residential is emphasized. The southern portion is described as a narrow commercial strip which borders the McClellan Business Park to the west. Given the proximity to McClellan Business Park, commercial/retail uses that support the business park are envisioned in this area.

The Town Center District Land Use Summary is illustrated in Table PD-2.

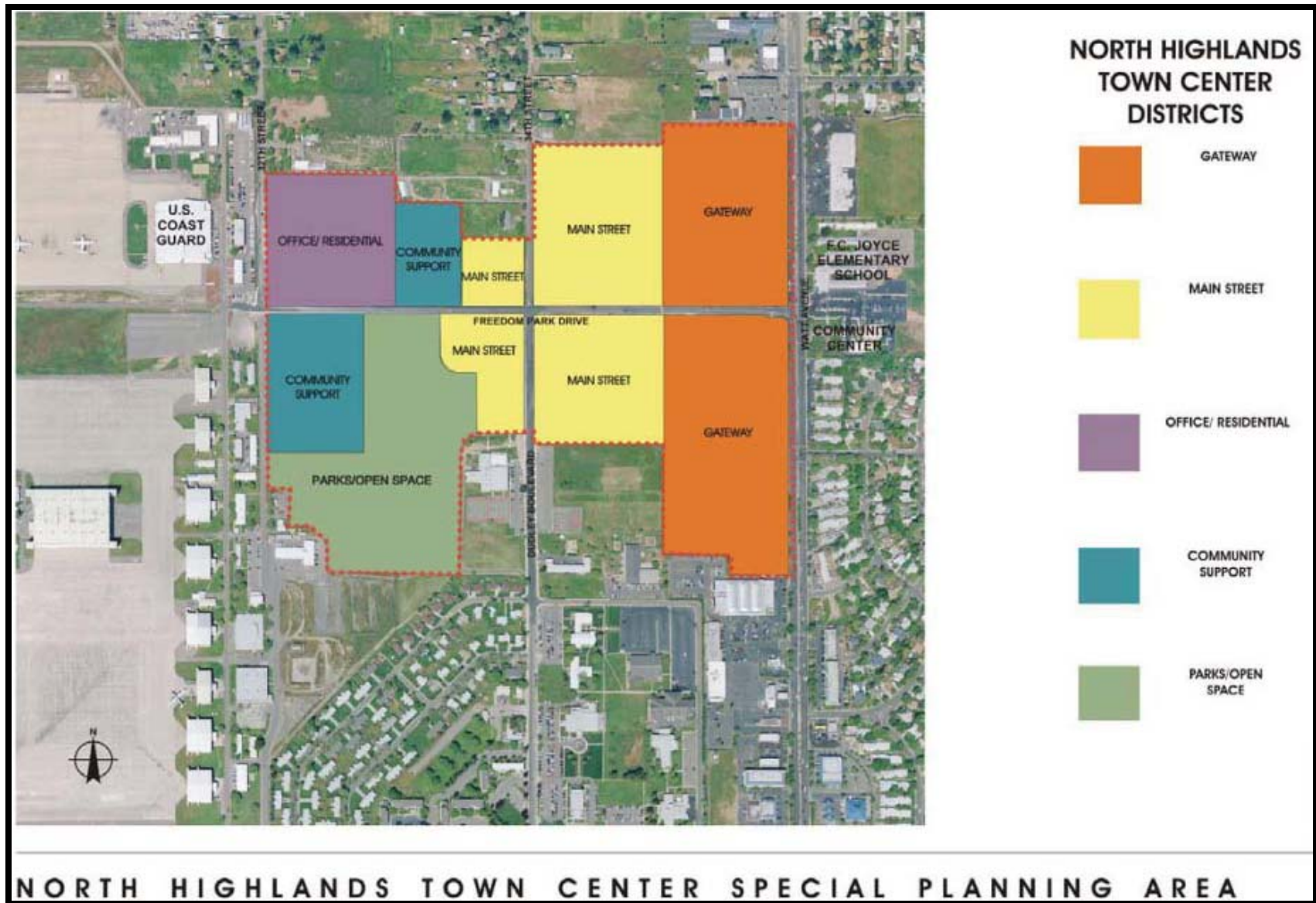
**Table PD-2: Town Center District Land Use Summary**

Land Use	Entire District	Town Center	Remainder of District
	Dwelling Units or Square Footage	Dwelling Units or Square Footage	Dwelling Units or Square Footage
<b>Residential</b>	2,280	1,824	456
<b>Retail</b>	292,500	29,250	263,250
<b>Office</b>	134,850	26,970	107,880

**TRIANGLE GATEWAY DISTRICT**

The Triangle Gateway District is located south of Peacekeeper Way, between Roseville Road and Interstate 80. Due to its location, adjacent to Interstate 80 and two light rail transit stations (located at Watt Avenue and I-80 and at Longview and I-80), the plan envisions the Triangle Gateway District as a transit-oriented development. According to the Corridor Plan, “Transit-oriented development (TOD) is a smart growth model that combines residential, employment, shopping, and services at sufficient densities (typically 40 du/ac minimum) and intensities with transit service (such as bus rapid transit or heavy rail) to reduce automobile dependence.” The Triangle Gateway District area benefits from its location due to

Plate PD -4: Approved North Highlands Town Center SPA Land Use Map



visibility and available transit opportunities; however, the area is also constrained due to the presence of the North Area Recovery Station (Transfer Station) and due to noise from aircraft at McClellan Business Park. In order to provide a comprehensive approach to planning the Triangle Gateway District, capitalizing on benefits and dealing with constraints, the District is broken into three subdistricts. The subdistricts are described below, and can be viewed on Plate PD -3.

### **Triangle Gateway District: Subdistrict 1**

The Corridor Plan defines Subdistrict 1 as follows:

The subdistrict is envisioned as a commercial and residential mixed-use area that could also include office, entertainment, and hotel uses, as supported by market conditions. The subdistrict should incorporate a transition from residential mixed-use along Roseville Road to employment uses in the central and eastern portions of the subdistrict.

The plan intends to have higher density residential development (35-65 du/ac) focused towards Roseville Road. Residential uses could also occur on the east side of North Watt Avenue; however, the plan envisions commercial/retail uses being constructed towards North Watt Avenue. In this subdistrict, and all of the district's subdistricts, development will be planned in conjunction with convenient bicycle and pedestrian routes that directly access transit stops/stations.

### **Triangle Gateway District: Subdistrict 2**

The Corridor Plan defines Subdistrict 2 as follows:

Subdistrict 2 is envisioned as a region-serving commercial/retail center, with businesses that could include general merchandise, home improvement supplies, and specialized stores providing clothing, books, or sundries. The subdistrict could also accommodate entertainment uses, such as a small theater. Residential and office uses may be included in this subdistrict, but should not be the primary uses. If included, office and residential must be located above ground-floor commercial/retail.

Subdistrict 2 is unique from the other subdistricts because there are several vacant large-format retail buildings and numerous undeveloped properties. Given the abundance of vacant and unutilized land there is an opportunity to redevelop the area into a regional commercial/retail center. Pedestrian and bicycle circulation is emphasized within the area and will be integral to the overall design.

### **Triangle Gateway District: Subdistrict 3**

The Corridor Plan defines Subdistrict 3 as follows:



Subdistrict 3 is envisioned as an employment center with office and light industrial uses accessible from the Longview and Watt Avenue Light Rail Transit Stations, as well as bus transit on Watt Avenue. Office uses complementing those in McClellan Business Park are also suitable.

Overall, Subdistrict 3 is planned for multi-story buildings in a business park setting. The multi-story buildings will capitalize on the visibility of the area from I-80 and other major roadways and transit locations, including light rail. The plan notes that the southeast corner of the subdistrict could be developed with a mixed-use development that would serve employees of the business park. As with all of the subdistricts, there is an emphasis on pedestrian and bicycle mobility.

The Triangle Gateway District Land Use Summary is illustrated in **Table PD-3**.

**Table PD-3: Triangle Gateway District Land Use Summary**

Land Use	Entire District	District Center	Remainder of District
	Dwelling Units or Square Footage	Dwelling Units or Square Footage	Dwelling Units or Square Footage
<b>Residential</b>	2,550	765	1,785
<b>Retail</b>	585,000	234,000	351,000
<b>Office</b>	359,600	71,920	287,680

*AREA OF INFLUENCE*

The Corridor Plan identifies an area described as the east side of 34<sup>th</sup> Street as the “Corridor Plan Area of Influence.” The Area of Influence is located on the east side of 34<sup>th</sup> Street and the Plan area, north of the North Highlands Town Center to Antelope Road. Since it is the overall vision of the Corridor Plan to plan the area in a comprehensive and holistic manner, the Area of Influence was included in order to address long term goals for new trails, parks, sewer and water infrastructure and local access streets. The Corridor Plan does provide the following caveat regarding the Area of Influence:

The Area of Influence is therefore included on maps and diagrams in the Corridor Plan, however this plan does not modify the General Plan designation or zoning for this area. Concept plans for this area included in the corridor Plan are shown for illustrative purposes only and do not represent binding entitlements to development.

Based on the above, it should be noted that the environmental document does rely on some of the exhibits from the Corridor Plan; however, any designations overlaid on this

area are considered a Planning “concept” and are not considered a part of this project. Thusly, any potential environmental impacts associated with “concepts” for the Area of Influence are not analyzed as part of this EIR. See Plate PD -5 for an exhibit denoting the Area of Influence.

*LAND USE SUMMARY OF THE CORRIDOR PLAN AREA*

Table PD-4, presents the Corridor Plan Land Use Summary (Note: Table PD-4 rounds the land use assumptions to the nearest whole number. These rounded numbers were utilized as the land use assumptions for all further analysis: including traffic, noise, air quality, and climate change impacts). As with the other districts, these numbers represent the maximum, or growth-cap, that could occur under the Corridor Plan.

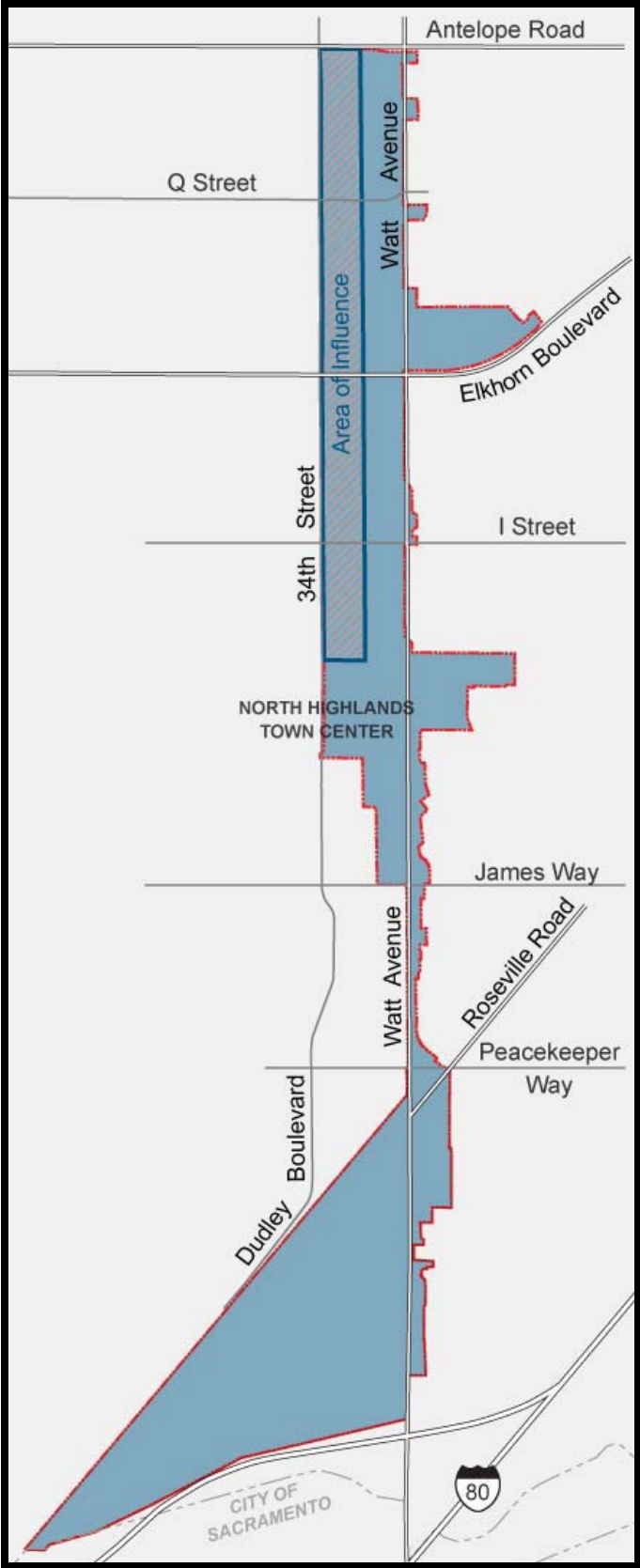
**Table PD-4: Corridor Plan Land Use Summary**

Land Use	Corridor Plan, All Districts
	Dwelling Units or Square Footage
<b>Residential</b>	7,200
<b>Retail</b>	1,170,000
<b>Office</b>	714,700

*CORRIDOR PLAN URBAN DESIGN*

The Corridor Plan provides detailed development standards and design guidelines for each of the Corridor’s district centers with the exception of North Highlands Town Center, which is covered by the Town Center Development Code. The Corridor Plan also has standards set for the mixed-use residential neighborhoods that are planned to be located outside the District centers. The development standards and design guidelines present principles related to site orientation and design, circulation, building form and massing, parking (vehicular and bicycle), and parks and open space. These

Plate PD -5: Corridor Plan Area of Influence



standards define the overall development form for each of the proposed Districts. See Plate PD -6 and Plate PD -7 for the Elkhorn District Center Conceptual Land Use Plan and the Elkhorn District Center Illustrative Site Plan, respectively. See Plate PD -8 and Plate PD -9 for the Triangle Gateway District Conceptual Land Use Plan and the Triangle Gateway District Urban Design Framework Plan, respectively. The Corridor Plan also provides a set of specific development standards and design guidelines that are geared towards the smaller scale relationship between a lot and proposed building. On defining the difference between the standards proposed for the Corridor, the Plan states the following:

On a district scale, the development standards regulate urban design by defining the development form and intensity of different land use zones within the Corridor Plan area. At the scale of the lot and building, development standards define the relationship of the building to the lot and street, to parking, and define a menu of different frontage types that are intended to strengthen the urban design character of North Watt Avenue and support a pedestrian-oriented environment.

The specific development standards would apply to each proposed zone and consist of standards related to lot coverage, landscape coverage, density, floor area ratios, setback requirements, permitted frontage types, building heights, and parking requirements. All of the standards can be viewed in Chapter 3: Urban Design of the North Watt Avenue Corridor Plan (see Appendix A).

#### *CORRIDOR PLAN PUBLIC REALM DESIGN*

The Corridor Plan also includes standards related to public areas within the Corridor. Chapter 5 (see Appendix A) of the Corridor Plan provides a framework for how public-accessible areas should be designed in order to cohesively plan the area. Standards are related to the following public areas/elements: streetscapes, vehicular travel lanes, transit lanes, bicycle trails and lanes, parkway designs, sidewalk design, acceptable street trees, paving materials, lighting, traffic calming mechanisms, landscaping requirements, creek corridors, parks, paseos, open space, gateways, signage, and public art.

## INTENDED USES OF THE EIR

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The Sacramento County Board of Supervisors will use the information contained in this EIR in evaluating the proposed project and rendering a decision to approve or deny the requested entitlements. The EIR will serve as an information document for the general public as well. Responsible agencies may also use the EIR as needed for subsequent discretionary actions.

Plate PD -6: Elkhorn District Center Conceptual Land Use Plan



Plate PD -7: Elkhorn District Center Illustrative Site Plan

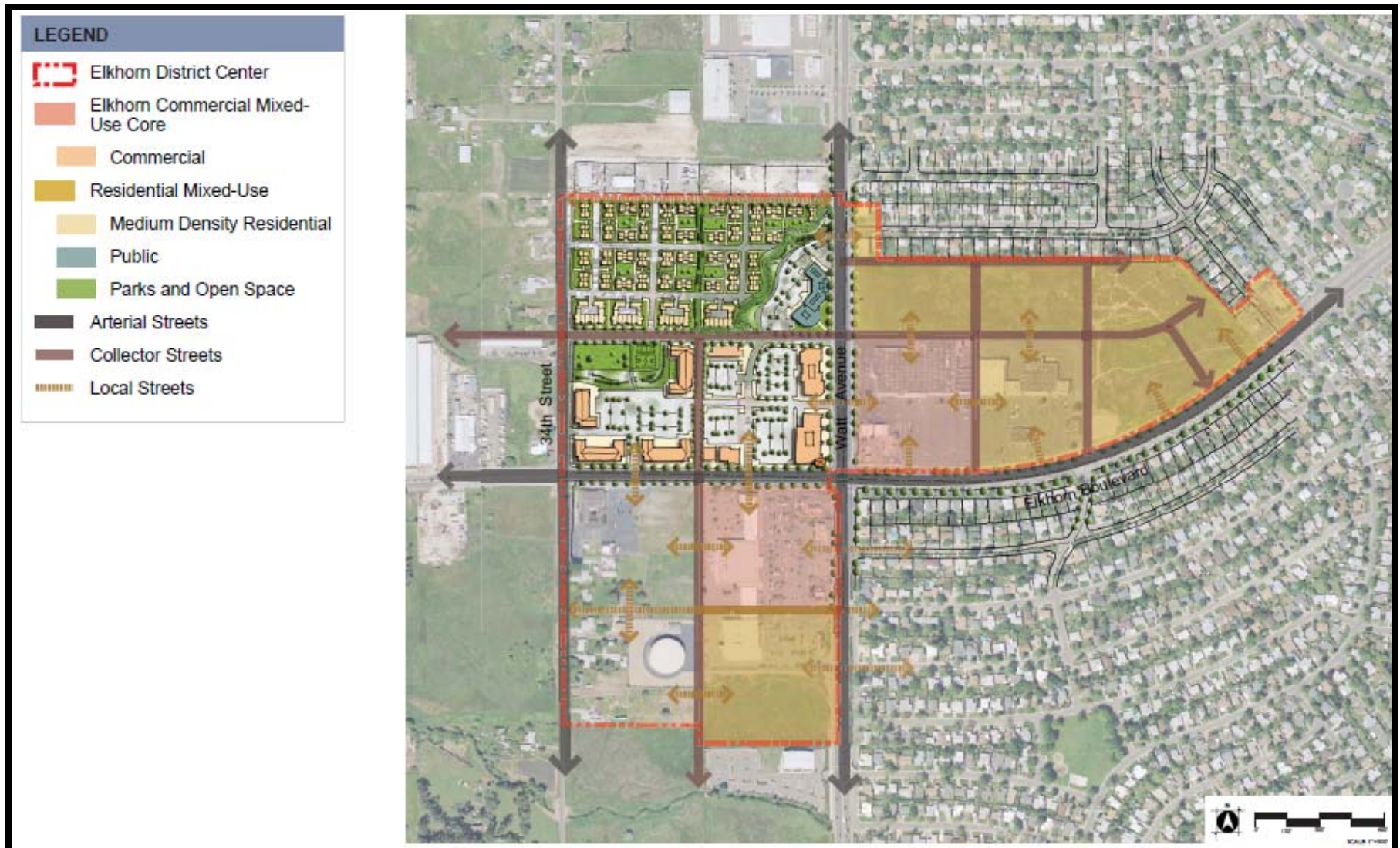


Plate PD -8: Triangle Gateway District Conceptual Land Use Plan

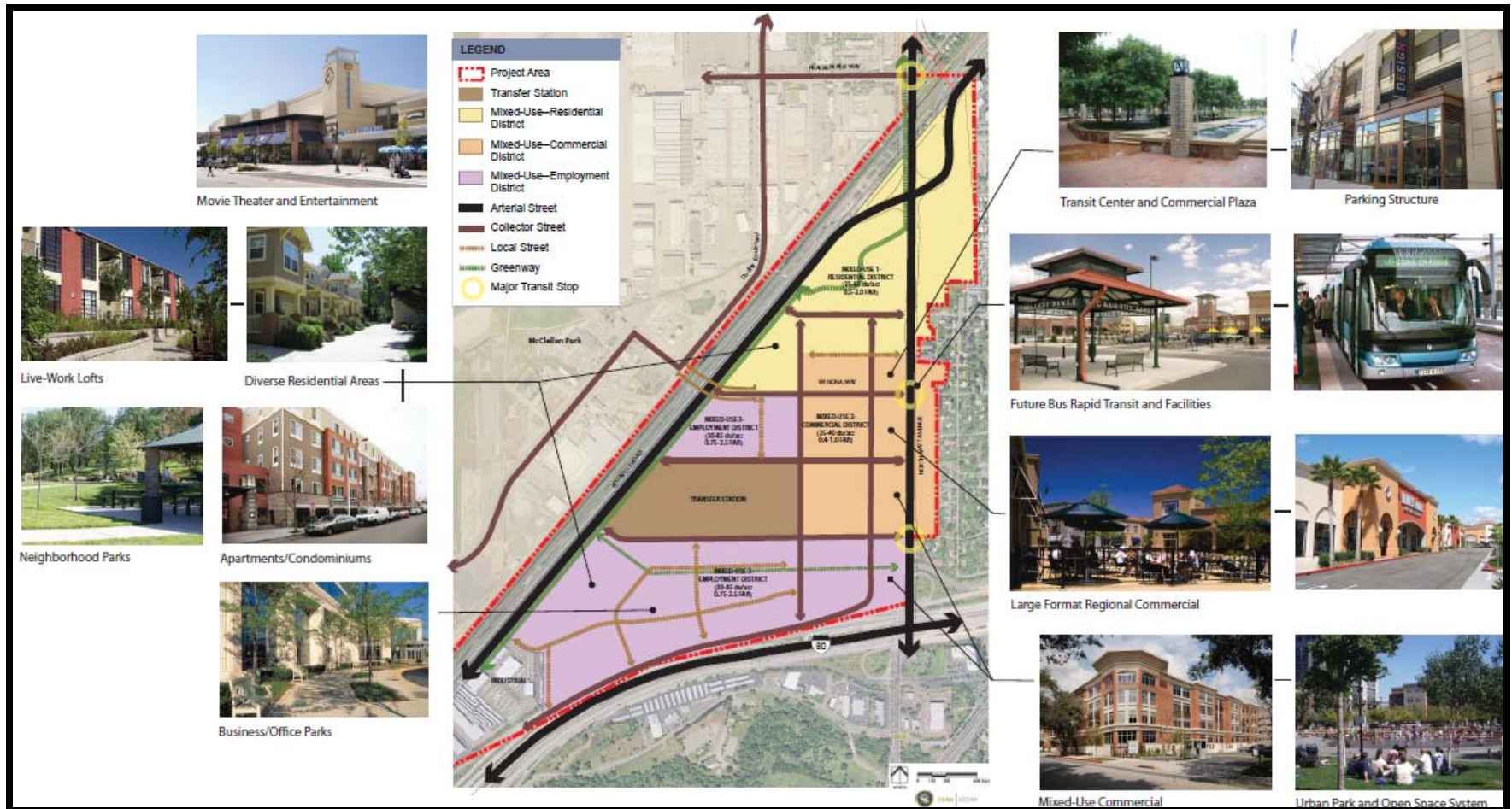
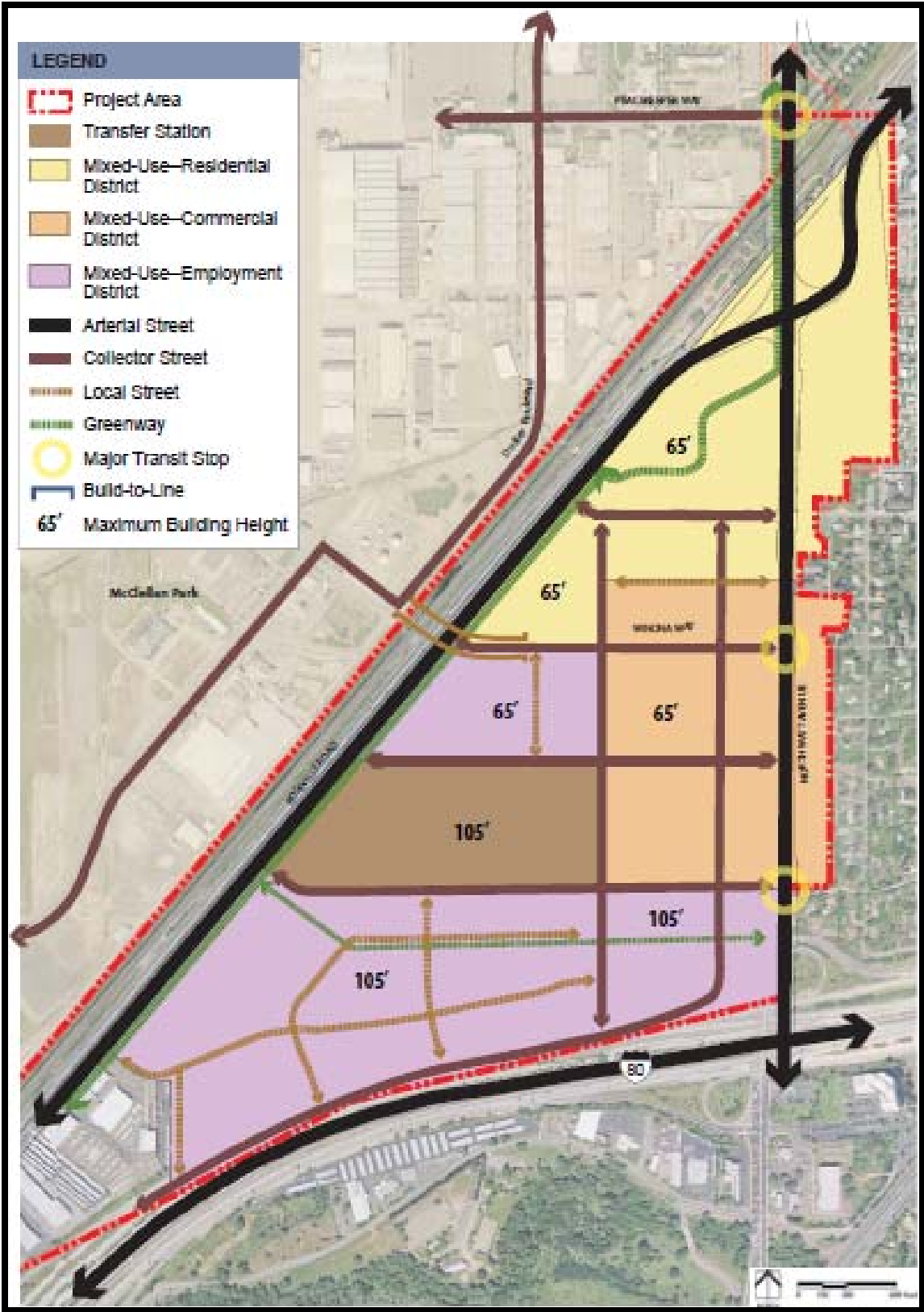


Plate PD -9: Triangle Gateway District Urban Design Framework Plan





## 3 ALTERNATIVES TO THE PROPOSED PROJECT

### INTRODUCTION

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According to Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

The CEQA Guidelines [Section 15126.6(e) 2] require that a No Project Alternative be evaluated, and that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As proposed, the Corridor Plan will result in significant impacts related to land use, airport compatibility, public services, traffic, air quality, noise, cultural resources and hazardous materials. The purpose of this section is to identify alternative project plans that would mitigate, lessen or avoid the significant effects of the proposed project.

The following range of alternatives relies entirely on the proceeding chapters' project specific analyses for the proposed project. The alternatives include land use changes that are less intensive than those of the proposed project in order to reduce the number of significant and unavoidable impacts resulting from the proposed project. Thus, discussions of the alternatives' impacts, below, do not include the entire analyses that are included in the proceeding chapters.

### RANGE OF ALTERNATIVES

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To foster meaningful public discussion and informed decision making, a range of reasonable alternatives to the project, as proposed, is provided. This range includes the "no project" alternative, the purpose of which is to allow the hearing body to compare the impacts of approving the proposed project to the impacts of not approving the proposed project. The No Project Alternative describes what could occur under existing zoning within the Plan Area.

Pursuant to Section 15126.6 of the CEQA Guidelines, an alternative must also "attain most of the basic objectives of the project". As noted above, the provided alternatives

must also be feasible. “Feasibility” of alternatives is described in the CEQA guidelines, as follows (§15364):

“Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Some alternatives were considered but determined to be infeasible and are not included in the “Description of Alternatives” section. One of these infeasible alternatives is the “Alternate Location of Project” alternative. An alternate location of the project, or changing the area of the Corridor Plan would not satisfy the basic objectives of the proposed project.

Project alternatives include:

1. No Project
2. Reduced Density Alternative
3. Limited Use Within McClellan Airport Approach-Departure and Clear Safety Zones
4. Modified Land Use for Triangle Gateway District

## PROJECT OBJECTIVES

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As noted above, pursuant to Section 15126.6 of the CEQA Guidelines, an alternative must “attain most of the basic objectives of the project”. The North Watt Avenue Corridor Plan includes seven objectives that are intended to fulfill the “Vision” for the Corridor Plan. The overall Vision Statement for the project area is to create a plan that is a “comprehensive guide to the implementation of the community’s vision for a vibrant, economically healthy corridor that enhances the quality of life in North Highlands and the greater Sacramento region”. The Plan aims to meet these objectives by allowing for development patterns intended to serve the community and to serve as catalysts for attracting additional investment into the area. The stated objectives of the North Watt Avenue Corridor are as follows:

1. Concentrate development at three transit-oriented, mixed-use district centers (Elkhorn, North Highlands Town Center, and Triangle Gateway) with land densities and intensities sufficient to support regional transit.

Each district center will serve as an activity hub with a unique character and mix of land uses. Higher density residential and higher intensity commercial/retail, office, and civic/public uses should be concentrated at the district centers to support local and regional bus rapid transit services. Residential and

nonresidential uses should be mixed to encourage local pedestrian, bicycle, and light-duty vehicle access.

2. Revitalize vacant and underutilized sites to promote vibrant district centers and neighborhoods.

Vacant and underutilized sites within the district centers should be given redevelopment priority to create local employment opportunities and promote the availability of a full range of goods and services. Neighborhoods outside of the district centers should be redeveloped with a variety of housing choices, with neighborhood-serving commercial and office uses anchoring important intersections.

3. Create a balanced circulation system with multimodal transportation opportunities serving local and regional users.

Transit options, including local and bus rapid transit, should serve the district centers, which will be developed as transit-oriented developments. A network of automobile, bus transit, light-duty and low-speed vehicle, bicycle, and pedestrian routes will be available throughout the Corridor Plan area. New east-west streets and trails will be developed, with extensions of existing streets, where appropriate. Connections to the regional bicycle and pedestrian network will also be enhanced.

4. Attract land uses that will serve both the North Highlands community and McClellan Business Park.

The North Highlands community is fortunate to include McClellan Business Park, which is a rapidly growing regional employment center. Employment opportunities that complement those in McClellan Business Park shall be actively sought for the Corridor Plan area and located in the district centers, particularly the Triangle Gateway TOD.

5. Preserve and enhance the quality of air, water, sensitive species habitat, and other natural resources within the Corridor Plan area to promote its long-term sustainability and that of the North Highlands community.

Maintaining the long-term viability of environmental resources within the Corridor Plan area contributes to the overall quality of life for North Highlands residents and visitors and increases the sustainability of the community and the Sacramento region. The Corridor Plan identifies sustainability goals and policies, and should be implemented in a manner that effectively preserves and enhances finite local resources. Although almost all of the Corridor Plan area is already urbanized, opportunities to improve air and water quality; preserve open space, creeks, and drainage ways; and protect sensitive species habitat shall be actively pursued.

6. Create a sense of place. Promote the rich and varied character of the North Highlands community to encourage a strong, local sense of place and attract regional visitation.

The history of North Highlands and the Corridor Plan area are intricately tied to McClellan Air Force Base and its evolution to McClellan Business Park, with McClellan's aeronautic history celebrated at the Aeronautic Museum of California. More recent ethnic immigration to the North Highlands community, particularly from Southeast Asia, Eastern Europe and Latin America, has added richness to the community's character. The community seeks to develop these and other aspects of local character to create a sense of place that is both appealing to local residents and can serve to attract regional visitation.

7. Attract exemplary and sustainable urban design to the Corridor Plan area resulting in high-quality buildings and an inviting public realm.

Well-designed buildings and an attractive public realm can attract users and entice additional development. The latest technology and design techniques should be incorporated into all buildings and landscaping to minimize energy and water use, while also ensuring the high quality construction of an aesthetically pleasing built environment.

## DESCRIPTION OF ALTERNATIVES

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### ALTERNATIVE 1: NO PROJECT

Under the No Project Alternative, property owners within the Plan area would be capable of constructing projects consistent with existing entitlements. Existing entitlements are those uses allowed under existing zoning. Zoning within the Plan area consists of AC, BP, GC, TC, LC, SC, O, AR-1, RD-2, RD-5, RD-10, RD-20, RD-30, RM-1, M-1, MP, SPA, and NPA. Uses allowed within these zones consist of commercial, retail, office, industrial or residential uses.

### ALTERNATIVE 2: REDUCED DENSITY ALTERNATIVE

Under the Reduced Density Alternative there would be a reduction in maximum density allowances for commercial, office and residential uses in the Corridor Plan. The Corridor Plan could still be made up of the same mixture of uses; however, density would be lowered such that traffic and operational air quality impacts would be reduced. The required density limits to achieve a reduced traffic volume and reduced operational air quality emissions would have to be determined through further traffic impact analyses and air quality modeling; however it can be logically assumed that a density reduction would result in a traffic volume and air quality emissions levels that would be less than those of the proposed project.

### ALTERNATIVE 3: LIMITED USE WITHIN THE MCCLELLAN AIRPORT APPROACH-DEPARTURE SAFETY ZONE ALTERNATIVE

Under the Limited Use alternative, only those uses within the Corridor Plan that are permitted under the McClellan Airport Approach-Departure Safety Zone, as designated by the existing or future McClellan CLUP, would be allowed on parcels located within the safety zone. For the very small portion of the Corridor Plan located within the Clear Zone, uses would also be limited to those allowed in the CLUP. All other areas, outside of the Approach-Departure and Clear Safety Zone, within the SPA area could develop as proposed.

According to the McClellan CLUP land use tables, the following uses would be allowed in the Approach-Departure Safety Zone (Note: The following list is not exhaustive of all uses allowed within the Approach-Departure Safety Zone. Instead it highlights only the likely uses in the area and omits uses such as agricultural uses and industrial uses):

- Medical and dental laboratories
- Miscellaneous wholesale trade
- Lumber, building materials, and nurseries
- Auto, truck, boat, and recreational vehicle dealers
- Mobile home dealers
- Auto, truck, boat, RV, and miscellaneous repair
- Mobile home repair
- Commercial laundries and cleaning
- Business services
- Business parks and industrial clusters
- Construction businesses

All of the above uses are subject to the following condition, per the land use table:

Use is compatible only if they do not result in a large concentration of people. A large concentration of people is defined as a gathering of individuals in an area that would result in an average density of greater than 25 persons per acre per hour during any 24 hour period ending at midnight, not to exceed 50 persons per acre at any time.

For the Clear Zone, the McClellan CLUP limits the use to open space/natural areas, natural water ways, row and field crops, and pasture and grazing uses.

## ALTERNATIVE 4: MODIFIED TRIANGLE GATEWAY DISTRICT

Under Alternative 4, residential uses would not be allowed within the Triangle Gateway District. Instead a modified industrial land use/industrial office designation would be added. This alternative would reduce potential land use conflicts associated with siting residential uses in the vicinity of NARS and other existing industrial uses. Additionally, this alternative would support nearby land uses adjacent to the plan area within McClellan Business Park. If this alternative was selected the definition of allowed industrial/office land uses would have to be carefully selected in order to maintain compatibility with encouraged commercial and retail uses along Watt Avenue. While the reduction in land use compatibility issues is the most obvious result of this alternative, potential noise and air quality impacts would be reduced in the Triangle District given that sensitive residential land uses would be prohibited.

## IMPACT ANALYSIS

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### ALTERNATIVE 1: NO PROJECT

#### *LAND USE*

The project area is made up of many parcels located within the County of Sacramento. The total project area is approximately 730 acres. The parcels within the Plan area have existing land use entitlements under existing zoning. Existing zoning within the Plan area consists of AC, BP, GC, TC, LC, SC, O, AR-1, RD-2, RD-5, RD-10, RD-20, RD-30, RM-1, M-1, MP, SPA, and NPA. Uses allowed within these zones generally consist of commercial, retail, office, industrial or residential uses. The plan area does contain some underutilized and vacant lands that have the potential for build-out under existing zoning should the No Project Alternative be approved.

The No Project Alternative would generally allow for development consistent with the Sacramento County General Plan and Zoning Code. However, the County General Plan specifically notes that this area should be redeveloped into a mixed use corridor due to its current underutilized state. The effort to facilitate this type of redevelopment within the Plan area could be hindered under the No Project Alternative. Even so, redevelopment could technically occur under existing entitlements, although it is acknowledged that such an effort would not be as coordinated, structured, or as easily facilitated as it currently would be under the proposed Corridor Plan. Environmentally, land use impacts under the No Project Alternative would be ***less than significant***.

*AIRPORT COMPATIBILITY***NAVIGABLE AIRSPACE**

The project area is subject to height restrictions based on height standards for defining obstructions to air navigation which are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77. Development in the No Project Alternative would be governed by these existing height restrictions and impacts to navigable airspace would be ***less than significant***.

**APPROACH-DEPARTURE/CLEAR SAFETY ZONES**

Under the proposed project, there are significant and unavoidable safety impacts associated with allowing some of the proposed uses within the Approach-Departure and Clear Safety Zones of McClellan Airport.

Currently there are some existing uses within both zones that may be considered incompatible with airport safety policy. Additionally, based on existing zoning there could be additional incompatible uses developed in the future. However, many of these uses would require a conditional use permits and discretionary actions that would take airport safety impacts into account.

Safety impacts are reduced under the No Project scenario, however, it is acknowledged that some uses allowed under existing entitlements are still directly incompatible with airport safety policy. Therefore, impacts related to airport land use compatibility under the No Project alternative are considered ***potentially significant***.

*HYDROLOGY AND WATER QUALITY*

Some additional runoff would be expected with new development of underutilized and vacant parcels within the plan area consistent with the existing land use entitlements. However, as discussed in the "Drainage, Hydrology and Water Quality" chapter, adverse effects to the existing runoff characteristics are considered minimal and no flood hazards or substantial drainage deficiencies are expected. Future development within the area will be required to meet the specifications of the Sacramento County Improvement Standards and the Sacramento County Floodplain Management Ordinance. With conformance with applicable standards, future development associated with the No Project Alternative will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity. As with the proposed project, compliance with existing regulations will ensure that drainage impacts related the No Project Alternative are ***less than significant***.

*PUBLIC SERVICES & UTILITIES*

The project area is currently served with a wide variety of public services. Under the No Project Alternative, there could be minor impacts to public services as vacant lands are

developed and underutilized parcels are redeveloped consistent with existing land use entitlements. This type of development, as with the proposed project, would likely be incremental in nature and generally inconsequential given the overall developed nature of the project area. As with the proposed project, impacts to law enforcement, fire protection and emergency services, solid waste, schools, park and recreation and energy services under the No Project Alternative would be ***less than significant***.

### **WATER SUPPLY**

The project site is located within the service area of Sacramento Suburban Water District (SSWD). Under existing conditions, most of the parcels within the SPA area are currently built out and are provided water services from the District.

SSWD has indicated that upgrades to the existing water system infrastructure would be required to serve the proposed project. Under the No Project Alternative, similar improvements would be required as development and redevelopment occurred within the area consistent with existing zoning. SSWD has indicated that there is enough water supply to serve existing zoning. As with the proposed project, impacts are expected to be ***less than significant***.

### **SEWER**

The project area is within the service area of one local sewer district, Sacramento Area Sewer District (SASD), and one regional sewer service district, Sacramento Regional County Sanitation District (SRCSD). Although the project area is within these service areas, much of the project area is currently served with private sewer systems (i.e. septic systems). As with the proposed project, as development and redevelopment occurs under the No Project alternative within areas currently on private systems, connection to the public system and associated system upgrades is required. Additionally, in areas currently served with public sewer, upgrades to existing infrastructure would be triggered when necessary.

SASD has indicated that there is enough capacity to support development based on existing zoning; however, providing the service on a case-by-case basis could be cost prohibitive for individual property owners. Ultimately, service can be provided under the No Project Alternative, thus impacts are considered ***less than significant***.

### **ALTERNATIVE TRANSPORTATION**

The project area is located along Watt Avenue, a feeder line. According to the General Plan, land adjacent to feeder lines are to be developed to certain standards in order to support alternative transportation. Specifically, floor area ratios (FARs) within an 1/8 of a mile of feeder lines are required to be 0.4. In the No Project condition General Plan policy LU-34 requires development in the plan area to be transit supportive and impacts to alternative transportation are ***less than significant***.



### *TRAFFIC AND CIRCULATION*

Under existing conditions one study intersection and three roadway segments are operating at unacceptable levels of service (LOS). Under the No Project scenario development could still occur under existing entitlements and lead to the deterioration of other LOS's at additional intersections or roadway segments within the plan area. The additional development could exacerbate already impacted facilities. Traffic impacts are considered ***significant and unavoidable***.

### *AIR QUALITY*

Under the No Project Alternative, underutilized parcels and vacant parcels could be developed under existing entitlements consistent with zoning. These actions could result in particulate matter and dust emissions that would exceed daily thresholds. Additionally, operational emissions would exceed daily thresholds as well. Given that the No Project Alternative does not necessarily require discretionary actions for future development under existing zoning, potential impacts related to air quality could go unmitigated. Thus, impacts related to air quality under the No Project Alternative are considered ***significant and unavoidable***.

### *NOISE*

As noted in the proposed project analysis, traffic on Watt Avenue and the Freeway are the main contributors to noise in the area. Additionally, various commercial uses as well as side-street traffic from feeder streets in the area, contribute to a minor degree to the noise environment.

In some cases noise volumes are above County standards. Under the No Project Alternative the project area could be redeveloped or developed with uses that may result in exposure of persons to, or generation of, noise levels in excess of county standards. As with the proposed project, developers may judiciously design the placement of residential buildings and associated activity areas so sensitive receptors are not located immediately adjacent to high noise levels; however impacts could still occur. Impacts under the No Project scenario are considered ***potentially significant***.

### *BIOLOGICAL RESOURCES*

Impacts to biological resources, including native oak trees, streams, wetlands and other surface waters, riparian habitat and nesting migratory birds could occur as future development or redevelopment of parcels occurs consistent with existing land use entitlements. Under current County policy, impacts would be mitigated for any non-discretionary projects' tree removal by obtaining a tree removal permit and providing compensation as outlined in the County's Tree Protection Ordinance. Additionally, impacts to wetlands, riparian habitat and nesting migratory birds are regulated through the appropriate state and federal agencies, thus impacts would likely be mitigated to

less than significant levels. The No Project Alternative would result in **less than significant** impacts to biological resources.

#### *CLIMATE CHANGE*

Under the No Project Alternative development would still occur with existing entitlements. The proposed project, with mitigation for air quality and climate change, will result in reductions in emissions for every project, resulting in less than significant impacts. Under the No Project Alternative such mitigation may not occur because proposed developments may be under SMAQMD screening thresholds or significance levels. Thus, the No Project Alternative could result in unmitigated impacts related to climate change. These impacts are considered **potentially significant**.

#### *CULTURAL RESOURCES*

Under the No Project Alternative cultural resources could be impacted. All future growth, to the maximum zoning densities, could impact known and/or unknown cultural resources, including prehistoric or historic archaeological resources and architectural resources. Currently, the County of Sacramento does not have a Historic Preservation Ordinance that would require review of potential impacts to cultural resources on all requested permits, including demolition permits. Thus, unless the project has discretionary review, impacts could occur unknowingly to important cultural resources. Since non-discretionary projects, such as demolition, can occur in the No Project Alternative, which can result in the removal of cultural resources, impacts to archeological and architectural resources are **significant and unavoidable**.

#### *HAZARDOUS MATERIALS*

Impacts related to hazardous materials are related to sites known to be contaminated; sites that were once contaminated and sites that may be contaminated due to existing or previous uses within the project area. Under the No Project Alternative, these parcels could be redeveloped in the future in accordance with existing land use entitlements. The No Project development could result in disturbance of hazardous soils; however, known hazardous materials sites found to be contaminated during construction activities would be subject to review by County Environmental Management Department. Remediation, if required, would occur consistent with state law. With or without the project, there are measures in place to ensure that hazardous materials are cleaned up. With remediation, impacts would be considered **less than significant**.

## ALTERNATIVE 2: REDUCED DENSITY ALTERNATIVE

### *LAND USE*

Under the Reduced Density Alternative land use impacts would generally mirror those described for the proposed project, with the exception that the project would propose fewer residential units and less commercial and office square footage. This alternative would be in conflict with some of the goals and objectives of the Blueprint, which calls for intensive utilization of the “urban core” areas along major corridors. Additionally, the Reduced Density Alternative would also be in conflict with the General Plan Update which calls for intensive redevelopment along Watt Avenue and specific densities along feeder lines.

One of the benefits of this alternative would be the reduction in the potential of land use compatibility issues, real or perceived, between land uses typically not sited adjacent to one another. Under this alternative, open space could act as a buffer between potentially incompatible uses.

Although the Reduced Density Alternative would likely reduce compatibility impacts within the plan area it would be counter to the growth strategies outlined in the General Plan. A reduced density would be inconsistent with the mixed use objective of the General Plan which is to promote “compact, mixed use developments concentrated in nodes around transit stops, in community centers, and along commercial and transportation corridors” as well as General Plan Policy LU-34 and other policies intended to site new intensive development in currently developed areas with existing transit service in order to reduce dependence on automobile travel, focus new development away from undeveloped land on the County outskirts and more easily meet air quality goals. With this alternative, these inconsistencies are **significant and unavoidable**.

### *AIRPORT COMPATIBILITY*

#### **NAVIGABLE AIRSPACE**

Under the Reduced Density Alternative impacts to navigable airspace would mirror those described for the proposed project. The project area is subject to height restrictions based on height standards for defining obstructions to air navigation which are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77. Height of development in the Reduced Density Alternative would be dictated by what is currently proposed for the Corridor Plan, which are all under the height restrictions defined in FAR Part 77. Impacts to navigable airspace would be **less than significant**.

**APPROACH-DEPARTURE/CLEAR SAFETY ZONES**

Although density would be lowered in this alternative, the SPA could still be made up of the same mixture of uses included in the proposed project. Uses allowed outright within the proposed project would be incompatible with the allowed uses of the Approach-Departure/Clear Zones and result in safety impacts. No feasible mitigation can be applied to the SPA which would reduce the impact of siting nonconforming uses in this zone to a less than significant level. Thus, impacts related to airport safety and policy are considered ***significant and unavoidable***.

*HYDROLOGY AND WATER QUALITY*

The Reduced Density Alternative would not result in a measurable impact to hydrology and water quality over the proposed project. As with the proposed project, compliance with existing regulations will ensure that drainage impacts related the Reduced Density Alternative are ***less than significant***.

*PUBLIC SERVICES & UTILITIES*

As stated previously, the project area is served with public services. Impacts related to the Reduced Density Alternative, on law enforcement, solid waste, school, park and recreation and energy services, would be similar to the proposed project. However, with reduced density, impacts may not be as substantial as they may be under the proposed project due to the fact that not as much growth would be allowed. As with the proposed project, impacts associated with these public services would be ***less than significant***.

**WATER SUPPLY**

The Reduced Density Alternative would allow for densities in the Sacramento Suburban Water District (SSWD) north service area that are above those in the existing condition but below those of the proposed project. Similar to the proposed project, additional water supplies may be required for the Reduced Density Alternative. SSWD has taken the project water demands in to account in their Urban Water Management Plan and Master Plan, and have determined that the proposed Corridor may require additional water supply in order to reach full buildout. The Reduced Density Alternative may also reach the threshold where additional water supply is required. As with the proposed project, with mitigation, water supply impacts would be reduced to ***less than significant***.

**SEWER**

Under the Reduced Density Alternative sewer impacts would be similar to those of the proposed project. However, with reduced density, impacts may not be as substantial given the reduction in growth that could occur compared to the proposed project. As with the proposed project, as development and redevelopment occurs under the Reduced Density alternative within areas currently on private systems, connection to

the public system and associated system upgrades is required. Additionally, in areas currently served with public sewer, upgrades to existing infrastructure would be triggered when necessary.

SASD has indicated that there is enough capacity to support development based on existing zoning; however, as with the proposed project a phasing plan would be required to determine when and how improvements will be made under the Reduced Density alternative. With mitigation, impacts are considered ***less than significant***.

### **ALTERNATIVE TRANSPORTATION**

The Reduced Density Alternative development patterns in the Plan area would be less than those required by LU-34 which is intended to, in part, support transit supportive uses. In this regard, this alternative is in conflict with an adopted policy supporting alternative transportation. This impact is ***significant and unavoidable***.

### *TRAFFIC AND CIRCULATION*

The Reduced Density Alternative is proposed, partially, to address impacts associated with traffic and circulation. Under this alternative, densities would be reduced below those of the proposed project in order to lessen the intensity of traffic volumes and related congestion in the project area and surrounding communities below those generated by the proposed project.

Additional study would be required to determine the precise density reduction that would be required to reduce impacts below those of the proposed project and even if densities are reduced, it is unknown if such density reductions would result in fewer significant impacts. Based on the Caltrans significance thresholds freeway segments operating at unacceptable levels adjacent to the project area would be subject to significant impacts with the addition of as little as 10 new trips. It is easily foreseeable that even with a reduced density impacts to traffic would remain ***significant and unavoidable***.

### *AIR QUALITY*

The Reduced Density alternative was proposed to address impacts associated with traffic and circulation (discussed above) and air quality. Under this alternative, densities would be reduced below those of the proposed project in order to lessen air quality impacts. Although it is acknowledged that impacts would be reduced they would not be reduced to less than significant levels.

As the proposed project covers a large area in which construction could occur on multiple sites at any given time the amount of construction activity on any given day within the project area cannot be predicted and could be greater than 15 acres and could exceed fugitive dust thresholds. Additionally, although the Reduced Density Alternative may result in a cumulative benefit, operational impacts could significantly increase over what is currently located within the SPA area with full buildout. Lastly,

mitigation would be required to reduce air quality resulting from ozone precursor emissions and diesel particulate caused by construction activities to less than significant levels.

The Reduced Density Alternative would reduce air quality impacts below those of the proposed project; however, due to the size of the project area impacts would not be reduced to less than significant levels. Impacts would be similar to those of the proposed project. Impacts related to fugitive dust would be **significant and unavoidable**. Impacts related to operational impacts would be **significant and unavoidable**. Impacts related to ozone precursor emissions and diesel particulate, due to roadways, freeway and the railroad, would require mitigation to be **less than significant**.

#### *NOISE*

As with the No Project and proposed project, individuals may be subjected to noise levels that are above County standards. However, under the Reduced Density Alternative, there would be some reduction in future traffic levels due to a reduction in allowable densities, thus it is possible that traffic noise levels would be reduced. It is uncertain how much of a reduction would be realized given that existing noise levels can be high due to existing traffic. Additionally, under this alternative, the project area could have larger open space areas that could be utilized to buffer sensitive receivers from high noise levels. However, with any mixed use development there is a potential for nuisance noise impacts between land uses. Therefore, although densities are reduced, impacts would still be **potentially significant** due to uncertainties.

#### *BIOLOGICAL RESOURCES*

Implementation of the Reduced Density Alternative could potentially reduce impacts to biological resources because with less intensive development it may be possible to retain biologically sensitive resources. However, because a project is less intensive it does not necessarily result in fewer impacts to biological resources. For example, a moderately sized commercial project may be considered less intensive than a high-density residential development but would likely result in removal of any on-site biological resources to accommodate vehicular parking and other associated infrastructure. Thus, impacts related to the Reduced Density Alternative are considered identical to the proposed project. Mitigation would be required and impacts would be reduced to **less than significant**.

#### *CLIMATE CHANGE*

The Reduced Density Alternative would lower climate change emissions given that emissions would not be as high; however, the reduction in density may not be enough to reduce impacts to less than significant. Like the proposed project, mitigation would be required for future projects. With mitigation, impacts would be considered **less than significant**.

*CULTURAL RESOURCES*

The Reduced Density Alternative would result in the same impacts as the proposed project. Although this alternative calls for reduced densities which could allow for more design freedom in order to retain important historical resources, there still could be significant impacts to unevaluated historical structures if they are removed. Ultimately impacts would remain **significant and unavoidable** if a historic structure was removed. While impacts to archaeological resources would be **less than significant** with mitigation.

*HAZARDOUS MATERIALS*

Impacts related to hazardous materials would be essentially identical to the proposed project. Mitigation would still be applicable. With mitigation impacts would be **less than significant**.

### ALTERNATIVE 3: LIMITED USE WITHIN THE MCCLELLAN AIRPORT APPROACH DEPARTURE ZONE ALTERNATIVE

*LAND USE*

Under the Limited Use alternative only uses that are permitted under the Land Use Compatibility for Airport Safety Table for the Approach Departure zone and clear zone would be allowed where these zones fall in the southwestern portion of the Triangle Gateway District. Uses that would be excluded in this alternative, within the Approach-Departure Zone, include virtually all public and quasi-public services, recreational services, wholesale trade, retail trade, business and professional services or shopping districts. All uses would be excluded within the Clear zone with the exception of agriculture, grazing and open space uses.

This option would result in significantly less intensive uses within the southwestern portion of the Triangle Gateway District; however, the remainder of the site could still be developed consistent with the proposed plan and land use impacts to the remainder of the site would mirror those of the proposed project. Land Use Impacts of the Limited Use Alternative would be **less than significant** with mitigation.

*AIRPORT COMPATIBILITY***NAVIGABLE AIRSPACE**

Under the Limited Use Alternative impacts to navigable airspace would generally mirror those described for the proposed project. The project area is subject to height restrictions based on height standards for defining obstructions to air navigation which are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77. Height of development in the Limited Use Alternative would be dictated by what is currently proposed for the Corridor Plan, which

are all under the height restrictions defined in FAR Part 77. Impacts to navigable airspace would be ***less than significant***.

#### **APPROACH-DEPARTURE/CLEAR SAFETY ZONES**

As noted above, the proposed project would result in significant and unavoidable safety impacts associated with the proposed uses within the Approach-Departure/Clear Zone of McClellan Airport. Under the Limited Use alternative, new uses would be limited to those allowed within the applicable zone.

By limiting the land uses to those in the Land Use Compatibility for Airport Safety Table, the Limited Use Alternative would be considered compatible with the McClellan CLUP and would avoid a significant safety impact. Thus, impacts associated with airport policy and safety would be considered ***less than significant***.

#### *HYDROLOGY AND WATER QUALITY*

The Limited Use Alternative would not result in a measurable impact to hydrology and water quality over the proposed project. As with the proposed project, compliance with existing regulations will ensure that drainage impacts related the Limited Use Alternative are ***less than significant***.

#### *PUBLIC SERVICES & UTILITIES*

As stated previously, the project area is served with public services. Impacts related to the Limited Use Alternative, on law enforcement, solid waste, school, park and recreation and energy services would be very similar to the proposed project. As with the proposed project, impacts associated with these public services would be ***less than significant***.

#### **WATER SUPPLY**

The Limited Use Alternative would allow for densities in the Sacramento Suburban Water District (SSWD) service area consistent with the proposed project. Similar to the proposed project, additional water supplies may be required for the Limited Use Alternative. SSWD has taken the proposed project water demands in to account in their Urban Water Management Plan and Master Plan, and have determined that the proposed Corridor may require additional water supply in order to reach full buildout. The Limited Use Alternative may also reach the threshold where additional water supply is required. As with the proposed project, with mitigation, water supply impacts would be reduced to ***less than significant***.

#### **SEWER**

Under the Limited Use Alternative sewer impacts would be similar to those of the proposed project. As with the proposed project, as development and redevelopment



occurs under the Limited Use Alternative within areas currently on private systems, connection to the public system and associated system upgrades is required. Additionally, in areas currently served with public sewer, upgrades to existing infrastructure would be triggered when necessary.

SASD has indicated that there is enough capacity to support development based on existing zoning; however, as with the proposed project a phasing plan would be required to determine when and how improvements will be made under the Limited Use alternative. With mitigation, impacts are considered ***less than significant***.

### **ALTERNATIVE TRANSPORTATION**

The project area is located along Watt Avenue, a feeder line. According to the General Plan, land adjacent to feeder lines are to be developed to certain standards in order to support alternative transportation. Specifically, floor area ratios (FARs) within an 1/8 of a mile of feeder lines are required to be 0.4. In the Limited Use Alternative, FARs would be dictated by the Corridor Plan, which is consistent with General Plan policy LU-34. The Limited Use alternative would be transit supportive and impacts to alternative transportation are ***less than significant***.

### *TRAFFIC AND CIRCULATION*

Under the Limited Use Alternative, the area of the project site that is within the safety zones would generally be built out with similar uses that are currently allowed. The remainder of the site would be intensified based on the development standards of the proposed project. Given the minor amount of the Corridor Plan that is located within the airport safety zones, there would likely be no measurable impact to traffic and circulation impacts over the proposed project. With mitigation some impacts are reduced to ***less than significant*** while others remain ***significant and unavoidable***.

### *AIR QUALITY*

Under the Limited Use Alternative, the majority of the project area could still be built based on proposed densities and uses and air quality impacts resulting from construction related fugitive dust, ozone precursor emissions and diesel particulate; as well operational emissions would be similar to those of the proposed project. Impacts would be similar to those of the proposed projects. Impacts related to fugitive dust would be ***significant and unavoidable***. Impacts related to operational impacts would be ***significant and unavoidable***. Impacts related to ozone precursor emissions and diesel particulate, due to roadways, freeway and the railroad, would require mitigation to be ***less than significant***.

### *NOISE*

Under the Limited Use Alternative, impacts related to construction, traffic and community generated noise would be similar as for the proposed project because there

would be little or no difference in proposed land use densities or lay-out of the majority of the Corridor area, thus people could be subjected to, or generate, noise levels in excess of standards as shown for the proposed project. Noise impacts to exterior receptors would remain **significant and unavoidable**.

#### *BIOLOGICAL RESOURCES*

Under the Limited Use Alternative, there would be little difference in proposed land use densities or lay-out of the Plan and the impacts to biological resources would generally mirror those of the proposed project and would be subject to the same mitigation. With mitigation, impacts would be **less than significant**.

#### *CLIMATE CHANGE*

The Limited Use Alternative would have similar climate change emissions as the proposed project. Like the proposed project, mitigation would be required for future projects. With mitigation, impacts would be considered **less than significant**.

#### *CULTURAL RESOURCES*

Impacts to cultural resources from the Limited Use Alternative would be similar to those of the proposed project. As with the proposed project, impacts would remain **significant and unavoidable** if a historic structure was removed while impacts to archaeological resources would be **less than significant** with mitigation.

#### *HAZARDOUS MATERIALS*

Impacts related to hazardous materials would be essentially identical to the proposed project. Mitigation would still be applicable. With mitigation impacts would be **less than significant**.

### ALTERNATIVE 4: MODIFIED TRIANGLE GATEWAY DISTRICT

#### *LAND USE*

Under the Modified Triangle Gateway District alternative, residential land uses would be prohibited in the Triangle Gateway District. Instead, compatible industrial/industrial office uses would be allowed in conjunction with commercial, retail, and office uses as currently planned. By prohibiting residential land uses within the Triangle District, the potential for serious land use compatibility issues between sensitive residential receptors and the NARS facility would be eliminated. Additionally, sensitive residential uses may conflict with other existing industrial uses within the Triangle District.

Under the proposed plan, up to 2,550 residential units could be built in the Triangle District (Table 2.3: Triangle Gateway District Land Use Summary; North Watt Corridor

Plan). As a result of this alternative, the County would lose the ability to add up to 2,550 residential dwelling units in the project area. However, commercial and industrial square footage would increase. It is possible that some of the loss in residential units could be offset by allowing for denser residential development outside of the Triangle District in the other two planned Districts.

In addition to prohibiting residential land uses, under Alternative 4, permitted uses in the Triangle Gateway would be modified to include only those uses that were deemed compatible with the existing solid waste facility, other existing industrial uses, and with the objectives of the Corridor Plan.

This Alternative appears to be more consistent with the SACOG Blueprint projected land uses for the Triangle District compared to the proposed Corridor. Overall, the Blueprint envisioned land uses for the Triangle are overwhelmingly industrial with retail centered along Watt Avenue. The one possible deviation is the Blueprint designates “mixed-use corridors or centers” along Watt Avenue and the far southwestern corner of the Triangle District. The Alternative proposes a mix of uses but omits residential uses in favor of compatible industrial, office, civic, commercial and retail uses.

This option would result in significantly less residential uses within the southern portion of the Corridor Plan area; however, the remainder of the Corridor could still be developed consistent with the proposed plan and land use impacts to the remainder of the site would mirror those of the proposed project. Land Use Impacts of the Modified Triangle Gateway District Alternative would be **less than significant**. Since sensitive residential receptors would be prohibited under this alternative and only compatible uses would be permitted in the Triangle Gateway, compatibility impacts associated with the solid waste facility and other industrial facilities would be eliminated; thus mitigation for a land use buffer would not be required, and impacts would be **less than significant**.

#### *AIRPORT COMPATIBILITY*

##### **NAVIGABLE AIRSPACE**

Under the Modified Triangle Gateway District Alternative impacts to navigable airspace would generally mirror those described for the proposed project. The project area is subject to height restrictions based on height standards for defining obstructions to air navigation which are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77. Height of development in the Modified Triangle Gateway District Alternative would be dictated by what is currently proposed for the Corridor Plan, which are all under the height restrictions defined in FAR Part 77. Impacts to navigable airspace would be **less than significant**.

**APPROACH-DEPARTURE/CLEAR SAFETY ZONES**

As noted above, the proposed project would result in significant and unavoidable safety impacts associated with the proposed uses within the Approach-Departure/Clear Zone of McClellan Airport. Although residential density would be lowered in this alternative, the Triangle Gateway District could still be made up of a mixture of commercial, office and industrial uses. Uses allowed outright within the proposed project would be incompatible with the allowed uses of the Approach- Departure/Clear Zones and result in safety impacts. No feasible mitigation can be applied to the Corridor which would reduce the impact of siting nonconforming uses in this zone to a less than significant level. Thus, impacts related to airport safety and policy are considered **significant and unavoidable**.

*HYDROLOGY AND WATER QUALITY*

The Modified Triangle Gateway District Alternative would not result in a measurable impact to hydrology and water quality over the proposed project. As with the proposed project, compliance with existing regulations will ensure that drainage impacts related the Modified Triangle Gateway District Alternative are **less than significant**.

*PUBLIC SERVICES & UTILITIES*

As stated previously, the project area is served with public services. Impacts related to the Modified Triangle Gateway District Alternative, on law enforcement, solid waste, school, park and recreation and energy services would be very similar to the proposed project. As with the proposed project, impacts associated with these public services would be **less than significant**.

**WATER SUPPLY**

The Modified Triangle Gateway District Alternative would allow for densities in the Sacramento Suburban Water District (SSWD) service area consistent with the proposed project. Similar to the proposed project, additional water supplies may be required for the Modified Triangle Gateway District Alternative. SSWD has taken the proposed project water demands in to account in their Urban Water Management Plan and Master Plan, and have determined that the proposed Corridor may require additional water supply in order to reach full buildout. The Modified Triangle Gateway District Alternative may also reach the threshold where additional water supply is required. As with the proposed project, with mitigation, water supply impacts would be reduced to **less than significant**.

**SEWER**

Under the Modified Triangle Gateway District Alternative sewer impacts would be similar to those of the proposed project. As with the proposed project, as development and redevelopment occurs under the Modified Triangle Gateway District Alternative within areas currently on private systems, connection to the public system and associated

system upgrades is required. Additionally, in areas currently served with public sewer, upgrades to existing infrastructure would be triggered when necessary.

SASD has indicated that there is enough capacity to support development based on existing zoning; however, as with the proposed project a phasing plan would be required to determine when and how improvements will be made under the Modified Triangle Gateway District Alternative. With mitigation, impacts are considered ***less than significant***.

### **ALTERNATIVE TRANSPORTATION**

The project area is located along Watt Avenue, a feeder line. According to the General Plan, land adjacent to feeder lines are to be developed to certain standards in order to support alternative transportation. Specifically, floor area ratios (FARs) within an 1/8 of a mile of feeder lines are required to be 0.4. In the Modified Triangle Gateway District Alternative, FARs would be dictated by the Corridor Plan, which is consistent with General Plan policy LU-34. Although, the Triangle Gateway District would lose residential land uses under this alternative, and would function more as an employment and retail destination, it would serve residential land uses in the northern portion of the Corridor Plan area and existing residential uses on the east side of Watt Avenue. Therefore, this alternative still supports alternative transit and may in fact increase commuter trips on local buses from the northern Corridor Districts to the Triangle.

The Modified Triangle Gateway District Alternative would be transit supportive and impacts to alternative transportation are ***less than significant***.

### *TRAFFIC AND CIRCULATION*

Under the Modified Triangle Gateway District Alternative, traffic impacts could change by prohibiting residential land uses within the Triangle Gateway District. As currently proposed, up to 2,550 residential units could be built in the Triangle; therefore, modeled traffic impacts associated with residential within the Triangle would likely decrease in the Triangle District. However, on the overall plan level, the precise reduction in residential units is unknown at this time since, as pointed out, some of the residential units that were slated for the Triangle Gateway District could be built in other portions of the Plan area under this alternative. Even if offsets in land uses did not occur, it is unlikely that most traffic impacts would be reduced to less than significant levels because the remainder of the proposed land uses throughout the Plan will result in a major increase in vehicle trips on roadways within and adjacent to the Corridor. With mitigation some impacts are reduced to ***less than significant*** while others would remain ***significant and unavoidable***.

### *AIR QUALITY*

Under the Modified Triangle Gateway District Alternative, the majority of the project area could still be built based on proposed densities and uses and air quality impacts

resulting from construction related fugitive dust, ozone precursor emissions and diesel particulate; as well operational emissions would be similar to those of the proposed project. However, because residential uses and other incompatible uses would be prohibited in the Triangle District, de facto sensitive air quality receptors would also be reduced significantly. Under the proposed project, diesel particulate from the freeway and the Union Pacific Railroad would impact sensitive receptors in the Triangle Gateway District. Under the Modified Triangle Gateway District Alternative, impacts to air quality resulting from construction related fugitive dust and operational emissions would still be **significant and unavoidable**; however, impacts to sensitive receptors due to exposure to diesel particulate from the freeway and railroad would be reduced to **less than significant**.

#### *NOISE*

Under the Modified Triangle Gateway District Alternative, there would be no measurable change in impacts related to construction, traffic and community generated noise compared to the proposed project, with the exception of noise impacts to certain receptors in the Triangle Gateway District. Residential receptors would be eliminated thereby reducing noise exposure to sensitive receptors in the Triangle Gateway District. In particular, noise impacts to sensitive receptors due to the UP Railroad would be eliminated and would not require mitigation.

There still is the potential for people to be subjected to, or generate, noise levels in excess of standards; therefore, noise impacts to exterior receptors would remain **significant and unavoidable**.

#### *BIOLOGICAL RESOURCES*

Under the Modified Triangle Gateway District Alternative, there would be little difference in the overall acreage that would be developed or disturbed within the Corridor Plan; thus, impacts to biological resources would generally mirror those of the proposed project and would be subject to the same mitigation. With mitigation, impacts would be **less than significant**.

#### *CLIMATE CHANGE*

The Modified Triangle Gateway District Alternative would have similar climate change emissions as the proposed project with the exception of a reduction in potential housing units. The precise reduction in residential units is unknown at this time since, as pointed out, some of the residential units that were slated for the Triangle Gateway District could be built in other portions of the Plan area. It is unlikely that with the offsets in land uses that climate change impacts would be reduced to less than significant levels. Like the proposed project, mitigation would be required for future projects. With mitigation, impacts would be considered **less than significant**.

*CULTURAL RESOURCES*

Impacts to cultural resources from the Modified Triangle Gateway District Alternative would be similar to those of the proposed project. As with the proposed project, impacts would remain **significant and unavoidable** if a historic structure was removed while impacts to archaeological resources would be **less than significant** with mitigation.

*HAZARDOUS MATERIALS*

Impacts related to hazardous materials would be essentially identical to the proposed project. Mitigation would still be applicable. With mitigation impacts would be **less than significant**.

## SUMMARY COMPARISON OF ALTERNATIVES

The goal of the project alternatives is to reduce impacts to a less than significant level. The proposed project would result in significant impacts related to airport compatibility, traffic, operational air quality, fugitive dust air quality, noise, and cultural resources: historic architectural resources. See Table ALT-1 for a summary of impacts between the alternatives.

**Table ALT-1: Summary Comparison**

Impact Category	Project	Alternative 1: No Project	Alternative 2: Reduced Density	Alternative 3: Limited Use Alternative	Alternative 4: Modified Triangle Gateway District
Land Use	LS(M)	LS	SU	LS	LS
Airport Compatibility					
• Navigable Airspace	LS	LS	LS	LS	LS
• Approach-Departure Safety Zone	SU	PS	SU	LS	SU
Hydrology and Water Quality					
• Drainage & Water Quality	LS	LS	LS	LS	LS
Public Services & Utilities (fire, school, law enforcement, etc)	LS	LS	LS	LS	LS
• Water Service	LS(M)	LS	LS(M)	LS(M)	LS(M)

Impact Category	Project	Alternative 1: No Project	Alternative 2: Reduced Density	Alternative 3: Limited Use Alternative	Alternative 4: Modified Triangle Gateway District
• Sewer Service	LS(M)	LS	LS(M)	LS(M)	LS(M)
• Alternative Transportation	LS	LS	SU	LS	LS
Traffic	SU	SU	SU	SU	SU
Air Quality					
• Fugitive Dust During Construction	SU	SU	SU	SU	SU
• Ozone Precursor Emissions & Diesel Particulate Caused by Construction	LS(M)	SU	LS(M)	LS(M)	LS(M)
• Diesel Particulate due to Freeway	LS(M)	SU	LS(M)	LS(M)	LS
• Diesel Particulate due to Railroad	LS(M)	SU	LS(M)	LS(M)	LS
• Operational	SU	SU	SU	SU	SU
Noise	SU	PS	PS	SU	SU
Biological Resources	LS(M)	LS	LS(M)	LS(M)	LS(M)
Climate Change	LS(M)	PS	LS(M)	LS(M)	LS(M)
Cultural Resources					
• Archaeological Resources	LS(M)	SU	LS(M)	LS(M)	LS(M)
• Architectural Resources	SU	SU	SU	SU	SU
Hazardous Materials	LS(M)	LS	LS(M)	LS(M)	LS(M)
Meets Objectives	Yes	No	No	No	Yes

**SU**-significant and unavoidable **S** – significant, **PS** – potentially significant, **LS(M)** – less than significant with mitigation, **LS** – less than significant

## ENVIRONMENTALLY SUPERIOR ALTERNATIVE

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The No Project, Reduced Density, and Limited Use alternatives do not meet the objectives of the plan in that they do not support a wide variety of community oriented



retail, commercial and service uses or allow for higher density and more compact mixed use development. In turn, these alternatives do not contain the environmental benefits that can result from reaching these objectives and focusing on redevelopment and infill. These objectives focus on the redevelopment of an existing, aging area currently containing large segments of homogeneous development with mixed-use development and other “smart growth” strategies which inherently lend to improved environmental conditions.

Although the Modified Triangle Gateway District alternative (Alternative 4) removes one of the land uses, it still will result in a mixed use Corridor that meets the Plan objectives and maintains smart growth principles. .

The ultimate purpose of smart growth is sustainable communities, and is a reaction in part to the recognized health impacts of urban sprawl and vehicle-centric development strategies. Various studies have demonstrated that smart growth development significantly reduces impacts to air quality, water quality, open space/biological resources, and public health. A 2005 Seattle study found that residents of neighborhoods where land uses were mixed and streets are better connected, making non-auto travel easier and more convenient, traveled 26 percent fewer vehicle miles than residents of neighborhoods that were more dispersed and less connected (Lawrence Frank and Company). It has also been demonstrated that the greenhouse gas emission reductions incorporated within California’s Executive Order S-3-05 are unlikely to be achieved just through vehicle efficiency and development of low-carbon fuels – significant vehicle trip reductions will also be required (Yang, et. al.) and can be fostered through smart growth land use policies. Both the proposed project and Alternative 4, would result in a sustainable corridor.

As shown in Table ALT-1, Alternative 4 reduces three environmental impacts (land use compatibility and air quality associated with I-80 and the railroad) to less than significant without mitigation; however, mitigated the proposed project is identical to Alternative 4. Therefore, Alternative 4 and the proposed project are the environmentally superior alternatives.

## 4 LAND USE

### INTRODUCTION

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This chapter examines existing land uses in and adjacent to the project area and identifies applicable regulations and policies affecting the project site. This section evaluates potential land use impacts of the proposed project, including those associated with inconsistencies with the Sacramento County General Plan, Sacramento County Zoning Code and potential land use conflicts and incompatibilities.

### BACKGROUND

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In 1974, Sacramento County adopted the “North Highlands – North Central Area Community Plan” (Community Plan) which contained as its first stated objective “to protect the operational effectiveness of McClellan Air Force Base by preventing the intrusion of incompatible uses into the area.” Due to the closure of the Air Force Base in July 2001 this objective has become obsolete as the base has been converted to civilian use as McClellan Park, a corporate business park.

The development that has occurred along the North Watt Avenue Corridor reflects this historical intent to act as a supportive role to operations that once occurred at McClellan Air Force Base. Essentially, the corridor provides convenient auto access to uses that would have served employees at McClellan. The County has long since identified the challenges that face the North Watt corridor since closure of the Base and has had on-going efforts that include community outreach and workshops that have culminated in various approved plans for the corridor and the North Highlands community as a whole. The following plans have been prepared on behalf of the North Highlands Community and the North Watt Avenue Corridor:

- North Watt Avenue Beautification Master Plan
- North Highlands Town Center Development Code
- North Highlands Community and Economic Development Strategy
- McClellan/Watt Redevelopment Plan

From the above mentioned planning efforts paired with extensive public outreach the following priorities listed below were identified by the community and have directly influenced the development of the North Watt Avenue Corridor plan:

- a greater variety of housing types;

- more efficient access to local destinations by walking, biking, transit, and driving;
- improved aesthetics along North Watt Avenue, including updated architecture, signage, and site planning;
- revitalization of vacant lots and vacant or underutilized buildings;
- incorporation of the aeronautic and agricultural history into design features (such as signage) to contribute to the visual expression of a positive community character; and
- new commercial centers, such as the North Highlands Town center, that can better serve the community's needs for shopping, services, and entertainment, and strengthen local community by providing public gathering places.

Other Countywide efforts that have focused on commercial corridors in general are the 2030 Sacramento County General Plan Update and the Mobility Strategies for County Corridors plan. The updated General Plan recognizes that continued growth in the Sacramento region is best accommodated by adopting smart growth measures that concentrate urban development at major transportation nodes.

In addition to the above mentioned planning efforts, the County as a whole has become increasingly aware of the role that commercial corridors play in contributing to greenhouse gas emissions. In response to greenhouse gas emissions legislation, the County has been seeking ways to respond by incorporating specific measures targeted at reducing greenhouse gas emissions in current planning efforts.

The Corridor Plan has thus been devised to implement new land use and transportation development that produce less greenhouse gas emissions than existing forms; builds on the priorities set by the community; and supports the County's commitment to revitalize its older commercial corridors.

## ENVIRONMENTAL LAND USE SETTING

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The North Watt Avenue Corridor area consists of approximately 750 acres positioned along a 4-mile segment of Watt Avenue north of Interstate-80 to Antelope Road/U Street within the unincorporated Sacramento County. The plan area is situated entirely within the community of North Highlands adjacent to the former McClellan Air Force Base (now the McClellan Business Park). The Corridor is located within Sections 32 and 34-39 of Township 9 and 10 North, Range 5 East, on the Rio Linda, California USGS 7.5' Quadrangle Map.

Existing zoning in the plan area consists of Auto Commercial (AC), Business and Professional (BP), General Commercial (GC), Highway Travel Commercial (TC), Limited Commercial (LC), Shopping Center (SC), Recreation (O), Agricultural-

Residential (AR-1), Residential Density 2 (RD-2), Residential Density 5 (RD-5), Residential Density 10 (RD-10), Residential Density 20 (RD-20), Residential Density 30 (RD-30), Mobilehome Subdivision (RM-1), Light Industrial (M-1), Office Park (MP), Special Planning Area (SPA), and Neighborhood Preservation Area (NPA). Adjacent land use zones are TC, M-1, RD-2, RD-5, RD-10, RD-20, RD-30, RM-1, MP, SPA and AR-1. The majority of the properties that are adjacent to the project site are RD-5 parcels. There is also a substantial volume of AR-1 and SPA properties adjacent to the plan area. The SPA area is the McClellan Business Park (formerly McClellan Air Force Base).

## PROPOSED LAND USE PLAN

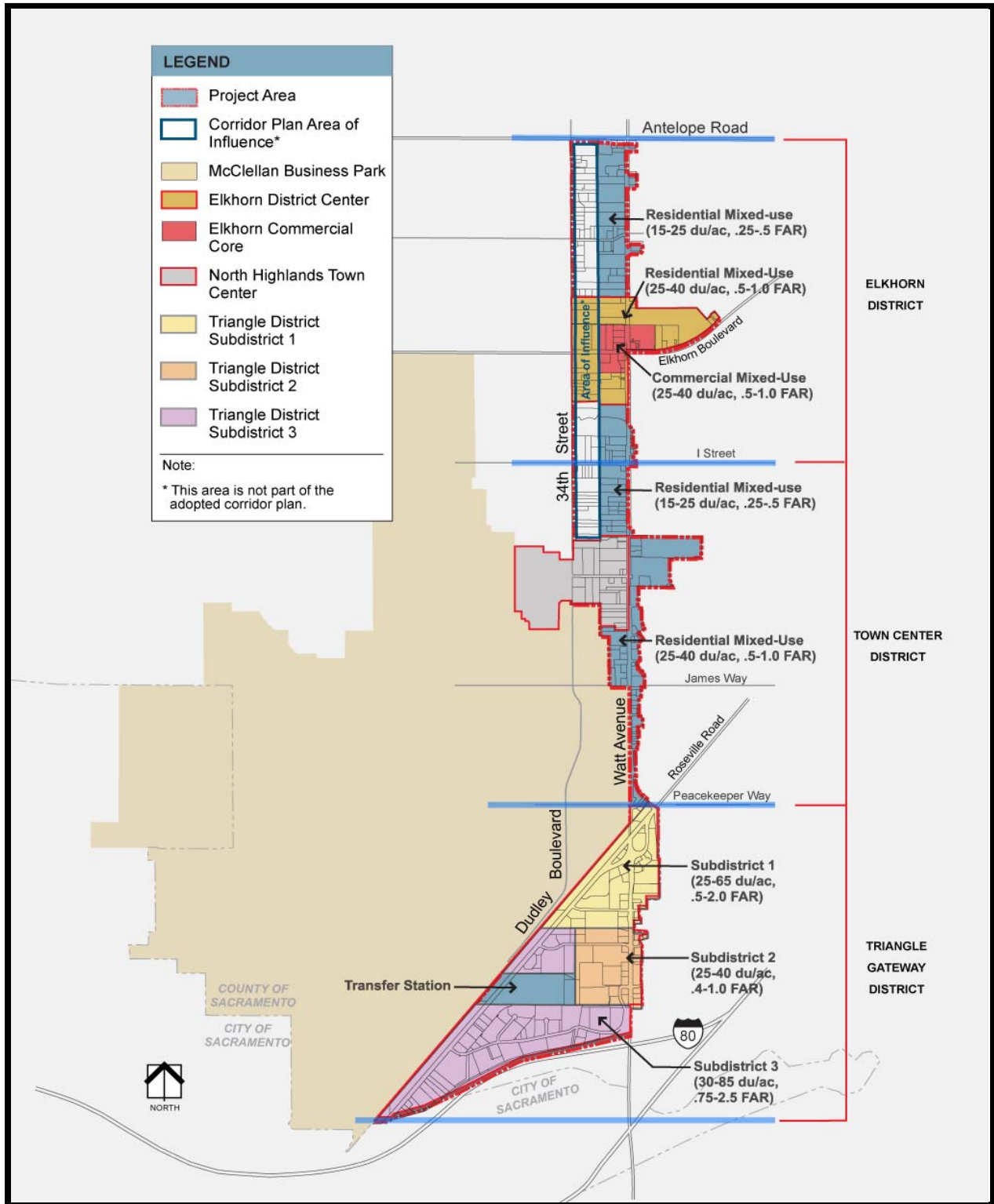
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The North Watt Avenue Corridor Plan is a land use plan (Plate LU -1) that is intended to guide infill growth and public improvements within the plan area within a planning horizon of 20 years. The following Vision Statement summarizes the overall vision of the Corridor plan area:

The Corridor Plan is a comprehensive guide to the implementation of the community's vision for a vibrant, economically healthy corridor that enhances the quality of life in North Highlands and the greater Sacramento region.

Specific details of the Corridor Plan, including layout, principles, and descriptions of covered content in the Land Use Plan are included in the Project Description chapter.

**Plate LU -1: North Watt Avenue Corridor Plan Land Use**



## REGULATORY SETTING

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To analyze the potential land use effects of the Corridor Plan, this EIR considers the Preferred Scenario of the Sacramento Area Council of Governments (SACOG) “Blueprint” study as well as the differences between the existing General Plan, proposed General Plan update and Zoning designations of the project parcels and the proposed Corridor Plan land use designations. This chapter also evaluates the impacts of the project related to the McClellan Base Reuse Plan, the McClellan AFB/Watt Avenue Redevelopment Area and the North Watt Avenue Beautification Project. Impacts related to the McClellan Airport and the Comprehensive Land Use Plan (CLUP) are discussed in the “Airport Compatibility” chapter (Chapter 5).

## SIGNIFICANCE CRITERIA

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A land use impact is significant if Project implementation results in any of the following (based on the CEQA Guidelines):

1. If any portion of the project will significantly conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, or
2. Result in significant physical disruption or division of an established community.
3. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.
4. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
5. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

CEQA Guidelines defines “significant” as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.” (Section 15382)

## IMPACTS AND ANALYSIS

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### IMPACT: CONFLICT WITH LAND USE PLAN, POLICY, OR REGULATION

#### *SACRAMENTO AREA COUNCIL OF GOVERNMENT (SACOG) "BLUEPRINT"*

The SACOG Board of Directors adopted the Preferred Blueprint Scenario in December 2004; the County of Sacramento has also endorsed the Preferred Scenario. The preferred scenario is a vision for growth that promotes compact, mixed-use development and more transit choices as an alternative to low density development. The Preferred Blueprint Scenario is a part of SACOG's Metropolitan Transportation Plan for 2035, the long-range transportation plan for the six-county region comprised of the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba and their 22 constituent cities. It also serves as a framework to guide local government in growth and transportation planning through 2050.

SACOG and civic partner Valley Vision initiated the Blueprint project in 2002 to study future land use patterns and their potential effects on the region's transportation system, air quality, housing, open space and other resources.

The study found that continuing the recent practice of building large-lot, low-density housing would consume another 660 square miles of undeveloped land. Residents would face longer commutes, more vehicle trips, dirtier air and a growing disconnect between where they live and where they work.

After extensive public outreach and Blueprint workshops, an alternative vision that integrated smart growth concepts such as higher-density, mixed-use developments and reinvestment in existing developed areas was developed. An analysis of the alternative showed that following smart growth principles would shorten future commute times, reduce traffic congestion, lessen dependence on automobiles and provide for housing choices that more closely align with the needs of an aging population.

The Blueprint's preferred scenario map for the project area is shown in Plate LU -2 and a close-up is provided in Plate LU -3. Plate LU -4 provides the SACOG summary statistics for the base case (expected 2050 scenario if growth continues as it has) scenario versus the preferred scenario in the Rio Linda-McClellan Area. In the preferred scenario, the area is shown as containing retail, industrial, public, office, rural residential, open space, attached residential, medium density mixed use center or corridor, high density mixed use center or corridor, and employment focus mixed use center or corridor uses. Table LU-1 below shows the approximate percentages of each land use type in the preferred scenario.

Plate LU -2: Rio Linda/ McClellan SACOG Blueprint Preferred Scenario Map

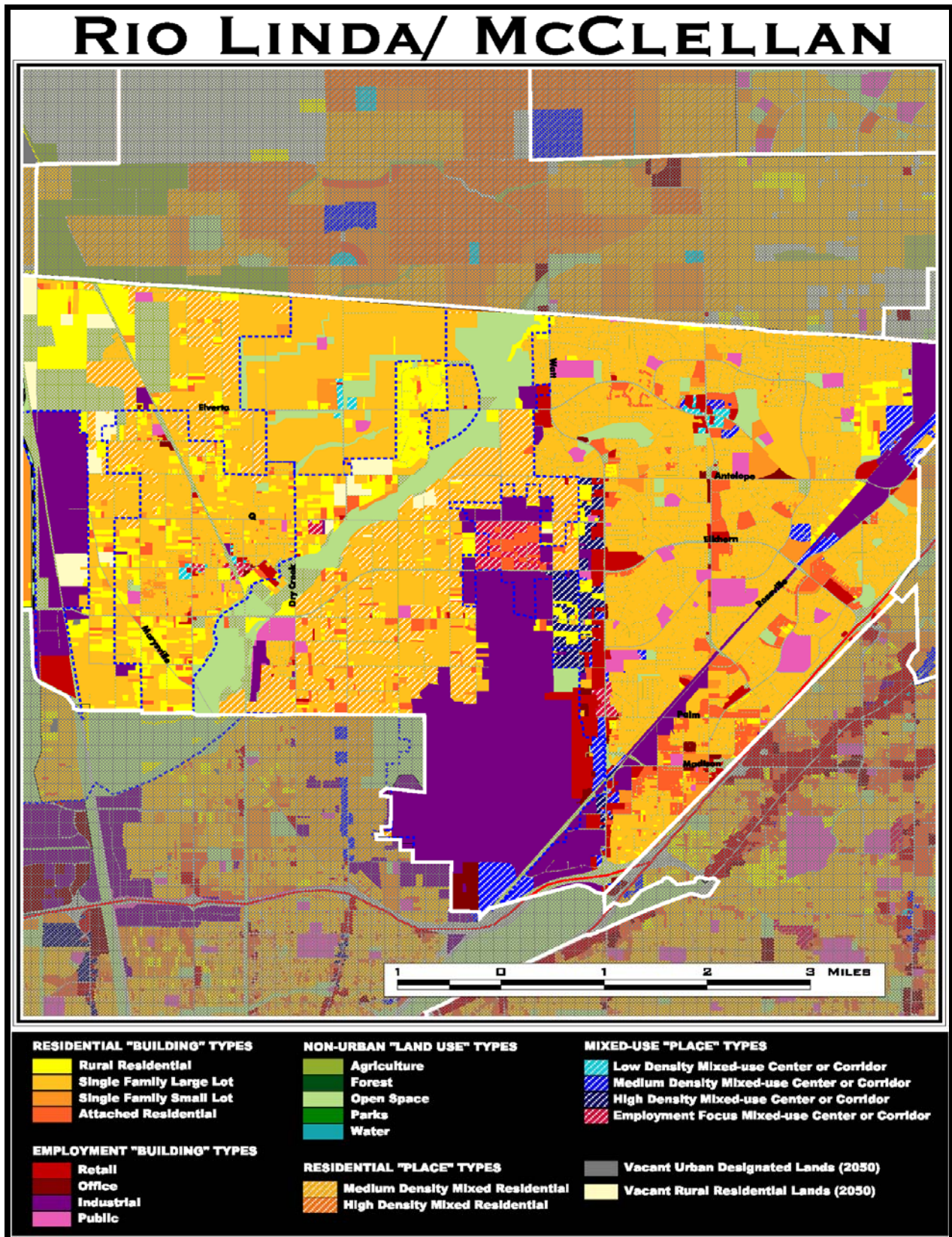
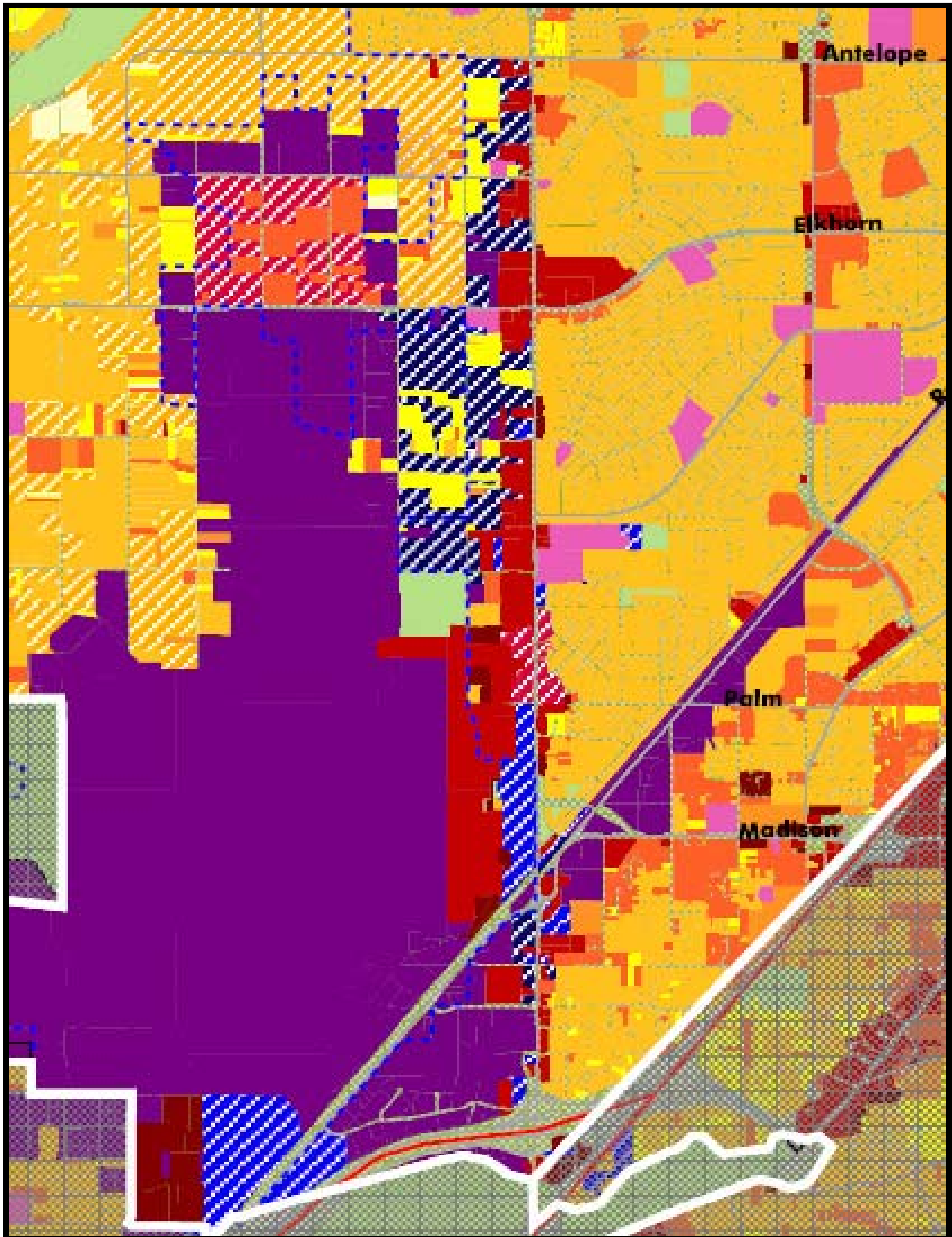




Plate LU -3: Rio Linda/ McClellan SACOG Blueprint Preferred Scenario Close-up



## Plate LU -4: SACOG Blueprint Summary Statistics

<b>RIO LINDA/ MCCLELLAN</b>		
<b>SCENARIO</b>	<b>Base Case</b>	<b>Draft Preferred Blueprint Scenario</b>
Growth in Jobs: 2000-2050	9,616	39,939
Growth in Housing Units: 2000-2050	12,063	39,078
Balance of Jobs/Housing in 2000:	1.0	1.0
Balance of Jobs/Housing Growth (2000-2050):	0.8	1.0
Balance of Jobs/Housing in 2050:	1.0	1.0
<b>New Housing Growth through 2050 (by type):</b>		
Rural Residential (Existing 2%)	10%	1%
Large Lot Single Family (Existing 69%)	57%	34%
Small Lot Single Family (Existing 0%)	2%	23%
Attached Products (Existing 29%)	31%	43%
<b>Total Housing Product Mix through 2050:</b>		
Rural Residential	4%	1%
Large Lot Single Family	66%	51%
Small Lot Single Family	1%	12%
Attached Products	29%	36%
<b>New Job Growth through 2050 (by sector):</b>		
Retail Jobs (Existing 19%)	59%	16%
Office Jobs (Existing 51%)	25%	61%
Industrial Jobs (Existing 26%)	10%	20%
Public/Quasi-Public Jobs (Existing 4%)	6%	3%
<b>Total Job Mix through 2050:</b>		
Retail Jobs	27%	18%
Office Jobs	46%	56%
Industrial Jobs	23%	23%
Public/Quasi-Public Jobs	4%	3%
<b>Growth through Re-investment in 2050:</b>		
Jobs	0%	36%
Dwelling Units	0%	16%
<b>Type of Trips:</b>		
Auto	93.2%	83.2%
Transit	1.1%	4.2%
Bike and Pedestrian	5.7%	12.6%
<b>Vehicle Miles Traveled</b>		
Per Day per Household	47.4	38.1
Pct Vehicle Hours in Heavy Congestion on Freeways and Arterials	30%	20%
<b>Discussion Draft Preferred Scenario Summary</b>		
<p>This northern unincorporated area in Sacramento County experiences strong growth, with a population of more than 190,000 people by 2050:</p> <ul style="list-style-type: none"> <li>- Growth is led by McClellan Park, and includes a significant amount of reinvestment on the former military base and along the Watt Avenue corridor;</li> <li>- Most of the growth is on vacant properties, but a significant percentage (16% of new housing, 36% of new jobs) is through reinvestment in existing developed properties;</li> <li>- Housing growth is through roughly similar amounts of large lot single family, small lot single family and attached rowhouses, townhomes, condominiums and apartments.</li> </ul>		

**Table LU-1  
Approximate Percentages of Land Use Types in the Project Area Under the  
SACOG Blueprint Preferred Scenario**

<u>Preferred Scenario Land Use</u>	<u>Approximate Percentage of Corridor Area</u>
<b>Employment Building Types</b>	
Retail	25
Industrial	25
Public	6
Office	4
<b>Residential Building Types</b>	
Rural Residential	2
Attached Residential	2
<b>Non-Urban Land Use Types</b>	
Open Space	1
<b>Mixed-Use Place Types</b>	
Medium Density Mixed-Use Center or Corridor	15
High Density Mixed-Use Center or Corridor	10
Employment Focus Mixed-Use Center or Corridor	10

The land use plan proposed for the Corridor is shown in Plate LU -1 above. The proposed land use plan indicates the site will be a mix of residential, commercial, retail and mixed-use land uses. The uses proposed for the Corridor are almost identical to those proposed for the area in the SACOG Blueprint preferred scenario. In general, the Corridor results in a redistribution of similar land uses as compared to the Blueprint's preferred scenario. As noted in the Plan, "The Corridor Plan is consistent with the Blueprint's concentration of commercial uses around major intersections, with higher density residential uses located throughout the areas outside the district centers."

The Corridor Plan does present one deviation from the preferred scenario in that the Blueprint preferred scenario retains the industrial land use designation in the "Triangle District" of the plan. The Corridor Plan designates this area for a transit oriented development with a mix of residential, retail and office uses. Thus, in this area, the Corridor Plan presents higher intensity land uses than those shown in the preferred scenario.

In general the Blueprint serves as a regional guide to the type of smart growth that the Sacramento region can utilize in order to avoid the poor traffic and air quality situations shown to occur by the SACOG base case scenario. The deviations from the preferred scenario proposed in the Corridor land use plan are consistent with smart growth principles by providing higher intensity uses closer to transit. Thus, in terms of smart growth principles, the proposed Corridor Plan makes positive deviations to the Blueprint preferred scenario.

In conclusion, the Corridor Plan project generally complies with the guiding land use assumptions of the Blueprint preferred scenario and no substantial conflicts with the preferred scenario have been identified. Impacts are considered **less than significant**.

#### *SACRAMENTO COUNTY GENERAL PLAN*

The existing Sacramento County General Plan was adopted by Sacramento County in 1993. The Board of Supervisors certified the Final EIR and Subsequent EIR on October 20, 1993 as Resolution No. 93-1359 and approved the Sacramento County General Plan on December 15, 1993 as Resolution No. 93-1577. The Sacramento County General Plan is in the process of being updated and is expected to be adopted. Since the General Plan Update is expected to be approved in the short term, and that it is unlikely that substantial changes will occur to the Update during the hearing process that would affect the Corridor Plan, the following analysis compares the project to the Update only.

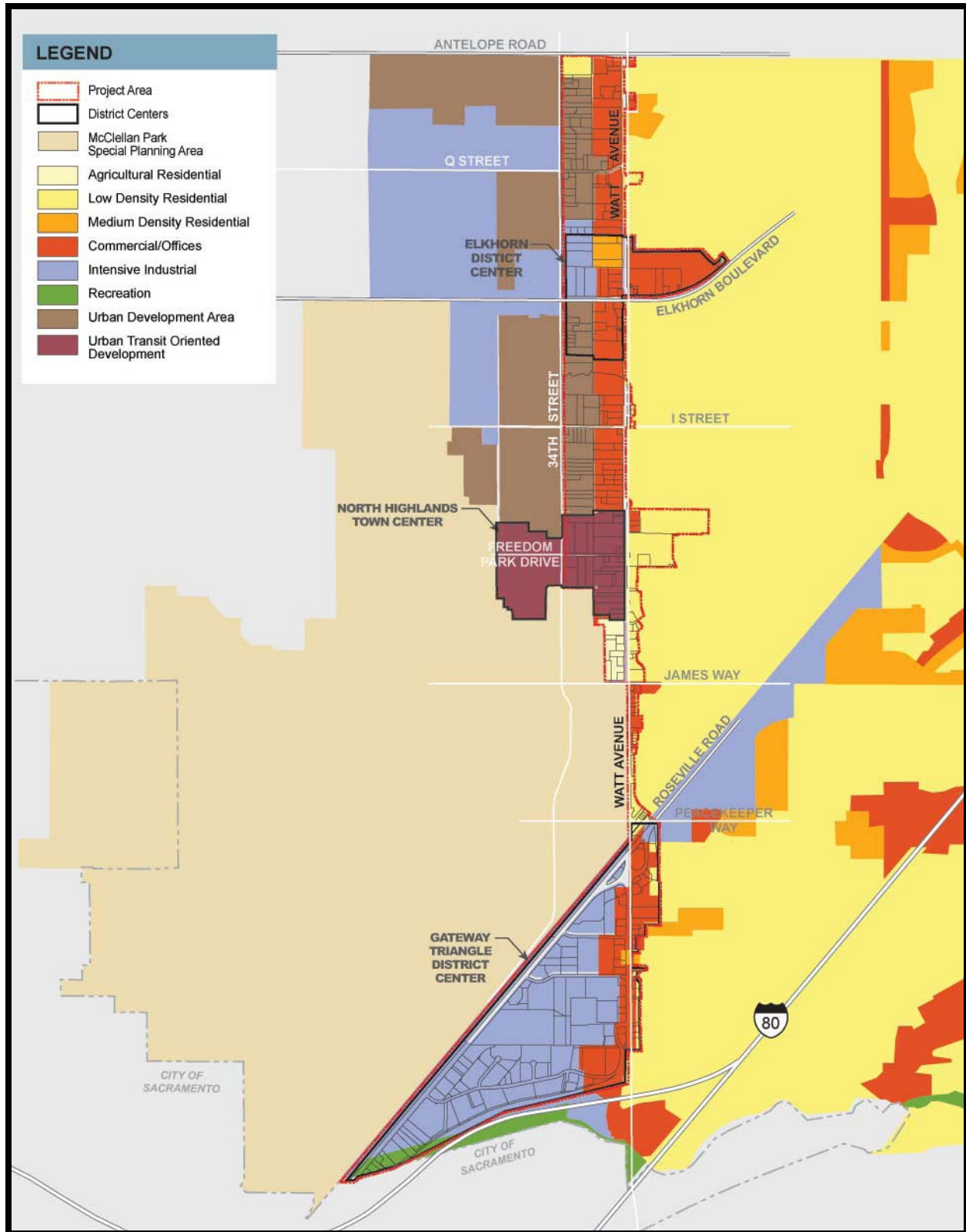
#### **GENERAL PLAN LAND USE DESIGNATIONS**

The General Plan land use designations for the project area and surrounding vicinity are shown in Plate LU -5. The immediate Plan area is made up of the following General Plan land use designations:

- Agricultural Residential (36.18 acres)
- Commercial Offices (285.70 acres)
- Intensive Industrial (310.57 acres)
- Low Density Residential (68.30 acres)
- Medium Density Residential (11.28 acres)
- Recreation (8.74 acres)

As noted above, the two largest existing land use components in the project area are Commercial/Offices and Intensive Industrial. Generally, the Commercial/Offices designation is located along the western portion of Watt Avenue north of the North Highlands Town Center and on both the east and west side of Watt Avenue south of the Town Center. The existing Intensive Industrial parcels are located west of Watt Avenue at Elkhorn Boulevard and almost the entire Triangle Gateway District. Combined, these two designations account for more than 80% of the plan area. The remaining 20% of the plan area is made up of residential and recreational designations.

Plate LU -5: General Plan Land Use Designations



Directly adjacent General Plan land use designations are as follows:

- Urban Development Area
- Intensive Industrial
- Recreation
- Commercial/Offices
- Medium Density Residential
- Low Density Residential
- Urban Transit Oriented Development
- McClellan Park Special Planning Area

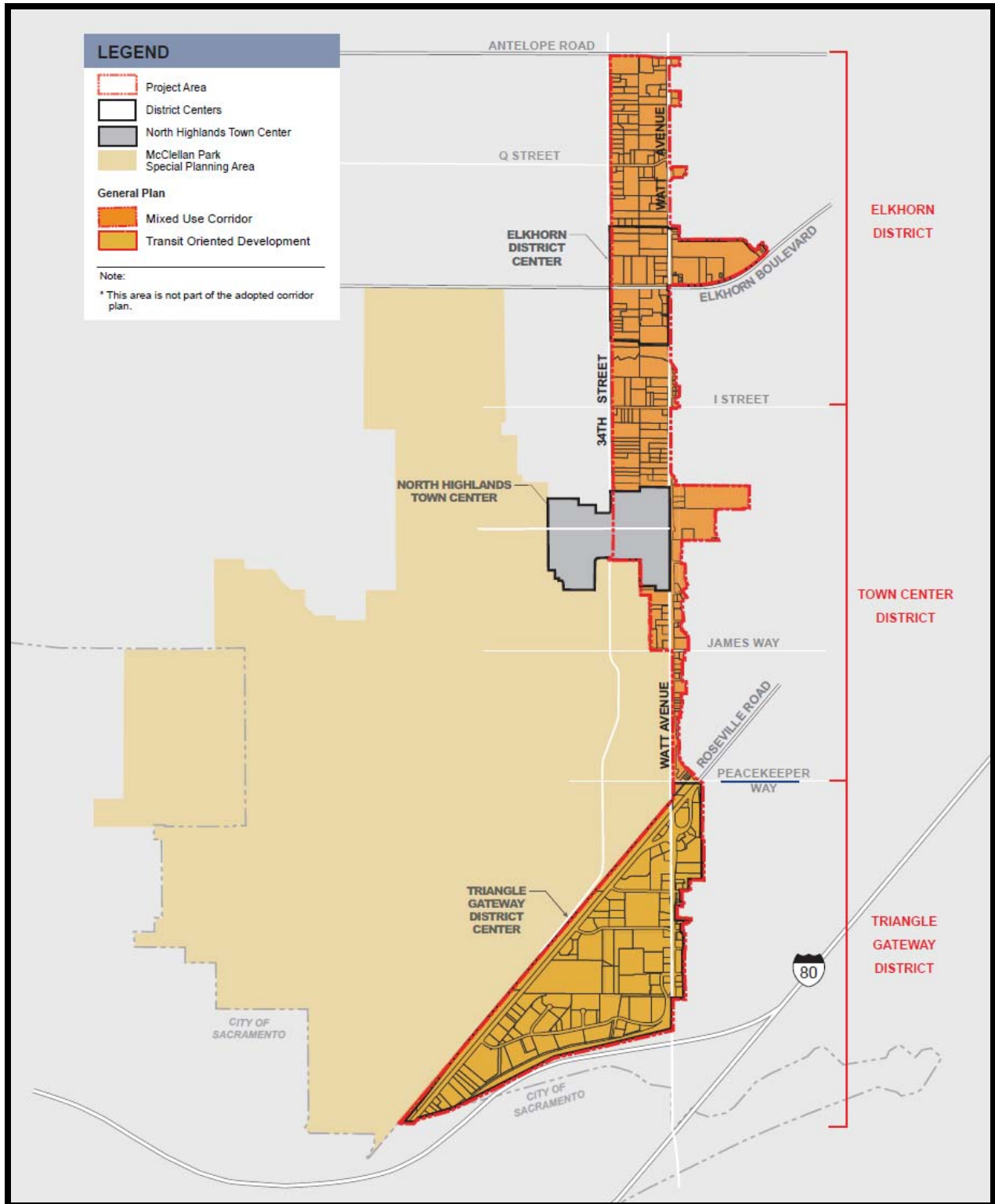
The largest adjacent General Plan land use designation is Low Density Residential, which represents almost all of the properties located east of the Corridor Plan area. This area represents the core low density residential neighborhoods of the North Highlands community. Along the western portion of the plan area adjacent properties are generally designated for Urban Development Area or are within the McClellan Park Special Planning Area.

The proposed Corridor Plan will result in the following changes to the General Plan land use designations:

- A General Plan Amendment to change the existing General Plan designations to Neighborhood Transit Oriented Development. (Note: it is anticipated that the new General Plan designation will be Mixed-Use Corridor as defined in the General Plan Update.)
- A General Plan Amendment to create the “Smart Growth Street” General Plan designation.
- A General Plan Amendment to change the General Plan Transportation Plan to add the “Smart Growth Street” designation for Watt Avenue from I-80 north to U Street.

The amendments listed above regarding the Smart Growth Streets will be discussed below and in the Transportation and Circulation chapter. Also, as mentioned above, it is anticipated that the General Plan Update will go into effect either prior to the adoption of the proposed project or very soon thereafter; thus, the General Plan Amendment regarding the existing General Plan designations changing to a Neighborhood Transit Oriented Development (TOD) (1993 General Plan designation) is only analyzed in terms of the Mixed Use Corridor designation, which will supersede the TOD designation in most of the Commercial Corridors. The exception to this within the North Watt Corridor is the Triangle Gateway District, which will retain the TOD designation. Thus, all areas outside the Triangle Gateway District will be designated as Mixed Use Corridor and the Triangle Gateway District will be designated TOD. These designations are discussed further below and can be viewed in Plate LU -6.

**Plate LU -6: Proposed General Plan Land Use Designations**



The Mixed Use Corridor designation relates to 14 commercial corridors targeted by the County, one of which includes the project area, for revitalization with mixed-use, retail, employment and residential uses that are both compact and transit oriented. This designation falls under the Mixed Use and Transit Oriented Development category of the Urban Designations Section of the General Plan.

The TOD General Plan designation is a mixed use designation that allows for mixed use communities at moderate densities that are along the Feeder Line Network of the transit system and within 10 minutes travel time of the Trunk Line Network. TODs may also be located on bus lines not shown on the Transportation Plan as long as transit meets the level of service defined for the Feeder Line Network. The concepts of TODs call for high intensity, mixed use development close to transit, an emphasis on neighborhood support services, a pleasant walking environment and good pedestrian connectivity.

The Sacramento County General Plan policies that are pertinent to TOD's are policies LU-~~3234~~ through LU-~~3739~~. These policies are intended to support the stated goal of the Transit Oriented Development subsection of the General Plan which is to have "high intensity, mixed use neighborhoods that provide a pedestrian environment and are closely linked to transit."

The policies in the Land Use Element that support the County's TOD strategies and are relevant to the project are as follows:

- LU-~~3234~~. It is the policy of Sacramento County to support and encourage Transit Oriented Development (TODs) in appropriate areas throughout the county. Development applications within ½ mile of a transit stop/station **identified in Regional Transit's Master Plan or a County-adopted Plan** shall comply with the TOD development requirements as listed on Table ~~7~~~~8~~. Appropriate locations include transit stops or nodes in commercial corridors, Bus Rapid Transit (BRT) or Light Rail stations, transit stops in new growth areas, or opportunity sites identified in Regional Transit's Master Plan. **The Planning Director will be responsible for determining an applications' consistency with this policy and will take into account application-specific opportunities and constraints, including reasonable opportunities for access to transit.** If the Planning Department determines that an application is inconsistent with the intent of this policy, the Board of Supervisors shall be the appropriate hearing body to determine feasibility of consistency **(see table 7). Master Plans (such as Specific Plans, corridor plans, etc.) adopted after the updated General Plan is approved may replace the standards in this policy and Table 7 with standards tailored to the subject area.**
- LU-~~3335~~. Parking requirements may be reduced in order to meet the density requirements established by policy LU-~~3234~~.
- LU-~~3436~~. Developments in the areas designated on the Land Use Diagram as Transit Oriented Development shall be designed in a manner that conforms to the concepts of transit-oriented development, including:



- High intensity, mixed-use development concentrated in a Core Area within an easy walk (one quarter mile) of a transit stop on the Trunk or Feeder Line Network.
  - An emphasis on neighborhood support commercial services at street level in the Core Area that can serve the residents of the Core and surrounding Secondary Areas, with other employment encouraged in the TODs created along the Trunk Line Network.
  - A pleasant walking environment created through good land use design, short distances, amenities, and streetscape features.
  - Direct, multiple linkages, especially for bicycles and pedestrians, between the Core Area and the surrounding Secondary Area.
- LU-~~3537~~. The primary concepts in LU-~~3436~~ should be employed wherever feasible in new urban development.
  - LU-~~3638~~. Community Plans and Specific Plans shall employ the primary concepts in LU-~~3436~~ in designating locations for higher intensity mixed use development and designing circulation and pedestrian networks.
  - LU-~~3739~~. ~~Promote~~**Provide** and support development of pedestrian and bicycle connections between transit stations and nearby residential, commercial, employment or civic uses by eliminating physical barriers and providing linking facilities, such as pedestrian overcrossings, trails, wide sidewalks and safe street crossings.

Table ~~8~~ **Table 7** of the Land Use Element details the minimum density and intensity requirements of LU-~~3234~~ and is included as Table LU-2 of this document.

### **GENERAL PLAN LAND USE DESIGNATION CONCLUSIONS**

The proposed project provides for high intensity, mixed use development along North Watt Avenue which is noted to be a Feeder Line on the County Transportation Plan. Additionally, the project proposes that nearly the entire site be developed with residential and commercial mixed uses and includes a transportation vision that emphasizes the promotion of pedestrian accessibility, walking and transit.

In respect to LU-~~3234~~, the table which details the minimum density and intensity requirements of TOD's (Table LU-2), indicates that residential development within  $\frac{1}{8}$  of a mile of feeder lines should maintain a minimum density of 10 dwelling units per net acre (du/NA) and non-residential and mixed-use development along feeder lines should maintain a minimum floor area ratio (FAR) of 0.4 to be transit supportive. For development between and  $\frac{1}{4}$  and  $\frac{1}{2}$  mile, development should maintain a minimum density of 6 du/NA and a 0.3 FAR.

The majority of the project site is within ½ of a mile, or closer, from Watt Avenue and, as shown in the Corridor Plan, the project proposes residential densities ranging from 15 to 65 dwelling units per acre and FAR's from 0.25 to 2.0. Within the Triangle District (proposed TOD area), proposed residential densities range from 25 to 65 dwelling units per acre with FAR's ranging from .5 min to 2.0 max. The proposed project also notes

**Table LU-2: Requirement of LU-3234**

<b>MINIMUM DENSITY AND INTENSITY REQUIREMENTS OF LU-34</b>					
<b>TRANSIT TYPE</b>	<b>INTENT</b>	<b>LAND USE TYPE</b>	<b>WITHIN 1/8 MILE</b>	<b>WITHIN 1/8-1/4 MILE</b>	<b>WITHIN 1/4-1/2 MILE</b>
<b>LIGHT RAIL (Existing and Planned)</b>	<p>Create transit supportive districts around light rail stations that feature compact and/or mixed use development and encourage pedestrian activity. Preferred uses include ground floor retail with compact housing and/or employment uses above.</p> <ul style="list-style-type: none"> <li>▪ Target densities within 1/8 mile range from 40-80 du/NA depending on the location, although due to ideal nature of these sites, there is no limit to the density/intensity. Target densities within 1/8 to 1/4 mile are 30-60 du/NA. Within 1/4 to 1/2 the target is 12-30 du/NA. FARs equivalent to these densities are recommended for non-residential and mixed use projects.</li> <li>▪ Developments proposed on land designated as TOD on the Land Use Diagram <i>must</i> meet the minimum densities and intensities of this table.</li> <li>▪ Developments proposed on land located within 1/2 mile of an existing or planned light rail station that is <i>not</i> designated as TOD on the Land Use Diagram <i>should</i> meet the minimum densities and intensities of this table.</li> <li>▪ Transit area plans shall conform to the minimum densities and intensities of this table.</li> </ul>	<b>RESIDENTIAL</b>	30 du/NA	18 du/NA	12 du/NA
		<b>NON-RESIDENTIAL &amp; MIXED USE</b>	1.5 FAR	1.0 FAR	0.65 FAR
<b>BUS RAPID TRANSIT AND OTHER TRUNK SERVICE</b>	<p>Attract transit supportive uses at appropriate sites with access to Bus Rapid Transit and other trunk line service where that service is planned or currently exists, including:</p> <ul style="list-style-type: none"> <li>○ In identified commercial corridors;</li> <li>○ At major bus stops, transfer stations and other key opportunity sites as identified by Regional Transit's updated Master Plan, and;</li> <li>○ In new growth areas and other master planned areas</li> </ul> <ul style="list-style-type: none"> <li>▪ Target densities within 1/8 mile range from 20-50 du/NA depending on the location, although due to ideal nature of these sites, there is no limit to the density/intensity. Target densities within 1/8 to 1/4 mile are 15-30 du/NA, and within 1/4 to 1/2 the target is 10-20 du/NA. FARs equivalent to these densities are recommended for non-residential and mixed use projects.</li> </ul>	<b>RESIDENTIAL</b>	20 du/NA	15 du/NA	10 du/NA
		<b>NON-RESIDENTIAL &amp; MIXED USE</b>	0.65 FAR	0.5 FAR	0.4 FAR
<b>FEEDER LINES</b>	<p>Attract transit supportive uses at appropriate sites along where feeder lines are planned or currently exist, including:</p> <ul style="list-style-type: none"> <li>○ In identified commercial corridors;</li> <li>○ At major bus stops, transfer stations and other key opportunity sites as identified by Regional Transit's updated Master Plan, and;</li> <li>○ In new growth areas and other master planned areas</li> </ul> <ul style="list-style-type: none"> <li>▪ Target densities within 1/8 mile range from 10-30 du/NA. Target densities within 1/8 to 1/4 mile are 6-15 du/NA, and within 1/4 to 1/2 the target is 6-10 du/NA. FARs equivalent to these densities are recommended for non-residential and mixed use projects.</li> </ul>	<b>RESIDENTIAL</b>	10 du/NA	6 du/NA	6 du/NA
		<b>NON-RESIDENTIAL &amp; MIXED USE</b>	0.4 FAR	0.3 FAR	0.3 FAR
<p><b>NOTES</b></p> <p>1. The intent of the minimum FARs shown on this table is to encourage transit supportive uses, including retail uses that will stimulate street-level activity and employment uses that will generate a large number of jobs. The minimum FARs should not be used to justify uses that are not transit supportive, such as big boxes stores, warehouses and storage uses; although these uses may satisfy the minimum requirements of this table, they do not meet the intent of the policy.</p> <p><i>EXISTING: Existing service or under construction</i>                      <i>du/NA = Dwelling unit / net acre</i>  <i>PLANNED: Service is in an adopted plan</i>                                      <i>FAR = Floor area ratio</i></p> <p style="text-align: right;"><i>Source 2007 Sacramento County General Plan</i></p>					

that when a project is located within ½ mile of a transit stop/station, it shall comply with the minimum development requirements of Policy LU-34, as listed on **Table 7** ~~Table 8~~ of the Land Use Element of the General Plan (Table LU-2). Further, if a project does not comply with Policy LU-~~32~~**34**, the Corridor Plan states that such a project will require that the proponent file an application for a Special Development Permit subject to discretionary review by the Board of Supervisors. Thus, the Corridor Plan is compatible with the General Plan policy LU-~~32~~**34**.

Overall, the proposed Corridor Plan calls for a mix of land uses that generally fall within the existing General Plan designations applied to the plan area except that the densities noted in the plan are greater than those currently allowed within portions of the project site. The proposed project is intended to allow for mixed-development that is generally more intensive than the uses currently allowed in the project area; however, the proposed project is compatible with the General Plan TOD designation as well as the Mixed-Use Corridor Designation. Impacts are **less than significant**.

### **GENERAL PLAN LAND USE ELEMENT**

The Land Use element of the 2030 General Plan provides land use policy guidance for development in unincorporated Sacramento County. The General Plan Update addresses mixed-use development and contains many relevant policies, goals and implementation measures related to the type of mixed-use proposed by this project.

### ***GENERAL PLAN LAND USE ELEMENT DEVELOPMENT STRATEGIES AND POLICIES***

The goal of the 2030 General Plan Land Use Element is to develop an orderly pattern of land use that concentrates urban development, enhances community character and identity through the creation and maintenance of neighborhoods, is functionally linked with transit, promotes public health and protects the County's natural, environmental and agricultural resources.

The 2030 General Plan includes four land use strategies that are designed to meet this goal. The land use strategies that are relevant to the project address the need to accommodate projected population and employment growth in areas where the appropriate level of public infrastructure and services are or will be available; address the need to cultivate land use patterns that maximize the benefits of new and existing development while maintaining the quality, character, and identity of neighborhood and community areas; and focuses on the reinvestment and revitalization of existing communities through comprehensive and coordinated planning strategies and public participation that addresses housing, economic development, commercial development, employment opportunities, public facilities and infrastructure improvements.

One of the strategies that the 2030 General Plan introduces for urban growth accommodation within the unincorporated Sacramento County is "Commercial Corridor Planning". The objective stated for Commercial Corridor Planning is as follows:

New retail and employment opportunities in targeted corridors to support community economic health and vitality, and additional residential dwelling units to support these stores and jobs.

The 2030 General Plan identifies 14 target corridors, including the proposed North Watt Avenue Corridor (Plate LU -7).

The 2030 General Plan Land Use Element provides the following policy specific to the designated commercial corridors:

- ~~• LU-12. It is the intent of the County to comprehensively plan for the revitalization of the 14 targeted commercial corridors and invest the resources necessary to: stimulate private investment; encourage development of vacant and underutilized parcels; support reuse and/or rehabilitation of abandoned or blighted buildings; encourage rezoning of excess industrial and commercial lands to allow for medium and high density residential or mixed use projects, and; avoid non transit supportive uses, such as industrial uses, low density residential, and uses that would necessitate large parking lots fronting on the street.~~
- **LU-11. It is the intent of the County to comprehensively plan for the revitalization of the targeted commercial corridors and invest the resources necessary to achieve the following: stimulate private investment; encourage development of vacant and underutilized parcels; support reuse and/or rehabilitation of abandoned or blighted buildings; encourage rezoning of excess industrial and commercial lands to allow for medium and high density residential or mixed use projects, and; avoid non transit supportive uses, such as industrial uses, low density residential, and uses that would necessitate large parking lots fronting on the street.**

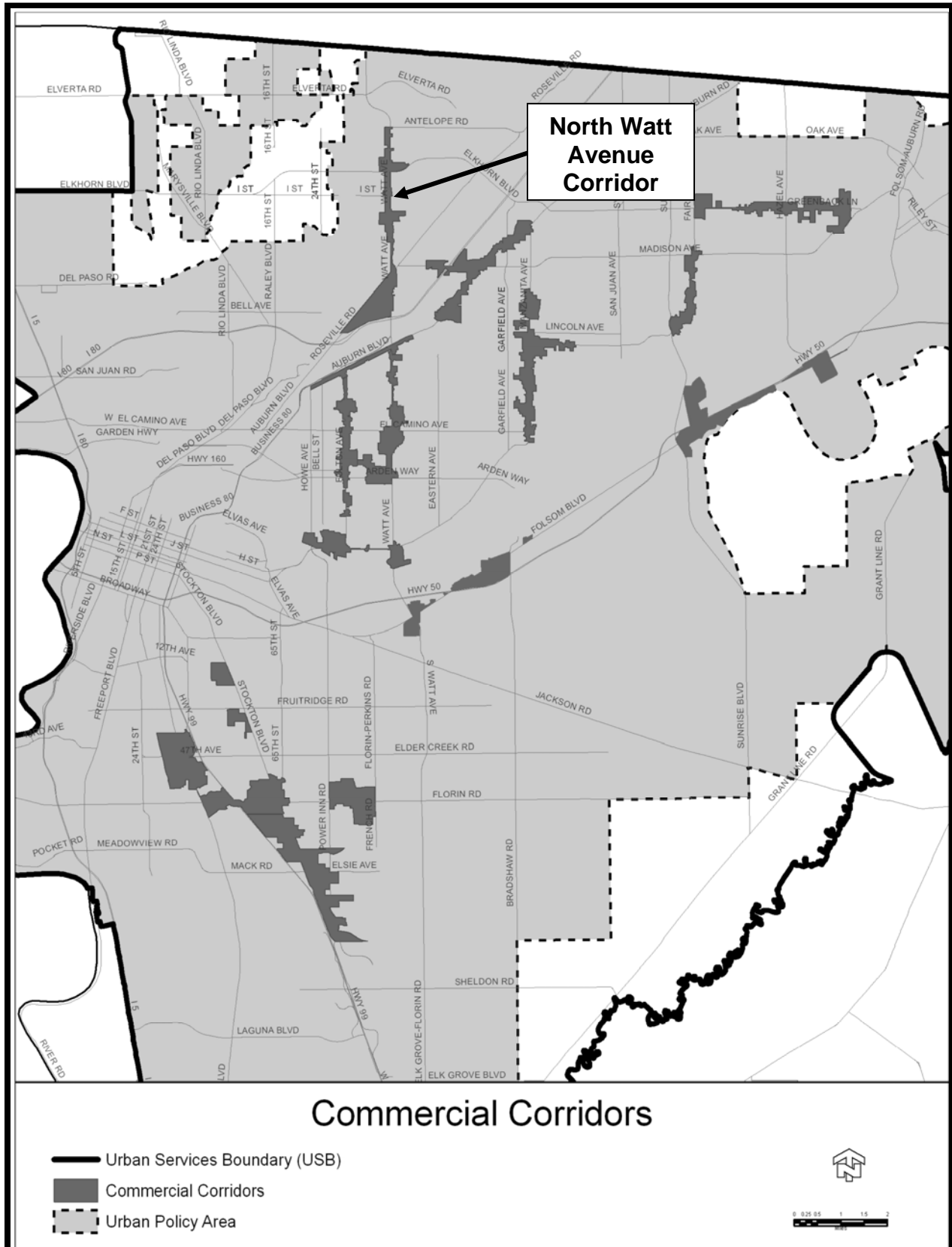
Other policies in the Land Use Element that support the County's land use strategies and are relevant to the project are as follows:

- ~~LU-78.~~ Provide for additional mixed use development in commercial parking areas where such uses would be compatible with surrounding uses and where parking demand can be appropriately accommodated or structured parking can be constructed.
- **LU-18. Encourage development that complements the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.**
- ~~• LU-20. Encourage development that compliments the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.~~
- ~~LU-2022.~~ Planning processes for existing communities, commercial corridors and new growth areas shall provide for distinct and identifying

physical elements, ~~including but not limited to~~ **which may include**: gateways, signage, public art, common site or street layout, shared design qualities of buildings or infrastructure, or prominent landmarks or destinations.

- LU-~~21~~23. Promote a better balance of employment, neighborhood services, and different housing types by reviewing development projects and the surrounding community and designing new projects wherever feasible so that they maintain or improve the mix of uses in the community.
- LU-~~23~~25. Providing compact, mixed use developments shall be an integral part of all master planning efforts for new growth areas and commercial corridors.

### Plate LU -7: 2030 General Plan: Commercial Corridors



- **LU-26. When planning for new development in new communities, the features below shall be incorporated for their public health benefits and ability to encourage more active lifestyles, unless environmental constraints make this infeasible. In existing communities, the features below shall be considered, as appropriate and feasible:**
  - **Where appropriate, compact, mixed use development and a balance of land uses including schools, parks, jobs, retail and grocery stores, so that everyday needs are within walking distance of homes.**
  - **Grid or modified-grid pattern streets, integrated pathways and public transportation that connect multiple destinations and provide for alternatives to the automobile.**
  - **Wide sidewalks, shorter blocks, well-marked crosswalks, on-street parking, shaded streets and traffic-calming measures to encourage pedestrian activity.**
  - **Walkable commercial areas with features that may include doors and windows fronting on the street, street furniture, pedestrian-scale lighting, and served by transit when feasible.**
  - **Open space, including important habitat, wildlife corridors, and agricultural areas incorporated as community separators and appropriately accessible via non-vehicular pathways.**
- ~~LU-28. When planning for new development in either new or existing communities, the following features shall be considered for their public health benefits and ability to encourage more active lifestyles:~~
  - ~~Compact, mixed use development and a balance of land uses so that everyday needs are within walking distance, including schools, parks, jobs, retail and grocery stores.~~
  - ~~Streets, paths and public transportation that connect multiple destinations and provide for alternatives to the automobile.~~
  - ~~Wide sidewalks, shorter blocks, well-marked crosswalks, on-street parking, shaded streets and traffic-calming measures to encourage pedestrian activity.~~
  - ~~Walkable commercial areas with doors and windows fronting on the street, street furniture, pedestrian-scale lighting, and served by transit when feasible.~~
- **LU-2729. Provide safe, interesting and convenient environments for pedestrians and bicyclists, including inviting and adequately lit streetscapes, networks of trails, paths and parks and open spaces located**



near residences, to encourage regular exercise and reduce vehicular emissions.

- LU-~~3840~~. Community Plans, Specific Plans, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.
- LU-~~4143~~. Encourage placement of active uses, such as retailers, restaurants, and various services, on the ground floor of buildings in areas where the greatest levels of pedestrian activity are sought.
- LU-~~4345~~. Parking areas shall be designed to:
  - Minimize land consumption;
  - Provide pleasant and safe pedestrian and bicycle movement;
  - Facilitate shared parking
  - Allow for the possible reuse of surface parking lots through redevelopment; and,
  - Minimize parking lot street frontage.
- LU-~~4854~~. Discourage the establishment and build-out of linear, strip pattern, commercial centers.
- LU-~~8994~~. Support planning for and development of mixed use centers and urban villages along commercial corridors to improve quality of life by creating diverse neighborhood gathering places, supporting enhanced transit service and non-automotive travel, stimulating local economic development, eliminating blight and balancing land uses.
- LU-~~9092~~. Focus investment of County resources in commercial corridors to facilitate improvements to streetscapes, sidewalks, landscaping, undergrounding of utilities, and other infrastructure and public amenities to encourage and stimulate private investment.
- LU-~~102404~~. Ensure that the structural design, aesthetics and site layout of new developments is compatible and interconnected with existing development.
- LU-~~104406~~. All redevelopment, revitalization and commercial corridor planning efforts shall include specific provisions to create and/or enhance community identity.

### **STRATEGIES AND POLICIES CONCLUSION**

The 2030 General Plan emphasizes the County's desire to promote redevelopment with goals and policies that relate to better utilizing lands currently designated for urban uses. The 2030 General Plan emphasizes new retail and employment opportunities in targeted corridors to support community economic health and vitality, and additional residential dwelling units to support these stores and jobs; new development that maintains and/or enhances community identity while remaining compatible with existing neighborhoods; compact, mixed use developments concentrated in nodes around transit stops, in community centers, and along commercial and transportation corridors. Three of the themes identified in the 2030 General Plan include:

- Viewing commercial corridors in the context of community plan objectives;
- Making commercial corridors mixed-mode streets with an emphasis on uses and site planning that facilitate the use of transit; and
- Revitalizing the County's underutilized commercial corridors as mixed-use streets that serve both regional commercial and local service needs.

According to the 2030 General Plan, the project area is a singled out corridor that is in need of future redevelopment. An implementation measure located in the Growth Management and Design Strategy of the Land Use Strategies and Policies section states that the County should "develop Community and Specific Plans, Corridor Plans and transit station land that promote neighborhood and community identity through design, street patterns architecture, buffers and open space".

The goals, objectives and related policies of the North Watt Avenue Corridor Plan encompass the same goals and objectives set forth in the 2030 General Plan. The proposed project appears to correlate and be compatible with the growth strategies outlined in the 2030 General Plan in that the project aims to create a transit oriented, pedestrian friendly neighborhood with a sense of place and community identity that focuses on mixed use development and revitalization. The proposed project is also consistent with the goals and policies noted in the 2030 General Plan as they relate to redevelopment and corridor planning efforts.

In conclusion, the proposed Corridor Plan would not be in conflict with the goals and policies of the 2030 General Plan and would thus result in a **less than significant** land use impact related to the 2030 General Plan.

### **SMART GROWTH STREET GENERAL PLAN DESIGNATION**

In addition to the proposed General Plan amendments related to land use, the Corridor Plan requests General Plan Amendments to both create the Smart Growth Street (SGS) General Plan designation and to change the General Plan Transportation Plan to add the SGS designation for Watt Avenue from I-80 north to U Street.

In years past, the predominant focus of transportation planning was to provide for the safe and efficient movement of vehicular traffic. However, this focused approach often failed to pay equal attention to accommodating other modes of travel, particularly walking and biking. The idea of “Complete Streets” responds to this inequity by striving to design and operate streets that enable safe and efficient access for all users. Successfully planned and constructed Complete Streets allow pedestrians, bicyclists, motorists and transit riders of all ages and abilities to safely move along and across the street. Sacramento County is committed to ensuring that all streets are built as Complete Streets.

The concept of SGSs expands upon the Complete Streets concept. While both SGSs and Complete Streets are pedestrian, bicycle and transit friendly, SGSs take a holistic view of the street, the adjacent corridor, the surrounding community and the natural environment, while allowing for more flexibility in the design of street and corridor improvements. The County intends to apply the SGS concept in previously-developed areas, such as commercial corridors, to support and encourage infill development and revitalization efforts. This concept is vital to the County’s goal of implementing SACOG’s adopted Blueprint Vision and concepts related to smart growth and transit-oriented development promoted in the County’s General Plan.

The SGS concept is intended to be implemented by designating applicable areas with a SGS designation on the General Plan Land Use Diagram and the Transportation Plan. This designation requires a focused planning effort to comprehensively plan for highly coordinated and interconnected land uses, transportation infrastructure and public realm amenities.

### **SMART GROWTH STREET OBJECTIVES**

The objectives of the SGS designation is to develop roadways with “green infrastructure” to the greatest extent feasible; to create and/ or improve community identity by coordinating improvements to the streetscape and surrounding corridor to achieve a consistent look and feel or carry through a specific “theme;” to create an “outdoor room” along the street to establish a sense of place and improve the comfort and overall experience of all users, particularly pedestrians and bicyclists; and to create communities and corridors using a holistic perspective when considering land uses and the design context of street and corridor improvements. The Community Planning and Development Department’s Planning Division have developed the following objectives, discussions and policies related to SGSs:

1. Objective: Incorporate “green infrastructure” to the greatest extent feasible.

To make streets truly adhere to smart growth principles, they should be planned, engineered and constructed to not only safely and efficiently accommodate all modes of travel, but also to incorporate “green infrastructure.” Green infrastructure can include a number of strategies, but generally can be described as a physical improvement that reduces environmental impacts and/or results in

a net environmental benefit, all while creating a more pleasant environment for users.

- Incorporate Low Impact Design (LID) techniques to the greatest extent feasible to improve water quality runoff and erosion control, infiltration, groundwater recharge, visual aesthetics, etc. LID techniques may include but are not limited to:
    - i. Bioretention techniques such as filtration strips, swales, and tree box filters;
    - ii. Permeable hardscape;
    - iii. Green roofs; and
    - iv. Erosion and sediment controls
    - v. Reduce street and lane widths where appropriate
  - Use recycled and/or recyclable materials whenever feasible.
  - When feasible, incorporate higher albedo materials and surfaces, such as lighter-colored pavements and cool roof technologies, and encourage the creation of tree canopy to reduce the built environment's absorption of heat to reduce the urban "heat island" affect.
2. Objective: Create and/or improve community identity by coordinating improvements to the streetscape and the surrounding corridor to achieve a consistent look and feel or carry through a specific "theme."
- Smart Growth street planning efforts shall identify specific, implementable measures to create and/or improve community identity.
  - Incorporate public art into streetscape improvements to the extent feasible.
3. Objective: Create an "outdoor room" along the street to establish a sense of place and improve the comfort and overall experience of all users, particularly pedestrians and bicyclists.
- Smart Growth streets shall incorporate features such as shade trees and plantings, well designed benches and other street furniture, trash receptacles, news racks, outdoor dining experiences, entertainment, public art, pedestrian scaled lighting fixtures, wayfinding signage, and other amenities as appropriate.

4. Objective: Create communities and corridors using a holistic perspective when considering land uses and the design context of street and corridor improvements.

No two streets, nor two communities, are the same. As such, the concept of smart growth and sustainable streets encourages a holistic perspective of considering land uses and the design context of street and corridor improvements to allow them to be “tailored” to the area and the surrounding community. Implementing this concept will entail holistic and innovative corridor analysis techniques to account for increased pedestrian, bicycle and transit usage and regional vehicle miles traveled (VMT) reductions associated with Smart Growth Street improvements. Such an analysis may lead to the conclusion that a reduced LOS for motor vehicles is acceptable in certain instances provided that the land uses and enhancements to other modes of travel result in an overall positive benefit to mobility and access and may also reduce VMT.

The County recognizes that within specific defined corridors that a highly coordinated and interconnected land uses and transportation infrastructure can result in improved walk-ability, bicycle use, transit opportunities and other forms of mobility, which can result in an environmental benefit and enhancements to a community. Where a corridor planning analysis indicates that motor vehicular travel will operate at LOS F, fees may be assessed to improve other modes of travel, such as enhancements to bicycle, pedestrian, transit, and public realm amenities, to encourage and facilitate travel through alternative, non-automobile modes of travel.

The following policies will apply to areas and corridors identified as Smart Growth Streets on the General Plan Land Use Diagram and the Transportation Plan. Smart Growth Streets may include commercial corridors as designated by the County, regional rail, light rail, and Bus Rapid Transit (BRT) corridors, areas within ½ mile walking distance of a regional rail, light rail or BRT stations, and mixed use-corridors as designated by the County. The intent is that these areas should include frequent transit service, enhanced pedestrian and bicycle systems, a mix of land uses at densities that support transit use and be characterized as quality development.

- A Smart Growth Street designation requires a focused and holistic corridor planning analysis that considers highly coordinated and interconnected land uses and transportation infrastructure within the corridor while also considering the impacts to surrounding communities and the natural environment.
- On a Smart Growth Street, the County shall strive to maintain operations and capacity on urban roadways and intersections at LOS E or better, unless maintaining this LOS would, in the County’s judgment, be infeasible and conflict with the achievement of other Smart Growth street objectives.

Congestion in excess of LOS E may be acceptable provided that provisions are made to improve overall mobility, reduce overall VMT and/or promote non-automobile transportation.

- Where a Smart Growth Street planning analysis indicates that a roadway improved to its general plan designation will be congested in excess of LOS E, mobility impacts fees may be assessed to the properties within the Smart Growth Street area. Such mobility fees shall be fairly apportioned to the properties and shall be sufficient in amount to improve other Smart Growth Street objectives such as improvements that would enhance pedestrian, bicycle, transit, other modes of mobility, and public realm amenities.
  - Evaluation of Smart Growth Street corridors and development within those corridors shall utilize multi-modal level of service standards, including pedestrian, bicycle, and transit modes of travel in addition to motor vehicle travel, to support and encourage overall mobility through improvement to all modes of travel.
5. Objective: Encourage the use of shared driveways to reduce the total number of driveways along a Smart Growth street to improve overall mobility and safety for all modes of travel.

An excessive number of driveways increase the amount of turning movements along a roadway, both slowing traffic and increasing potential conflicts between turning vehicles and pedestrians/bicyclists. Shared driveways thereby improve traffic flow and reduce vehicle-pedestrian conflicts.

- Smart Growth street planning efforts shall develop a comprehensive strategy to significantly reduce the total number of driveways along the roadway, including specific measures to ensure implementation, such as requiring cross-access and reciprocal parking agreements between adjacent property owners.
6. Objective: Encourage the use of shared parking facilities and reduced parking requirements.

Redundant and/or excessive parking facilities are not only an inefficient use of land, they are also expensive to build and maintain, are rarely used to their capacity, increase the urban “heat island” affect, and often create environments that are unfriendly to pedestrians and bicyclists. Encouraging adjacent land uses to share parking facilities and/or reducing the parking requirements in certain areas can provide an incentive for infill development by reducing the amount of land and expense that a builder must devote to parking facilities, while also leading to a more efficient use of land. It also avoids large expanses of asphalt, which can impede pedestrian and bicycle travel and contribute to the

“heat island” effect. Shared parking also supports the objective of reducing the number of driveways along a Smart Growth Street.

- Smart Growth street planning efforts shall develop a comprehensive strategy to reduce both the total amount of parking and total surface area dedicated to parking facilities. In general, reduced parking requirements and innovative parking solutions such as, shared parking, structured parking, parking maximums rather than minimums, on street parking, performance parking pricing, parking benefit districts and other innovative parking solutions will be strongly encouraged wherever feasible, while large surface parking lots will be strongly discouraged.
7. Objective: Design corridors that equitably accommodate all users, and complement the unique characteristics of the surrounding community and mix of uses.

Successfully-designed corridors accommodate the needs of all users and complement the unique assets of their surrounding communities. Corridors can accommodate the needs of all users with design that allows access to a full range of transportation modes. Corridors can also complement the unique characteristics of the surrounding community and mix of uses with appropriately-scaled design, and by providing full connectivity between destinations.

To accommodate the unique characteristics of the surrounding community, corridor design must be appropriately scaled to the community and the regional context. Corridors serving local destinations, while accommodating a range of modes, should emphasize enhanced pedestrian and bicycle access and connections. These roadways should accommodate vehicular speeds of no more than 35 miles per hour, to ensure safety for non-motorized modes such as pedestrian and bicycle travel. Corridors serving a more regional context, while accommodating a range of transportation modes, may necessitate roadways of more than 2-lanes with speeds greater than 35 mph. In this case, context sensitive solutions should be considered so as to minimize barriers to pedestrian and bicycle travel.

One method that should be considered within existing corridors is the concept of a road diet. A road diet is a treatment given to an urban roadway in which the number or width of lanes is reduced, and the freed space converted to parking, bike lanes, landscaping, walkways, or medians, while still meeting the mobility needs of motor-driven vehicles. Road diets are implemented to provide additional pavement and safety for bicyclists and pedestrians, reduce vehicle speeds, and enhance public realm amenities.

To provide full connectivity between destinations requires providing the most direct possible routes, as well as route choices. Successful accommodation of non-motorized travel modes requires good connectivity; due to their slower speeds (relative to motorized travel), longer than necessary distances between

destinations are especially inefficient. Connectivity standards to ensure equitable travel options for all users might include block size standards or a requirement for direct pedestrian / bicycle ways between all major destinations.

Finally, corridor evaluation methods must consider the accommodation of a full range of transportation modes. A measure of community objectives for corridor success must be developed, to facilitate the creation and design of corridors that achieve those objectives.

- Planning processes for Smart Growth Street corridors shall consider road diets, pedestrian and bicycle enhancements, traffic calming measures and other feasible measures to create a corridor that equitably accommodates all users and modes of travel.
- Establish connectivity standards to implement within Smart Growth Street corridors, to ensure safe, pleasant and direct travel between destinations for all users.
- To ensure the safety and comfort of all users, support and encourage street design to accommodate vehicular speeds of up to 35 miles per hour as appropriate.

### **SMART GROWTH STREET CONCLUSION**

The Smart Growth Street Designation will allow for more flexible design standards along certain developed roadways within Sacramento County in order to facilitate smart growth development. Although it is noted that SGSs may allow for increased traffic congestion in some cases, SGSs are intended to provide support for more compact land uses while providing for low polluting transportation and conserving environmental resources within the surrounding community. SGSs are intended to result in overarching benefits that are assumed to offset perceived negative impacts associated with increased traffic congestion. The overarching benefit is an overall healthier community.

Roadways that are designated as Smart Growth Streets in the future will require additional environmental review and project approvals and impacts to designation changes will be assessed at that time. The North Watt Corridor Plan meets the objectives related to the Smart Growth Street and issues and impacts of the Smart Growth Street Designation for the North Watt Avenue Corridor are addressed in more detail in the Traffic and Circulation chapter of this EIR. Impacts are considered **less than significant**.

### *SACRAMENTO COUNTY ZONING CODE*

The proposed project requests a Zoning Ordinance Amendment to create the North Watt Avenue Corridor Special Planning Area (SPA) and would require a rezone from



AC, BP, GC, TC, LC, SC, O, AR-1, RD-2, RD-5, RD-10, RD-20, RD-30, RM-1, M-1, MP, SPA, and NPA to the SPA zone. Title II, Article 6, §235-90 thru 235-93 of the Sacramento County Zoning Code establishes the procedure and authority for establishing Special Planning Areas in the County. The SPA zoning category was designed to allow for the regulation of properties that have unique environmental, historical, architectural attributes or other elements that require special conditions that the standard zone regulations do not accommodate. According to §235-90:

It is recognized that in certain circumstances it may be desirable to provide for a greater range or mixture of uses in an area than would be permitted in the standard land use zones of this Code.

The North Watt Avenue Corridor Plan area has been long developed along major roadways in the North Highlands/Foothill Farms community and, according to the Planning Division, is in need of revitalization to make the area a thriving focal point in the community in a way that meets the needs of the community, pedestrians as well as commuters that utilize the roadways. Thus, it is asserted that due to its location, current disposition, and the desire to create a smart growth mixed-use corridor on the project site the plan area requires special conditions in order to redevelop and revitalize it into a community asset. §235-93 of the zoning code states that the following items shall be addressed and included in an SPA Ordinance:

1. A list of permitted uses.
2. Performance and development requirements relating to yards, lot area, intensity of development on each lot, parking, landscaping, and signs.
3. Other design standards appropriate for the specific site and development.
4. Legal description of property covered by the ordinance.
5. Reasons for establishment of an SPA Land Use Zone on the particular property.

The proposed SPA provides the above provisions. The proposed SPA does not appear to significantly conflict with the Sacramento County Zoning Code. Impacts are **less than significant**.

### **PROPOSED ZONING**

The proposed project is a request for a rezone to the SPA zone. Zoning in the SPA area will have another level of zoning generally consisting of more specific zoning designations for the mixed use development to ensure orderly development within the Corridor area. The Corridor Plan denotes four mixed-use zoning designations for the plan area: Residential Mixed-Use 1 (RMU-1), Residential Mixed-Use 2 (RMU-2), Commercial-Mixed Use (CMU), and Transit-Oriented Development (TOD). Plate LU -8 denotes the locations of these zones throughout the Corridor Plan area. A general discussion of these zones is included below.

***RESIDENTIAL MIXED-USE 1 ZONE***

This zone is intended to allow for the development of medium-density residential neighborhoods that would be supported by small scale, neighborhood-serving retail. According to the Corridor Plan, the RMU-1 zone “shall be predominately residential with limited neighborhood-serving nonresidential uses”. Residential densities will be 15-25 du/ac. Nonresidential uses will have Floor Area Ratios of 0.25 min to 0.5 max and will be located on two acres or less for any single use. Table LU-3 shows permitted uses while

Table LU-4 denotes prohibited uses in the RMU-1 zone. See the Corridor Plan in Appendix A for more detailed information on the RMU-1 zone.

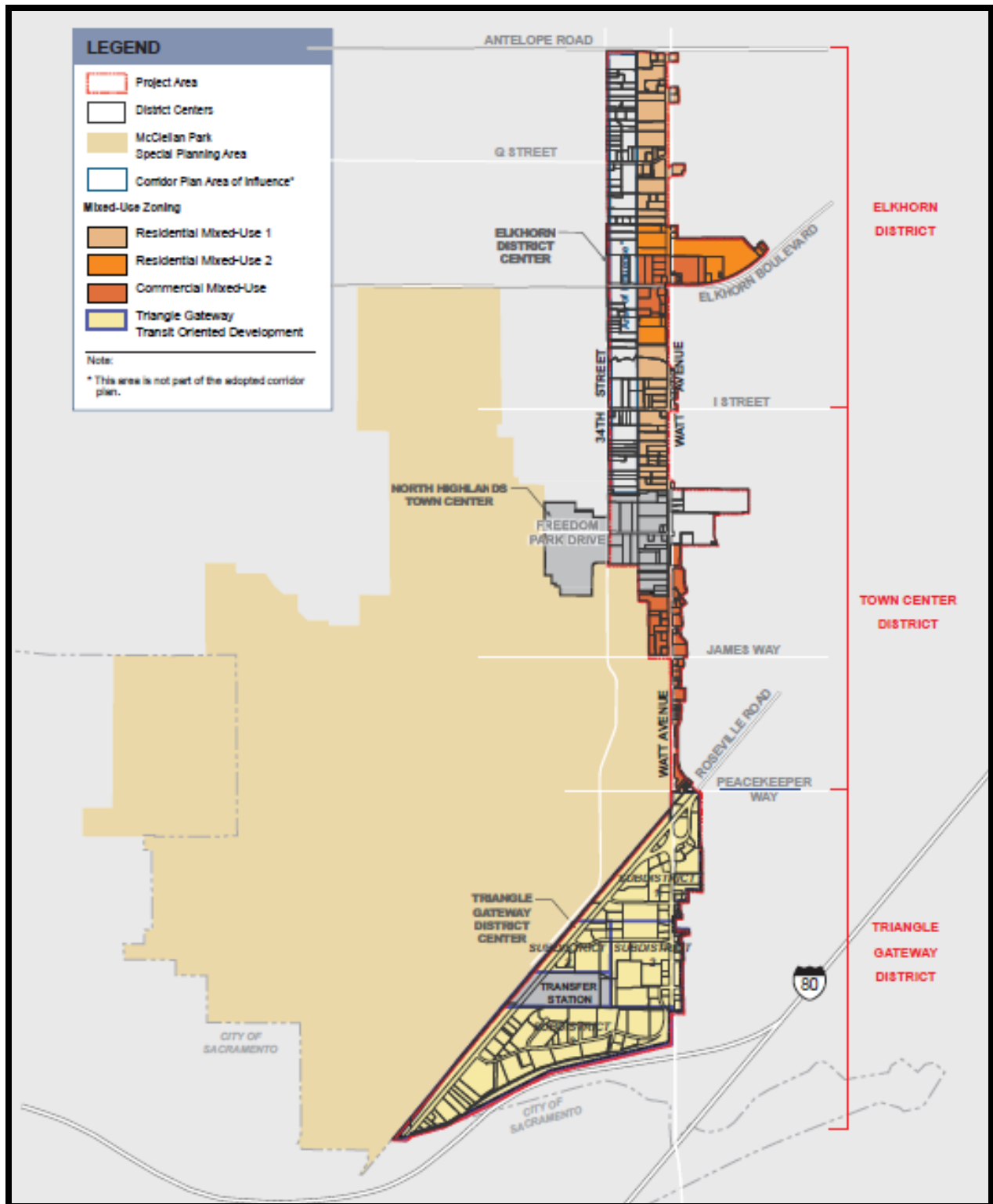
**Table LU-3: Permitted Uses in the RMU-1 Zone**

<b>Residential</b>	All residential uses that meet the development standards of the RMU-1 zone are permitted, except for any uses specifically prohibited below.
<b>Commercial/Retail</b>	<p>Food services (restaurants, cafes, coffee shops, and bakeries)</p> <p>Personal services (beauty parlors)</p> <p>Health and fitness services (spas, fitness centers)</p> <p>Food, drug, or liquor stores (convenience stores, drug stores, wine specialty shops and tasting rooms)</p> <p>General commercial (bookstores, news shops)</p>
<b>Office</b>	<p>Medical, dental</p> <p>Legal</p> <p>Financial (accounting, banking, insurance)</p> <p>Business or professional office</p>
<b>Civic/Public/Institutional</b>	<p>Schools, technical school, college</p> <p>Churches</p> <p>Libraries</p> <p>Community center</p> <p>Sheriff and fire stations and substations</p>

**Table LU-4: Prohibited Uses in the RMU-1 Zone**

<b>All Land Uses</b>	<p>Large-format retail centers</p> <p>Fast Food Restaurants</p> <p>Automobile service and repair</p> <p>Gasoline service stations</p> <p>Car washes</p> <p>Automobile, recreational vehicle, motorcycle, and boat rental and sales</p> <p>Towing services</p> <p>Mini-storage</p> <p>Adult entertainment</p> <p>Drive-through facilities</p>
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Plate LU -8: Proposed Corridor Zoning Designations



**RESIDENTIAL MIXED-USE 2 ZONE**

This zone is intended to allow for the development of mixed-use residential neighborhoods with high densities to support transit. The RMU-2 zone will be predominately residential with a minimum ratio of 70% residential uses. Residential densities will be 25-40 du/ac. Nonresidential uses will have Floor Area Ratios of 0.5 min to 1.0 max. The permitted uses within the RMU-2 zone mirror those of the RMU-1 zone (see Table LU-3) with the exception that residential uses are allowed that meet the standards of the RMU-2 zone. Prohibited uses in the RMU-2 zone are the same as the RMU-1 zone (see Table LU-4). See the Corridor Plan in Appendix A for more detailed information on the RMU-2 zone.

**COMMERCIAL MIXED-USE ZONE**

This zone is intended to allow for the development of a shopping and service district concentrated on Elkhorn Boulevard. The CMU zone will be predominately commercial uses with secondary office and residential uses. Residential densities will be 25-40 du/ac. Nonresidential uses will have Floor Area Ratios of 0.5 min to 1.0 max. Also, if the use is located within ¼ of a mile of a BRT transit stop, that use shall have 50 employees per acre minimum. The permitted uses within the CMU zone mirror those of the RMU-1 and RMU-2 zones (see Table LU-3) with the exception that residential uses are allowed that meet the standards of the CMU zone. Prohibited uses in the CMU zone listed in Table LU-5. See the Corridor Plan in Appendix A for more detailed information on the CMU zone.

**Table LU-5: Prohibited Uses in the CMU Zone**

<b>All Land Uses</b>	Automobile, recreational vehicle, motorcycle, and boat rental and sales Towing services Mini-storage Adult entertainment Drive-through facilities Car washes
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**TRANSIT-ORIENTED DEVELOPMENT ZONE**

The TOD zone is intended to promote higher density and intensity development near transit. This zone is only located within the Triangle Gateway District. According to the Plan:

Higher density residential uses are encouraged in Subdistrict 1 and may be green court or garden style apartments or condominiums, podium-style apartments or condominiums, or any other suitable residential model that meets the development standards of this zone. Commercial/retail, hotel, and

entertainment uses are encouraged in Subdistrict 2. Office uses may be located anywhere in the TOD, but are particularly encouraged near Roseville Road or in the southern portion of the TOD near I-80.

Residential and nonresidential densities and floor area ratios will vary depending on the subdistrict. However, residential densities will range from 25-65 du/acre and nonresidential will have Floor Area Ratios of 0.5 min to 2.0 max. Also, if the use is located within ¼ of a mile of a BRT transit stop, that use shall have 50 employees per acre minimum. The permitted uses within the TOD zone are listed in Table LU-6 and prohibited uses are listed in Table LU-7.

**Table LU-6: Permitted Uses in the TOD Zone**

<b>Residential</b>	All residential uses that meet the development standards of the TOD zone are permitted.
<b>Commercial/Retail</b>	Large-format retail, if incorporating urban design Food services (restaurants, cafes, coffee shops, and bakeries) Personal services (beauty parlors) Health and fitness services (spas, fitness centers) Food, drug, or liquor stores (convenience stores, drug stores, wine specialty shops and tasting rooms) General commercial (bookstores, news shops) Hotel/motel
<b>Entertainment</b>	Theater Skate park Convention center
<b>Office</b>	Medical, dental Legal Financial (accounting, banking, insurance) Business or professional office
<b>Civic/Public/Institutional</b>	Schools, technical school, college, university Churches Libraries Community center Sheriff and fire stations and substations

**Table LU-7: Prohibited Uses in the TOD Zone**

<b>All Land Uses</b>	Automobile service and repair
	Gasoline service stations
	Car washes
	Automobile, recreational vehicle, motorcycle, and boat rental and sales
	Towing services
	Mini-storage
	Adult entertainment
	Drive-through facilities

**OTHER ZONING CODE IMPACTS**

The project area includes portions of properties that are currently zoned Special Planning Area (SPA) or Neighborhood Preservation Area (NPA). In total there are 55.24 acres of the plan area that is currently zoned SPA and 0.28 acre of the plan area that is currently zoned NPA. As noted previously, the proposed project will rezone the entire area to the “North Watt Avenue Special Planning Area”. In the case of the existing SPA and NPA that exist within the plan area, the Corridor Plan states the following:

The North Watt Avenue Special Planning Area will supersede all other special planning areas within the Corridor Plan area (including the Watt Special Planning Area) except the North Highlands Town Center Special Planning Area.

The Corridor is also located adjacent to two other SPAs, including the North Highlands Town Center SPA and the McClellan Park SPA. The North Highlands Town Center SPA is discussed in greater detail in the Project Description chapter. As shown, the Corridor Plan is located next to the McClellan Business Park and the Plan notes that the Corridor “has been devised to complement the land use plan for McClellan Business Park, which is governed by the *McClellan Airforce Base Final Reuse Plan (2000; or Reuse Plan)* and *McClellan Park Special Planning Area (2002; or SPA)*”.

Zoning in the McClellan SPA is comprised of four main land use districts: (1) Core Aviation/Industrial District; (2) East McClellan District; (3) South McClellan District; and (4) West McClellan District. These districts, supporting subdistricts, and land uses are described in detail in the Sacramento County Zoning Code Section 511-10, “*McClellan Park Special Planning Area.*”

In general, the North Watt Avenue Corridor Plan is intended to compliment the plans, goals, and objectives of the North Highlands Town Center SPA and McClellan Park SPA. Therefore, the Corridor Plan does not conflict with either of these plans and environmental impacts are considered **less than significant**.

*McCLELLAN AFB/WATT AVENUE REDEVELOPMENT PLAN*

On November 22, 2000 the County adopted the McClellan AFB/Watt Avenue Redevelopment Plan and on June 20, 2001, the Sacramento County Board of Supervisors adopted the Mather/McClellan Merged Redevelopment Project Area which combined the redevelopment plans for the two closed military bases. The McClellan AFB/Watt Avenue Redevelopment Area is shown in Plate LU-9. As shown on Plate LU-9, the North Watt Avenue Corridor Plan area is entirely included within the redevelopment plan area.

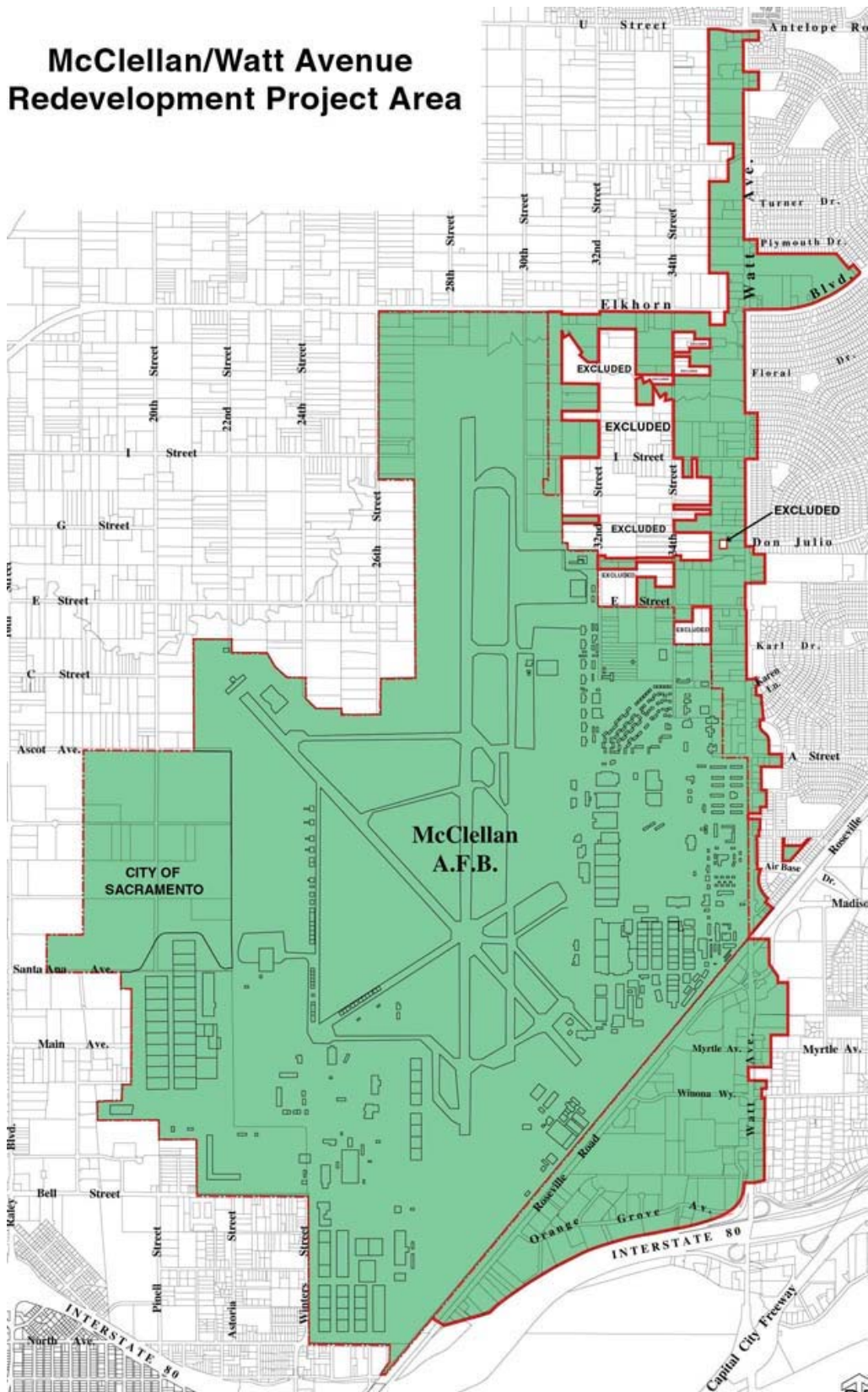
The closure of the 2,856-acre McClellan Air Force Base was a major loss to the Sacramento region after the earlier closure of two other military bases; the Sacramento Army Depot and Mather Air Force Base. The base played a critical role in the Sacramento regional economy as a major source of jobs and technological development. The redevelopment plan established a redevelopment area which included the base and areas off-base along Watt Avenue.

The County hired the development equity partner McClellan Business Park, LLC to market and redevelop the base. The portion of the redevelopment area outside the base is referred to as the Watt Avenue Corridor. It contains approximately 634 acres and serves as the commercial and industrial center for the North Highlands community. Watt Avenue serves as the main gateway to the Base, and inclusion of the Watt Avenue Corridor in the Project Area provided the opportunity to integrate the redevelopment of the Base with the North Highlands community.

The North Watt Avenue Corridor Plan would compliment the redevelopment plan, which is mainly a taxation and funding plan for revitalization projects. The interaction of the Corridor Plan with the redevelopment plan is not expected to have a significant land use related environmental impact. Ultimately, the proposed project functions as an implementation mechanism for the redevelopment plan. Impacts are considered **less than significant**.



Plate LU-9: McClellan AFB/Watt Avenue Redevelopment Area



*NORTH WATT AVENUE BEAUTIFICATION MASTER PLAN*

The North Watt Avenue Beautification Master Plan was prepared by the Sacramento Housing and Redevelopment Agency and Sacramento County Public Works Agency. The plan's executive summary states the following:

The primary goal of the North Watt Beautification Master Plan is to create a unique identity for North Highlands by means of consistent landscape and streetscape improvements for existing residential and commercial properties so as to provide a stimulus for continued redevelopment and reinvestment. Other equally important goals include increasing redevelopment area/community economic opportunities, retaining a sense of history relative to McClellan Air Force Base and the broader North Highlands community, improving existing connections with new investments in properties such as McClellan Park and the North Highlands Town Square, and creating a streetscape that allows for enhanced transit and user comfort while attracting new, thriving businesses to the Plan area.

The plan identified five districts along Watt Avenue. The Corridor Plan is within all five districts. According to the Plan, each district will have a unique palette of trees and landscaping to help establish neighborhood identity. This beautification plan was written with an understanding of the concept for a Corridor Plan along Watt Avenue.

The proposed Corridor Plan does not appear to conflict with the Beautification Master Plan. Differences in landscaping and street design may be present; however, the overall goal to redevelop and enhance the corridor is uniform throughout both plans. Regardless, the differences between the plans would not result in any significant environmental impact. Thus, land use impacts are considered **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: PHYSICAL DISRUPTION OR DIVISION OF AN ESTABLISHED  
COMMUNITY

The division or disruption of an established community is an impact considered by CEQA. Case law has established that a project must create physical barriers within the established community in order to be considered under this impact category. There is existing development within the Corridor and adjacent to the Corridor Plan area. Additional development within the Corridor is not expected to divide an established community; impacts are **less than significant**. Existing/future land use compatibility as it relates to physical disruption within the Corridor is discussed further below.

*EXISTING/FUTURE LAND USE COMPATIBILITY*

If approved, the Special Planning Area Ordinance would regulate future development within the project area. Existing land use within the Corridor and existing and future land uses directly adjacent to the Corridor would be regulated per the general provisions of the Sacramento County Zoning Code, unless in an adjacent SPA (i.e. McClellan Park SPA), in which case those specific regulations would apply. When an existing use within the Corridor area expands then it will be subject to the provisions of the Corridor Plan but until that time it will operate as currently permitted by the Zoning Code. The vision articulated in the North Watt Avenue Corridor Plan will not occur immediately upon project approval but will happen over time as the area transforms. This will create the potential for land use incompatibilities from both inside the project area and outside the project area with both existing and potential future uses.

One of the potential incompatibilities is associated with the existing industrial properties located mainly within the Triangle Gateway District. The proposed plan, calls for this area to be developed with a mix of uses (limited light industrial uses allowed in one of the subdistricts), including residential uses. This would create the potential for noise, odor, vibration, and light/glare impacts to any adjacent uses that would conflict with existing or future industrial uses. The proposed Corridor Plan calls for extensive design review and includes specific development standards. Design review and development standards are intended to avoid land use conflicts in order to plan a cohesive community. When properties are developed adjacent to existing industrial or new industrial uses are proposed, design considerations that will help to buffer the sites will occur. Landscaping, building orientation, sound resistant construction materials and separation of uses are all possible design methods than can help to avoid/reduce any conflicts.

It is also possible that the AR-1 (Agricultural-Residential) properties located west of the project area and north of McClellan Business Park may perceive any development or re-development, especially at high densities, of the corridor properties as a nuisance. They may experience new sources of light, glare, and noise. They may view any multistory structures as a visual impact. It is recognized that different people perceive nuisances differently; however the intensity and density of uses proposed on the project site will not differ substantially from what could be conducted in the existing M-1(Light Industrial), GC (General Commercial) and LC (Limited Commercial) land use zones, which exist adjacent to the AR-1 areas. Additionally, in terms of the AR-1 zone, the Sacramento County Summary of Zoning Classifications notes that, "The purpose of these [agricultural] zones is to provide for agricultural uses for the present, while reserving these areas for possible future urban, recreational or industrial uses". Ultimately, in terms of community impacts, build-out of the Corridor at existing zoned densities, would add the potential for nuisance impacts to these adjacent properties. Even at increased densities under the Corridor Plan, this impact may not increase substantially in magnitude. Design review and stringent development standards are intended to reduce land use nuisance impacts to adjacent or mixed land uses.

Although the Corridor Plan includes design elements intended to reduce impacts related to land use interfaces, it is acknowledged that screening and setbacks may not reduce related impacts completely and that impacts may be seen as a nuisance to some individuals on adjacent properties; however, these nuisance impacts are not considered significant environmental impacts. Impacts are considered **less than significant**. Some specific land use interfaces, of potential concern, are discussed in more detail below.

#### *NORTH AREA RECOVERY STATION*

The North Area Recovery Station (NARS) is located within the central portion of the Triangle Gateway District. Main access to NARS is from Roseville Road which borders NARS to the west. NARS functions as a transfer/processing facility for solid wastes, including some hazardous wastes. The hazardous wastes that NARS is permitted to accept are “household hazardous wastes” such as acids, automotive fluids, household and auto batteries, cooking oil, fluorescent lamps and tubes, gasoline and other flammable materials, home generated needles and syringes, household cleaners, paints, solvents and other universal waste. Other highly toxic materials, such as asbestos, explosives or radioactive materials may not be disposed of at NARS. In addition to the waste collection function, NARS also contains the only liquefied natural gas (LNG) station held by the County’s Waste Management Department. LNG fuels the fleet of County garbage trucks.

Under existing conditions, NARS is surrounded on three sides by light industrial uses, which is compatible with the uses at NARS. Under the proposed Corridor Plan, a wide variety of uses would be allowed around the transfer station. Allowed uses include commercial, retail, office and residential uses. Sensitive uses, such as residential uses and day cares, may be subjected to nuisance impacts due to the NARS facility and may perceive NARS as an incompatible land use.

The Department of Waste Management & Recycling (DWMR) has reviewed the proposed project and has expressed concern over siting incompatible uses adjacent to the NARS facility. Staff concern is based on the fact that there have been several examples of population growth and land use expansion around solid waste facilities leading to the closure of such facilities (landfills, transfer stations, etc.). In some cases, these facilities may originally have been located in what was a remote or less dense area. Strong odor is the single most cited complaint taken by solid waste facilities from their neighbors, which has lead to some facilities opting to close and relocate elsewhere.

DWMR Director, Paul Philleo, provided the following background and comments in a letter (dated July 1, 2010) regarding the NARS facility and potential impacts:

The County Department of Waste Management & Recycling (DWMR) owns and operates the North Area Recovery Station (NARS) at 4450 Roseville Road, located in the Triangle Gateway District of the North Watt Corridor plan. At this public solid waste facility DWMR transfers 190,000 tons of refuse for disposal

and transfers and or processes 120,000 tons of recyclable materials including curbside recyclables, greenwaste, woodwaste and others. DWMR also operates a public Household Hazardous waste (NNW) collection facility at NARS that safely handled 1.3 million pounds of HHW last year.

NARS serves the County's residential solid waste, greenwaste, and curbside recyclables collections. It also serves private sector waste haulers who collect solid waste from businesses in the Sacramento region. Self-haulers, notably builders working on local construction sites are also primary customers. Adjacent to NARS are the DWMR vehicle yard and refueling station for its fleet of clean-burning natural gas trucks.

NARS is the only solid waste facility capable of providing these critical services to the otherwise under-served area north of the American River. It is of utmost importance for the economic vitality and sustainability goals of the County that NARS remain operational and in its current location; siting another facility of this type capable of serving the north County is highly unlikely and would be prohibitively expensive.

The North Watt corridor plan proposes to change land-use designations around NARS in ways that will have impacts. The dramatic change from heavy industrial to commercial and even residential land uses will invite sensitive receptors for noise, dust and odors into close proximity to an existing solid waste facility. Additionally, traffic patterns, currently characterized by accommodation of high volumes of heavy trucks at all hours will be significantly impacted. Consideration of these and all other operations of the NARS facility must be included in the existing conditions established as part of the environmental review.

Page 2-21 of the Corridor Plan includes suggestions for improvements to the facility that could mitigate some of the impact associated with inviting sensitive receptors into proximity to NARS. Largely these include site rearrangement, enclosure and screening. Earlier investigation by DWMR into similar improvements indicated they would cost in excess of \$20 million, a cost-prohibitive burden that would have to be borne by the anticipated new development.

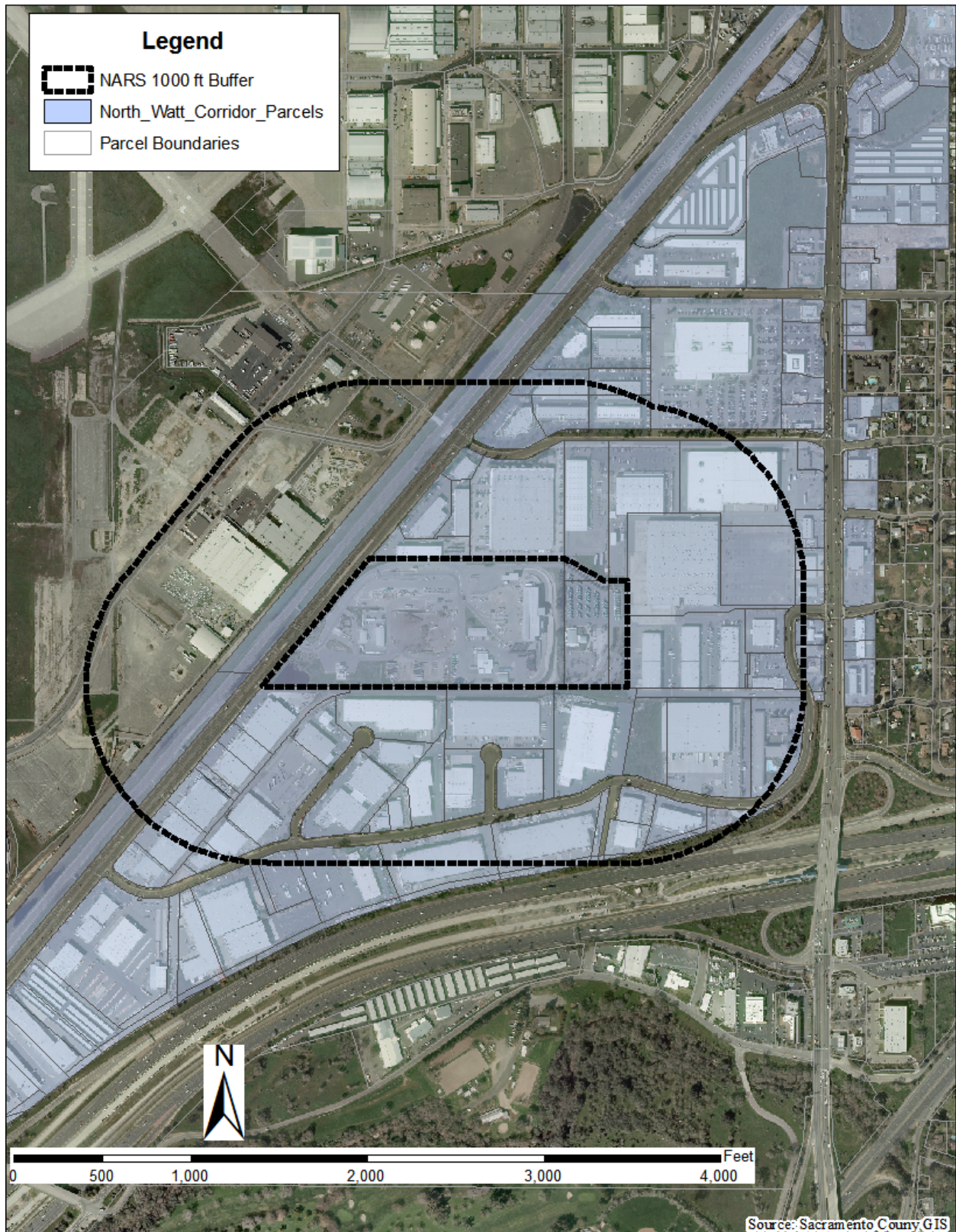
DWMR recommends that alternative mitigation measures be considered in the environmental review of the North Watt Corridor Plan project, specifically, at minimum the establishment of a NARS Buffer Zone measuring 1,000 feet from the parcel boundary. Within the Buffer Zone, residential development and retail storefronts would be prohibited. For example, while the back of a large retail establishment, characterized by loading docks, utility infrastructure, and solid waste receptacles, may be compatible in proximity to NARS, customers arriving to shop through the front doors are not. Additionally, parcels in the Buffer Zone could continue to host heavy industrial land uses more compatible with NARS.

The Department of Waste Management has met with the Planning Division and DERA to discuss potential future impacts, either real or perceived, which could arise from siting certain land uses, particularly sensitive land uses, within the Triangle Gateway District adjacent to the NARS facility. The Department of Waste Management and the Planning Division recognize the possibility of future **potentially significant** impacts to both the NARS facility and sensitive land uses due to current Corridor Plan policy and proposed land use designations. Therefore, they have committed to working together to find a mutually agreeable solution to reduce impacts to the necessary NARS facility and any future land use. Solutions proposed include buffer areas or restricting specific land uses adjacent to NARS.

Mitigation has been included below to reduce potential impacts by incorporating a 1,000 foot NARS Buffer Zone into the Corridor Plan (See Plate LU -10 for 1,000 foot NARS Buffer Area). Waste Management staff did note that specifics of such a buffer could be negotiated between DWMR and the Planning Division. For example, certain uses could be allowed with very specific restrictions.

With mitigation, potential land use impacts associated with the NARS facility are considered **less than significant**.

### Plate LU -10: NARS Buffer Area



*UNION PACIFIC RAILROAD*

The project area includes and encompasses a segment of the Union Pacific Railroad Main Line. The rail line runs parallel with Roseville Road directly north of the Triangle Gateway District. Under existing conditions, the UP line crosses Watt Avenue north of Roseville Road via an elevated bridge/track; thus, vehicular traffic on Watt Avenue travels beneath the bridge and is uninhibited by rail operations. With the exception of this portion of elevated track, the remaining UP rail line, located adjacent to the project area, is level with the surrounding plan area topography. In general, the rail line is separated from existing uses within the Corridor Plan area by Roseville Road. The only land uses within the Corridor vicinity that are located directly adjacent to the rail line are those within McClellan Park. Although the Corridor Plan area is physically separated from the UP line by Roseville Road, the Triangle Gateway District has several existing spurs off the UP line, which directly serve the heavy and light industrial uses in the District.

Under the proposed Corridor Plan, a wide variety of land uses would be allowed within the currently industrial Triangle Gateway District. Allowed land uses, under the Corridor Plan, include commercial, retail, office and residential uses. Some of the sensitive land uses, such as residential uses, could consider the UP line a nuisance due to noise or air quality associated with rail operations. Additionally, the introduction of additional people and vehicles within the project area could result in conflicts with rail operations. Potential impacts associated with noise, air quality or conflicts that may effect rail operations are considered in the Noise, Air Quality and Public Services chapter respectively. Given that it is not uncommon for a wide variety of uses to be sited immediately adjacent to rail lines and to exist without substantial problems throughout the County and beyond, the designation of land uses within the project area is not itself considered a land use impact. Impacts are considered **less than significant**. As noted, secondary impacts associated with rail operations are analyzed in greater detail in respective EIR chapters.

*MITIGATION MEASURES:***MITIGATION MEASURE LU-1: NORTH AREA RECOVERY STATION**

A policy shall be added to the North Watt Avenue Corridor Plan establishing a 1,000 foot North Area Recovery Station Buffer Zone. In consultation with and to the satisfaction of the Department of Waste Management & Recycling, specific land use restrictions and design guidelines shall be established for the NARS Buffer Zone.

IMPACT: DISPLACEMENT OF SUBSTANTIAL NUMBERS OF EXISTING HOUSING,  
NECESSITATING THE CONSTRUCTION OF REPLACEMENT HOUSING  
ELSEWHERE

The Corridor Plan is not expected to displace existing housing. Instead, implementation of the proposed project would result in additional housing opportunities in the Corridor



Plan area. Since the Corridor Plan is not expected to displace substantial existing housing, impacts are **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: CONVERT PRIME FARMLAND, UNIQUE FARMLAND, OR FARMLAND OF STATEWIDE IMPORTANCE TO NON-AGRICULTURAL USES OR CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE, OR A WILLIAMSON ACT CONTRACT

The Corridor Plan does not contain prime farmland, unique farmland or farmland of statewide importance; thus, there is no impact to farmland resources. Additionally, the proposed project does not contain agriculturally zoned properties nor does it contain Williamson Act contracted lands. Impacts are **less than significant**.

*MITIGATION MEASURES*

None required.

## 5 AIRPORT COMPATIBILITY

### INTRODUCTION

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The Corridor Plan area is located directly adjacent to McClellan Field/Airport. In the vicinity of airports, Comprehensive Land Use Plans (CLUPs) are used to address the issues of airport noise and safety, with the intent of protecting airport operations from encroachment by non-compatible land uses, as well as protecting the citizens on the ground from the impacts of excessive noise and aircraft accidents. As indicated on the adopted Airport Land Use Commission CLUP map for McClellan Air Force Base/Field, portions of the plan area are located within the airport's overflight safety zone, the approach/departure safety zone, the clear safety zone and within the 65 CNEL noise contour (see Plate AC -1).

### AIRPORT ENVIRONMENTAL SETTING

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The McClellan Airport is located within the vicinity of the proposed project. Plate AC -2 is an aerial photograph of the airport property, with notations indicating the locations of notable surrounding features. The airport runway, which is oriented north-south, is approximately 10,600 feet long and 200 feet wide. The aircraft hangers and airport buildings are generally located on the east and west side of the runway. Prior to 2001, the airport was part of the McClellan Air Force Base, and was intensely utilized for military purposes. In 2001 the Air Force Base was decommissioned and the former Base began its conversion to civilian use as the McClellan Business Park. While the airport is still utilized, the overall make-up of air traffic in-and-out of the airport has changed. Additionally, the surrounding Business Park attracts numerous businesses and associated employees to former base buildings, which, in some cases, are immediately adjacent to the airport and its operations. While the area around the McClellan Airport and the airport itself has changed significantly since the decommissioning of the Base, the Airport's CLUP is still based on military use. Since the CLUP is the fundamental guidance document utilized for land use decisions, it is used for the following analysis; however, it is acknowledged that current operations would warrant a revised CLUP. Some data compiled from analyses that were conducted for the 2001 decommissioning of the Base are utilized as the "best available" information but the official CLUP has not been updated.

Plate AC -1: Existing McClellan Field CLUP (based on military use)

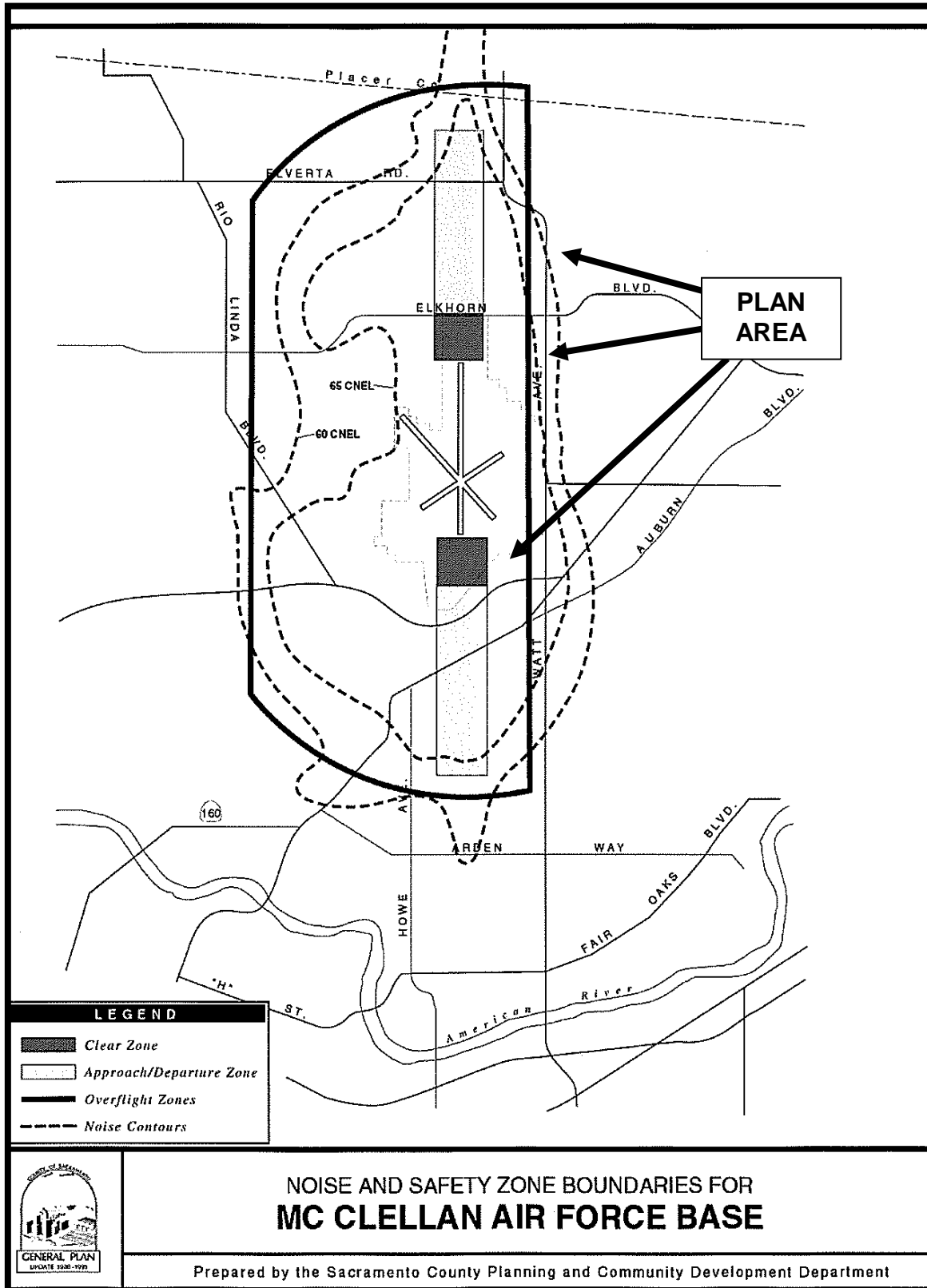
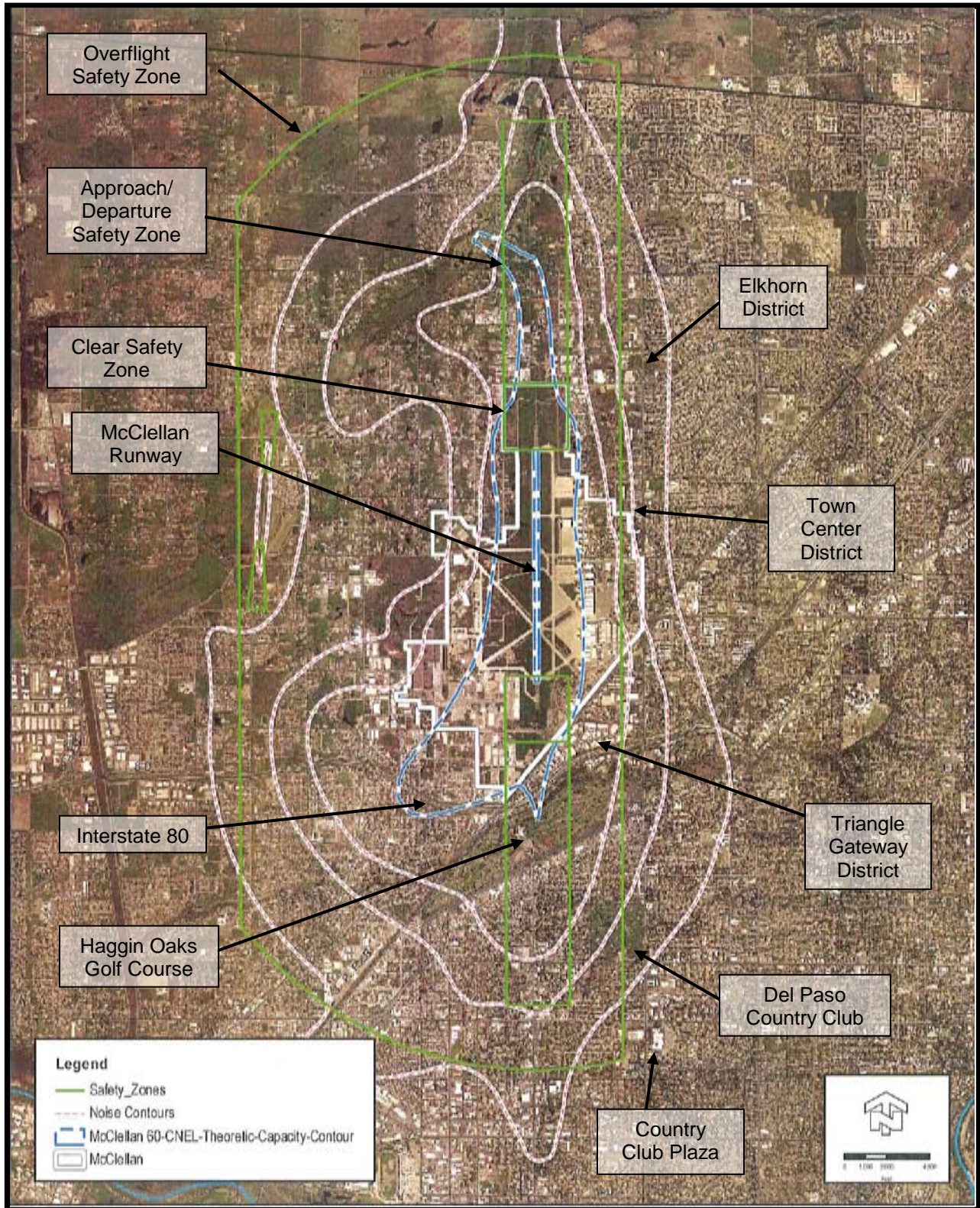


Plate AC -2: Aerial of Airport Property



## SIGNIFICANCE CRITERIA

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Based on CEQA guidelines, an airport compatibility impact is significant if Project implementation results in any of the following:

1. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards.
2. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft.
3. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip.
4. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

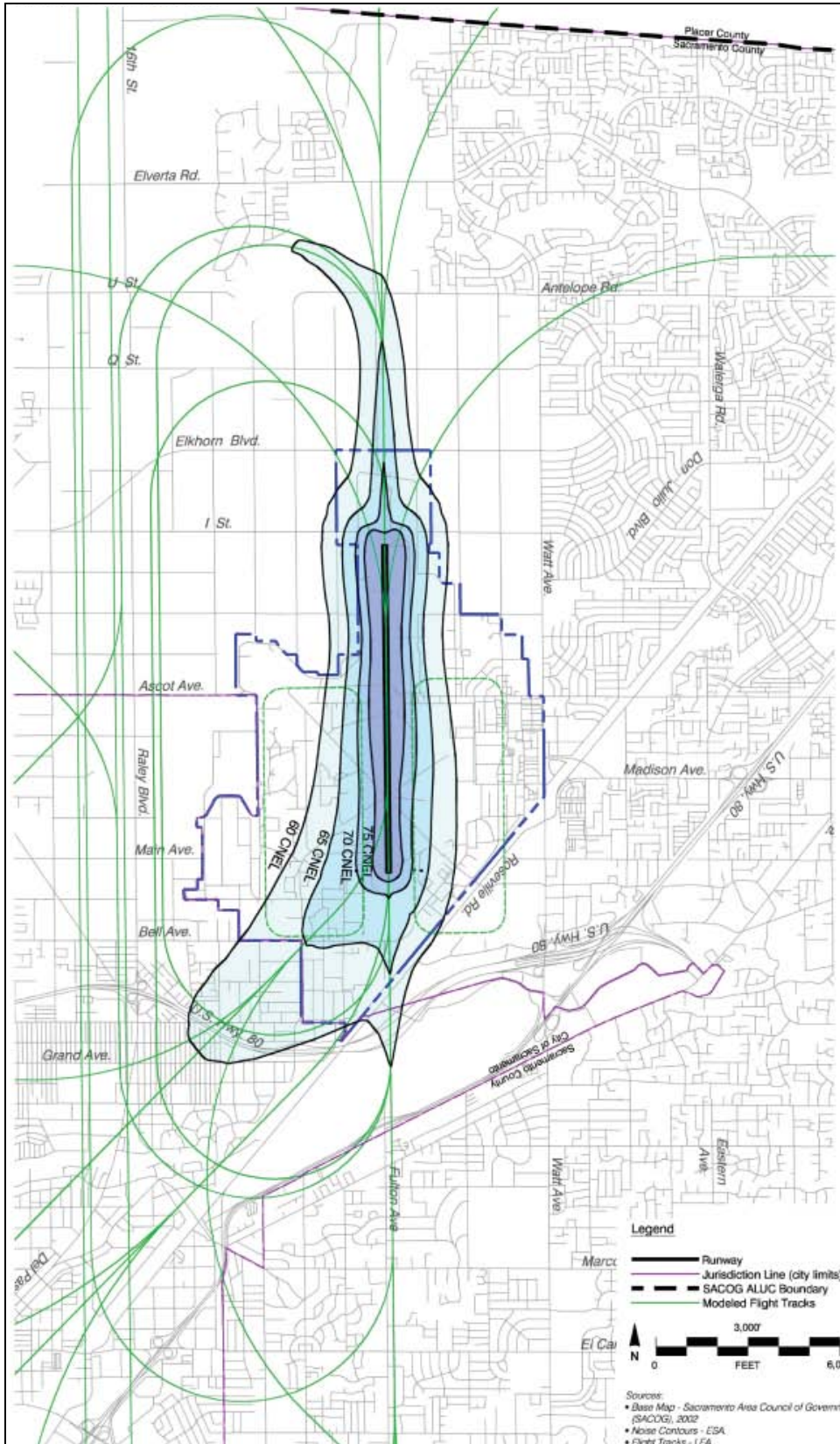
## IMPACTS AND ANALYSIS

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### IMPACT: EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO AIRCRAFT NOISE LEVELS IN EXCESS OF APPLICABLE STANDARDS

Depending on the location within the plan area, the project site is within the 60 or 65 CNEL noise contour for the McClellan Air Field as designated by the adopted CLUP. However, as discussed previously, the McClellan Air Force Base was decommissioned in 2001, and as a result there is a change in the type and frequency of planes using the airport which has changed the characteristic of aircraft noise impacting the community around the airport. As part of the *McClellan Air Force Base Draft Final Reuse Plan and Draft Implementation Plan Final Environmental Impact Report/Environmental Impact Statement* (McClellan Reuse EIR/EIS) certified on November 27, 2002, a noise consulting firm analyzed McClellan Airport to determine noise levels associated with the changed use at McClellan. The updated noise analysis and related noise contours are depicted on Plate AC-3. These were adopted by the County Board of Supervisors, as an override of the existing CLUP, and currently represent the best available information at this time. As shown on the Board-adopted noise contours for McClellan Airport, the project site is located almost entirely outside of the 60 CNEL db noise contours with the exception of a small portion of the Corridor Plan located in the extreme southwest corner of the project area within the Triangle Gateway District, Subdistrict 3. The Corridor Plan recognizes the constraints that aircraft noise would have on sensitive receptors, such as residential housing, in this area. Instead of promoting a mix of uses in areas of the plan subjected to high aircraft noise levels, the Plan states that noise

Plate AC-3: McClellan Noise Compatibility Map (based on non-military use)



sensitive uses should not be developed within the 60 CNEL contour of Subdistrict 3. Instead, the plan works within the constraints and envision the area to be developed as an employment center containing office and/or light industrial uses that are not considered sensitive noise receptors. These types of uses are intended to support the surrounding community. By restricting noise sensitive uses in areas subjected to significant noise levels reduces aircraft noise impacts to a **less than significant** level.

*MITIGATION MEASURES:*

None required.

IMPACT: RESULT IN A SUBSTANTIAL ADVERSE EFFECT UPON THE SAFE AND EFFICIENT USE OF NAVIGABLE AIRSPACE BY AIRCRAFT

Navigable airspace could be impacted if building heights in the project area exceeded designated height standards. According to the McClellan CLUP, “height standards for defining obstructions to air navigation are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace.” The CLUP further discusses the need for height restrictions as follows:

Height restrictions are necessary to ensure that objects will not impair flight safety or decrease the operational capability of the airport. FAR Part 77 defines a series of imaginary surfaces surrounding airports. Any object or structure which would penetrate any of these imaginary surfaces is considered by the FAA to be an obstruction of air navigation.

The “imaginary surfaces” have been defined for McClellan airport. Essentially, height restriction zones, or the imaginary surfaces, have been created by defining an appropriately safe height above ground level in zones surrounding the airport. The imaginary surfaces in which buildings can be built up to, and be expected to not affect navigable airspace, range from less than 100 feet to more 450 feet above ground level around the airport.

G. Rickelton of County Airports has reviewed the proposed project. Mr. Rickelton did not provide new comments on the Corridor Plan; however comments he submitted on a prior project (West Auburn Boulevard Special Planning Area), which also was located in close proximity to the McClellan Airport, are directly applicable to the Corridor Plan.

Mr. Rickelton made the following comment on building heights:

Another key concern is related to proposed building heights. To ensure the integrity of the airspace and preserve safety margins, height restrictions are in place surrounding any airport. All prospective buildings within the development areas must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the Federal Aviation Administration (FAA) for an Obstruction Evaluation and

receive a determination that the proposed construction poses “No Hazard to Air Navigation” prior to issuance of permits and the initiation of construction.

The most restrictive height zone within the plan area, in terms of allowable building heights provided by the FAA, is 150 feet above ground level. According to the zoning standards established in this area for the TOD-Subdistrict 3 zone, a “principle” building within this area may be up to 105 feet tall. Therefore, implementation of the proposed Corridor Plan within the Triangle Gateway District (Subdistrict 3) would not impact Navigable Airspace. Additionally, it is not expected that other areas within the Corridor Plan would impact Navigable Airspace because the corresponding FAA height zones have higher limits and the Corridor Plan specifies substantially lower maximum building heights (45-65 feet depending on applicable land use zone).

It should also be noted that the Zoning Code also provides the following provision regarding height limits in relationship to airports:

301-24. In any zone no tree or other object of natural growth shall be allowed to grow and no building or appurtenance thereon, tower or other structure shall be erected or maintained to exceed the height limits developed for aircraft approach and take-off areas which are designated on the Comprehensive Zoning Plans which are part of this Code.

In conclusion, based on the most restrictive height allowed for aircraft safety within the Corridor, or 150 feet, and the highest building allowed within the Corridor, the Corridor Plan does not propose building heights that exceed building height requirements of the FAA; thus the project is not expected to impact navigable airspace and will have a **less than significant** impact on navigable airspace.

*MITIGATION MEASURES:*

None required.

IMPACT: RESULT IN A SAFETY HAZARD FOR PEOPLE RESIDING OR WORKING IN THE VICINITY OF AN AIRPORT/AIRSTRIP

Airport Comprehensive Land Use Plans (CLUPs) define three safety zones; they are the clear zone, approach/departure zone and the overflight zone. The clear zone is the area at each end of the runway where noise and risk of off runway accidents are the greatest. The approach/departure zone is the area between the clear zone and the overflight zone where aircraft have either just left the ground or are preparing for touchdown and the overflight zone is the area where aircraft maneuver to either exit or enter the airport space for landing or take off. In terms of quantifying the dimensions involved for each of the above mentioned zones, the McClellan CLUP defines the safety zones specific to McClellan as follows:



1. Clear Zone: An area starting at the end of the runway surface that is 3,000 feet wide, is centered on the extended centerline of the runway, and extends 3,000 feet outward.
2. Approach-Departure Zone: An area 3,000 feet wide and 12,000 feet long, that starts at the outer end of the clear Zone, and is centered along the extended centerline of the runway.
3. Overflight Zone: Overflight zone dimensions are determined by reviewing the flight patterns for this airfield and developing a zone that will include that land overflowed by aircraft in a take-off or landing phase, aircraft using flight paths associated with training touch and go operations, and aircraft maneuvering near the airfield after take-off or before landing.

Within the three safety zones, discussed above, the risk of aircraft accident is the least for the overflight zone and most for the clear zone.

According to the CLUP for McClellan, which was adopted as part of the 1993 General Plan, the project is located partially within the McClellan Airport Overflight Zone and the Approach/Departure Zone. Additionally, a very small portion of the project area is located within the Clear Zone. The following is a discussion of project related impacts within each of the zones.

#### *OVERFLIGHT ZONE*

The Overflight Zone boundary is located just west of Watt Avenue and extends west through portions of the Elkhorn and Town Center Districts and includes most of the Triangle Gateway District (See Plate AC -2). According to the McClellan Air Force Base Comprehensive Land Use Plan, "Land Use Compatibility Guidelines for Safety" tables, most of the proposed Corridor Plan uses appear to be compatible within the overflight zone. Some of the uses would be subject to special conditions as listed within the table (See Appendix B for the table). No significant land use related environmental impacts are noted in regards to the overflight zone. Impacts are **less than significant**.

#### *APPROACH/DEPARTURE ZONE*

A small section of the Triangle Gateway District is located within the approach/departure safety zone. The area within the Triangle Gateway District that is within this safety zone is limited to the southwestern tip of the district, entirely located within the Subdistrict 3 (See Plate AC -2). Per the "Land Use Compatibility Guidelines for Safety" tables (Appendix B), uses within the approach/departure safety zone are more stringently regulated as compared to those uses located within the overflight zone. This is due to the fact that any uses within the approach/departure zone that may result in even a moderate concentration of people, is considered a substantial safety issue that could result from aircraft crashes or emergency landings.

Based on the airport safety tables, virtually no public and quasi-public services, recreational services, wholesale trade, retail trade, business and professional services or shopping districts are allowed within the zone. Based on allowed uses within the Corridor, almost all of the allowed uses are not compatible or allowed within the approach/departure zone.

The proposed project was reviewed by Sacramento County Airport Systems staff (G. Rickelton) and the Sacramento Area Council of Governments (SACOG) Airport Land Use Commission staff (G. Chew). Mr. Chew provided comments, while Mr. Rickelton did not submit comments on the proposed Corridor Plan; however, Mr. Rickelton has commented on a similar project (West Auburn Boulevard Special Planning Area), which also encompassed portions of the approach/departure safety zone located just south of the proposed Corridor Plan. His comments on the West Auburn Boulevard SPA project are directly applicable to the Corridor Plan. In current and previous comments, both reviewers indicate that the key concerns for citing projects within safety zones are noise and safety.

G. Chew of SACOG made the following comments on safety:

The second affected CLUP policy is safety. The SPA lies within two safety zones – the Approach/Departure zone and the Overflight zone... The Approach Departure zone has a higher safety risk, and is therefore more restrictive. Some of the land uses prohibited in this zone include chemical or petroleum products manufacturing or retail, electric and natural gas switching station, water and sewer treatment plants, department or grocery stores, food and drinking establishments, and other commercial and public uses that may yield high concentrations of people. Only single family detached residential is allowed if the density is no more than one unit per five acres. State law allows the local governing body (in this case the Sacramento County Board of Supervisors) to override the findings of the ALUC, if done in accordance with California Public Utilities Section 21676.5(a).

On safety issues, G. Rickelton of County Airports made the following comments:

Aircraft operations are predicted to continue to increase during the coming decades. Flight operations in early morning and late evening hours are also expected to increase. The number of aircraft overflying this site will increase as McClellan Field continues to grow. The FAA has total control over aircraft flight routes. Though McClellan Field is considered a general aviation facility, large commercial class aircraft do operate there. These operations include Boeing 747 and 767 aircraft which are large wide-body aircraft.

The following applicable information is from the McClellan CLUP on the Airport Safety Restriction Areas:

Urban areas around airports are exposed to the possibility of aircraft accidents even with well-maintained aircraft and highly trained crews. Despite stringent

maintenance requirements and countless hours of training, history makes it clear that accidents are going to occur.

Airfield safety areas are established to minimize the number of people exposed to aircraft crash hazards. This is accomplished by placing restrictions on land uses in various safety areas.

The dimensions of safety areas were determined by analyzing historical aircraft accident data and designing safety zone dimensions that encompass significant hazard areas.

The risk of people on the ground being killed or injured by a falling plane is small; however, an aircraft crash is a high consequence event and when a crash does occur, the result is often catastrophic. Because of this, most attempts at setting safety standards on the ground have not attempted to estimate accident probabilities. They have, instead approached safety standards by determining acceptable land uses assuming a crash would occur.

Aircraft accidents near airports differ with the type of aircraft involved. For commercial air carrier activity, the landing phase of operations has the highest rate of fatal accidents. A National Transportation Safety Board (NTSB) study of air carrier accidents during 1970-1979 found 42 percent of all fatal accidents were related to landing and only 21 percent related to taxi and takeoff operations.

In addition to the above information on the rationale for safety zones, the McClellan CLUP also includes some accident statistics for safety zones based on Air Force aircraft accidents. According to this information, 658 accidents occurred between 1968 and 1980, and out of these 8% (51 accidents) occurred within Zone I (the project area is located within Zone I). It should be noted that although this information is based on military aircraft accidents, it gives a good indication of the risk associated with siting certain uses within close proximity to airport runways.

Based on the above, there is a credible body of knowledge indicating that building out the Approach/Departure Zone within the Corridor Plan area, with land uses that are allowed under the Corridor Plan, a serious public safety issue could arise. As discussed above, state law does allow the Sacramento County Board of Supervisors to override the findings of the ALUC. Airport land use law requires a two-third vote to override any portion of Airport Policy.

Although the airport policy can be overridden through Board discretion, the safety impact would still occur. Given the substantial safety issue, this impact is considered **significant**. No feasible mitigation can be applied to the Corridor Plan which would reduce the potential impact of siting nonconforming uses, in this zone, to a less than significant level. Thus, impacts related to airport safety and policy would be considered **significant and unavoidable**.

*CLEAR ZONE*

The Triangle Gateway District also contains a minor portion of the Clear Zone. Based on inspection of available maps, it appears that a small corner of the Clear Zone is located within Subdistrict 3 of the Triangle Gateway District. According to the *California Airport Land Use Planning Handbook (January 2002)*, ideally the Clear Zone would be completely void of all structures and objects. The Handbook also states that no new structures should be built in the Clear Zone. In fact, the FAA's advisory circular ("Airport Design", 09/29/1989, AC # 150/5300-13) strongly recommends that airports, if possible, should own the area located within the Clear Zone outright and if it is not feasible than they should seek easements over the zone.

According to the McClellan Air Force Base Comprehensive Land Use Plan, "Land Use Compatibility Guidelines for Safety" tables, there are no compatible uses within the Clear Zone with the exception of open space and natural areas, natural water areas, row and field crops, and pasture and grazing uses. These uses are allowed provided that no structures are built and as long as they don't result in new water areas that produce fog or result in a bird hazard.

As noted above for the Approach/Departure Zone, although airport policy can be overridden through Board discretion, the safety impact would still occur. Given the substantial safety issue, this impact is considered **significant**. No feasible mitigation can be applied to the Corridor Plan which would reduce the potential impact of siting nonconforming uses, in this zone, to a less than significant level. Thus, impacts related to airport safety and policy would be considered **significant and unavoidable**.

*MITIGATION MEASURES:*

None available.

IMPACT: RESULT IN A CHANGE IN AIR TRAFFIC PATTERNS, INCLUDING EITHER AN INCREASE IN TRAFFIC LEVELS OR A CHANGE IN LOCATION THAT RESULTS IN SUBSTANTIAL SAFETY RISKS

The proposed project does not involve changes in air traffic patterns nor will it affect levels of air traffic at the nearby airport. Impacts are considered **less than significant**.

*MITIGATION MEASURES:*

None required.

## 6 PUBLIC SERVICES & UTILITIES

### INTRODUCTION

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This chapter provides background information on public services and utilities located in and around the North Watt Avenue Corridor. Further, this chapter examines and identifies any potential environmental impacts associated with the proposed project on public services and utilities.

### PUBLIC SERVICES SETTING

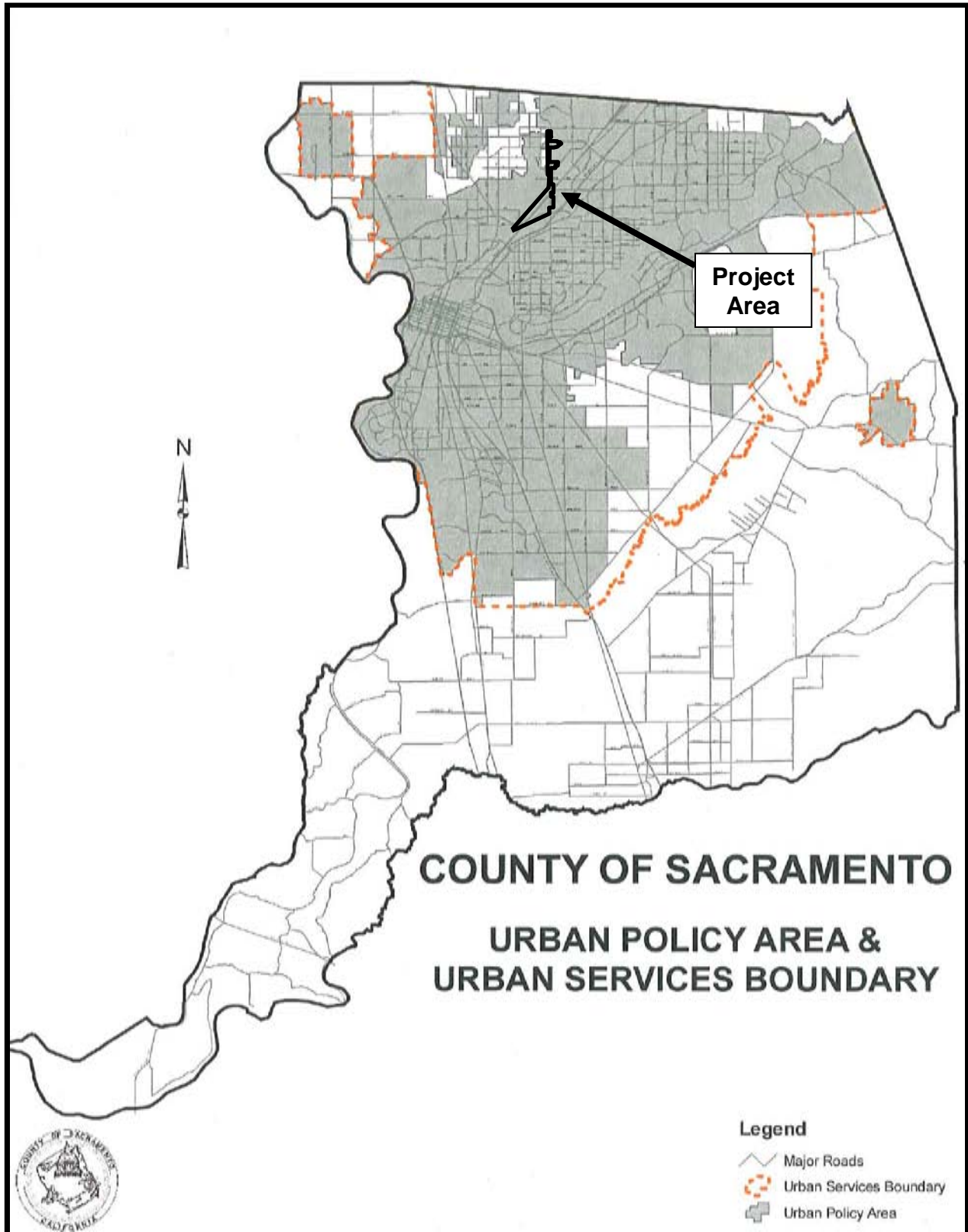
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The project is located within the Urban Services Boundary (USB), as defined in the Land Use Element of the County of Sacramento General Plan (Plate PS -1). The USB indicates the ultimate boundary of the urban area in the unincorporated County. The project is located within the following public utility and service districts:

<b>Potable Water Service:</b>	Sacramento Suburban Water District
<b>Local Sewer Service:</b>	Sacramento Area Sewer District (SASD)
<b>Regional Sewer Service:</b>	Sacramento Regional County Sanitation District
<b>Fire Protection Service:</b>	Sacramento Metropolitan Fire District
<b>Public Safety Service:</b>	Sacramento County Sheriff's Department
<b>Local Park District:</b>	North Highlands Recreation and Park District
<b>Local School District:</b>	San Juan and Twin Rivers Unified School Districts
<b>Natural Gas Service:</b>	Pacific Gas and Electric
<b>Electrical Power Service:</b>	Sacramento Municipal Utility District
<b>Public Transit:</b>	Sacramento Regional Transit District
<b>Railroad:</b>	Union Pacific Railroad

The future development of this site according to the land use designations proposed in the Plan could potentially increase demands on public services. Service providers that

Plate PS -1: Urban Services Boundary



have reviewed the project and provided specific public service comments are noted in this chapter.

## PUBLIC SERVICES/UTILITIES REGULATORY SETTING

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### JOINT UTILITIES COORDINATION COMMITTEE REGULATORY SETTING

As set forth in utility coordinating procedures for cities and counties, adopted on November 19, 1992 by the Joint Utilities Coordination Committee – American Public Works Association (APWA), each utility is obligated to relocate their facilities when necessary to make way for the proper governmental use of the streets. For this reason, procedures have been established to assist cities, counties, and utilities in coordinating public improvement projects. These procedures set guidelines for project engineers responsible for the development of plans and specifications for city and county projects, to coordinate with utility providers during the design and pre-construction phases of the work.

The objectives of coordination are to identify utility locations and to minimize service interruption. These objectives are met by providing affected utility providers with the necessary construction plans showing project limits, centerline, right of ways, and other pertinent information. Utilities are then able to plan and initiate possible utility relocation prior to project construction.

Future construction level roadway projects within the Plan area will be required to contact Underground Service Alert (USA) at least 2 full working days before beginning construction activity. USA will contact local utilities and inform them that construction is about to begin in their service area. This notice allows local utilities to mark the areas where their underground facilities are located near the construction site so that they may be avoided during project construction.

The current and updated Sacramento County General Plan Public Facilities Element identifies a variety of goals and policies relating to fire protection, law enforcement, schools, parks, and libraries. The goals and policies relate to providing adequate service for new development and identify specific policies for development projects to accommodate services within their project. Policies also provide for connection fees, service charges and fair share costs to support funding for improvements to services as a result of a new development.

## WATER SERVICES

### *STATE OF CALIFORNIA*

#### **URBAN WATER MANAGEMENT PLANNING ACT**

Pursuant to California Water Code Sections 10610-10657, as last amended by Senate Bill 318 in 2004, the Urban Water Management Planning Act requires all urban water suppliers with more than 3,000 service connections or water use of more than 3,000 AFA are required to submit an Urban Water Management Plan (UWMP) to the California Department of Water Resources every 5 years and update the plan on or before December 31 in years ending in 5 and 0. SB 318 is the 18<sup>th</sup> amendment to the original bill requiring a UWMP, which was initially enacted in 1983. Amendments to SB 318 have focused on ensuring that the UWMP emphasizes and addresses drought contingency planning, water demand management, reclamation, and groundwater resources.

#### **SENATE BILL 610**

SB 610 became effective January 1, 2002. The purpose of SB 610 is to strengthen the process by which local agencies determine the adequacy and sufficiency of current and future water supplies to meet current and future demands. SB 610 amended the California Public Resources Code to incorporate Water Code requirements within the CEQA process for certain types of projects (described below). SB 610 also amended the water code to broaden the types of information included in a UWMP. SB 610 consists of two primary components, the UWMP and the Water Supply Assessment (WSA) (Water Code Sections 10910-10915).

#### **WATER CODE PART SECTION 10910**

Water Code Section 10910 et seq. defines the projects for which the preparation of a Water Supply Assessment (WSA) is required as well as the lead agency's responsibilities related to the WSA. The Water Code also clarifies the roles and responsibilities of the lead agency under CEQA and of the water supplier with respect to describing current and future supplies compared to current and future demands. A WSA is required for:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;



- A mixed use development that includes one or more of the uses described above;
- A development that would demand a volume of water equivalent to or greater than the volume of water required by a 500-dwelling unit project; and
- For lead agencies with fewer than 5,000 water service connections, any new development that would increase the number of water service connections in the service area by 10% or more.

Under Section 10910 of the Water Code, the lead agency must identify the affected water supplier and ask the supplier whether the new demands associated with the project are included in the suppliers UWMP. If the UWMP includes the demands, it may be incorporated by reference in the WSA. If there is no public water system to serve the project, the lead agency must prepare the WSA.

### **SENATE BILL 221**

SB 221 requires a city or county to include as a condition of approval of any tentative map, parcel map, or development agreement for certain residential subdivisions a requirement that a “sufficient water supply” be available. Proof of a sufficient water supply must be based on a written verification from the public water system that would serve the development.

### *LOCAL*

### **2030 SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan Public Facilities Element identifies a variety of goals and policies which relate to providing adequate service for new development and identify specific policies for development projects to accommodate services within their project. The Sacramento County General Plan policies that are pertinent to water facilities are policies PF-1 through PF-5. These policies are intended to support the stated goal of the Water Facilities Section of the General Plan which is to have “water facilities developed in an environmentally sound, economically efficient, and financially equitable manner.”

The policies in the Public Facilities Element that support the County’s water facilities strategies and are relevant to the project are as follows:

- PF-4. Connector fees for new development shall cover the fair share of costs to acquire and distribute surface water to the urban area.
- PF-5. New treatment facilities and all facility operations shall be funded by beneficiaries.

## SEWER SERVICE

*STATE OF CALIFORNIA***PORTER-COLOGNE WATER QUALITY CONTROL ACT**

The Porter-Cologne Act requires the California State Water Resources Control Board (State Water Resources) to adopt water quality control plans and set waste discharge requirements (WDRs) for dischargers into surface and groundwaters. The Central Valley Regional Water Quality Control Board (Regional Water Board) is responsible for administering and enforcing WDRs, permits, and water quality control plans.

**STATE WATER RESOURCES RESOLUTION NO. 68-16 STATEMENT OF POLICY WITH RESPECT TO MAINTAINING HIGH QUALITY WATERS IN CALIFORNIA**

The goal of State Water Resources Resolution No. 68-16 (Statement of Policy With Respect to Maintaining High Quality Waters in California) is to maintain high quality waters where they exist in the State. State Board Resolution No. 68-16 states, in part:

- “Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.
- Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”

The State Department of Water Resources has interpreted Resolution No. 68-16 to incorporate the federal anti-degradation policy, which is applicable if a discharge that began after November 28, 1975 will lower existing surface water quality.

**WATER RECLAMATION REGULATIONS**

Wastewater reclamation in California is regulated under Title 22, Division 4, of the California Code of Regulations. The intent of these regulations is to ensure protection of public health associated with the use of reclaimed water. The regulations establish acceptable levels of constituents in reclaimed water for a range of uses and prescribe means for assurance of reliability in the production of reclaimed water. The California Department of Health Services (DHS) has jurisdiction over the distribution of reclaimed wastewater and the enforcement of Title 22 regulations. The Regional Water Board is

responsible for issuing waste discharge requirements (including discharge prohibitions, monitoring, and reporting programs).

### *LOCAL*

#### **SACRAMENTO REGIONAL WASTEWATER TREATMENT PLANT MASTER PLAN 2020**

The purpose of the Sacramento Regional Wastewater Treatment Plant (SRWTP) Master Plan is to identify wastewater treatment and facility needs for a 20-year planning period, which lasts through the year 2020. The 2020 Master Plan goals are to provide a phased program of recommended facilities to accommodate planned growth while at the same time maintaining treatment reliability, meeting future regulatory requirements, and optimizing costs. To meet this goal, a 2020 Master Plan was prepared that integrated overall strategies for wastewater treatment, effluent management, and biosolids disposal into an effective wastewater treatment management program. The 2020 Master Plan proposed that treatment facility expansion occur in stages or phases as the sewage generated by the population increases. The capacity of the plant would increase under this plan from 181 mgd to 218 mgd (dry weather). The treatment plant is not designed to accommodate wet weather flows. During wet weather events (2-year, 10-year, and 100-year storm events), effluent must be stored (either in emergency storage basins or within the interceptors) because SRWTP cannot discharge effluent into the river. The storage basins and interceptors are designed to provide adequate capacity to accommodate wet weather flows.

The SRCSD Board of Directors approved the SRWTP Master Plan 2020 in fall of 2003. In November 2007, the Superior Court of California invalidated portions of the Environmental Impact Report that was certified for the 2020 Master Plan. Both the SRCSD and the plaintiffs have appealed the judge's ruling. Expansion of the SRWTP beyond the permitted capacity would not occur until after a Master Plan has been approved consistent with the result of the appellant decision. These appeals remain in litigation at the time of this analysis.

#### **INTERCEPTOR MASTER PLAN 2000**

The purpose of the Interceptor Master Plan 2000 was to update the 1993 – 1994 Sacramento Sewerage Expansion Study (SSES) in order to more accurately predict existing and future capacity needs in the regional interceptor system and provide a strategic approach to plan for the capacity needs. To accomplish this the Master Plan updated the service area, growth projections, existing system response to rainfall, provided dynamic modeling, estimated cost of facilities, identified right-of-way acquisition needs, and identified near and long-term improvements required for regional wastewater conveyance. A master plan for the interceptor system was essential to accommodate approved developments and avoid interruption of the service to developing areas. The Master Plan 2000 identifies land use and population projections based on SACOG Blueprint Criteria, and land use plans of the member jurisdictions. The Plan also includes wastewater flow estimates, information on hydraulic modeling,

interceptor design criteria, and identifies conveyance systems and policies to accommodate planned growth. The SRCSD Board of Directors approved the Interceptor Master Plan 2000 in March 2003.

The SRCSD is currently evaluating whether to update the Interceptor Master Plan 2000. District staff (S. Deeble) stated the following regarding an update to the Interceptor Master Plan 2000:

SRCSD is currently working on an Interceptor Sequencing Study to evaluate the Interceptor Master Plan 2000 (MP 2000) and determine when the next master planning document will be developed. Ideally, SRCSD will complete a Master Plan on a 5-year cycle one year after CSD-1 (now SASD) master planning efforts.

The SASD Master Plan 2006 Update was approved by the Board of Directors in October 2008 (see discussion below).

### **SACRAMENTO AREA SEWER DISTRICT SEWERAGE FACILITIES EXPANSION MASTER PLAN**

In order to effectively plan and budget for capital improvement needs, SASD adopted and periodically updates a facilities master plan. The master plan is broad based and addresses policy issues, improvements to the existing sewer system to alleviate deficiencies, and sewer trunk expansions to accommodate new development areas. This Master Plan was approved by the Board of Directors in May of 2004.

### **SASD SEWERAGE FACILITIES EXPANSION MASTER PLAN 2006 UPDATE**

A 2006 CSD-1 Sewerage Facilities Expansion Master Plan Update (renamed SASD Sewerage Facilities Expansion Master Plan Update) had been prepared and approved by the Board of Directors in October, 2008. The Master Plan Update is a companion document to the previously approved Sewerage Facilities Expansion Master Plan discussed above. The Master Plan update evaluates future areas of expansion and revises relief projects approved in the previous master plan. Many of the facilities previously approved in the CSD-1 Sewerage Facilities Expansion Master Plan have been constructed. In addition, the Master Plan Update incorporates the Upper Deer Creek, Lower Deer Creek and Upper Laguna Creek sewer sheds that were not evaluated in the previous Master Plan. The service area is proposed to expand from 268 square miles to 281 square miles with the update. Consequently, the number of miles of pipeline and the number of customers served is anticipated to increase.

Land use categories are of relevance to the Master Plan update effort, in that projected unit wastewater flow rates for future development are based on the types of land uses and their respective densities. The Master Plan Update used 13 land use categories for developing wastewater flow estimates for potential build-out conditions. The land use categories were developed during stakeholder sessions with the County, various cities, developers, and interested parties. The wastewater generation estimate was expressed in the equivalent of single-family dwelling units (ESDs) per acre, where one

ESD represents the wastewater generation equivalent of one single-family residence. Flow estimates for an ESD are 310 gallons per day. The ESD's for each of the 13 land uses are found below (Table PS-1).

**Table PS-1 Land Use Categories, Design ESD Densities, and Flow Estimates**

Land Use Code	Description	ESDs per acre	Flow Estimates (gpd)
AG	Agricultural	6	1,860
VLSRI	Agricultural Residential	6	1,860
VLDR2	Very Low Density Residential	6	1,860
LDR1	Low Density Residential	6	1,860
LDR2	Medium Low Density Residential	10	3,100
MDR1	Medium Density Residential	15	4,650
MDR2	Medium High Density Residential	22	6,820
HDR	High Density Residential	30	9,300
COM	Commercial/Office	6	1,860
IND	Industrial	6	1,860
PQP	Public/Quasi-Public/Schools	6	1,860
Mixed	Mixed/Special Planning Areas/Urban Reserve	6	1,860
Open	Open Space, Recreation, Parks, Cemeteries	6	1,860

Source: SASD Design Standards dated February 13, 2008 (page 22, section 3.1.7)

### ***RELATIONSHIP BETWEEN THE MASTER PLANS***

In summary, the relationships between the SRWTP, SRCSD, and SASD master plans are as follows:

- The purpose of the SRWTP 2020 Master Plan is to provide a phased program of recommended facilities to accommodate planned growth while maintaining treatment reliability, meeting future regulatory requirements, and optimizing costs.
- The purpose of the Interceptor Master Plan 2000 is to update and refine planned regional conveyance facilities identified in the 1993-1994 SSES (in terms of service area, growth projections, existing system response to rainfall, dynamic modeling, estimated cost of facilities and right of way acquisition) and identify near and long-term improvements needed for the regional wastewater conveyance system.

- The overall goal of the SASD Master Plan and Master Plan Update is to plan for future needs for the trunk sewer system, including relief projects for existing areas and expansion projects to serve areas of new development.

All of these master plans are incorporated by reference and can be viewed at County of Sacramento, Community Planning and Development Department, Division of Environmental Review and Assessment, 827 7<sup>th</sup> Street, Room 220, Sacramento, CA 95814; the Sacramento Regional County Sanitation District, 10545 Armstrong Avenue, Suite 101, Mather, CA 95655; or online: the CSD-1 Master Plan at <http://www.csd-1.com/dev-res.html#mp>; the SRCSD Master Plan 2000 at <http://www.srcsd.com/simp2000.html>; and the SRCSD SRWTP 2020 Master Plan at <http://www.srcsd.com/srwtp-2020mp.html>.

### **2007 SACRAMENTO COUNTY GENERAL PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan Public Facilities Element identifies a variety of goals and policies which relate to providing adequate service for new development and identify specific policies for development projects to accommodate services within their project. The Sacramento County General Plan policies that are pertinent to sewer service are policies PF-6 through PF-18. These policies are intended to support the stated goal of the Wastewater Collection and Treatment Section of the General Plan which is to have a “safe, efficient, and environmentally sound public sewer system and treatment facility serving all urban development.”

The policies in the Public Facilities Element that support the County’s wastewater strategies and are relevant to the project are as follows:

- PF-6. Interceptor, trunk lines and flow attenuation facilities shall operate within their capacity limits without overflowing.
- PF-7. Although sewer infrastructure will be planned for full urbanization consistent with the Land Use Element, an actual commitment of additional sewer system capacity will be made only when **the land use jurisdiction approves development to connect and use the system.** ~~users are ready to connect and use the system.~~
- PF-8. Do not permit development which would cause sewage flows into the trunk or interceptor system **which would cause an overflow** ~~to exceed their capacity.~~
- PF-9. Design trunk and interceptor systems to accommodate flows generated by full urban development at urban densities within the ultimate service area. **System design may take into consideration land that cannot be developed for urban uses due to long-term circumstances including but not limited to conservation easements, floodplains, public recreation areas etc.** This could include phased construction where deferred capital costs are appropriate.

- PF-10. Development along corridors identified by the Districts in their **documents Master Plans** as locations of future sewerage conveyance facilities shall incorporate appropriate easements as a condition of approval.
- PF-15. Support CSD-1 and SRCSD policies to fund new trunk and interceptor capital costs through connection fees for new development.
- PF-16. Support SRCSD policy to fully fund treatment plant operation through monthly service charges to system users. Fund treatment plant expansion and upgrades, and existing trunk and interceptor replacements or improvements through connection fees or other revenue sources.
- PF-17. Support a policy requiring monthly service charges to users that reflect differences in the volume and concentration of wastewater generated by nonresidential users.
- PF-18. New development projects which require extension or modification of the trunk or interceptor sewer systems shall be consistent with sewer facility plans and shall participate in established funding mechanisms. **The County should discourage development projects that are not consistent with sewer master plans or that rely upon interim sewer facilities, particularly if the costs of those interim facilities may fall on ratepayers. Prior to approval of a specific Commercial Corridor redevelopment project which requires extension or modification of the trunk or interceptor sewer systems, a sewer study and financing mechanism shall be prepared and considered along with the proposed Corridor redevelopment project, in consultation with the Sacramento Area Sewer District.** ~~The County will not support development projects that are not consistent with sewer master plans and that require installation of interim sewer facilities.~~

## FIRE PROTECTION AND EMERGENCY SERVICES

### *STATE OF CALIFORNIA*

#### **CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**

In accordance with CCR Title 8 Sections 1270, "Fire Prevention" and Section 6773 "Fire Protection and Fire Equipment", the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all fire fighting and emergency medical equipment.

*LOCAL***FIRE CODES AND GUIDELINES**

The availability of sufficient water flows and pressure are a basic requirement of the fire districts. Fire District requirements are determined for specific development projects at the design stage and are based on the Uniform Building Code (UBC). In addition to meeting minimum fire flow requirements, all development projects within the unincorporated area are required to meet other various fire protection requirements identified in the plan check and review process. The Fire District specifications require that fire sprinklers be installed in all new commercial construction that exceeds 3,600 square feet and some residential properties exceeding 2,999 square feet. Also, for structures exceeding 3,600 square feet, the district requires water pressure of at least 20 pounds per square inch residual pressure at 1,000 gallons per minute flow. The district also requires that all traffic signals installed on a project site include traffic control devices that allow the Fire District to activate the light and therefore control the flow of traffic in order to maintain a response time of five minutes.

**FIRE DISTRICT MASTER PLANS**

The Fire District Master Plans provide policy guidance, objectives, and activities in an effort to improve emergency response to the districts' citizens, use existing resources more efficiently, and improve district facilities. These plans address deficiencies with existing fire stations, including age and condition issues; noncompliance with building codes, such as the ability to respond to emergencies following an earthquake; and lack of apparatus rooms of sufficient size to store present-day emergency-response equipment. These plans are available for review from the individual fire districts.

**SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to fire protection and emergency services are policies PF-~~5453~~ through PF-~~6463~~. These policies are intended to support the stated goal of the Fire Protection and Emergency Services Section of the General Plan which is to have "efficient and effective fire protection and emergency response serving existing and new development."

The policies in the Public Facilities Element that support the County's emergency services strategies and are relevant to the project are as follows:

- PF-~~5453~~. Require new development to install fire hydrants and associated water supply systems which meet the fire flow requirements of the appropriate fire district.
- PF-~~5554~~. New development shall provide access arrangements pursuant to the requirements of the California Fire Code.



- PF-~~56~~55. Infill development shall be provided adequate off-site improvements to meet on-site fire flow requirements.
- PF-~~57~~56. New development, redevelopment or traffic signal replacement shall require the installation of emergency signal activation systems in all street improvements requiring signalization when requested by a fire district.
- PF-~~58~~57. Traffic calming measures should be used wherever possible in a manner that does not delay emergency vehicle responses.
- PF-~~59~~58. Alternative methods of fire protection and access must be instituted if access is reduced to emergency vehicles.
- PF-~~60~~59. Require that structures of four stories or more in height provide on-site equipment and facilities to the satisfaction of the appropriate fire district, consistent with industry norms and standards.

## LAW ENFORCEMENT

### *LOCAL*

#### **SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to Law Enforcement services are policies PF-~~50~~49 through PF-~~53~~52. These policies are intended to support the stated goal of the Sheriff Section of the General Plan which is to have “adequate Sheriff Services and Facilities for the Unincorporated Areas of Sacramento County.”

The policies in the Public Facilities Element that support the County’s emergency services strategies and are relevant to the project are as follows:

- PF-~~53~~52. Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property; when feasible.

## SOLID WASTE

### *STATE OF CALIFORNIA*

#### **CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT AND THE CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD (CIWMB)**

Regulations for solid waste disposal in California began with the enactment of the Solid Waste Management and Resource Recovery Act of 1972. This statute created the Solid Waste Management Board, giving it authority related to solid waste handling, disposal and reclamation.

The Integrated Waste Management Act of 1989 is the result of two pieces of legislation, AB 939 and SB 1322, which created the California Integrated Waste Management Board (CIWMB). The Integrated Waste Management Act mandated a goal of 25 percent diversion of each city's and county's waste from disposal by 1995 and 50 percent diversion in 2000, with a process to ensure environmentally safe disposal of waste that could not be diverted. The CIWMB plays a central role of promoting achievement of the waste diversion as mandated by the Act (Cal EPA, 2009).

The CIWMB is the State agency designated to oversee, manage, and track California's 92 million tons of waste generated each year. The Board provides grants and loans to help California cities, counties, businesses and organizations meet the State's waste reduction, reuse and recycling goals. The Board promotes a sustainable environment where these resources are not wasted, but can be reused or recycled. In addition to many programs and incentives, the Board promotes the use of new technologies for the practice of diverting California's resources away from landfills (CIWMB, 2009). The Board is responsible for ensuring that State waste management programs are primarily carried out through local enforcement agencies (LEAs). The California Water Resources Control Board and the Central Valley Regional Water Quality Control Board also regulate waste disposal (the latter actually regulated solid waste prior to the CIWMB).

As reported in the CIWMB 2007 Annual Report, California has exceeded the goals mandated by the Integrated Waste Management Act of 1989 by diverting 54 percent of its waste stream. This accomplishment is in part due to successful partnership between State government, local government, and the solid waste industry in California.

Senate Bill 1016, signed into law on September 26, 2008, represents a fundamental shift in the way local jurisdictions will be measured for compliance with state diversion mandates. Jurisdictions will be evaluated based on the implementation of programs that measure per capita waste disposal, rather than diversion percentage.

#### *LOCAL*

#### **SACRAMENTO COUNTY DEPARTMENT OF WASTE MANAGEMENT AND RECYCLING (DWMR)**

The Sacramento County Department of Waste Management and Recycling (DWMR) is responsible for maintaining a waste management system for residents and businesses in the unincorporated areas of the County. The DWMR has responsibility for garbage recycling and collection services, garbage disposal and recycling facilities, and recycling programs. The DWMR oversees the waste management collection and disposal services for approximately 155,500 residential customers every week. The DWMR collects and disposes/processes 150,000 tons of trash, 75,000 tons of green waste, and 45,000 tons of recyclables each year.

In 2007, the County turned in almost 700 tons of electronic waste (e-waste) to the California Electronic Asset Recovery (CEAR), which is the County's e-waste vendor.

The money generated from e-waste recycling goes back into e-waste recycling programs.

### **SOLID WASTE ADVISORY COMMITTEE**

The Solid Waste Advisory Committee (SWAC) is an advisory panel consisting of an appointed representative from each jurisdiction in Sacramento County. The SWAC is the State-mandated Local Task Force (as mandated by the California Public Resources Code Section 40950), which coordinates waste management and recycling efforts throughout the County. The SWAC advises the County Board of Supervisors, the city councils of the cities within the County, and the Sacramento Regional County Solid Waste Authority (SWA) on all matters relating to the County of Sacramento Integrated Waste Management Plan and all matters relating to integrated waste management, including public education; source reduction; recycling; composting; transformation; materials recovery/resource recovery and marketing; and the collection, transfer, processing, and disposal of refuse and recycling.

### **SACRAMENTO COUNTY INTEGRATED WASTE MANAGEMENT PLAN**

The County of Sacramento adopted the Sacramento County Integrated Waste Management Plan in March 1996, and it was approved by the California Integrated Waste Management Board in May 1998. This plan consists of the following:

- Siting Element (entire county: cities and unincorporated areas)
- Summary Plan (entire county: cities and unincorporated areas)
- Source Reduction & Recycling Elements (by City, County, or Regional Agency)
- Household Hazardous Waste Elements (by City, County, or Regional Agency)
- Non-disposal Facility Elements (by City, County, or Regional Agency)

These documents are the main sources and references for solid waste facility planning in Sacramento County. The Siting Element and Summary Plan are prepared and administered by the County of Sacramento, Department of Waste Management & Recycling. The remaining documents are prepared and administered by each individual jurisdiction or regional agency.

### **SACRAMENTO REGIONAL SOLID WASTE AUTHORITY (SWA)**

The Sacramento Regional Solid Waste Authority is a joint powers authority of Sacramento County and the City of Sacramento. SWA was formed in December 1992 to assume the responsibility for solid waste, recycling, and disposal needs for businesses and apartment complexes in the Sacramento area. The SWA regulates commercial solid waste collection by franchised haulers and offers recycling services to multi-family dwelling units. SWA is governed by a Board of Directors consisting of elected officials from the City of Sacramento and the unincorporated area of Sacramento County. The following SWA recycling ordinances apply to the unincorporated areas of the County.

**SWA ORDINANCES**

The SWA has adopted three recycling ordinances that target three distinct waste streams: (1) The Business Recycling Ordinance, adopted in 2007 for commercial generators who subscribe to 4 cubic yards or more of refuse service per week; (2) The Certification of C&D [Construction and Demolition] Debris Sorting Facilities Ordinance, adopted in 2008, that creates a program for mixed C&D facilities that dovetails with both City and County C&D Ordinances for builders; and (3) The Multifamily Recycling Ordinance, adopted in 2009, that requires owners of multifamily properties with over 5 units to subscribe to a recycling service for their tenants.

**LOCAL ENFORCEMENT AGENCY**

Local enforcement agencies (LEAs) have the primary responsibility for ensuring the correct operation and closure of solid waste facilities in the state. They also have responsibilities for guaranteeing the proper storage and transportation of solid wastes. The Sacramento County Environmental Management Department (EMD) is authorized as the LEA under Division 30 of the Public Resources Code and Title 14 of the California Code of Regulations (CCR).

**SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to solid waste are policies PF-~~20~~19 through PF-~~26~~25. These policies are intended to support the stated goal of the Solid Waste Services and Facilities Section of the General Plan which is to have a “safe, efficient and environmentally sound operation of solid waste facilities in Sacramento County.”

The majority of the policies in the General Plan pertain to service providers and not to development projects. The policies in the Public Facilities Element that support the County’s Solid Waste Services strategies and are relevant to the project relate to fees to support waste adequate facilities and are as follows:

- PF-~~23~~22. Solid waste collection, handling, recycling, composting, recovery, transfer and disposal fees shall recover all capital, operating, facility closure and maintenance costs.
- PF-~~24~~23. Solid waste disposal fees and rate structures shall reflect current market rates and provide incentives for recovery.

## SCHOOLS

*STATE OF CALIFORNIA***LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)**

The “Leroy F. Greene School Facilities Act of 1998”, also known as Senate Bill No. 50 (SB 50) established a State program to provide per-pupil funding for new construction and modernization of existing school facilities. (OPSC, 2009). The passage of Proposition 1A in 1998 allowed SB 50 to be fully implemented.

SB 50 limited the power of cities and counties to require mitigation of school facilities as a condition of approving new development and authorized school districts to assess fees (at various levels) to directly offset the costs associated with increased capacity as a result of new development.

**OFFICE OF PUBLIC SCHOOL CONSTRUCTION AND THE STATE ALLOCATION BOARD**

The State Allocation Board (SAB) is responsible for determining the allocation of state resources used for the new construction and modernization of local public school facilities. The SAB is also responsible for the administration of the State School Facility Program, the State Relocatable Classroom Program and the Deferred Maintenance Program. The SAB is the policy-level body for the programs administered by the Office of Public School Construction (OPSC) (OPSC, 2009). The OPSC, as staff to the SAB, implements and administers the School Facility Program and other programs of the SAB. The OPSC also has the responsibility of verifying that all applicant school districts meet specific criteria based on the type of funding which is being requested. (OPSC, 2009)

There have been four Kindergarten-University Public Education Facilities Bond Acts passed by voters (Proposition 1A, 47, 44 and 1D) that allocated billions of dollars in general obligation bonds for K – 12 facilities through the School Facility Program. These funds help assist school districts with overcrowding, accommodating future enrollment growth and repairing and modernization of older facilities.

**CALIFORNIA EDUCATION CODE**

The California Education Code authorizes the California Department of Education to develop site selection standards for school districts. The California Department of Education School Facilities Planning Division has prepared a School Site Selection and Approval Guide that provides criteria for location appropriate school sites in the State of California.

Site selection is determined based on a screening and ranking procedure. The criteria, in order of importance are listed below:

1. Safety

2. Location
3. Environment
4. Soils
5. Topography
6. Size and Shape
7. Accessibility
8. Public Services
9. Utilities
10. Cost
11. Availability
12. Public Acceptance

*LOCAL*

**SACRAMENTO COUNTY OFFICE OF EDUCATION**

The Sacramento County Office of Education (SCOE) is responsible for delivering quality education to more than 238,000 K – 12 public school students in Sacramento County. The SCOE provides technical assistance, curriculum and instructional support, staff development, legal and financial advice and oversight to 13 school districts. SCOE also directly educates more than 30,000 children and adults.

**SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to public school facilities are policies PF-2726 through PF-3938. These policies are intended to support the stated goal of the Public School Facilities Section of the General Plan which is to have “new public schools which serve as a neighborhood focus and maintain a quality learning environment for Sacramento County’s residents as the County Population increases.”

The General Plan policies related to public schools generally pertain to developing schools that are functionally and physically integrated within their surrounding neighborhoods; that are developed through a coordinated planning effort between school districts; and that are at levels equal to state standards for school enrolment and school site size for all Sacramento schools. School related policies in the General Plan focus on how schools will be sited and developed rather than on how development may affect schools. School facilities mitigation is covered under California Government Codes noted above.

## PARKS AND RECREATION

### *STATE OF CALIFORNIA*

#### **QUIMBY ACT**

The Quimby Act (California Government Code Section 66477) states that “the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map...”. It should be noted that the Quimby Act only applies to the acquisition of new parkland and does not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act effectively preserves open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The Quimby Act also finds that a minimum of three acres, up to a maximum of five acres, of park area is required per 1,000 persons. Sacramento County's Community Planning and Development Department and Municipal Services Agency oversee these requirements in the unincorporated area.

### *LOCAL*

#### **TITLE 22**

Title 22 of the Sacramento County Code provides direction on calculating park acreage requirements for residential developments. Depending on the jurisdiction, residential developments are required to dedicate land for park construction or pay in-lieu fees.

## ENERGY SERVICES (ELECTRIC AND GAS)

### *FEDERAL*

#### **FEDERAL ENERGY REGULATORY COMMISSION**

The Federal Energy Regulatory Commission is an independent agency that regulates the transmission and sale of electricity, natural gas, and oil; licenses and inspects hydropower projects; reviews proposals to build liquefied natural gas (LNG) terminals; and oversees related environmental matters (FERC, 2009).

*STATE OF CALIFORNIA***CALIFORNIA PUBLIC UTILITIES COMMISSION**

The California Public Utilities Commission (CPUC) regulates the design, installation, and management of California's public utilities, including electric, natural gas, water, transportation, and telecommunications. The CPUC also provides consumer programs and information, such as energy efficiency, low income programs, demand response, and California solar initiative for California's energy consumers.

**CALIFORNIA CODE OF REGULATIONS**

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, California Building Standards Code. Part 6 of Title 24 contains California's Energy Efficiency Standards for Residential and Nonresidential Buildings. These regulations were established in 1978 in response to legislative mandate to reduce California's energy consumption. The standards are updated periodically to incorporate new energy efficiency technologies and methods (CEC, 2009).

**WARREN-ALQUIST STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT ACT**

The Warren-Alquist Act of the Public Resources Code gives statutory authority to the California Energy Commission. Under the Warren-Alquist Act, there will be state policies for responsibility for energy resources, reduction in uses of energy, conservation of energy, and establishment of statewide goals for energy conservation. (Warren-Alquist Energy Resources Conservation and Development Act, Government Code Section 25000 *et seq.*)

*LOCAL***2030 SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to energy services, related to electricity distribution, are policies PF-83 through **PF-111**~~PF-112~~. Policies pertinent to natural gas distribution are policies **PF-112** ~~PF-113~~ through **PF-114** ~~PF-115~~. These policies are intended to support the stated goal of the Energy Facilities Section of the General Plan which is to have, "Appropriately sited energy facilities that efficiently and safely produce and distribute energy to Sacramento County residents without compromising environmental quality or human health."

Among other things, the General Plan Energy Facilities policies are related to the location of facilities to minimize visual intrusion, biological impacts, and land use incompatibilities for cogeneration and solar facilities as well as conventional electric facilities.



## PUBLIC TRANSIT

### *LOCAL*

#### **2030 SACRAMENTO COUNTY GENERAL PLAN CIRCULATION ELEMENT**

The Sacramento County General Plan policies that are pertinent to public transit are policies CI-13 through CI-20. These policies are intended to support the stated goal of the Transit section of the Circulation Element which is to, "Promote a balanced and integrated transit system to maximize mobility in a safe and efficient manner." The General Plan states the following about the policies within the Transit section of the Circulation Element:

Policies in this section seek to develop a safe and efficient transit system by promoting transit services within urban corridors of dense population and employment, assuring that users are provided with adequate transportation choices, addressing user needs, developing convenient transfers between transportation systems, and ensuring adequate funding for the system.

#### **SACRAMENTO REGIONAL TRANSIT MASTER PLAN**

The Sacramento Regional Transit District's Transit Master Plan (TMP) is a long term plan (25-30 years) that provides a vision for transit service in the Sacramento region. The plan takes into account the development that is envisioned within the Sacramento region in SACOG's Blueprint. It is recognized that the type of growth envisioned in the Blueprint must be developed in such a way as to complement and facilitate transit in the region. The plan envisions and provides tools to facilitate the expansion of Sacramento's existing light rail lines, the addition of streetcar lines to downtown and Rancho Cordova, and high frequency bus corridors throughout the Sacramento region.

## RAILROAD

### *FEDERAL*

#### **FEDERAL RAILROAD ADMINISTRATION**

The Federal Railroad Administration is tasked with promulgating and enforcing rail safety regulations.

### *STATE OF CALIFORNIA*

#### **CALIFORNIA PUBLIC UTILITIES COMMISSION**

The California Public Utilities Commission (CPUC) regulates all investor-owned and operated electric, natural gas, telecommunications, water and transportation companies in California. The CPUC regulates approximately 58,000 transportation and 655 utility

companies. In addition, the CPUC has safety oversight responsibilities for electric cooperatives, freight transportation, railroads, and distribution of gas and propane in mobile home parks. In terms of railroads, the CPUC ensures that railroads comply with federal railroad safety regulations.

## SIGNIFICANCE CRITERIA

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The criteria used to evaluate the significance of public services and utility impacts resulting from the proposed project were developed based on CEQA Guidelines and on professional standards. Impacts of the proposed project on public service and utilities were considered significant if implementing the project would:

- Result in not having adequate water supply for full build out of the project;
- Result in not having adequate wastewater treatment and disposal facilities for full build out of the project;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities;
- Result in substantial adverse physical impacts associated with the provision of electric or natural gas service;
- Result in substantial adverse physical impacts associated with the provision of emergency services such as to substantially increase emergency response times;
- Result in substantial adverse physical impacts associated with the provision of public school services;
- Result in substantial adverse physical impacts associated with the provision of park and recreation services; or
- Result in a conflict with adopted policies, plans, or programs supporting alternative transportation.

## IMPACTS AND ANALYSIS

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### IMPACT: WATER SERVICES

The project site is located within the service area of the Sacramento Suburban Water District (SSWD) (see Plate PS-2). Under existing conditions, most of the parcels within the Corridor area are currently built out and are provided water services from the District. The SSWD serves a population of approximately 170,000 in Sacramento County. The District is split into two service areas, the north service area (NSA) and the south service area (SSA). The proposed Corridor Plan is located entirely within the NSA. SSWD's water source is primarily served by 89 active water wells, 41 of which provide water in the NSA. These wells are supplemented by surface water in the NSA. Surface water is purchased through agreements from the Placer County Water Agency and wheeled through Folsom Dam and treated at the San Juan Peterson Treatment Plant. Water is delivered through the San Juan Cooperative Transmission and Conveyance Pipelines into the NSA. The District owns 59 million gallons per day (MGD) capacity in the Cooperative Pipeline and owns the Conveyance Transmission Pipeline.

SSWD, in partnership with DERA, has performed a Water Supply Assessment (WSA) for the project, which is appended to this EIR (Appendix C). SSWD also provided an Infrastructure Study which is discussed further below.

### **IMPACT**

The Corridor Plan encourages high density new development and redevelopment within the project area. New development on undeveloped parcels will increase the existing demand for water supply. A large portion of the properties located within the Corridor Plan area have existing water users on-site. Redevelopment of these parcels may or may not increase the existing water consumption. However, the Corridor is expected to substantially increase the density of land uses in the project area, therefore increasing the water consumption of the area. When and if there is an increased water demand will depend on the timing and details of private applications to develop/redevelop parcels in the area.

SSWD prepared a Water Supply Infrastructure Study (Appendix D) and SSWD staff (W. Jung) reviewed the proposed project and indicated that:

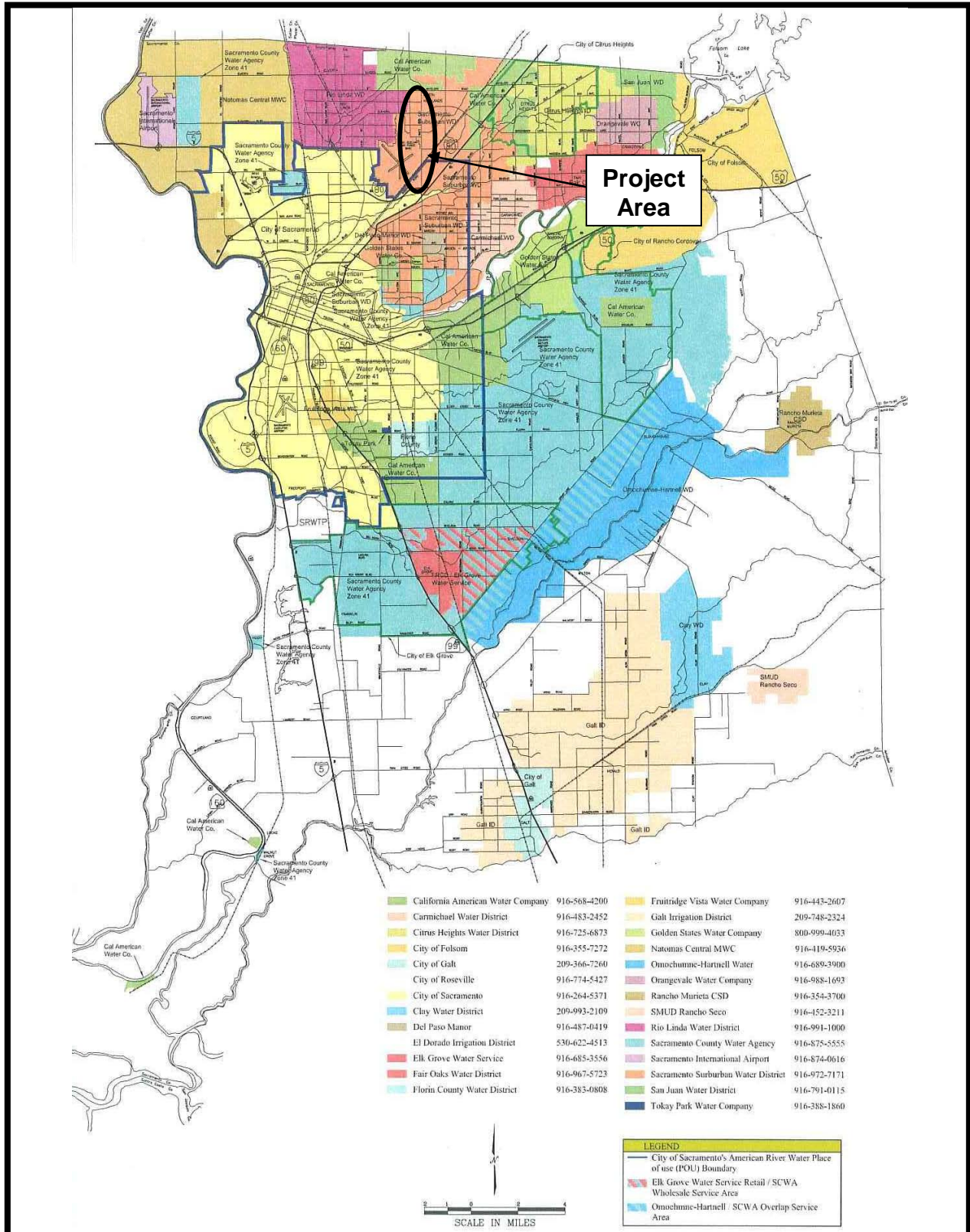
Within the WA [Watt Avenue] Corridor sufficient water supply is available to provide domestic and fire protection to the existing uses. The existing facilities in some areas of the WA Corridor do not meet the requirements of the District's Ordinance 2004-03 Regulation Governing Water Service (Regulation). New development will be required to comply with the regulations before water service is provided.

The proposed mixed-use zoning pending demand for fire protections may require additional water facilities, such as but not limited to, new upsized water mains and/or groundwater wells.

Mixed-use development projects would require at a minimum 12-inch size water mains fronting the parcel.

Ideally if mixed-use development were constructed along the WA Corridor the existing 6 and 8-inch water mains per District Regulations would be replaced with minimum new 12-inch water main. Existing 10-inch water mains could remain if the new proposed development's future demands do not exceed the flow capacity as per SSWD Regulations.

Plate PS-2: Water Purveyor Map



Further, the WSA (Appendix C) prepared for the Corridor Plan concluded the following regarding water supply in the “Determination of Sufficiency” concluding section:

SSWD’s UWMP has calculated future water demands based on development intensities consistent with the proposed project. SSWD has sufficient water supplies to serve the current zoning of the area but may need future supplies for final build out of the proposed project. With this in mind, SSWD will be investigating potential well sites as development plans are developed in the North Highlands area. SSWD will request and purchase property for potential well site(s) pending the scheduling of development in the North Watt Corridor.

Although SSWD’s UWMP accounts for the demand associated with the proposed Corridor project, it is noted that at full buildout additional water supply may be required. SSWD also notes that SSWD’s Regulations Governing Water Service sets parameters for water main sizes depending on the type of development. According to SSWD, the requirements are “development driven” based on the potential fire flow demands for certain types of building construction and for mixed-use development. The minimum allowed water main size is 12 inches in diameter. SSWD concluded that the existing six and eight inch water mains would not be adequate to supply the required fire flow capacities for mixed use development. However, SSWD also indicated that the existing 10 inch mains may be able to remain unless future demands exceed the flow capacity.

The Infrastructure Study also indicated that the upsized piping required for new mixed use development would be located along the property frontage. In addition, individual private connections to the water mains would be required to provide water to buildings that are currently not served.

Ultimately, the project area is provided water and has existing infrastructure supporting the majority of the site under existing conditions. Future development and redevelopment will require specific infrastructure upgrades. SSWD has indicated that water supply is adequate to support some intensification within the Corridor but additional water supply may be required as the Corridor reaches full buildout. Inadequate water supply and infrastructure facilities would result in **significant** impacts as the Corridor develops.

To ensure that adequate water supply and infrastructure upgrades are identified prior to the initiation of development, mitigation is included requiring the Sacramento County Municipal Services Agency (MSA) to prepare, or facilitate the preparation of, a phasing plan. The phasing plan will identify thresholds of development for when necessary infrastructure and supply improvements are required. This will occur prior to intensifying development within the Corridor. In the instance that private applicants/developers wish to proceed with development ahead of the phasing plan, project specific analyses will be required to ensure that the existing infrastructure and supply can accommodate the proposed development. With mitigation, environmental impacts related to water supply are **less than significant**.

*MITIGATION MEASURES:***MITIGATION MEASURE PS-1: PUBLIC SERVICE INFRASTRUCTURE**

Prior to Development Plan Review or issuance of building permits for projects resulting in intensification of use or increased square footage associated with development pursuant to the North Watt Avenue Corridor Plan, the Sacramento County Municipal Services Agency (MSA) shall prepare, or facilitate the preparation of, a phasing plan that identifies thresholds of development for when necessary improvements are required. The phasing plan shall also identify a mechanism to track when thresholds are met so infrastructure improvements are constructed when needed.

If private applicants/developers wish to proceed with development ahead of MSA's phasing plan, project specific analyses (i.e. sewer study, water study, traffic study) will be required to ensure that the existing infrastructure can accommodate the proposed development. Infrastructure improvements that are needed to accommodate proposed development shall be constructed prior to issuing building permits.

**MITIGATION MEASURE PS-2: WATER SUPPLY/INFRASTRUCTURE**

When water supply thresholds are met, as identified in the MSA phasing plan, no further development in accordance with the Corridor Plan shall occur until additional water supply is secured to support future Corridor Plan development and necessary fire flows.

**IMPACT: SEWER SERVICES**

Public sewer service within the unincorporated Sacramento County is provided by the Sacramento Regional County Sanitation District (SRCSD) and the Sacramento Area Sewer District (SASD). The Plan area lies within the existing boundaries of both service districts. Each of the districts provides a distinct service.

SASD operates, maintains and constructs sewage trunks and collection lines that carry between 1 and 10 million gallons per day. SASD provides collection and transport of sanitary sewage and industrial wastes from its facilities to the major transmission, treatment, and disposal facilities operated by SRCSD.

The SRCSD provides sewage transport via interceptor lines with capacities exceeding 10 million gallons per day. Sewage collected locally by the SASD (along with other public agencies) is transported by SRCSD via one of four interceptor sewers to the Regional Treatment Plant, in Elk Grove, near the town of Freeport. The Regional Plant provides secondary sewage treatment through a pure oxygen activated sludge process and then discharges treated effluent into the Sacramento River downstream from domestic water supplies. The Regional Plant has the reserve capacity to serve the project area.

Existing public sewer service within the Corridor plan area is limited to the Triangle District. The remaining area within the Corridor Plan located north of the Triangle District is almost entirely on private septic systems. The SASD/SRCSD has reviewed the draft Corridor Plan and has prepared a level 2 sewer study for the future redevelopment consistent with the North Watt Avenue Corridor Plan (Appendix E). The objective of the study is summarized as follows:

- Ensure technical compliance with the most current SASD Master Plan.
- Establish the backbone trunk system and sheds.
- Locate and size pump/lift stations.
- Establish depth of pipes and verify cover.
- Confirm capacity of existing trunk sewers that will serve the project area.

The above was accomplished by conducting hydraulic modeling that established the projected wastewater flows from the proposed Corridor Plan at full expected build-out. Based on the existing flow monitoring within the Triangle District area and land use assumptions from the remainder of the plan area the following Equivalent Single Family Dwelling (ESD) factors were established and utilized in the sewer study's hydraulic modeling:

Mixed-Use Residential-1:	25 ESD/ acre
Mixed-Use Residential-2:	30 ESD/ acre
Commercial Mixed-Use:	30 ESD/ acre
Open Space:	6 ESD/acre
Commercial:	6 ESD/acre
Public Use:	6 ESD/acre
TOD:	30 ESD/acre

After the above ESDs were established the total wastewater flows expected in the project area were calculated. Table PS-2 shows the calculated wastewater flows for the Corridor area.

**Table PS-2: Calculated Wastewater Flows from North Watt Corridor**

Area	Acres	ESDs	ADWF (MGD)	PF	PWWF (MGD)
North of Elkhorn Blvd.	246	824,633	1.787	1.647	2.943
South of Elkhorn Blvd.	272	1,044,063	1.609	1.66	2.666
Triangle District	278	2,044,063	4.196	1.57	6.572
<b>Totals</b>	<b>796</b>	<b>3,935,829</b>	<b>7.592</b>	<b>1.604</b>	<b>12.181</b>

ADWF= Average Dry Weather Flow

PF= Peaking Factor

PWWF= Peak wet Weather Flow

MGD= Million Gallons Per Day

Source: SASD Level 2 Sewer Study for North Watt Avenue Corridor, 04/06/2009



The study also identifies existing relief projects in the area that were identified in the SASD Master Plan Update. The following Category 1 (defined as a relief project that are required to alleviate model predicted overflows with existing development under design storm conditions) relief projects were identified in the vicinity of the North Watt Avenue Corridor:

1. ARD - 3, Watt Avenue Sewer Replacement: This project includes upsizing the existing sewer along Watt Avenue between Bainbridge Drive and Owens Way. A new 18" parallel sewer would be constructed along Watt Avenue between Owens Way and Elkhorn Blvd. A new sewer located along Elkhorn Blvd. would be constructed to connect the existing 12" sewer to the new parallel sewer.
2. ARD - 4, Larry Way Pump Station Upsize: This project consists of constructing a new pump station to replace the existing pump station on Larry Way as well as upsizing the 12" force main.
3. ARD - 5, Don Julio Blvd Sewer Replacement: This project consists of upsizing the existing sewer parallel to Watt Avenue north and south of Don Julio Blvd., in Don Julio Blvd, Larry Way and Haven Drive.

Note: Under current conditions the ARD - 4 and ARD - 5 projects do not currently meet SASD requirements for a relief project. SASD will continue monitoring flow in these areas and new development may generate the need for the ARD - 4 and 5 relief projects.

SASD culminated all of the above information into the following analysis:

The existing sewer collection system cannot accommodate anticipated flows from the redevelopment of the area north of the Triangle. Additionally, limited sewer facilities are available in the area north of the Triangle, west of Watt Avenue. The SASD Master Plan indicates this area was intended to be served by future trunk facilities discharging into the Upper Northwest Interceptor in Elkhorn Boulevard. Though a majority of the anticipated flows from the redevelopment of the Triangle area can be accommodated in the existing system, a diversion of flow from an existing trunk to the McClellan Interceptor may be necessary in the future. To address these capacity deficiencies, the hydraulic model was utilized to develop a comprehensive project solution to provide relief to existing capacity constrained facilities and accommodate future flows from the redevelopment of the North Watt Corridor area.

The proposed project is shown in Exhibit B [see the proposed land use exhibit in the Project Description or Land Use chapter] and would eliminate two relief projects identified within the 2006 SASD Master Plan Update – ARD - 4 and ARD - 5, as well as take pump stations S015 and S016 offline. This project relieves flows from the currently constrained McClellan Interceptor, allowing for flows from the Triangle District and continued development of the eastern portion of the McClellan Business Park to utilize this freed capacity. Flows currently

entering the McClellan Interceptor would be rerouted by the proposed relief project and wastewater would ultimately flow into the Upper Northwest Interceptor (UNWI). Flows from the areas North and South of Elkhorn Boulevard would also gravity into the UNWI.

The new trunk sewer lines located north of the Triangle area were modeled based on the most current SASD design parameters and consist of diverting and redirecting flows through an 18" trunk line along Larry Way, towards Watt Avenue. Sewer flows would also be redirected along Don Julio Boulevard via an 18" trunk line, which would increase to a 24" trunk line at Larry Way and further increase to a 27" trunk line at Fairfax. These trunk lines would connect to a new 30" line located along Watt Avenue. Flows from the new Watt trunk line would be routed west towards 32nd Avenue and then north, as shown in Exhibit D [Plate PS-3] to connect to the Upper Northwest Interceptor located along Elkhorn Boulevard.



A 1.6 MGD pump station and 8" force main would be required to route some of the expansion area flows north of the McClellan Business Park north to the Upper Northwest Interceptor.

Modeling was performed for the Triangle area based on calibrated parameters, land use information given by Sacramento County Planning staff, and a domestic flow factor of 310 gpd/ESD. This modeling predicted overflows in the Orange Grove Trunk Line at buildout. To relieve the downstream Orange Grove Avenue trunk line, the force main would be redirected to discharge into the nearby McClellan (Roseville Road) Interceptor. Pump Station S069 would need to be upsized to handle the additional development flows. This would be accomplished by installing new pumps equipped with variable frequency drives. Should actual land use densities be less than the proposed densities, or should actual flows from the triangle area be less than predicted, this redirection may not be required.

Public collector sewer (designed and constructed in accordance with SASD standards) will also be needed to serve each individual parcel and direct flows to the future and/or existing trunk facilities.

The study concludes that the majority of the North Watt Avenue Corridor development would be able to gravity flow either to the UNWI or to McClellan Interceptor with the exception of the area within the McClellan Business Park that would flow by force main to the UNWI. Total preliminary costs for this alternative are approximately \$20,014,000.

Impacts to sewer service due to development and redevelopment, consistent with the Corridor Plan, vary depending on the area of the Corridor Plan in which development is proposed. As shown in the sewer study exert above, the portions of the existing public sewer system within the Triangle area that would be capacity constrained with future build-out under the Corridor Plan, will require system upgrades as outlined above.

Those areas that are not currently served with public sewer will require installation of the Watt Avenue trunk line so that future development and redevelopment can connect to the public sewer system. The timing of this major improvement is uncertain at this point; however, it will be dictated by the size, location and types of developments that occur within the Corridor area. It is reasonable to assume that certain types of projects (i.e. reuse of existing commercial buildings or small commercial ventures that are not intense sewer users) could be accommodated with an existing or new septic system without having to wait, or fund, the sewer improvements required to connect to public sewer. Though, at some point, any new development will require connection to public sewer due to health and safety issues. Health and safety issues center on the fact that a parcel needs to be large enough to accommodate a septic system and also have the ability to accommodate a replacement system if the existing septic system fails. Since it is unknown when the public sewer improvements will occur, mitigation is included requiring the Sacramento County Municipal Services Agency (MSA) to prepare, or facilitate the preparation of, a phasing plan. The phasing plan will identify thresholds of development for when necessary improvements are required. This will occur prior to

intensifying development within the Corridor. In the instance that private applicants/developers wish to proceed with development ahead of the phasing plan, project specific analyses will be required to ensure that the existing infrastructure can accommodate the proposed development.

Environmental impacts related to sewer service are **less than significant** with mitigation. Secondary impacts, such as biological resources impacts, related to installation of public sewer infrastructure are addressed in the appropriate chapters of this EIR.

*MITIGATION MEASURES*

*Comply with Mitigation Measure PS-1.*

IMPACT: FIRE PROTECTION AND EMERGENCY SERVICES

The North Watt Avenue Corridor Plan is within the service area of the Sacramento Metropolitan Fire District. The Sacramento Metropolitan Fire District provides services for a 417 square mile district operating 42 fire stations. The Sacramento Metropolitan Fire District reviewed the proposed project but did not submit comments and conditions of approval for the proposed project. Development or redevelopment projects will be subject to additional design requirements specified by the Fire District during the application or design phases of individual projects. The proposed project is not expected to result in substantial adverse physical impacts associated with the provision of emergency services. Impacts related to the North Watt Corridor Plan on fire protection and emergency services are **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: LAW ENFORCEMENT

The North Watt Corridor area is served by the Sacramento County Sheriff's Department. The Sacramento County Sheriff's Department did not submit comments on the proposed North Watt Corridor Plan. Based on past communication with Jeff Rodrigues of the Sacramento County Sheriff's Department, the Sheriff's Department seeks to maintain a service ratio standard of 1 officer per 1,000 population. The Corridor Plan could result in the addition of up to 7,200 residential units, which could result in a population increase of up to 19,440 people (based on an assumption of 2.7 people per residential unit). In order to maintain the service standard ratio of 1 officer per 1,000 people an additional 19.4 officers would be required to serve the project population. Such personnel and equipment would be funded through a combination of tax revenue and other sources to which individual projects within the Corridor may have to contribute. Development/redevelopment projects in the area may also be subject to design requirements specified by the Sheriff's Department during the application or

design phases of individual projects. Impacts of the Corridor Plan on law enforcement are considered **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: SOLID WASTE

The Sacramento County Department of Waste Management and Recycling provides solid waste services to the unincorporated portions of Sacramento County.

Kiefer Landfill is the primary municipal solid waste disposal facility in Sacramento County. The landfill facility sits on 1,084 acres located near the intersection of Kiefer Boulevard and Grant Line Road. Currently 250 acres, the State permitted landfill is 660 acres in size and will be able to serve the regional waste disposal needs for many years to come. Existing and planned solid waste facilities will be sufficient to serve the development/redevelopment of the project area in accordance with the proposed Corridor Plan.

It should be noted that the project area contains the North Area Recovery Station (NARS), within the Triangle Gateway District. NARS is a solid waste facility permitted as a transfer/processing operation for the northern portions of Sacramento County. The proposed project would not result in a public services impact related to NARS because the Corridor project itself will not result in or contribute to significant unplanned waste at the facility that would require facility expansions. Instead, Corridor impacts on NARS are related to land use compatibility between uses proposed in the Corridor and the solid waste function at NARS. Those impacts are discussed in the Land Use chapter of this EIR.

The impacts of the proposed Plan on solid waste service are considered **less than significant**. See Chapter 4, for impacts related to Land Use associated with solid waste facilities in the Corridor Plan area.

*MITIGATION MEASURES*

None required.

IMPACT: SCHOOLS

The North Watt Avenue Corridor is within the San Juan Unified School District and the Twin Rivers Unified School District. It is expected that development/redevelopment according to the proposed Corridor Plan would result in increases to the localized student population. As no specific development plans are proposed within the scope of the Plan, the extent of student population increases are unknown. Furthermore, the effects of project related population increases will have to be compared to the student

populations and facility capacities at local schools at the time development/redevelopment occurs.

The school districts did not submit comments on the Corridor Plan project. However, established case law, *Goleta Union School District v. The Regents of the University of California* (36 Cal-App. 4<sup>th</sup> 1121, 1995), indicates that school overcrowding, standing alone, is not a change in the physical conditions, and cannot be treated as an impact on the environment. Necessary school facilities will likely be funded through a combination of Mello-Roos bonds, statewide school bonds, and developer mitigation fees. Development within the Corridor would be required to pay the school impact fee in place at the time of project approval. Payment of required impact fees and taxes is determined to be full mitigation for impacts to schools pursuant to SB 50. Therefore, implementation of the proposed project would have a **less than significant** impact on school resources.

#### *MITIGATION MEASURES*

None required.

#### IMPACT: PARKS AND RECREATION

The North Watt Avenue Corridor Plan is located within the North Highlands Recreation and Park District (NHRPD). The Park District Staff has reviewed the Corridor Plan and has made the following comments pertinent to the Plan:

In reviewing and commenting on the new land uses proposed in the North Watt Corridor, the Park District has determined that no additional new parks are required within the corridor area. For new residential projects the park district will accept fees in lieu of parkland dedication based on 5 acres of parkland per 1,000 population.

Along the corridor are two creeks (Robla Creek, between I Street and Elkhorn Blvd and Dry Creek, mostly ditches and channels that ultimately reach Dry Creek to the west) that run westerly and lie within the floodplain. They are identified in the plan for use as open space and bike and pedestrian trails serving the corridor and West of Watt areas. This open space should be accessible by the public and be improved with trails, native planting and appropriate setbacks from any identified native species and habitat as may be required by the Army Corp of Engineers. The NHRPD has expressed interest in owning and maintaining these open spaces and trail areas only after the improvements have been installed by the Owner/Developer (i.e. trails, barrier cables/bollards, native plantings including trees (with irrigation for establishment), benches, picnic tables or other minimal amenities). While the District may agree to own and maintain these open spaces and trail areas, any creek maintenance and floodway operations and management would fall to the Sacramento County Dept. of Water Resources. The NHRPD would be willing to provide an easement for these purposes. Should the Park District determine that they would accept these areas

and these responsibilities, post improvement, they will not give quimby credit for the open space and these facilities. The District will require that the Owner annex the project into the District's Landscape and Lighting Assessment District for purposes of paying for the perpetual maintenance of the open space and amenities.

While the West of Watt area is not within the corridor plan, there are areas that are influenced by the corridor plan. NHRPD recognizes that this area will develop in the future and is currently looking at locations that would make for future park sites. Some of these potential future park sites would likely locate adjacent to the trail and open space areas.

The plan also discusses public plazas and spaces that would be developed as part of some of the commercial and mixed use projects. While landscaping and public gathering spaces are important amenities and are highly desirable, the park district has no interest in owning or maintaining these areas. As such this would fall to the property owners, developers and potential business district members to ensure the development, care and maintenance of these public spaces.

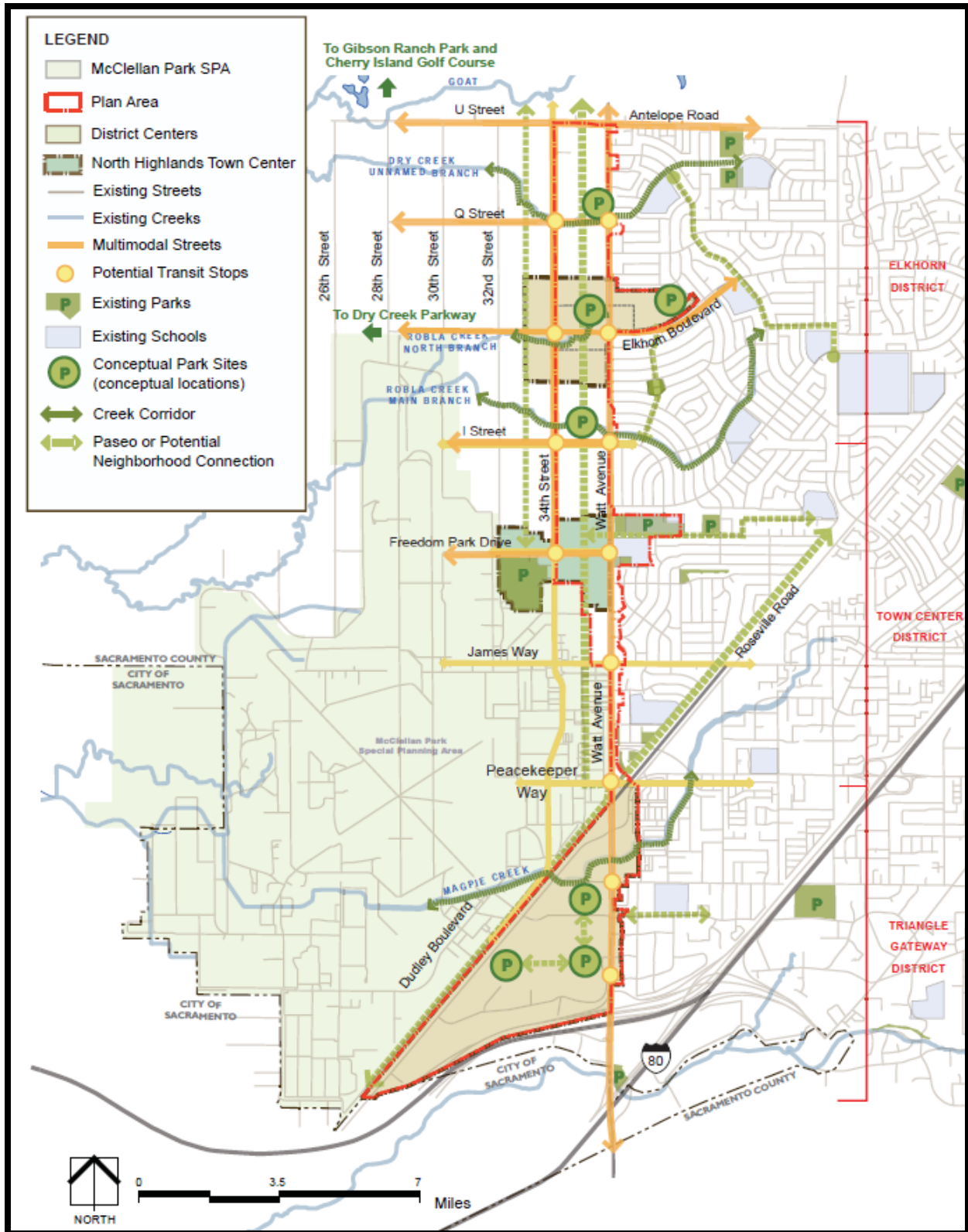
As noted above by NHRPD staff, additional parkland dedication may not be required. However, since precise development/redevelopment is uncertain at this time, parkland assessments will be conducted at the time specific individual projects move forward. It should be noted that, pursuant to the County Land Development Ordinance (Title 22 of Sacramento County Code) all future Tentative Subdivision Maps and Tentative Parcel Maps will be conditioned to dedicate land, pay a fee in lieu thereof, or provide a combination of dedication and in-lieu fees. Comments regarding coordination with future West of Watt planning for parkland facilities are forwarded, via this Draft EIR, to the Community Planning and Development Department's Planning Division for consideration.

The proposed Corridor Plan provides extensive background, design standards and guidelines regarding future parks, recreation and open space within the Plan area. The Plan also provides an exhibit that denotes existing parks and facilities and a conceptual plan for where new parks could be distributed or sited to best serve the future needs of the community. See Plate PS -4 for the exhibit. See the Urban Design and Public Realm Design chapters of the Corridor Plan (Chapters 3 and 5 respectively of Appendix A, the North Watt Corridor Plan) for specific standards and design guidelines related to Parks and Open Space proposed in the Corridor Plan.

The Corridor Plan notes that parks should be provided in the Corridor Plan area at a minimum ratio of 3.0 acres per 1,000 population, although a higher ratio (5.0 acres per 1,000) is recommended. This is consistent and may exceed the requests of the



Plate PS -4: Parks and Open Space Concept Plan



NHRPD because based on their comments no additional parks within the plan area are required. The proposed plan also calls for a network of park services that are linked by a trail system along creek corridors or roadways. The planned network in the Corridor will be designed for the potential to connect to the broader, regional, trail system within the County of Sacramento. As shown in Plate PS -4, the Corridor has been planned with an emphasis on park and open space services and will allow for additional park services. Impacts to park services are considered **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: ENERGY SERVICES (ELECTRIC AND GAS)

The North Watt Avenue Corridor Plan is located in a developed urban area with existing electric and natural gas service. Service providers were given the opportunity to comment on the proposed project. PG&E did not comment on the proposed project; however, SMUD provided comments that concluded SMUD has sufficient substation facilities to accommodate the new intensified land uses as proposed in the Corridor Plan. SMUD also notes that with more intense development it is likely that an additional 12kV feeder extension and individual line work to support the load of development as it occurs within the proposed Districts. Finally SMUD provides the following note to developers:

When design work is completed, SMUD will design the required infrastructure (conduit, pullboxes, pad mounted switchgear and transformers) based on the demand. The 12kV feeder will extend through the project to serve transformers as determined by load and voltage levels. Line re-conductoring may be required upstream of the new development to support the increased demand.

Ultimately, future development and redevelopment consistent with the proposed Corridor will be subject to specific design requirements as required by service providers. With provisions made, no significant environmental impacts are expected related to the provision of electric or natural gas services to the project area. Impacts to energy services are considered **less than significant**.

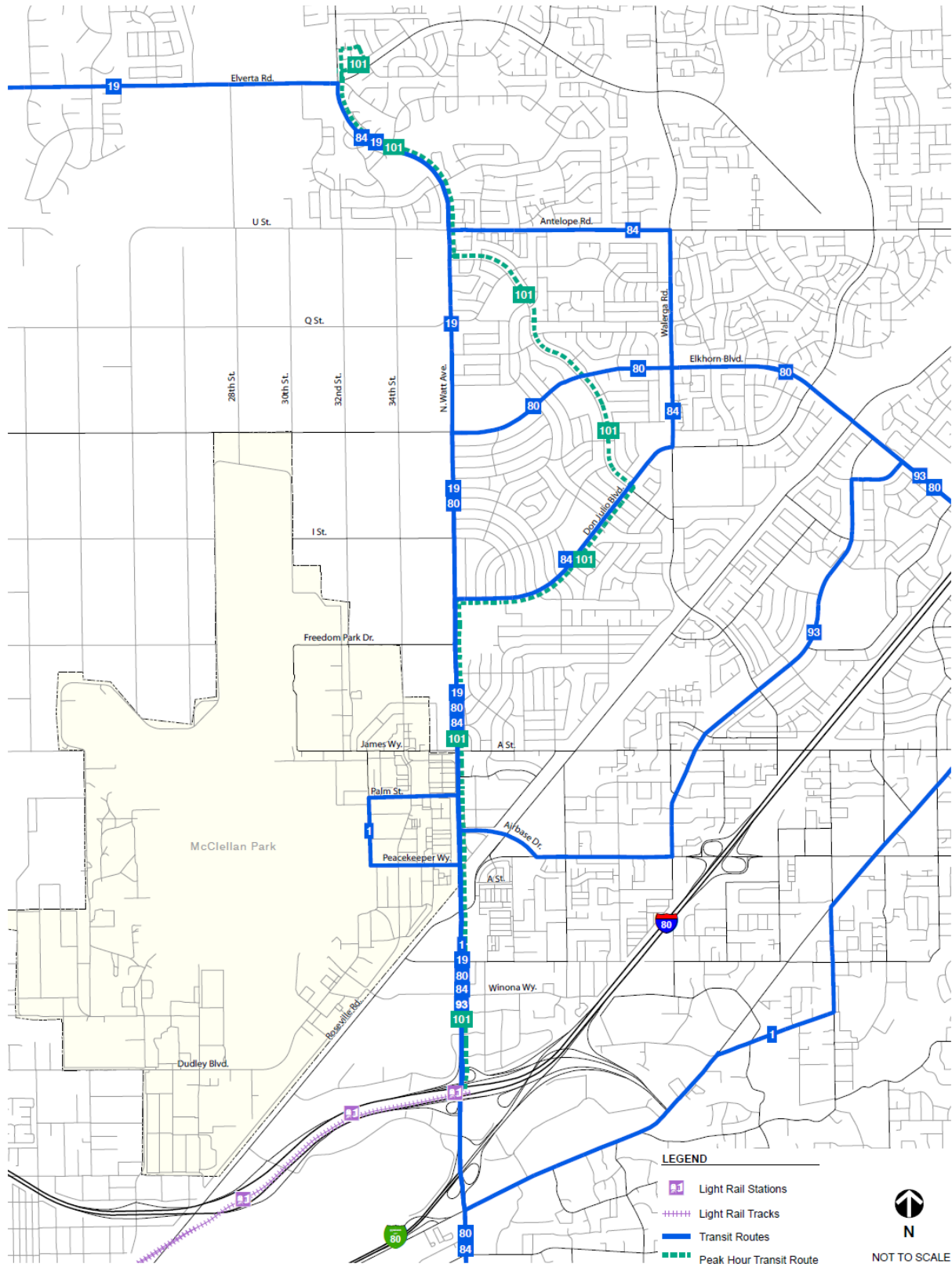
*MITIGATION MEASURES*

None required.

IMPACT: PUBLIC TRANSIT

The Sacramento Regional Transit District (RT) provides public transit service and facilities to Watt Avenue, offering several bus routes and a light rail station along the Corridor Plan area. Plate PS-5 illustrates the existing transit conditions within the Corridor Plan area. The I-80/Watt Avenue light rail station, located at the southern end

Plate PS-5: Existing RT Facilities



of Watt Avenue at the I-80/Watt Avenue interchange, is the northern terminus station for Regional Transit's Blue Line light rail route. Additionally, there are a number of passenger bus routes that provide service along Watt Avenue and through the Corridor Plan area.

RT routes 1, 19, 80, 84, 93, and 101 operate along all or portions of Corridor area. Details of these passenger bus line routes are described below:

- Route 1 (Greenback) – links the I-80/Watt Avenue light rail station with McClellan Park along North Watt Avenue, servicing Peacekeeper Way and Palm Street on its route. Route 1 operates with 15-minute headways Monday through Saturday and 30-minute headways on Sundays and holidays.
- Route 19 (Rio Linda) – links the I-80/Watt Avenue light rail station with McClellan Business Park, North Highlands, and the Arden/Del Paso light rail station. Route 19 operates daily with 60-minute headways. Along North Watt Avenue, Route 19 provides service between I-80/Watt Avenue and Elverta Road.
- Route 80 (Watt-Elkhorn) – links the Watt Avenue/Manlove light rail station, Country Club Plaza, the I-80/Watt Avenue light rail station, McClellan Business Park, and North Highlands. Route 80 operates with approximately 60-minute headways Monday through Saturday, with limited service on Sundays and holidays. Along North Watt Avenue, Route 80 provides service between Auburn Boulevard and Elverta Road.
- Route 84 (Watt-North Highlands) – links the Watt Avenue/Manlove light rail station, Country Club Plaza, the I-80/Watt Avenue light rail station, McClellan Business Park, and North Highlands. Route 84 operates with approximately 60-minute headways Monday through Saturday, with no service on Sundays or holidays. Along North Watt Avenue, Route 84 provides service between Auburn Boulevard and Elverta Road.
- Route 93 (Hillsdale) – links the I-80/Watt Avenue light rail station with McClellan Business Park, with a connection to Roseville Transit/Placer County Transit at Orlando Avenue/Louis Lane in Roseville. Route 93 operates with 30-minute headways on weekdays and 60-minute headways on weekends and holidays. Along North Watt Avenue, Route 93 provides service between I-80/Watt Avenue to Airbase Drive.
- Route 101 (Don Julio) – links the I-80/Watt Avenue light rail station with McClellan Business Park and the Watt Avenue/Elverta Road intersection. Route 101 operates limited commute period service, with two AM and two PM trips on 30-minute headways during the weekdays. Along North Watt Avenue, Route 101 provides service between I-80/Watt Avenue and Elverta Road.

Details of the Light Rail Blue Line that services the project area are described below:

Light Rail Blue Line has two stops located in close proximity to the Plan area: Watt and I-80 station and Longview and I-80 station. The Blue Line offers 15-minute service during daytime and peak hours and offers 30-minute service at night. This line connects to stations in Downtown Sacramento terminating at the Meadowview Station. Additionally, riders can connect to the Gold Line at several locations in Sacramento.

**Blue Line:**

1st train leaves at 4:21am with the last train dropping off at 12:38am weekdays.

1st train leaves at 4:35am with the last train dropping off at 12:38am Sat.

1st train leaves at 5:05am with the last train dropping off at 12:38am Sun and Holidays.

The North Watt Corridor Plan takes into account existing transit services and plans for future expansion in transit service within the project area as the Corridor is developed with “transit-friendly” uses, such as mixed use and transit oriented development. Future transit envisioned in the Plan would serve the Corridor and would provide a greater link to the entire Sacramento region. One of the basic principles of the Corridor is to plan “an interconnected circulation system with multimodal transportation opportunities to support community and regional mobility and access” (North Watt Corridor Plan, April 2009). The Corridor Plan has several design guidelines, goals and policies that are directly related to the enhancement of transit and overall mobility in the area.

The goals directly related to transit in the Circulation Element of the Corridor Plan, include the following:

Goal 4.2 Implement “complete streets” accommodating multiple modes of transportation appropriate to the type of street or trail.

Goal 4.3 Promote a flexible system that can incorporate new transportation systems and technologies as they become available.

Goal 4.4 Implement phased improvements (such as streetscape improvements and regional transit service) to meet the needs of new and anticipated development and efficiently use limited funding and resources.

Goal 4.6 Coordinate with bus transit service providers to determine system improvements, including routes and the location of transit stops and stations, consistent with Regional Transit’s *Transit Master Plan Transit-Oriented Development Guidelines*.

Goal 4.7 Expand local bus service to meet the needs of new development within the Corridor Plan area.

Goal 4.8 Coordinate with Sacramento Regional Transit to provide bus rapid transit service before full build-out as an incentive for growth and development.

Goal 4.9 Ensure that local and regional bus service includes logical links to McClellan Business Park and the overall North Highlands community.

Goal 4.10 Coordinate with private entities, such as McClellan Business Park, to develop a consistent program of transit incentives that serves the Corridor Plan area and North Highlands community, encourages transit use, and reduces single-occupant vehicle trips.

Goal 4.11 Construct transit facilities suitable for local bus transit and regional bus rapid transit. Such facilities may be separate or combined, as appropriate to routes.

Goal 4.12 Provide direct and convenient access to all transit stops and stations via the street grid and bicycle and pedestrian routes and trails.

The policies directly related to transit in the Circulation Element of the Corridor Plan, include the following:

Policy 4.5 Transit stop spacing in the Corridor plan area will be guided and determined by the Sacramento Regional Transit's "Transit Station Spacing Criteria." Transit stations along North Watt Avenue may be spaced approximately 1/2 mile apart. However, as determined by the station spacing evaluation and criteria, transit stations shall be spaced no closer than four city blocks (or 1,600 feet) apart and no greater than 1 mile apart.

Policy 4.7 Bus rapid transit service shall operate at intervals adequate to support transit-oriented development (with 15-minute headways typical).

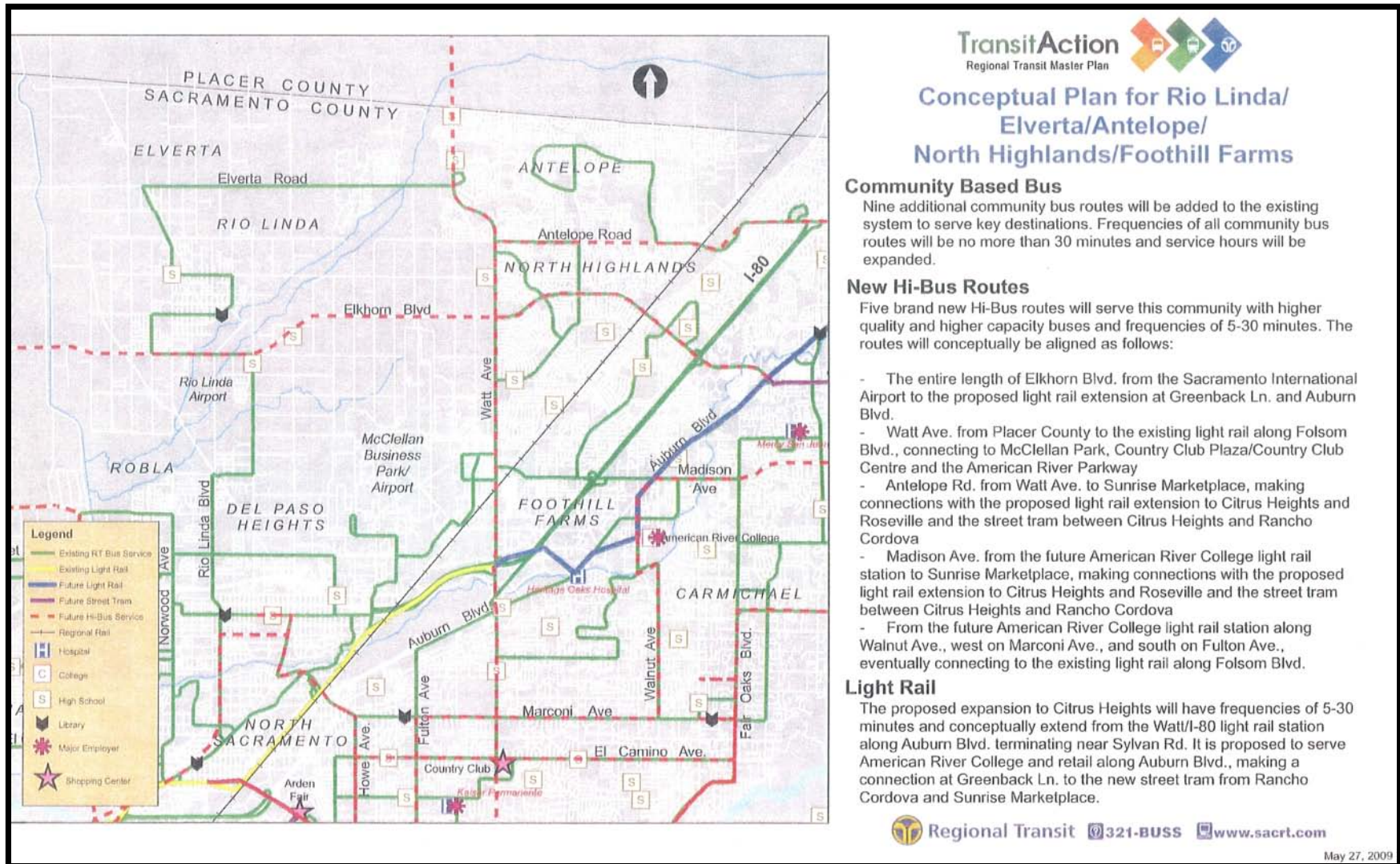
Policy 4.8 Suitable local bus stops and bus rapid transit stations shall be identified in coordination with transit providers for the North Highlands Town Center, the Elkhorn District, and Triangle Gateway District Centers, and elsewhere along the corridor. The approximate location of stops and stations shall be identified (although not necessarily constructed) before significant new development to facilitate connectivity and good site design.

Policy 4.9 Local bus transit stops and bus rapid transit stations shall include shade structures, benches, trash receptacles, and informational signage (including electronic signage at appropriate stops). Bus rapid transit facilities must also include pay stations.

As shown in the above goals and policies, the Corridor Plan calls for and accommodates future bus rapid transit on Watt Avenue. According to RT's Transit Action Plan for the project area, Watt Avenue is designated for hi-bus (see Plate PS-6 for RTs Conceptual Plan for the project area and vicinity), thus the Corridor Plan is compatible with the RTs vision for the project area.

In order for RT to be successful in providing transit in the project area, land use in specific areas must be planned accordingly. Specifically, densities must be high

Plate PS-6: Regional Transit's Conceptual Plan for the Corridor Plan and Vicinity



enough, with easy pedestrian access to transit stops, in order to create enough ridership to make transit economically feasible. The North Watt Corridor Plan provides for a mix of uses with an overall high density, including concentrated maximum density urban core districts, along a pedestrian-friendly corridor. The Corridor calls for residential densities of up to 65 dwelling units per acre (15-65 dwelling units/acre overall) and high minimum floor area ratios for nonresidential development. Additionally, the Corridor Plan discourages certain transit-unfriendly uses without going through another formal discretionary review process.

Regional Transit staff (Traci Canfield) was contacted about the North Watt Corridor Plan. RT staff did not have any concerns regarding the proposed project; instead staff was supportive of the overall premise of the Corridor. Staff did not provide any specific comments or recommendations that RT wanted included in the EIR. Staff did note that Watt Avenue, Elkhorn Boulevard and Antelope Road are designated as hi-bus corridors in the Transit Action Plan.

Overall, the proposed Corridor will not result in adverse impacts to RT service. The Corridor Plan accommodates and is not in conflict with RT's plan for regional transit services. Impacts related to transit service are considered **less than significant**.

#### *MITIGATION MEASURES*

None required.

#### IMPACT: RAILROAD

The project area includes and encompasses a segment of the Union Pacific Railroad Main Line. The rail line runs parallel with Roseville Road directly north of the Triangle Gateway District. Under existing conditions, the UP line crosses Watt Avenue north of Roseville Road via an elevated bridge/track; thus, vehicular traffic on Watt Avenue travels beneath the bridge and is uninhibited by rail operations. With the exception of this portion of elevated track, the remaining UP rail line, located adjacent to the project area, is level with the surrounding plan area topography. In general, the rail line is separated from existing uses within the plan area by Roseville Road. The only land uses within the Corridor vicinity that are located directly adjacent to the rail line are those within McClellan Park.

Given that rail services in the State of California are overseen by the CPUC, the UP railroad within the project area is discussed and analyzed in this chapter as a utility. The CPUC is tasked with ensuring that safety regulations associated with rail are complied with and enforced, and with ensuring that land use projects adjacent to rail corridors are planned with the safety of rail operations in mind. Land use adjacent to the rail lines is of importance because new developments can increase traffic and pedestrian volumes at at-grade rail-crossings.



DERA contacted the CPUC and asked staff to review the Corridor Plan and make any necessary comments or recommendations. CPUC staff (Moses Stites) provided the following comments:

The traffic impact study within the traffic/circulation section of the DEIR needs to specifically consider traffic safety issues to the at-grade railroad crossings within the project vicinity. In addition to the potential impacts of the proposed project itself, the DEIR needs to consider cumulative rail safety-related impacts created by other projects.

In general, the major types of impacts to consider are collisions between trains and vehicles, and between trains and pedestrians. The proposed project has the potential to increase vehicular and pedestrian traffic in the vicinity.

Measures to reduce adverse impacts to rail safety need to be considered in the DEIR. General categories of such measures include:

- Installation of grade separations at crossings, i.e., physically separating roads and railroad track by constructing overpasses or underpasses.
- Improvements to warning devices at existing highway-rail crossings.
- Installation of additional warning signage.
- Improvements to traffic signaling at intersections adjacent to crossings, e.g. traffic preemption.
- Installation of median separation to prevent vehicles from driving around railroad crossing gates.
- Prohibition of parking within 100 feet of crossings to improve the visibility of warning devices and approaching trains.
- Installation of pedestrian-specific warning devices and channelization and sidewalks.
- Construction of pull out lanes for buses and vehicles transporting hazardous materials.
- Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way.
- Elimination of driveways near crossings.
- Increased enforcement of traffic laws at crossings.
- Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings.

DERA also requested comments from Union Pacific staff. Staff did not provide comments or concerns specific to the North Watt Corridor Plan; however, UP has reviewed and commented on similar Corridor projects that are adjacent to UP facilities in the past. Previous comments from UP reflected the concerns raised above in the CPUC comments, and were almost entirely centered on safety. An excerpt from a UP comment letter on the Old Florin Town Special Planning Area project (letter dated August 3, 2007), which was also located along the UP main line, included the following:

*Residential development near the UP main line can negatively impact freight rail service and create unintended consequences that are in neither UP's nor the public's best interests. New housing and other development will attract more cars and pedestrians to the areas around UP lines, and people may trespass onto the railroad right of way as well.*

*In addition to the obvious safety concerns of which UP remains vigilantly aware, these factors also have the result that trains may be forced to proceed more slowly because of the residential development, and/or to make more frequent emergency stops, which makes rail service less effective and efficient. In the event of train slow-downs or stoppages, train cars may be forced to block at-grade roadway intersections, causing traffic disruptions.*

*UP requests that the County analyze and seek to mitigate the impacts that the SPA will have on the UP main line and rail service by requiring appropriate mitigation measures. Possible mitigation measures that should be provided by developers of property within the SPA include, for example, sound walls, setbacks, fences and other barriers, public education and disclosure, and, if any development is to be accessed across the UP right of way, grade-separated road crossings.*

The rail crossing within the Corridor plan area is not an at-grade crossing. The existing overpass crossing over Watt Avenue will not be affected by the proposed project. Thus, under existing conditions with or without the proposed project, there is a safe interface between the rail line and vehicular traffic within the Corridor. Additionally, there is a pedestrian tunnel that exists near the Watt Avenue rail intersection, below the rail line, which provides access from the Triangle Gateway area to the remaining northern portion of the Corridor Plan area.

The Corridor Plan calls for safer or expanded rail crossings in order to increase the mobility of pedestrians and bicyclists between the Triangle Gateway District and other northern areas of the Corridor and McClellan Business Park. The envisioned crossings would not be at-grade crossings. The Corridor Plan provides the following discussion regarding the UP rail line crossings (p-4-30 of Corridor Plan):

*The rail line intersecting the project area is a significant barrier to all forms of access. Two bicycle and pedestrian crossing improvements are recommended—one across the Union Pacific railroad tracks on North Watt Avenue including under the Union Pacific railroad tracks near Roseville Road and the second*

crossing improvement at Winonna Way connecting the Triangle Gateway district to McClellan Business Park. Both are shown in Figure 4.19, "Bicycle Circulation Plan."

The existing automobile underpass across the rail line is not wide enough to accommodate pedestrian or bicycle access. While an existing bicycle and pedestrian tunnel is provided near Watt Avenue and Roseville Road this facility lacks visibility, safety, and is underutilized, creating a major barrier to bicycle and pedestrian use between Roseville Road and Peacekeeper Way. This bicycle and pedestrian connection under the Union Pacific mainline is currently being studied with funding provided by the 2035 Metropolitan Transportation Plan and will be subject to future improvements identified in this study.

In addition to the above commentary, the Corridor Plan provides the following policies related to Union Pacific main line crossings:

Policy 4.1 An undercrossing or overcrossing of the Union Pacific railway (UPRR) adjacent to Roseville Road shall be constructed to connect McClellan Business Park with the Triangle Gateway District. The UPRR crossing should not negatively affect adjacent land uses in McClellan Business Park, and is the subject of study.

Policy 4.2 Pedestrian and bicycle access shall be provided between Roseville Road and Peacekeeper Way under the UPRR crossing. The 2035 Metropolitan Transportation Plan includes funding to study this connection under the Union Pacific mainline railroad tracks.

Policy 4.10 The bicycle and pedestrian undercrossing of the Union Pacific Railroad near Watt Avenue and Peacekeeper Way shall be improved per the Roseville-Watt Bicycle Pedestrian Feasibility Study.

Although the Corridor Plan envisions new crossings at the UP rail line, in all cases they are undercrossings or overcrossings, not at-grade crossings, thus rail safety and operations will not be impacted. It should be noted that while the Corridor Plan provides the planning framework for future under- or overcrossings, these projects will be subject to future feasibility studies and discretionary actions including additional environmental review. At that time, the project proponent will work closely with the Union Pacific railroad to ensure that appropriate safety measures are in place for both the railroad and the pedestrians and cyclists that utilize the crossings.

In terms of land use adjacent to the UP line, there is an existing barrier, Roseville Road, between land uses within the plan area and the UP main line. Under existing conditions there is a vehicular barricade (see Plate PS-7) along Roseville Road that also provides another physical separation from the UP tracks.

**Plate PS-7: Vehicular Barricade along Union Pacific Tracks**

The Corridor plan also envisions a multi-use trail on the southern portion of Roseville Road which further buffers incompatible land uses from the rail line. The plan states the following regarding the trail (on page 5-34 for the Plan):

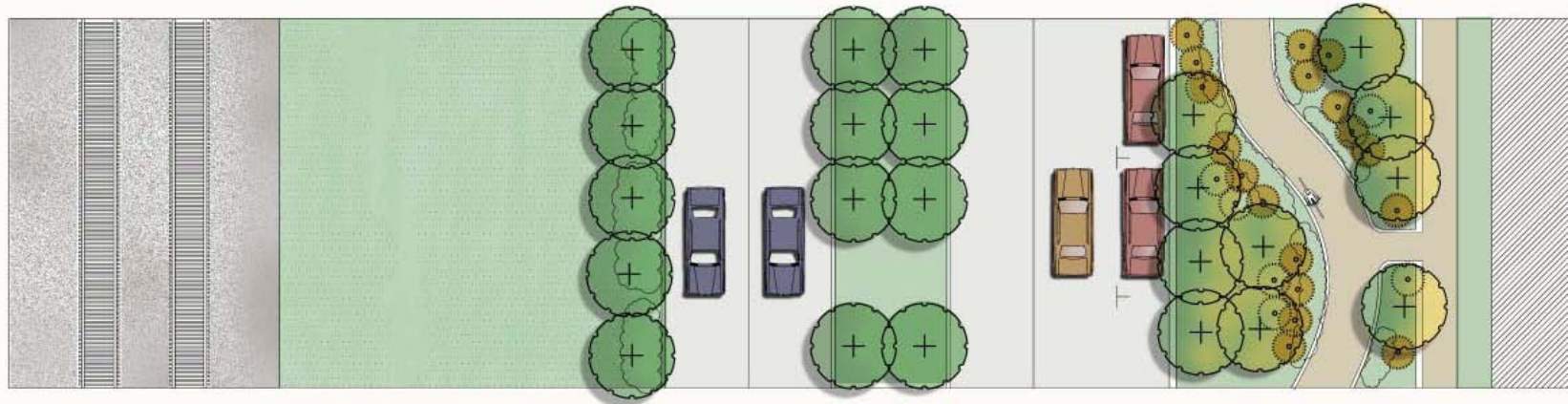
Roseville Road Class I, Multi-Use Trail: An open space landscape buffer with a meandering Class I trail is suggested along Roseville Road, within the road right-of-way, to buffer the Triangle Gateway District from the adjacent railroad tracks and traffic along Roseville Road (see Figure 5.7, “Roseville Road Class I Multi-Use Trail”) [Plate PS-8]. This route is intended to serve as a continuous north-south neighborhood trail connection from the Triangle Gateway District to other areas of the community.

Under CEQA, impacts to rail operations are not specifically addressed in the CEQA Guidelines; however the following significance criteria, related to safety applies:

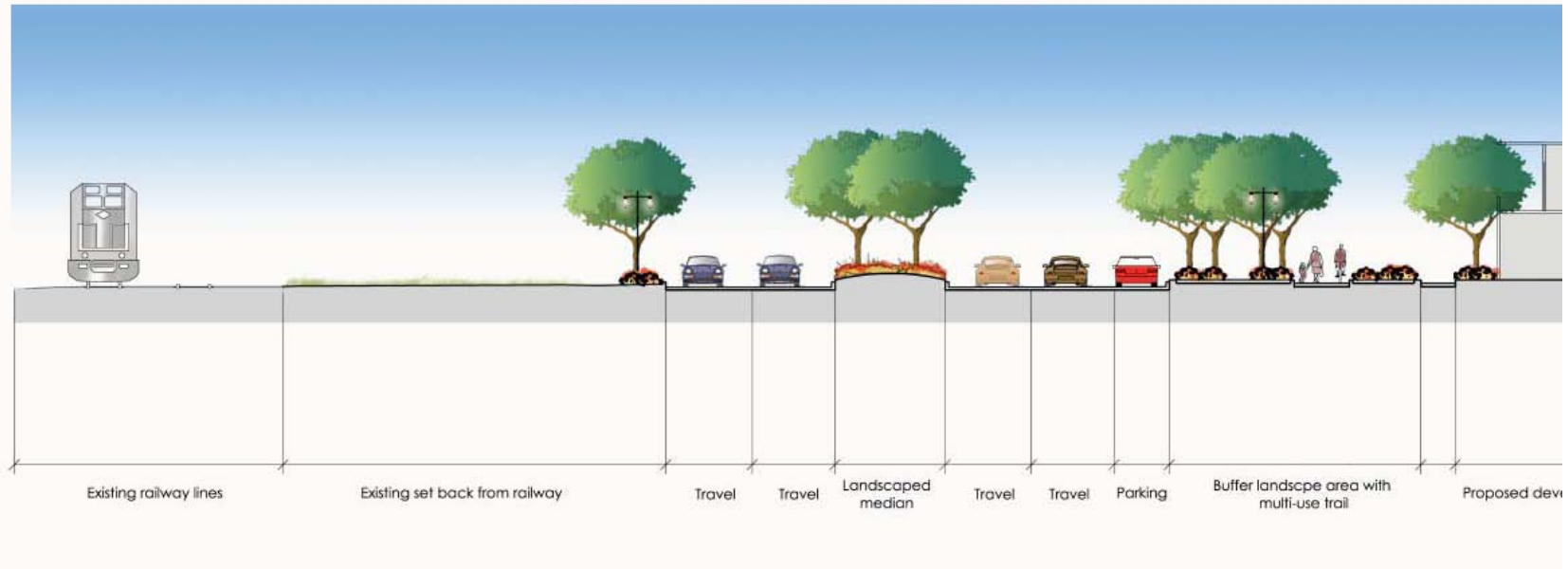
A project could have a significant environmental impact if it substantially increases hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).

The Corridor Plan does not propose hazards due to a design feature related to rail crossings such as a new at-grade rail crossing. Additionally, it does not propose incompatible uses immediately adjacent to the rail corridor. However, it is acknowledged that, as implemented, the Corridor Plan could introduce more pedestrians and bicyclists to the project area, thereby increasing the chance of interactions between the rail operations and citizens. Thus, some of the

### Plate PS-8: Proposed Trail Plan along Roseville Road



### Proposed Roseville Road Plan



recommendations included in the CPUC comments, listed above, may be directly applicable to the Corridor Plan. Specifically, measures such as installing warning signage and fencing along Roseville Road could prevent undesirable conflicts and delays in rail operations. Ultimately, although the proposed project would not result in significant environmental impacts related to rail services, rail safety and operations should be considered in the Corridor Plan. Thus, in order to provide the Planning Division with a tool to consider rail operations in conjunction with the overall Corridor Plan goals, the addition of a Plan policy that takes into account rail and allows rail-contextual review is proposed as mitigation. With the application of the proposed policy, potential impacts will be reduced but will remain less than significant.

### *MITIGATION MEASURES*

#### **MITIGATION MEASURE PS-3: RAILROAD POLICY**

A policy shall be added to the North Watt Avenue Corridor Plan that requires Planning Division review of uses proposed adjacent to UP rail operations. The review is intended to result in appropriate conditions being placed on development projects in close proximity to rail operations so that safety and rail operations are fully considered and accommodated. Appropriate conditions may include requiring the placement of warning signage in suitable locations, installation of fencing or barriers along Roseville Road, or providing education to future property owners.

## 7 DRAINAGE, HYDROLOGY, AND WATER QUALITY

### INTRODUCTION

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The purpose of the Drainage and Hydrology chapter of the EIR is to assess the potential impacts to the local watershed and storm drainage system associated with the potential development/redevelopment of the parcels in the North Watt Avenue Corridor Plan area.

The Sacramento County Department of Water Resources staff performed a reconnaissance level drainage study for the Corridor Plan area. The following setting and analysis is based on this study and contains portions thereof. This study can be reviewed in its entirety in Appendix F.

### DRAINAGE, HYDROLOGY, AND WATER QUALITY SETTING

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The North Watt Avenue Corridor is located within the following 4 watersheds: Dry Creek, Robla Creek, Magpie Creek, and Arcade Creek. Only three of the associated creeks are present within and traverse the Corridor Plan area: Dry Creek, two branches of Robla Creek, and Magpie Creek. The juxtaposition of the Corridor Plan area to the 4 watersheds and 3 creeks can be viewed in Plate DH-1.

The Corridor is located within the following FEMA Flood Zones: X, Shaded X, AO and AE as indicated on Panel No. 060262-0060D and 060262-0070D (1998) (Plate DH-2 through Plate DH-4 show FEMA maps by Corridor District). Zone X has been determined to be an area of minimal flood hazard determined to be outside the 500-year flood and protected by levee from 100-year flood. Zone Shaded X corresponds to areas expected to be inundated by 500-year floods; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than one square mile; and areas protected by levees from 100-year floods. Zone AO are areas subjected to flood hazards from rivers or stream, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. Zone AE is a special flood hazard area that is expected to be inundated by a 100-year flood where base flood elevations have been determined.

### EXISTING DRAINAGE SYSTEM

As noted above, the project area contains four watersheds. The storm drain system is divided into four sheds. These sheds were analyzed to determine if the existing pipe systems have sufficient capacity to convey design flows. The four sheds

Plate DH-1: Watersheds in Corridor Plan Area

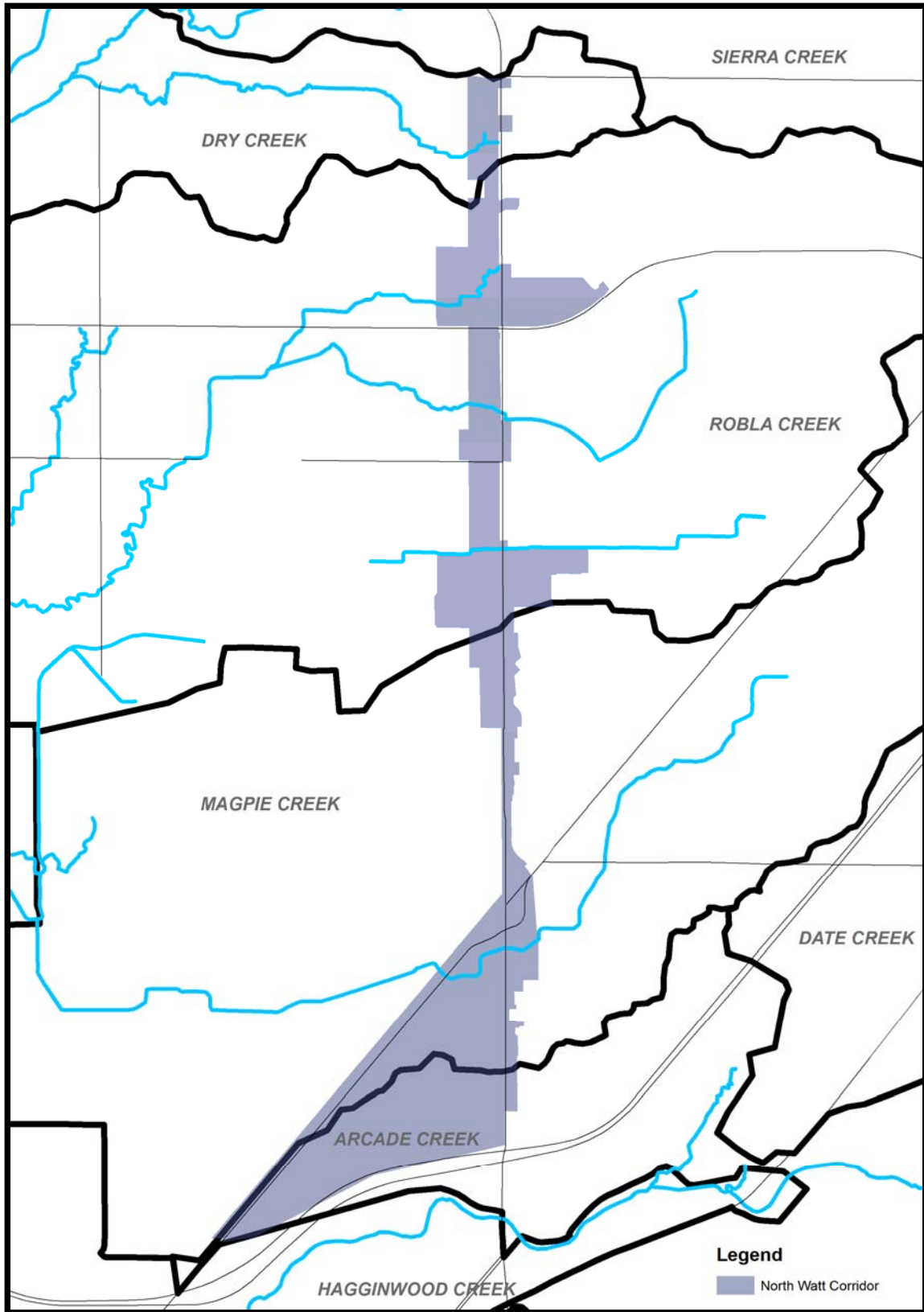




Plate DH-2: FEMA Map for Elkhorn District and Surroundings

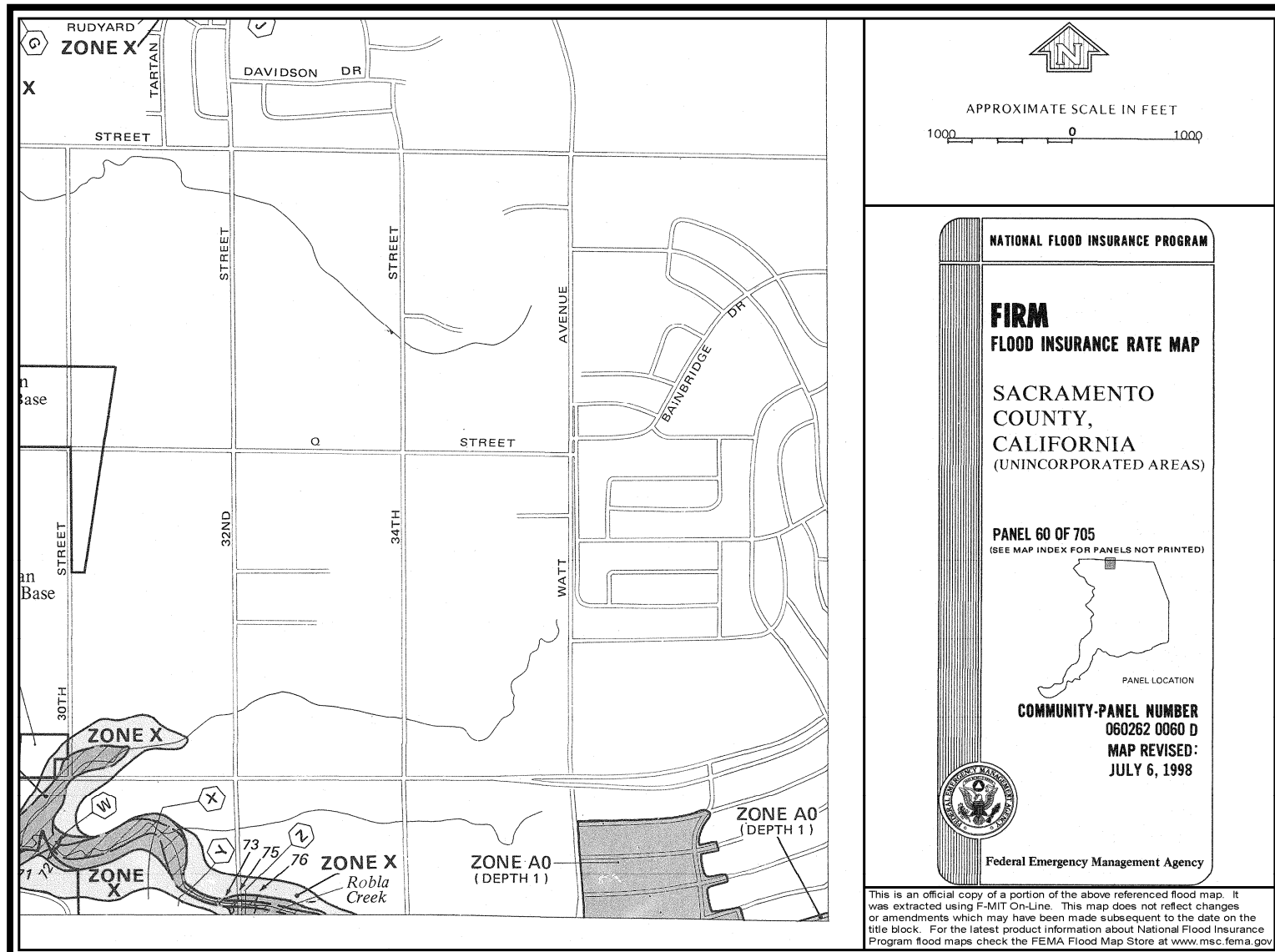


Plate DH-3: FEMA Map for North Highlands Town Center District and Surroundings

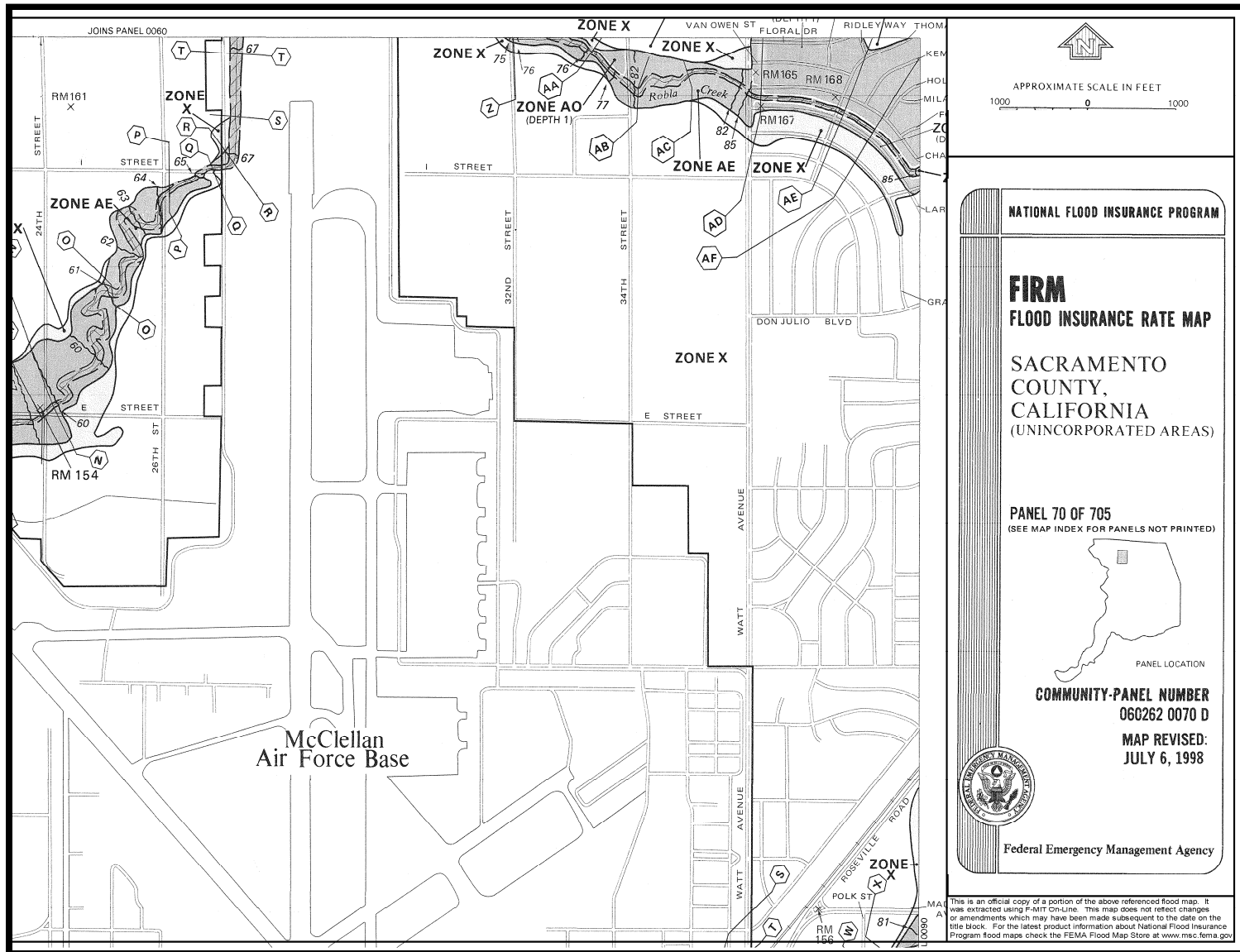
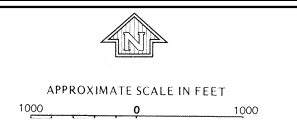
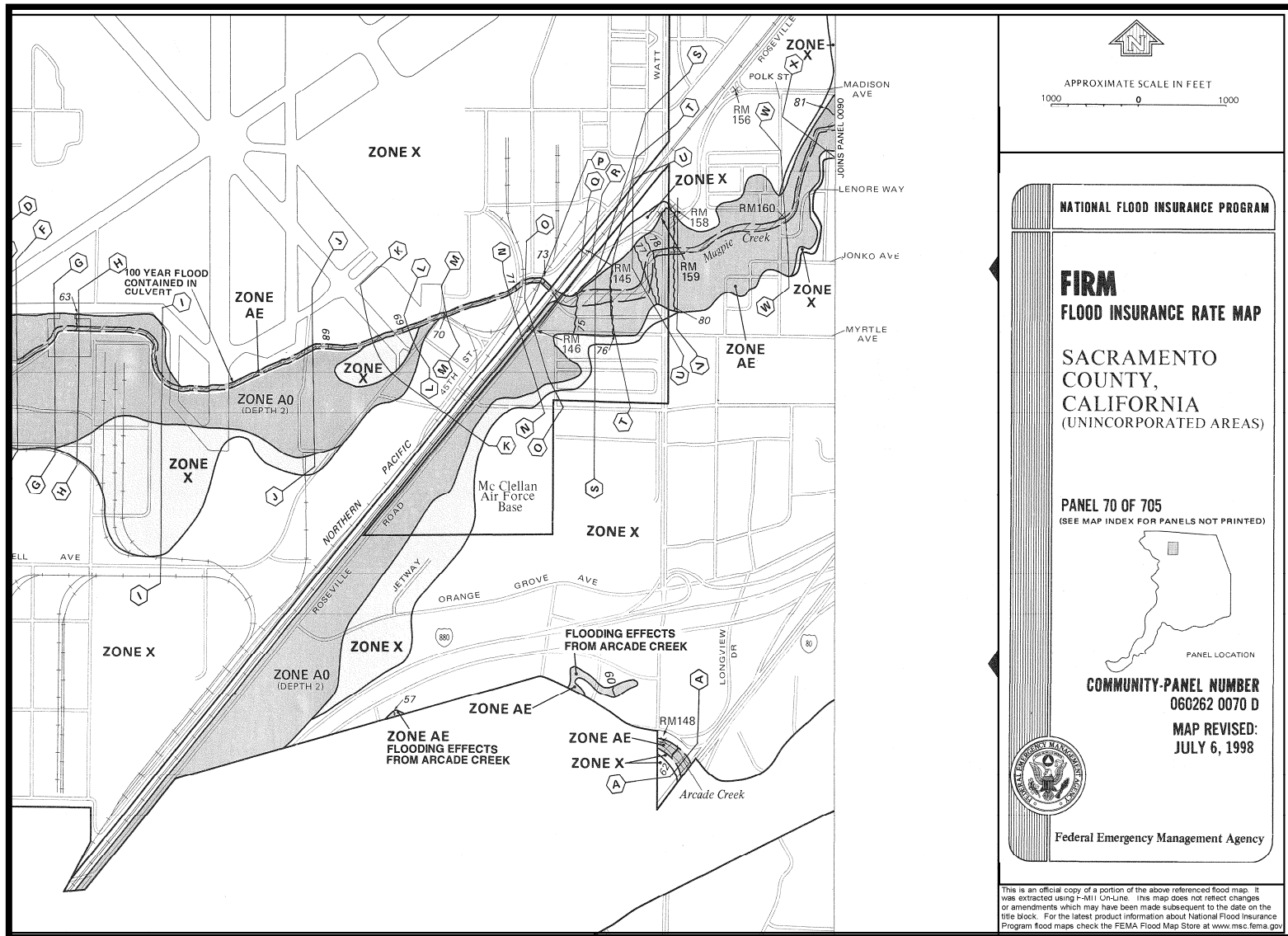


Plate DH-4 FEMA Map for Triangle Gateway District and Surroundings



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

SACRAMENTO COUNTY, CALIFORNIA (UNINCORPORATED AREAS)

PANEL 70 OF 705  
(SEE MAP INDEX FOR PANELS NOT PRINTED)



COMMUNITY-PANEL NUMBER  
060262 0070 D

MAP REVISED:  
JULY 6, 1998



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-M-I Un-Units. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

represent areas that convey trunk drainage (over 30 acres) or areas with existing pipe drainage that may become more densely urbanized in the future. The four sheds are shown in Plate DH-1.

Per the drainage study, the following is a description of the four drainage sheds:

Southern Shed – this shed is bounded by Interstate 80, North Watt Avenue and Roseville Road and is a fully developed drainage system. This shed is largely commercial/industrial land use.

Central Shed – this shed is bounded by Roseville Road and Freedom Park Drive, and is a fully developed drainage system. The area east of North Watt Avenue is residential, while the area west is largely commercial.

Robla Creek Shed – this shed is bounded by Freedom Park Drive and Elkhorn. The area east of North Watt is mainly developed while the west side consists mainly of rural ditches draining to Dry Creek.

Northern Shed – this shed is bounded by Elkhorn Blvd. and Antelope Road, and like the Robla Creek shed is largely developed on the east side of North Watt while the west side is mainly undeveloped with ditches and channels draining in to Dry Creek.

The drainage system consists of a trunk line along North Watt in the Triangle Gateway District and the Elkhorn District, and a combination of public and private drainage facilities serving the remainder of the area. The west side of Watt Avenue has large areas of undeveloped land, where open channels and drainage swales are the main drainage. The west side of North Watt was developed in the 1980's while the residential areas on the east side were developed during the 1960's.

#### *CONDITION OF EXISTING DRAINAGE INFRASTRUCTURE*

To determine which drainage facilities need to be upgraded/ replaced, Sacramento County Drainage Maintenance Engineering (DME) staff completed the following tasks:

- Reviewed the complaint and maintenance history for each of the parcels within the study area.
- Researched the Television Inspection (TVI) server for existing inspections within the area.
- Conducted field inspections to verify storm drain mapping. Facility types, condition, locations, etc., were all verified. If information could not be verified, TVI order was placed.
- Updated facility maps to reflect revised information.

- Reviewed all information gathered to identify needed follow-up.
- Created maps (north and south areas) showing all needed action (cleaning, repair or replacement of existing facilities).
- Created data spreadsheets with maps showing recommended upgrades and TVI requests.

DME staff determined that a significant portion of the mainline system within the Corridor Plan area is in good working condition. A total of 448 inlets and laterals were identified within the project area. Out of the 448 facilities within the project site, DME recommended that 143 facilities be scheduled for future upgrades due to size and/or condition.

DME staff did note that 49 service calls within the project area have been received. Many times these types of calls are related to roadway flooding due to blocked inlets. However, DME staff discovered that 15 of the service calls were related to facilities that need future upgrades.

## RELEVANT PROPOSED CORRIDOR PLAN POLICIES

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The Corridor Plan provides specific goals and policies that are intended to address issues associated with drainage and stormwater quality within the Plan area. The following general goal is stated within the “Public Realm Design” chapter of the Plan, which is intended to guide development within any outdoor spaces that are accessible to the public, whether privately or publicly owned:

Goal 5.2 Incorporate Low Impact Design principles in streetscapes, parking lots, parks, greenways, and other suitable areas to improve water quality, reduce the demand for irrigation, and more efficiently use stormwater runoff.

The following policies support this goal:

Policy 5.1 Public spaces shall conform to the standards expressed in the Stormwater Quality Design Manual, sponsored by the Sacramento Stormwater Quality Partnership.

Policy 5.2 Streets shall be designed as “green streets,” using Low Impact Design stormwater detention techniques, whenever feasible.

The Corridor Plan embraces the “green” streets concept. Impervious surface areas are substantially reduced in the green streets concept and replaced with planting areas. As a consequence of adding planting areas, ambient air temperatures are decreased by providing shade. Water quality is improved due to the biofiltration that occurs in the

planting areas, and due to the reduction in the volume and rate of water flow and fine sediment erosion flowing to the sewer system.

In addition to policies and guidelines related to the public areas of the Plan, the Corridor Plan also recommends that Low Impact Development techniques for managing stormwater drainage be incorporated within residential neighborhoods. Additionally, the plan calls for greenway buffers along Roseville Road and Magpie Creek to accommodate “stormwater drainage filters” and pedestrian and bike trails. The Plan also states that Dry Creek and Robla Creek should be restored to their natural functions of managing stormwater runoff, improving water quality, and serving as habitat areas for native plant and riparian species.

## REGULATORY SETTING

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### FEDERAL

#### *FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)*

FEMA maintains and updates the National Flood Insurance Program maps, called the Federal Insurance Rate Map (FIRM), that define areas of federal flood hazard. In Sacramento County and elsewhere the floodplains are identified based on U.S. Army Corps of Engineers (Army Corps) studies. FIRM maps denote the location of the federal 100-year flood area, 500-year flood area, and the Base Flood Elevation. In a 100-year floodplain, there is a 1% chance of flooding in a given year, and in a 500-year floodplain, there is a 0.2% chance of flooding in a given year. If an area is within a 100-year floodplain, flood insurance is required by most mortgage companies. FEMA is also responsible for the accreditation of levee systems (certification is by the Army Corps).

Not all 100-year floodplains are mapped by FEMA, because the focus of the FEMA FIRM maps is to provide information for insurance programs. Areas that have very little development that would be at risk from flooding, such as rural areas and wilderness areas, typically are not mapped. In Sacramento County, some of the rural areas of the eastern part of the County with watersheds that are generally less than 1 square mile in size have not been mapped by FEMA. Areas not mapped by FEMA, or areas where there are additional site-specific constraints that change the shape of the floodplain, are referred to as local floodplains in this EIR.

#### *CLEAN WATER ACT*

The Clean Water Act (CWA) is the Federal regulation covering surface water quality – it does not address either groundwater or water quantity. Surface waters protected by the CWA must either be navigable or hydrologically connected to a navigable water. The provisions of the CWA are administered and regulated primarily by the Environmental Protection Agency (EPA), the California EPA (Cal EPA), the Army Corps, and the State

and Regional Water Boards. Under the “umbrella” of Cal EPA, the State and Regional Water Boards are responsible for administration of the National Pollutant Discharge Elimination System program, which deals with stormwater pollution from construction, industrial areas, and municipal areas. The Army Corps is responsible for issuance of the CWA Section 404 permit, which deals with the discharge of dredged or fill material in a surface water, and the State and Regional Water Boards are responsible for issuance of the CWA Section 401 permit, which covers the same activity. Section 303(d) of the Clean Water Act (CWA) also requires States to identify waters that do not meet water quality standards, and to develop plans to address polluted water bodies on the 303(d) list.

## STATE OF CALIFORNIA

### *PORTER-COLOGNE WATER QUALITY ACT*

Porter-Cologne is enacted as part of the California Water Code, and is intended to protect the quality of waters within the State. Porter-Cologne covers the same issues as the Federal Clean Water Act (see above), but is specific to the needs and objectives of the State. Waters protected by the Clean Water Act must be navigable or hydrologically connected to navigable waters, whereas Porter-Cologne does protect these so-called “isolated” waters. The State Water Resources Control Board (Water Board) and the Regional Water Quality Control Boards (Regional Water Board) are responsible for the coordination and control of water quality protection efforts related to Porter-Cologne.

## LOCAL

### *SACRAMENTO COUNTY DEPARTMENT OF WATER RESOURCES*

Not all floodplains are mapped by FEMA. Though not mapped by FEMA, these local 100-year floodplains are still identified by the Sacramento County Department of Water Resources (County DWR) and regulated by the provisions of the Sacramento County Floodplain Management Ordinance, Improvement Standards, and Local Floodplain Management Plan. Local floodplains in the County are typically mapped either in response to an area having flooding problems, or in response to a request by a property owner to make modifications to their parcel. County DWR staff investigate the property and either decide that there is sufficient existing information to determine the floodplain elevation on the property or that a drainage study is required before a determination can be made.

### *SACRAMENTO COUNTY LAND GRADING AND EROSION CONTROL ORDINANCE*

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to prohibit the unauthorized discharge of pollutants from a point source to U.S. waters. The County of Sacramento has obtained a Municipal Stormwater NPDES permit from the Central Valley Regional Water Quality

Control Board under the requirements of the Clean Water Act to reduce pollutants found in urban stormwater runoff to the maximum extent practicable. The County complies with this permit by developing and enforcing ordinances and requirements to reduce the discharge of sediments and other pollutants in runoff from areas within the County.

Sacramento County must verify compliance with permit requirements by monitoring effluent, maintaining records, and filing periodic reports. A provision of the NPDES permit is the requirement that Sacramento County develop a Construction Site Management Program. The Construction Site Management Program is intended to help protect the water quality of surface waters by minimizing the amount of sediment runoff from a construction site. This is being accomplished by enforcement of the existing County Land Grading and Erosion Control Ordinance.

The project will be required to comply with the Sacramento County Land Grading and Erosion Control Ordinance (Sacramento County Code Ch. 16.44). The ordinance was established to minimize damage to surrounding properties and public rights-of-way; limit degradation to the water quality of watercourses; and curb the disruption of drainage system flow caused by the activities of clearing, grubbing, grading, filling, and excavating land. The ordinance establishes administrative procedures, minimum standards of review, and implementation and enforcement procedures for the control of erosion and sedimentation that are directly related to land grading activities.

In addition to complying with the County's ordinances and requirements, construction sites disturbing one or more acres are required to comply with the State's General Stormwater Permit for Construction Activities. The Construction General Permit is issued by the State Water Resources Control Board and enforced in Sacramento County by the Regional Board. Coverage is obtained by submitting a Notice of Intent to the State Board prior to construction. The General Permit requires preparation and implementation of a site-specific Stormwater Pollution Prevention Plan that must be kept on site at all times for review by the State inspector.

#### *SACRAMENTO COUNTY GENERAL PLAN*

The County General Plan contains policies in the Conservation and Safety Elements to preserve and protect surface water quality in order to promote a healthy aquatic environment which is safe for public use and enjoyment and to minimize the loss of life, injury, and property damage due to flood hazards.

The Sacramento County General Plan policies that are pertinent to hydrology and water quality and flooding are policies CO-24 ~~CO-30~~ through CO-31 ~~CO-47~~ and SA-5 through SA-21. These policies are intended to support the stated goals of the Water Quality and Flooding Sections of the General Plan which are:

Surface ground water quality which is protective of beneficial uses of Waters of the State, is safe for public use and enjoyment and promotes a healthy aquatic environment.



Minimize the loss of life, injury and property damage due to flood hazards.

The policies in the Conservation and Safety Elements that support the County's water quality and flooding goals and are relevant to the project are as follows:

- **CO-24. Comply with the Sacramento Areawide National Pollutant Discharge Elimination System Municipal Stormwater Permit (NPDES Municipal Permit) or subsequent permits, issued by the Central Valley Regional Water Quality Control Board (Regional Board) to the County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, Rancho Cordova, and Galt (collectively known as the Sacramento Stormwater Quality Partnership [SSQP]).**
- **CO-25. Support the preservation, restoration, and creation of riparian corridors, wetlands and buffer zones.**
- **CO-26. Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.**
- **CO-27. Support surface water quality monitoring programs that identify and address causes of water quality degradation.**
- **CO-28. Comply with other water quality regulations and NPDES permits as they apply to County projects or activities, such as the State's Construction General Permit and Aquatic Pesticides Permit.**
- **CO-29. Continue to support the County's participation in regional NPDES Municipal Permit compliance activities through collaborative efforts such as the Sacramento Stormwater Quality Partnership.**
- **CO-30. Require development projects to comply with the County's stormwater development/design standards, including hydromodification management and low impact development standards, established pursuant to the NPDES Municipal Permit.**
- **CO-31. Require property owners to maintain all required stormwater measures to ensure proper performance for the life of the project.**
- ~~CO-30. Provide important water quality benefits, preserving and, where possible, creating or restoring areas such as riparian corridors, wetlands and buffer zones.~~
- ~~CO-31. Limit disturbances of natural water bodies and natural drainage systems caused by development and infrastructure improvements, including roads, highways, bridges and flood control.~~
- ~~CO-32. Development shall not occur in areas that are particularly susceptible to erosion.~~

- ~~○ CO-33. Promote on-site infiltration as a development design strategy based on soil and other site conditions, and where groundwater quality will not be adversely affected.~~
- ~~○ CO-34. For new development and significant redevelopment projects:
  - ~~● Encourage designs which minimize impervious and directly-connected impervious surfaces, which are known to contribute to water quality degradation in downstream receiving waters.~~
  - ~~● Require pollutant source controls in all cases and treatment controls where applicable, to reduce pollutants in runoff to the maximum extent practicable.~~
  - ~~● Require control of the post-development peak storm water run-off discharge rates and velocities to prevent or reduce downstream erosion, and to protect stream habitat.~~~~
- ~~○ CO-35. Implement a program to ensure that stormwater quality treatment facilities installed during development are maintained to ensure optimum pollutant removal performance for the life of the project.~~
- ~~○ CO-36. Community and specific plans shall specify urban runoff control strategies and requirements, consistent with Master Drainage Plans and Public Work's urban runoff management program, for development in newly urbanizing areas and identify sites where retention and treatment are warranted consistent with discharge permit requirement and county-wide runoff measures.~~
- ~~○ CO-37. Establish controls to help ensure that the concentration and management of large animals on residential and agricultural-residential parcels does not contribute excessive nutrient concentrations in runoff to surface waters.~~
- ~~○ CO-38. Development, including infrastructure shall be designed, built and landscaped:
  - ~~● To minimize erosion during and after construction.~~
  - ~~● To minimize grading on slopes over 20 percent.~~~~
- ~~○ CO-44. Prohibit groundwater runoff and infiltration or the inclusion of infiltration devices and facilities from sites with activities that generate or handle pollutants, such as gas station.~~
- ~~○ CO-47. Educate Sacramento County citizens and businesses about the importance and use of groundwater, ensuring its continued high quality, the actions degrade groundwater quality, and actions that can mitigate or prevent groundwater contamination.~~

- SA-5. A comprehensive drainage plan for major planning efforts shall be prepared for streams and their tributaries prior to any development within the 100-year floodplain defined by full watershed development without channel modifications. The plan shall:
  - Determine the future 100-year flood elevations associated with planned and full development of the watershed;
  - Determine the future 100-year floodplain boundaries for both flood elevations (planned and full development) based on minimum 2-foot contour intervals;
  - Assess the feasibility of gravity drainage into the existing flow line of the stream;
  - Assess the feasibility of alternative means of drainage into the stream;
  - Identify potential locations for sedimentation ponds and other stormwater treatment facilities;
  - Determine the minimum lowering of the stream bottom necessary and develop a channel design consistent with General Plan policies;
  - Determine the location and extent of marsh, vernal pool and riparian habitat;
  - Develop measures for protecting and mitigating natural habitat;
  - Develop measures for protecting and mitigating for federal and state listed species;
  - Develop measures to ensure vector abatement control;
  - Identify appropriate plant species to be included as part of the natural features of the comprehensive drainage plan.
- SA-~~14~~1412. The County shall require, **when deemed to be physically or ecologically necessary**, all new urban development **and redevelopment** projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.
- SA-~~14~~1513. The County shall regulate, through zoning and other ordinances, land use and development in all areas subject to potential flooding and prohibit urban uses on unprotected flood land.
- ~~SA-14. Sacramento County will participate with the City of Sacramento, the Army Corps of Engineers and other Federal, State and local governments and agencies to develop a plan to finance, develop and construct flood control project improvements to reduce flooding potential in Sacramento County.~~

- SA-~~16~~145. Deny creation of parcels that do not have buildable area outside the 100-year floodplain **unless otherwise allowed in the Floodplain Management Ordinance**. ~~The buildable area may be constructed by the placement of fill as long as it conforms to the Local Floodplain Management Plan.~~
- SA-~~17~~146. For residential zoning, the area outside of the 100 year floodplain must be contiguous or reasonably situated to provide buildable area for a residence and associated structures. **Examples of structures include swimming pools, sheds, barns, detached garages, and other outbuildings that are normally associated with residential development. There may be exceptions (such as the Delta area) as allowed in the Floodplain Management Ordinance.**
- SA-~~18~~147. Vehicular access to the buildable area of newly created parcels must be at or above the 10-year flood elevation. Exceptions may be made when the existing public street from which access is obtained is below the 10-year flood elevation. **There may be exceptions (such as the Delta area) as allowed in the Floodplain Management Ordinance.**
- SA-~~19~~148. ~~Watercourse crossings shall be minimized.~~ Creation of lots that require watercourse crossings for single lots, or that will likely encourage watercourse crossings to be built by property owners (lots with useable area on both sides of a watercourse) will not be allowed **unless a detailed hydraulic study is approved by Water Resources and there is found to be no adverse impact in accordance with the County Floodplain Management Ordinance.**
- SA-~~22~~24. Areas within a 100-year floodplain shall not be upzoned to a more intensive use unless and until a Master Drainage Plan is prepared that identifies areas of the floodplain that may be developed.

## SIGNIFICANCE CRITERIA

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According to the CEQA Guidelines, impacts may be significant if the Project results in one of the following:

1. A violation of any water quality standard or waste discharge requirement.
2. A substantial alteration of 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, siltation, and/or environmental harm on- or off-site.
3. Create or contribute runoff water that would provide substantial additional sources of polluted runoff. Changes in water quality would be considered substantial if the Project will not comply with the County NPDES Program, or

there is a net increase in any other pollution source associated with an impaired waterway (under Section 303d of the Clean Water Act).

4. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
5. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems.
6. Placement of 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.
7. Placement of structures within a 100-year flood hazard area that would impede or redirect flood flows.
8. Exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam.

## IMPACTS AND ANALYSIS

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### IMPACT: ALTERATION OF LOCAL DRAINAGE PATTERN AND EXPOSURE TO FLOOD RISK

#### *DRAINAGE SYSTEM CAPACITY ANALYSIS*

The Sacramento County Department of Water Resources DME conducted a preliminary Drainage System Capacity Analysis. The following discussions are based on and contain portions of the DWR prepared Drainage Study.

The Corridor Plan will result in increased density and more mixed use development within the project area, thus, the associated infrastructure should be sized to meet this need. Under existing conditions, the Corridor is largely developed and paved with the exception of a few areas west of Watt Avenue. Due to the high percentage of existing impervious (developed or paved) surface in the study area, DWR does not anticipate an increase to the amount of runoff entering the drainage system as development occurs. In fact, as developers utilize the low impact development strategies discussed in the Corridor Plan (see the “Relevant Proposed Corridor Plan Policies” section above), flows to the drainage system may decrease. For this reason, the capacity analysis was based on flows calculated using the current development pattern.

The drainage system capacity analysis consists of an assessment of the hydraulic capability of the drainage pipe system within the Corridor Plan area in order to identify facilities that do not meet the minimum Nolte Design sizing criteria in accordance with the County of Sacramento Improvement Standards. The Nolte Design standard

requires that drainage pipe systems are designed to convey approximately 0.3 to 0.5 cfs/acre (based on land use) while still maintaining a minimum of 1 foot of freeboard within the manholes.

The analysis revealed that only the Triangle Gateway District Center area and the Elkhorn District Center area have trunk facilities. The remainder of the area is served by a combination of public and private drainage systems. Drainage systems that are outside of County right-of-way or in drainage easements and that do not convey through drainage are privately maintained. These on-site storm drainage systems are often not designed to the same rigorous standards as otherwise required by the County, and should be reviewed by each project proponent as associated projects move forward.

The analysis of the pipe system was done using a computer pipe modeling program called XP – Storm and was limited to “trunk” facilities. Input information for the pipe modeling program includes the rate of rain runoff for a given watershed, and the size, slopes, and lengths of the drainage pipes. The rate of rain runoff was determined by utilizing LIDAR topographic information and aerial photographs to find the shed areas and land uses respectively. This information was then input into the computer program SacCalc to obtain the rate of rain runoff for the individual water sheds. The pipe parameters were mostly gleaned from County of Sacramento record drawings, but some had to be assumed because of incomplete records.

The modeling results are summarized in the attached drainage study (Appendix F). Utilizing the design standard discussed above, if the freeboard exceeded 1 foot, the facility was considered adequate. The model results indicate that the trunk facilities located with the Corridor Plan area are sufficiently sized to meet current improvement standards.

It should be noted that this assessment was performed using best available information. Any development projects within the Corridor Plan area will be required to provide current topographic information that could alter the results of this pipe analysis or trigger other design requirements pursuant to the County of Sacramento Floodplain Management Ordinance.

#### *FLOODPLAIN*

The project area is located largely outside of any floodplain (Zone X) where the chance of flooding is considered minimal. However, the Corridor plan area contains areas mapped within FEMA Zones Shaded X, AO and AE, which are special flood hazard areas. Development within floodplains can be subject to flooding and can also alter flows or flood levels within the floodplain to areas outside of the floodplain in the pre-developed condition. Although the area within the Corridor that is located within a floodplain is small compared to areas not subjected to flooding, any new development in areas subjected to potential flooding would be required to meet Sacramento County Improvement Standards and Floodplain Management Ordinance minimum pad/floor elevations.

*DRAINAGE INFRASTRUCTURE UPGRADES*

The Drainage Study determined that no major drainage system capacity issues were identified in the Corridor area that would require upgrades to the existing trunk infrastructure. The modeling showed that the trunk system is able to handle design flows, so no system upgrades are planned at this time. Based on the DME system analysis, 143 drain inlets and laterals have been identified as needing replacement. The drain inlets will be replaced to the current standard which is a Type B inlet, and the laterals will be replaced with 12-inch pipes.

Drainage infrastructure upgrades will be determined for future individual projects in accordance with Sacramento County Improvement Standards. Drainage studies may be required for proposed development projects to identify and propose solutions to drainage problems resulting from the proposed project. The Department of Water Resources will evaluate future projects on a case-by-case basis.

*DRAINAGE AND FLOOD RISK CONCLUSIONS*

At this time, there are no specific plans for development or redevelopment within the plan area. Because development is considered nebulous, precise impacts to the drainage system cannot be fully analyzed or quantified at this time. However, DWR has indicated that the existing drainage concerns in the area are minor and pose no serious safety concerns or flood hazards. Future development/redevelopment within the Corridor will be coordinated with DWR to meet the specifications of the Sacramento County Improvement Standards and the Sacramento County Floodplain Management Ordinance. With conformance with applicable standards, future development associated with the Corridor will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity; project impacts related to drainage and flooding are **less than significant**.

*MITIGATION MEASURES*

None required.

IMPACT: IMPACTS ON WATER QUALITY FROM STORMWATER RUNOFF, EROSION, OR SPILLS

*REGULATORY CONSIDERATIONS*

New development and redevelopment projects are required to incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law (discussed above in the “Regulatory Setting” discussion). Future proposed projects within the Corridor may implement applicable stormwater quality measures pursuant to and consistent with the *Stormwater Quality Design Manual for the Sacramento & South Placer Regions*. The following are some of the current stormwater quality requirements applicable to specific development types:

Commercial and multi-family residential:

If the total area of the developed or redeveloped impervious surfaces (building rooftop, flat work, and parking areas) equals or exceeds the threshold specified in the County's NPDES permit, proposed projects are required to incorporate permanent stormwater quality treatment measures in conformance with applicable County ordinances & standards, and state and federal law.

RD4 to RD7 residential development:

If the total area of the developed or redeveloped project area equals or exceeds the trigger in the County clean water permit, incorporate permanent stormwater quality treatment measures in conformance with applicable County ordinances & standards, and state and federal law.

Industrial:

Industrial facilities specified in the State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Industrial Activities, must file an NOI with the Central Valley Regional Water Quality Control Board to obtain coverage under the state's General Stormwater Permit for Industrial Activities. The requirements of this permit will likely affect site layout and design.

Gas Stations:

On-site source control measures shall be required for these projects in accordance with the latest version of the *Stormwater Quality Design Manual for the Sacramento & South Placer Regions*. Treatment control measures may also be required if applicable.

All on-site and public right of way drainage inlets:

Provide a permanent concrete stamp, or other permanently applied message to the satisfaction of DWR not including paint, which reads "No Dumping-Flows to Creek" or other approved message at each storm drain inlet.

*STORMWATER QUALITY ALTERNATIVES*

Stormwater has been identified as a major source of pollution for all waterbody types in the United States, and the impacts of stormwater pollution are not static; they usually increase with land development and urbanization. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located.



Low Impact Development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution. LID comprises a set of site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. These practices can effectively remove nutrients, pathogens, and metals from stormwater, and they reduce the volume and intensity of stormwater flows.

LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions. LID has been characterized as a sustainable stormwater practice by the Water Environment Research Foundation and others.

LID can be applied to new development, redevelopment, or as retrofits to existing development. LID has been adapted to a range of land uses from high density ultra-urban settings to low density development. The basic LID intention is to reduce the volume of runoff and capture surface pollutants from roofs and parking lots. LID won't eliminate the need for storm drain pipes, but if it is utilized on a widespread basis in a watershed, it could serve to reduce erosion in the open channel receiving waters. LID is usually accomplished by creating a series of smaller retention areas that allow localized filtration, rather than carrying runoff to a remote collection area.

The subject area has generally very tight soil, so LID design would have to be an adaptation of methods commonly used elsewhere in the Country such as:

**Bio-retention planters** typically consist of grass buffers, sand beds, ponding area for excess runoff storage, organic layers, planting soil and vegetation. Bio-retention areas may include so called rain gardens with hydrologically appropriate landscaping, tolerant of the captured pollutants.

**Vegetated swales** function as a stormwater quality treatment measure, and may even eliminate the need for some of the traditional on-site storm drain pipes. These swales can be incorporated into the on-site landscaping scheme. They use grasses or other vegetation to reduce runoff velocity and allow filtration, while high volume flows are channeled away safely to a quantity management facility or a drainage system. The effectiveness is related to velocity and length, allowing the appropriate contact time for the stormwater to be filtered by the grasses. Features like plantings and check-dams may be incorporated to further reduce water velocity and encourage filtration.

**Disconnected impervious areas** direct water flows collected from structures, driveways, or street sections, into separate localized landscaped cells instead of combining it in drainpipes with other runoff. Disconnecting the flow limits the velocity and overall amount of conveyed water that must be handled by on-site or end-of-pipe water quality and quantity facilities.

**Cistern collection systems** can be designed to store rainwater for dry-period irrigation, rather than channeling it to streams. Smaller tanks that collect residential roof drainage are often called "rain barrels" and may be installed by individual homeowners. Some collection systems are designed to be installed directly under permeable pavement areas, allowing maximum water storage capacity while eliminating the need for gravel beds.

**Permeable surfaces** can be used as LID measures and may include a subdrain to carry the water to one of the approved treatment measures. Such pavement surfaces are often considered for automobile parking areas to capture the vehicle drips.

**Proprietary devices** might be installed as stand-alone treatment facilities. There are various devices available in the market place, not all of which are allowed by the County, but could, on a case-by-case basis, be considered for pilot study purposes.

#### *STORMWATER TREATMENT IMPLEMENTATION*

For North Watt Avenue Corridor Plan, the stormwater quality requirements will be implemented at various phases once a development application is submitted, including:

- At the planning phases, the project applicant is required to submit a *Stormwater Quality Preliminary Compliance Form* that includes a description of the proposed stormwater measures that will be incorporated into the project. The form is reviewed by the stormwater staff and the applicant is contacted if revisions to the form are needed. In addition, the project is conditioned to incorporate the applicable stormwater quality measures in the conditions of approval for the project.
- At the CEQA review phase, the project's environmental document is reviewed by the stormwater staff to ensure inclusion of applicable stormwater quality language and mitigation measures.
- At the plan review phase, the proposed design of the stormwater quality measures is reviewed to ensure compliance with the County's design criteria. Detailed design criteria are included in the *Stormwater Quality Design Manual* that is published by the stormwater quality section ([www.sactostormwater.org](http://www.sactostormwater.org)). In addition, the project applicant is required to execute a Maintenance Covenant that is recorded with the deed of the property to ensure proper long term maintenance of the stormwater measures.

- In the post construction phase, the project owners are required to submit self certification reports annually to demonstrate that the stormwater measures on their sites are properly maintained and functioning.

#### *HYDROMODIFICATION MANAGEMENT*

Over the next two years, Sacramento County will be developing and implementing hydromodification management standards to minimize impacts to natural creek systems from changes to the hydrologic cycle resulting from the increased impervious surface from new development. At this time, DWR staff assumes that the North Watt Avenue study area will be exempted from these requirements due to the current level of development in the study area as well as the improved nature of the receiving drainage system (largely concrete lined). However, this assumption may change as the hydromodification management plan is finalized and approved by the Regional Water Quality Control Board.

#### *STORMWATER QUALITY CONCLUSIONS*

There are no specific development proposals associated with the proposed Corridor Plan; thus, like with drainage, determining definitive, quantifiable impacts associated with stormwater quality is impossible at this time. However, for future projects to meet stormwater quality requirements, the County encourages developers to consider low impact development strategies to minimize stormwater treatment needed, provide credits to developers to encourage transit-oriented and infill development, and encourage a “green streets” program to meet stormwater quality requirements by incorporating facilities in the right-of-way. These strategies, if successful, should help minimize stormwater quality costs to individual developments in the corridor.

Future projects will be required to adhere to all applicable stormwater quality standards. Conformance with applicable standards and regulations will ensure impacts of future development/redevelopment projects, associated with stormwater quality are **less than significant**.

#### *MITIGATION MEASURES*

None required.

# 8 TRAFFIC AND CIRCULATION

## INTRODUCTION

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This chapter describes traffic and circulation within the project area and vicinity; evaluates impacts based on existing and cumulative scenarios; and recommends mitigation measures to reduce or eliminate significant impacts. The discussion contained in this chapter is based upon Fehr & Peers' Transportation Impact Study for the North Watt Avenue Corridor Plan (December 2010; Appendix G).

## TRAFFIC AND CIRCULATION SETTING

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### *EXISTING VEHICULAR TRANSPORTATION SYSTEM*

The North Watt Avenue Corridor area is located along Watt Avenue which is a major thoroughfare in Sacramento County. Watt Avenue connects future communities in Placer County (Placer Vineyards and Riolo Vineyards) with Sacramento County communities of Vineyards, Antelope, North Highlands, Arden Arcade, and Elk Grove. It also crosses three major east-west highways: Interstate 80 (I-80), Business I-80, and U.S. Highway 50. In addition to Watt Avenue, smaller roadways extend into the Plan area from the adjacent communities that surround the site. Listed below are the general location and access routes to the various districts that make up the Plan area.

**Elkhorn District:** The Elkhorn District is bordered by Antelope Road to the north and I street to the south. Elkhorn Boulevard bisects the district and its intersection with Watt Avenue is the geographical center of the district and where the "District Center" will be located. Elkhorn Boulevard and Antelope Road are major east-west roadways within the project area. Several small residential streets terminate onto Watt Avenue and provide access to the Corridor from established neighborhoods located east of Watt Avenue.

**Town Center District:** The primary access point for the Town Center District is from Watt Avenue. The District is bordered by Peacekeeper Way to the south and I street to the north. Other roadways that provide access to this district are Freedom Park Drive, Palm Drive, and James Street. As with the Elkhorn District, the Town Center District can also be accessed by adjacent neighborhoods to the east via small residential streets.

**Triangle Gateway District:** The Triangle Gateway District straddles Watt Avenue which serves as the primary access roadway to the district. Roseville Road also

provides access to the district. Other roadways within the Triangle Gateway District are Myrtle Avenue, Winona Way, Orange Grove Avenue, and various small courts.

#### *PLANNED VEHICULAR TRANSPORTATION SYSTEM*

The Corridor Plan includes a “Circulation” chapter which outlines the circulation framework envisioned for the Corridor Plan area. The Plan notes that the circulation element is utilized in conjunction with the land use plan in order to provide a balanced approach to developing the project area. The chapter provides general policies and goals, transit oriented goals and policies, bicycle and pedestrian goals and policies, and alternative transportation goals and policies. A circulation concept plan (see Plate TC-1) based on a developed street hierarchy (i.e. thoroughfares, arterials, etc) is also included in the Plan. The Plan notes that the following principles will guide the location and patterning of the vehicular transportation system within the Corridor:

- New streets and upgrades to existing streets should accommodate the full range of mobility options suitable to the type of street, as identified in the street sections. To accomplish this, it may be necessary for some streets to function at Level of Service F.
- New streets should be designed as a modified grid system, with block perimeters no greater than 400 feet.
- Existing streets should be extended, where warranted, to improve east-west connectivity through the Corridor Plan area. However, many of the streets on the west side of Watt Avenue will be local-serving only, since signalized cross-traffic should be minimized on Watt Avenue to increase efficiency.
- Watt Avenue and 34<sup>th</sup> Streets will convey regional and local north-south traffic. New north-south streets should be designed to carry local traffic and terminate at major roads, parks, or open space corridors to discourage use as an alternative to Watt Avenue and 34<sup>th</sup> Streets.
- New streets should respect the location of existing creek corridors whenever possible. Creeks should not be undergrounded or rerouted simply to accommodate new street alignments. Where a creek or drainage corridor has been modified and does not represent a desirable alignment for the creek itself, this may be modified to enhance the sustainability of the open space corridor.

In addition to the circulation plan, shown in Plate TC-1, and the above listed principles, the Corridor Plan also provides one near-term circulation improvement plan for Watt Avenue and 34<sup>th</sup> Street and three long term alternative circulation improvement plans for the Corridor Plan area.

The near-term improvement plan for Watt Avenue is lane and streetscape enhancements as depicted in Plate TC-2. Essentially, the section of Watt Avenue that is four lanes would be widened to six lanes and northbound and south bound traffic would be separated by a raised, landscaped median. Additionally, transit improvements would

Plate TC-1: North Watt Corridor Circulation Concept Plan

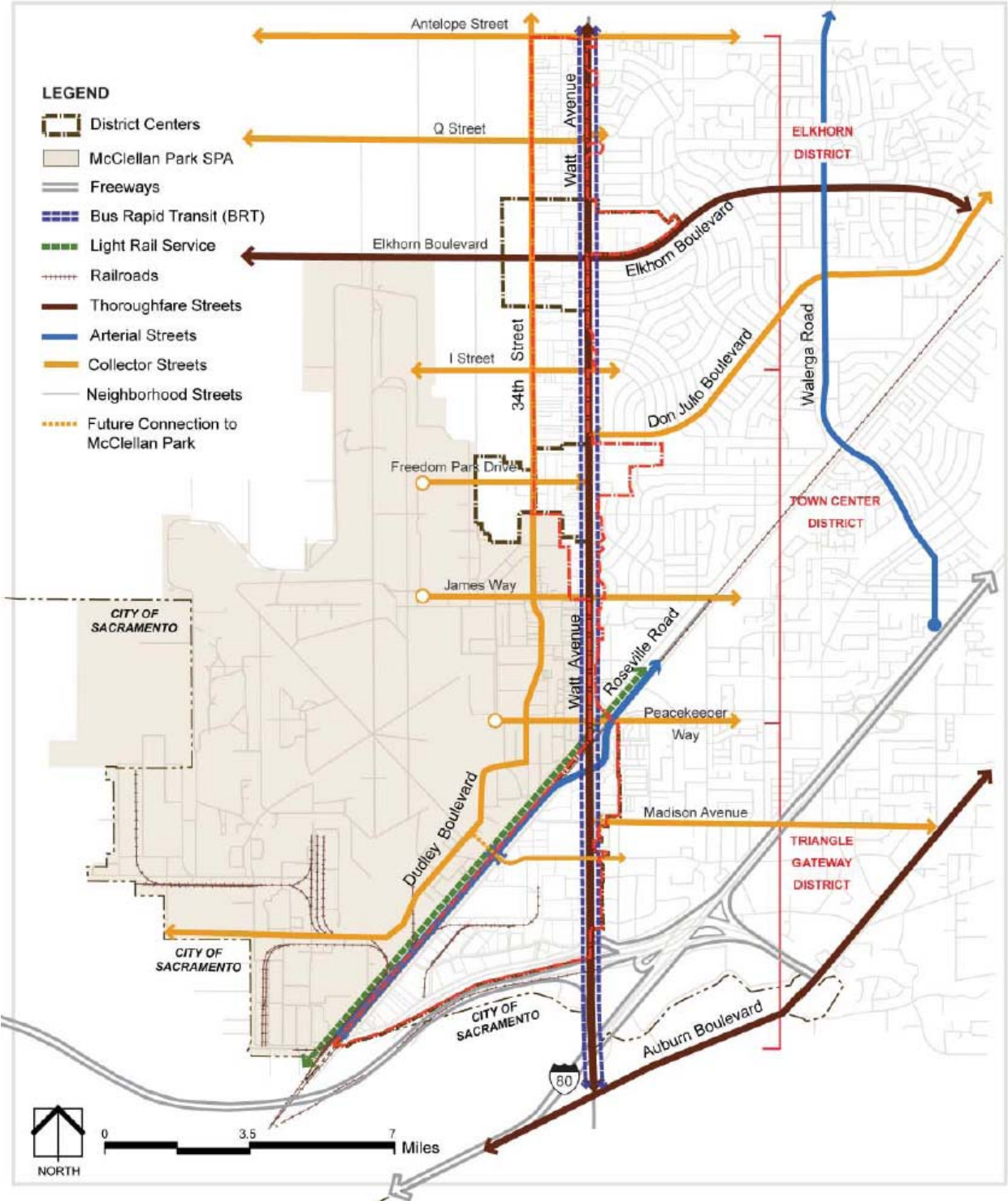
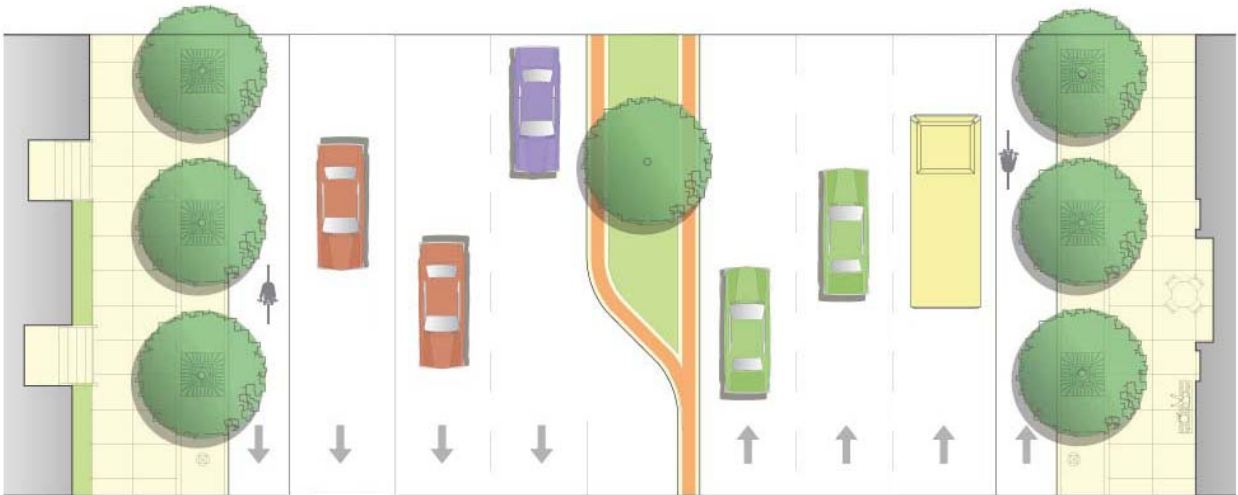
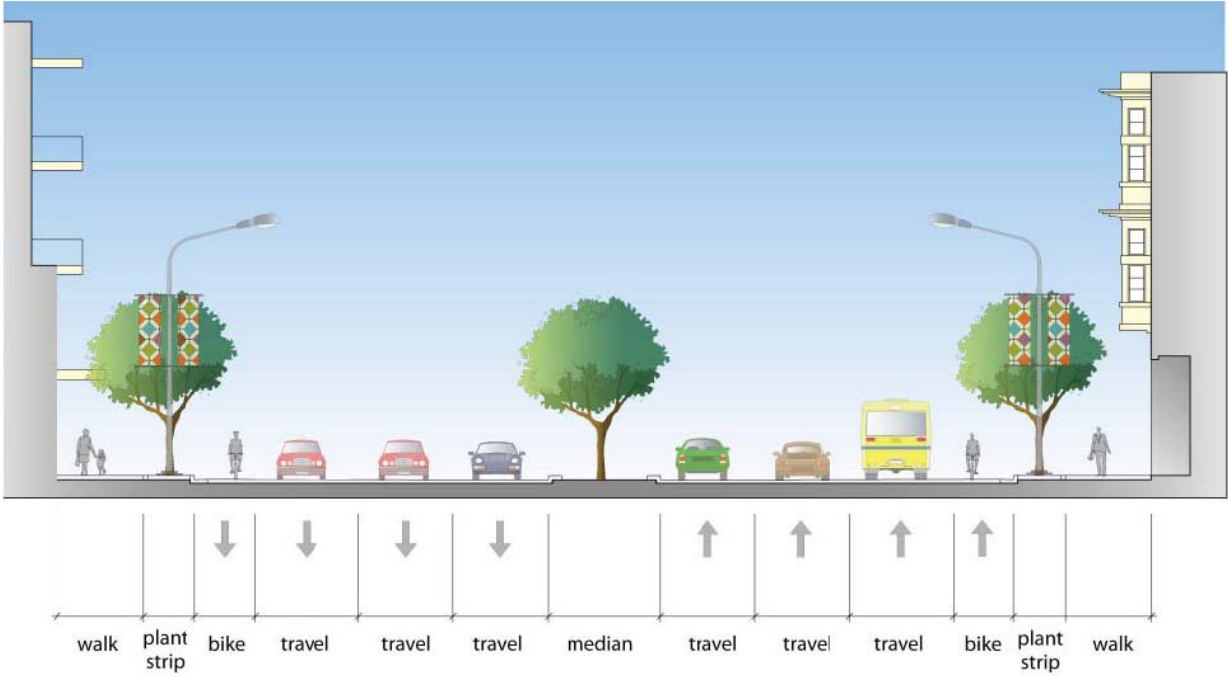


Plate TC-2: Near-Term Watt Avenue Improvement Concept Plan



include transit signal priority and queue jumps. Pedestrian improvements would include continuous sidewalks on Watt Avenue and on-street class II bicycle lanes would be installed. Under the near-term alternative, 34<sup>th</sup> Street would consist of two travel lanes, on street Class II bike lanes, a landscape strip, and continuous sidewalks, as depicted in Plate TC-3

The Corridor Plan also introduces three long-term alternatives which are included as transportation concepts that were developed in response to public input and in coordination with County staff. The Corridor Plan notes that the long term alternatives may be revisited at a latter date should the market demand them. The three alternatives include bus rapid transit (BRT) on Watt Avenue and/or 34 Street, and provide three concept scenarios of how BRT would be included in the project area. Since the Corridor Plan specifically defers these improvements to a later date, this EIR does not analyze their impacts.

It should be noted that the Corridor Plan does not request specific entitlements to build the near-term improvements on Watt Avenue or 34<sup>th</sup> Street, nor does it request entitlements to build improvements as shown on the “Circulation Concept Plan” diagram. It is assumed that these improvements will occur as individual development moves forward, and specific impacts will be assessed at that time; however, the traffic study did assume that the near-term improvements on Watt Avenue and 34<sup>th</sup> Street were completed at the “Existing Plus Project” scenario since it can be assumed that the improvements will occur if the Corridor, as planned, is developed.

### **SMART GROWTH STREET GENERAL PLAN DESIGNATION**

The proposed project includes a request for a General Plan Amendment to change the roadway designations for Watt Avenue, within the project area, to a Smart Growth Street.

The objectives of the SGS designation is to develop roadways with “green infrastructure” to the greatest extent feasible; to create and/ or improve community identity by coordinating improvements to the streetscape and surrounding corridor to achieve a consistent look and feel or carry through a specific “theme;” to create an “outdoor room” along the street to establish a sense of place and improve the comfort and overall experience of all users, particularly pedestrians and bicyclists; and to create communities and corridors using a holistic perspective when considering land uses and the design context of street and corridor improvements.

Proposed policies related the Smart Growth Street designation total 15. The policies detail requirements for development within areas designated as Smart Growth Streets ranging from implementing Low Impact Design drainage features to improving community identity. The policies that affect traffic and are most relevant to the North Watt Avenue Corridor Plan are as follows:

- Smart Growth Street Policy Number 7: A Smart Growth Street designation requires a focused and holistic corridor planning analysis that considers highly coordinated and



interconnected land uses and transportation infrastructure within the corridor while also considering the impacts to surrounding communities and the natural environment.

- Smart Growth Street Policy Number 8: On a Smart Growth Street, the County shall strive to maintain operations and capacity on urban roadways and intersections at LOS E or better, unless maintaining this LOS would, in the County's judgment, be infeasible and conflict with the achievement of other Smart Growth Street objectives. Congestion in excess of LOS E may be acceptable provided that provisions are made to improve overall mobility, reduce overall VMT and/or promote non-automobile transportation.
- Smart Growth Street Policy Number 9: Where a Smart Growth Street planning analysis indicates that a roadway improved to its general plan designation will be congested in excess of LOS E, mobility impacts fees may be assessed to the properties within the Smart Growth Street area. Such mobility fees shall be fairly apportioned to the properties and shall be sufficient in amount to improve other Smart Growth Street objectives such as improvements that would enhance pedestrian, bicycle, transit, other modes of mobility, and public realm amenities.
- Smart Growth Street Policy Number 10: Evaluation of Smart Growth Street corridors and development within those corridors shall utilize multi-modal level of service standards, including pedestrian, bicycle, and transit modes of travel in addition to motor vehicle travel, to support and encourage overall mobility through improvement to all modes of travel.
- Smart Growth Street Policy Number 11: Smart Growth Street planning efforts shall develop a comprehensive strategy to significantly reduce the total number of driveways along the roadway, including specific measures to ensure implementation, such as requiring cross-access and reciprocal parking agreements between adjacent property owners.
- Smart Growth Street Policy Number 13: Planning processes for Smart Growth Street corridors shall consider road diets, pedestrian and bicycle enhancements, traffic calming measures and other feasible measures to create a corridor that equitably accommodates all users and modes of travel.

In summary, the Smart Growth Street policies state the County should strive to maintain LOS E or better. On designated Smart Growth Streets, however, the County may conclude that widening or other improvements needed to maintain LOS E or better is infeasible. In lieu of this infeasible widening or other improvements, LOS worse than E (i.e., LOS F) may be considered acceptable if overall mobility is improved. Overall mobility is defined as including non-automobile transportation.

*EXISTING BICYCLE AND PEDESTRIAN SYSTEM*

Existing bicycle facilities and sidewalks are found throughout the project area, although some of bike lanes and sidewalks are discontinuous in nature. Currently Class II bike lanes are located along Antelope Road, Watt Avenue (discontinuous), and Elkhorn Boulevard. Other Class II bike lanes that are within ½ mile of the project area and have bike lane/route connectivity to the site are on Roseville Road, Airbase Road, and Larchmont Drive. These bike lanes connect to a number of local and regional bike lanes and trails that run throughout the greater Sacramento community that are greater than a half mile from the project site. These facilities include but are not limited to Class II bike lanes on Walerga Road to the east, 28<sup>th</sup> street to the west and Elverta Road to the north. In addition to the Class II bike lanes, the project site has connectivity to Don Julio Boulevard and Hillsdale Boulevard which contain Class III bike routes. There are no Class I bike paths in the immediate project site; however there is a Class I bike path at the I-80 pedestrian and bicycle over-crossing between Madison Avenue and Elkhorn Boulevard. (Refer to Plate TC-4 for the location of existing bicycle facilities). It should be noted that, in addition to the aforementioned bike facilities there may be some other bike lanes that are utilized within the project area. According to Sacramento County Department of Transportation staff (D. Klinker), these bike lanes are not developed to standards (are lacking signage or proper striping) and cannot be considered viable bike lanes. These bike lanes are not included in the provided exhibit.

Plate TC-3: Near-Term 34<sup>th</sup> Street Improvement Concept Plan

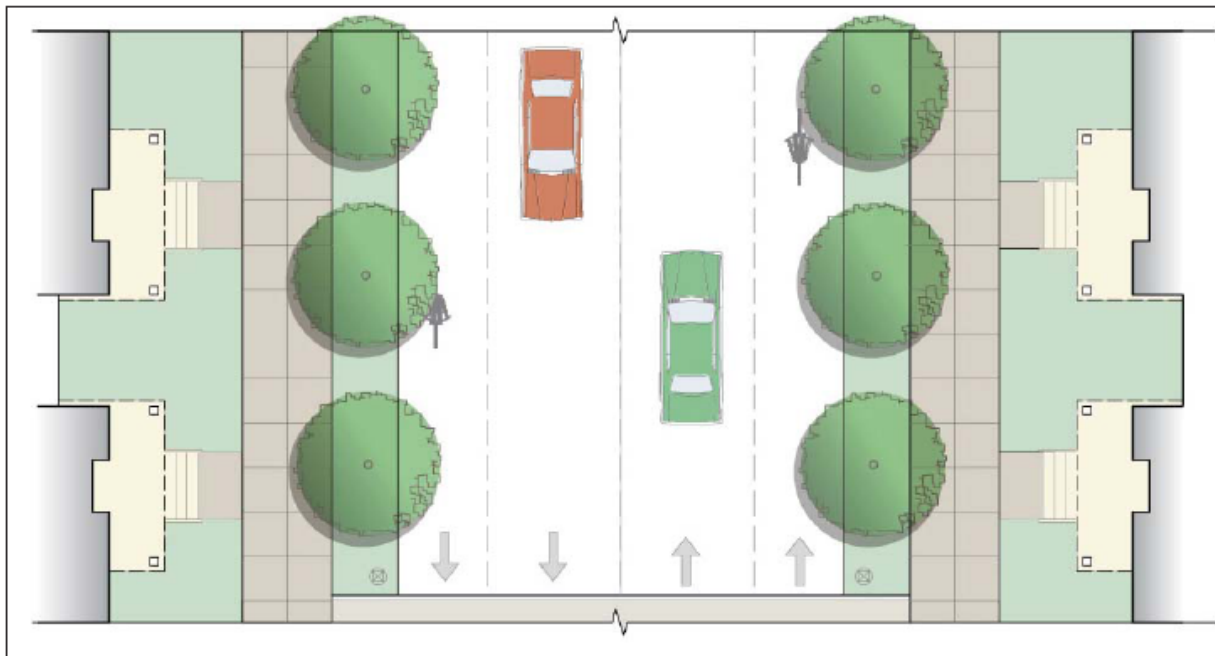
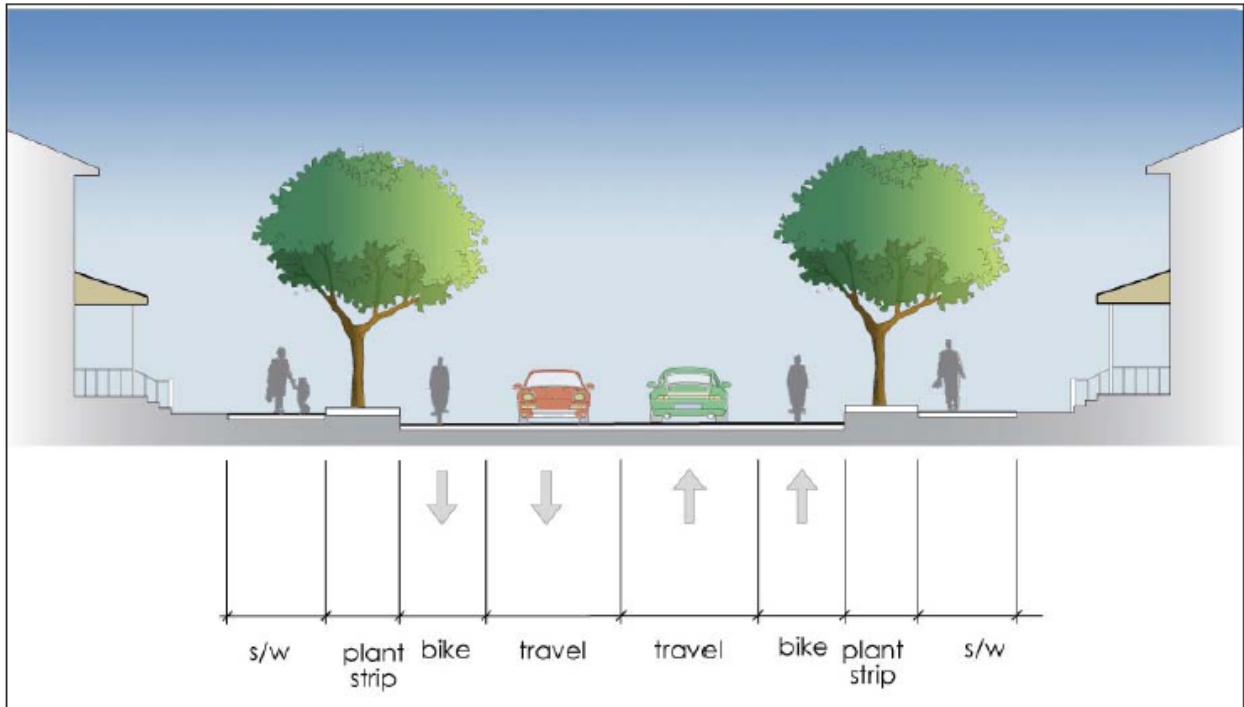
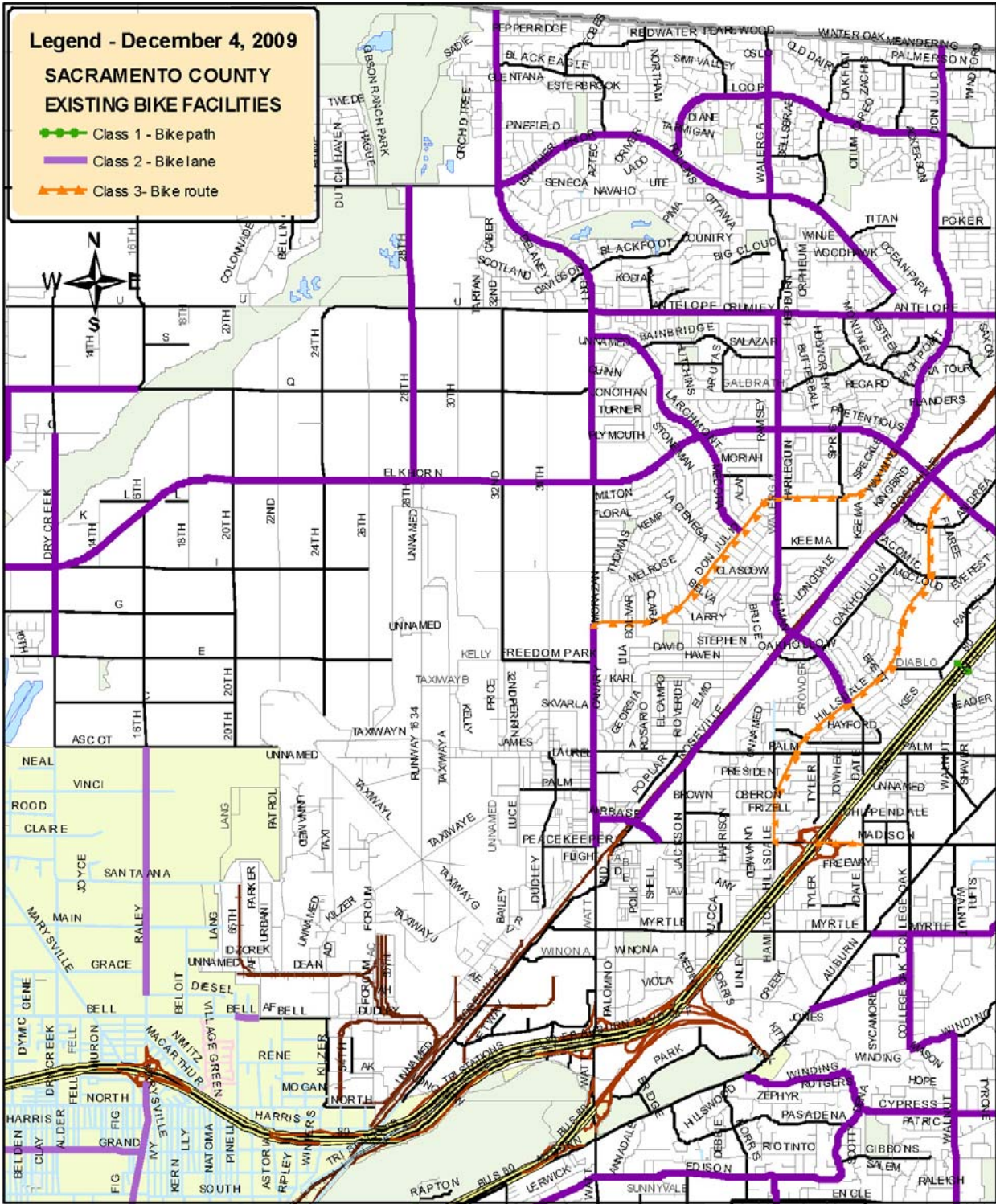


Plate TC-4: Existing Bicycle Facilities in Corridor Plan Area



### *PLANNED BICYCLE AND PEDESTRIAN SYSTEM*

The North Watt Avenue Corridor Plan plans for bikeways on all streets and in open space areas as outlined in Plate TC-5. According to the Corridor Plan, the planned bikeways are in sync with the *2010 Sacramento City/County Bikeway Master Plan*. All proposed bike trails, lanes, routes and other facilities will be designed in accordance with the County's design standards for these facilities. One of the focal points of the bicycle circulation plan proposed in the Corridor Plan, are the proposed Class I trails located along the open space corridors and the potential north-south paseo located between Watt Avenue and 34<sup>th</sup> Street. Additionally, the plan recommends two bicycle and pedestrian crossing improvements at the Union Pacific railroad tracks because the railroad is considered a barrier to all other forms of travel. The crossings are recommended at Watt Avenue (upgrade existing undercrossing to include bicycle lanes) and at Winona Way in the Triangle Gateway District (this crossing would connect the district with the McClellan Business Park). See Plate TC-5 for an exhibit of the Bicycle Circulation Plan for the North Watt Avenue Corridor Plan area.

As noted previously above, the Corridor Plan does not specifically request entitlements to construct bicycle and pedestrian improvements; instead, the project provides a planning framework so that the Bicycle Circulation plan and noted pedestrian improvements may occur in the future in an organized manner to facilitate the vision of a vibrant multimodal community.

### TRAFFIC STUDY SETTING AND SCOPE

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The traffic study, prepared by Fehr & Peers, entitled North Watt Avenue Corridor Plan Transportation Impact Study (December 6, 2010) evaluated traffic operations of the study intersections, roadway segments, and freeway facilities in the project vicinity under the following scenarios:

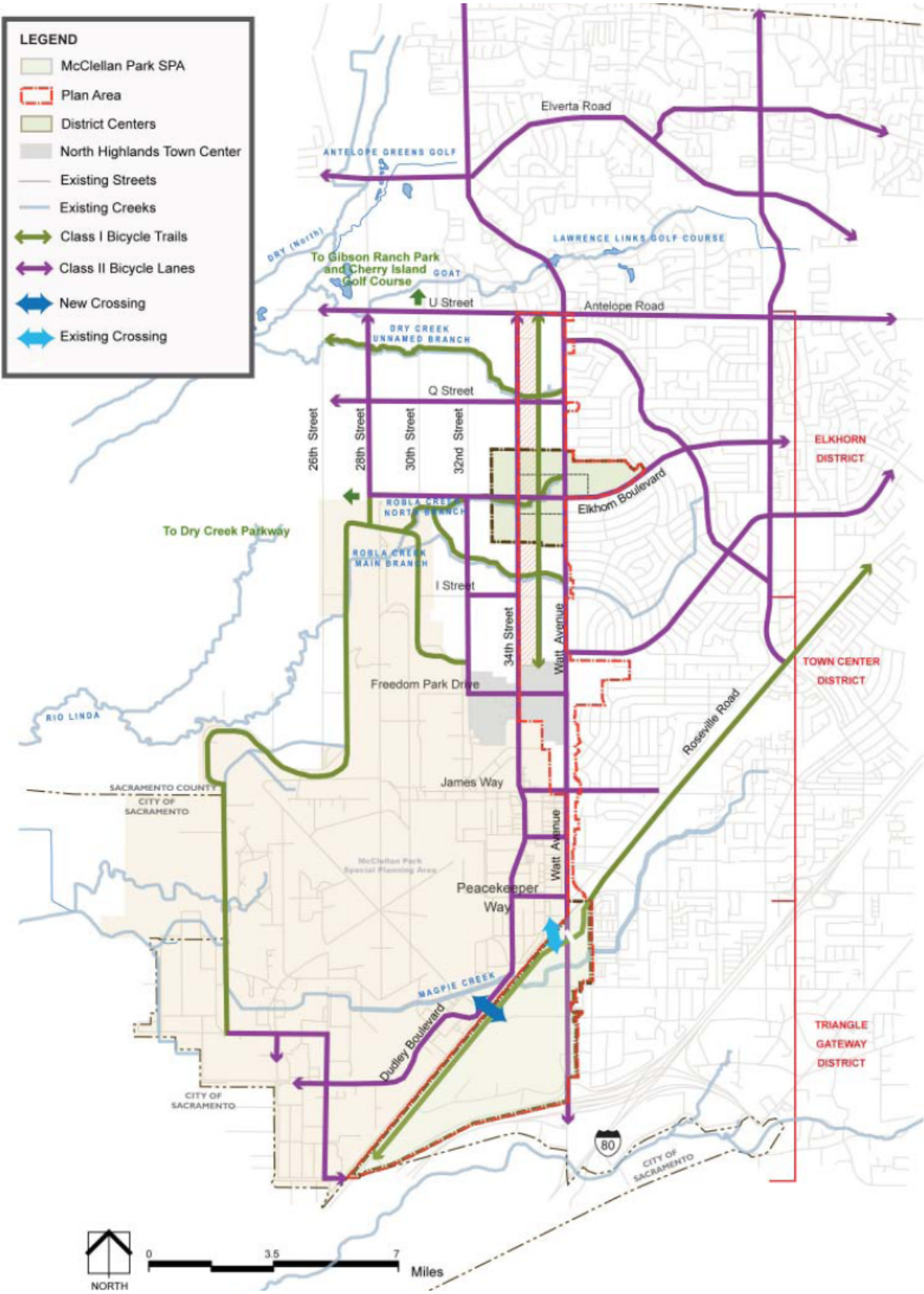
1. Existing Conditions
2. Existing Plus Project Conditions
3. Cumulative No Project Conditions
4. Cumulative Plus Project Plus Existing Sacramento County General Plan (1993)
5. Cumulative Plus Project Plus Proposed Sacramento County General Plan (2009)

The above scenarios were analyzed for the following intersections, roadways and freeway facilities:

#### Intersections:

1. Watt Avenue / Elverta Road
2. Watt Avenue / Antelope Road
3. Watt Avenue / Q Street
4. Watt Avenue / Elkhorn Boulevard

Plate TC-5: North Watt Corridor Bicycle Circulation Plan



5. Watt Avenue / Don Julio Boulevard
6. Watt Avenue / Freedom Park Drive
7. Watt Avenue / A Street/James Way
8. Watt Avenue / Palm Street
9. Watt Avenue / Airbase Drive
10. Watt Avenue / Peacekeeper Way
11. Watt Avenue / Roseville Road
12. Watt Avenue / Winona Way
13. Watt Avenue / Interstate 80 Westbound Off-ramp
14. Watt Avenue / Interstate 80 Eastbound Off-ramp
15. Elkhorn Boulevard / 32<sup>nd</sup> Street
16. 34<sup>th</sup> Street / Q Street
17. Elkhorn Boulevard / 34<sup>th</sup> Street
18. 34<sup>th</sup> Street / Freedom Park Drive
19. Dudley Boulevard / James Way
20. Watt Avenue / Auburn Boulevard

Roadway Segments:

1. Watt Avenue from PFE Road to Elverta Road
2. Watt Avenue from Elverta Road to Antelope Road
3. Watt Avenue from Antelope Road to Elkhorn Boulevard
4. Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard
5. Watt Avenue from Don Julio Boulevard to James Way/A Street
6. Watt Avenue from James Way/A Street to Airbase Drive
7. Watt Avenue from Airbase Drive to Roseville Road
8. Watt Avenue from Roseville Road to Winona Way
9. Watt Avenue from Winona Way to I-80 Ramps
10. Elverta Road from 28<sup>th</sup> Street to Watt Avenue
11. Elverta Road from Watt Avenue to Walerga
12. Q Street from 28<sup>th</sup> Street to Watt Avenue
13. Antelope Road from Watt Avenue to Walerga Road
14. Elkhorn Boulevard from 28<sup>th</sup> Street to Watt Avenue
15. Elkhorn Boulevard from Watt Avenue to Walerga
16. James Way from Dudley Boulevard to Watt Avenue
17. Palm Street from Dudley Boulevard to Watt Avenue
18. Airbase Parkway from Watt Avenue to Madison Avenue
19. Peacekeeper Way from Dudley Boulevard to Watt Avenue
20. 32<sup>nd</sup> Street from Elkhorn Boulevard to Freedom Park Drive
21. 34<sup>th</sup> Street from Elkhorn Boulevard to Freedom Park Drive
22. Dudley Boulevard from Freedom Park Drive to James Way
23. Dudley Boulevard from James Way to Peacekeeper Way
24. Dudley Boulevard from Peacekeeper Way to Bell Avenue
25. Watt Avenue from I-80 Ramps to Auburn Boulevard

Freeway Facilities:

1. Eastbound I-80 west of Madison Avenue Interchange – Mainline
2. Eastbound I-80 east of Madison Avenue Interchange – Mainline

3. Westbound I-80 east of Madison Avenue Interchange – Mainline
4. Westbound I-80 west of Madison Avenue Interchange – Mainline
5. Eastbound I-80 Slip Off Ramp to Madison Avenue – Diverge
6. Eastbound I-80 Loop On Ramp from Madison Avenue – Merge
7. Eastbound I-80 Slip On Ramp to Madison Avenue – Merge
8. Westbound I-80 Slip Off Ramp to Madison Avenue – Diverge
9. Westbound I-80 Loop On Ramp from Madison Avenue – Merge
10. Westbound I-80 Slip On Ramp from Madison Avenue – Merge
11. Northbound SR-51 south of Watt Avenue Interchange – Mainline
12. Northbound SR-51 between Watt Avenue Loop Off and Watt Avenue Slip On – Mainline
13. Southbound SR-51 north of Watt Avenue Interchange – Mainline
14. Southbound SR-51 south of Watt Avenue Interchange – Mainline
15. Southbound SR-51 Slip On Ramp from Watt Avenue – Merge
16. Southbound SR-51 Slip On Ramp from Auburn Boulevard – Merge
17. Northbound SR-51 from Fulton Avenue Slip On to Watt Avenue Slip Off – Weave
18. Northbound SR-51 from Watt Avenue Loop On to Watt Avenue Loop Off – Weave
19. Northbound SR-51 from Watt Avenue Slip On to Auburn Boulevard Slip Off – Weave
20. Eastbound I-80 from Longview Drive Slip On to Watt Avenue Slip Off/SR-244 Slip Off – Weave
21. Westbound I-80 from Watt Avenue Loop/Slip On to Longview Drive Slip Off – Weave

## TRAFFIC STUDY METHODOLOGY

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Traffic operations at study roadway segments and study intersections were analyzed in accordance with Sacramento County's *Traffic Impact Analysis Guidelines* (July 2004). Transportation facility operations were analyzed with level of service (LOS) as the primary measure of performance. LOS is a qualitative term that describes the operating performance of an intersection or roadway segment. LOS is measured quantitatively and reported on a scale from A to F, with "A" representing free flow traffic conditions and "F" representing highly congested or "grid-lock" traffic conditions.

Table TC-1 describes level of service conditions.



**Table TC-1  
Level of Service Definitions**

Level of Service	Description
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	Stable flow, but the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
D	Represents high-density, but stable flow.
E	Represents operating conditions at or near capacity level.
F	Represents forced or breakdown flow.

*ROADWAY SEGMENTS*

Roadway segments are analyzed by comparing the average daily traffic volume on roadway segments in the Plan area to daily traffic volume thresholds based on the specific facility types present.

The LOS methodology used to analyze roadway segments was based on the LOS criteria outlined in the *Traffic Impact Analysis Guidelines* (Sacramento County, 2004). This methodology examines the ADT volumes as compared to the daily traffic volume capacity of the roadway. Table TC-2 displays the LOS thresholds for roadway segments. These thresholds are used as guidelines by the County to identify the need for new or upgraded facilities.

**Table TC-2  
Level of Service Criteria for Roadway Segments**

Facility Type	# of Lanes	Maximum Daily Volume for Given Level Of Service				
		LOS A	LOS B	LOS C	LOS D	LOS E
Residential	2	600	1,200	2,000	3,000	4,500
Residential collector with frontage	2	1,600	3,200	4,800	6,400	8,000
Residential collector without frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, low access control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, moderate access control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, high access control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, 24'-36' of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, 24'-36' of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000
<u>Facility Type</u>	<u>Stops/Mile</u>	<u>Driveway</u>	<u>Speed</u>			
Arterial, low access control	4+	Frequent	25-35 MPH			
Arterial, moderate access control	2-4	Limited	35-45 MPH			
Arterial, high access control	1-2	None	45-55 MPH			

Source: *Traffic Impact Analysis Guidelines* (County of Sacramento Department of Transportation, 2004).

*INTERSECTIONS*Signalized

In accordance with Sacramento County requirements, signalized intersections were analyzed using the methodology described in *Interim Materials on Highway Capacity – Circular 212* (Transportation Research Board, 1980). This methodology calculates LOS based on the volume-to-capacity ratio (V/C) of critical lane volumes.

Table TC-3 presents the critical lane capacities and V/C LOS thresholds.

Unsignalized

The HCM methodologies were used to analyze unsignalized study intersections. The LOS rating is based on the average control delay expressed in seconds per vehicle. Control delay is the sum of delay caused by deceleration, time stopped at the intersection, and acceleration. At two-way or side street stop-controlled intersections, LOS is calculated for each movement rather than for the intersection as a whole. If an approach consists of a single lane from which drivers can take multiple movements, the LOS is based in the average control delay for all movements from that approach. The LOS reported at side street stop-controlled intersections is for the maximum control delay experienced on a specific approach or movement and for the intersection as a whole. Table TC-4 presents the level of service control delay thresholds.

**Table TC-3: Level of Service Criteria for Signalized Intersections**

Level of Service	Sum of Critical Lane Volumes by Signal Phasing (vehicles/critical lane/hour)			Volume-to-Capacity Ratio
	2-Phase	3-Phase	4 or more Phase	
A	0-990	0-930	0-900	< 0.60
B	991-1155	931-1085	901-1050	0.61 – 0.70
C	1156-1320	1086-1240	1051-1200	0.71 – 0.80
D	1321-1485	1241-1395	1201-1350	0.81 – 0.90
E	1486-1650	1396-1550	1351-1500	0.91 – 1.00
F	>1650	>1550	>1500	>1.00

Source: *Interim Materials on Highway Capacity, Circular 212*, Transportation Research Board, 1980; and County of Sacramento Traffic Impact Analysis Guidelines.

**Table TC-4: Intersection LOS Criteria**

LOS	Average Control Delay (seconds per vehicle)	
	Unsignalized Intersections	Signalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 to 20
C	> 15 and ≤ 25	> 20 to 35
D	> 25 and ≤ 35	> 35 to 55
E	> 35 and ≤ 50	> 55 to 80
F	> 50	> 80

Notes: The average delay reported for signalized intersections is for all vehicles passing through the intersection, whereas the average delay reported for unsignalized intersections is for the minor street movement with the greatest delay.

Source: *Highway Capacity Manual* (Transportation Research Board, 2000)

In addition to the LOS analysis, estimated peak hour traffic volumes at unsignalized intersections were reviewed to determine if they satisfy peak hour volume warrants for traffic signal installation. The peak hour warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. The warrant analysis estimates future development-generated traffic compared against a subset of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated Caltrans guidelines. The warrant analysis results presented in this study should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by SACDoT. Furthermore, the decision to install a signal should not be based solely upon the warrants, since signal installation can lead to certain types of collisions. SACDoT should regularly monitor actual traffic conditions and accident data, and reevaluate the full set of warrants to prioritize and program intersections for signalization.

#### *FREEWAY FACILITIES*

Per Caltrans standards, freeway facility operations are evaluated using the methodology contained in the Highway Capacity Manual. Table TC-5 describes the thresholds with respect to each LOS.

**Table TC-5: Density-Based Freeway Mainline, Off-Ramp Diverge, and On-Ramp Merge Segments Level of Service Criteria**

Level of Service	Density (vehicles/mile/lane)	
	Mainline	Ramp Junction
A	≤11	≤ 10
B	11 – 18	10 – 20
C	18 – 26	20 – 28
D	26 – 35	28 – 35
E	35 – 45	>35
F	> 45	Demand exceeds capacity

Source: Transportation Research Board, 2000.

The performance of freeway ramp weaving segments under existing conditions was analyzed using the Leisch methodology as defined in the Highway Design Manual (Caltrans). The Leisch method assigns a LOS based on service volume thresholds.

## SIGNIFICANCE CRITERIA

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### *COUNTY OF SACRAMENTO*

**Roadways/Signalized Intersections:** A project is considered to have a significant effect if it would:

1. Result in a roadway or signalized intersection operating at an acceptable LOS (LOS E or better) to deteriorate to LOS F in an urban area.
2. Increase the volume-to-capacity (V/C) ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at LOS F without the project (urban area).

**Unsignalized Intersections:**

1. Result in an unsignalized intersection movement/approach operating at an acceptable LOS (LOS E or better) to deteriorate to LOS F (urban area) and also cause the intersection to meet a traffic signal warrant.
2. Increase the delay by more than five seconds at a movement/approach that is operating at LOS F (urban area) without the project for an unsignalized intersection that meets a signal warrant.

**Bicycle and Pedestrian Facilities:** A project is considered to have a significant effect if it would:

1. Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use.
2. Interfere with the implementation of a planned bikeway as shown in the Bicycle Master Plan, or conflict with the Pedestrian Master Plan.
3. Result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle, or pedestrian/motor vehicle conflict.

Safety: A project is considered to have a significant effect if it would:

1. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

*STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION*

The Interstate 80 and State Route 51 Corridor System Management Plan (May 2009) identifies “Concept LOS” and “Concept Facility” to reflect the minimum level of operations acceptable for each route segment within the 20-year planning period and the highway facility needed in the next 20 years to maintain the Concept LOS. Typical Concept LOS standards in Caltrans District 3 are LOD D in rural areas and LOS E in urban areas. However, some heavily congested route segments now have a Concept LOS F because the improvements required to bring operations to LOS E are not feasible due to environmental, right of way, financial, and other constraints. I-80 and State Route 51 (Business 80) have a Concept LOS F in the study area. For facilities designated with Concept LOS F the acceptable LOS is LOS F.

Freeway Mainline/Ramps: A project will cause a significant impact if it:

1. Causes a facility operating at an acceptable level (based on the TCR) to deteriorate to an unacceptable level. For facilities with concept LOS F this criteria does not apply.
2. Produces an additional 10 trips or more to a facility that either currently or will (under cumulative conditions) operate at LOS F.

## IMPACTS AND ANALYSIS

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### EXISTING CONDITIONS

The traffic counts used in the existing conditions analysis for the study intersections and freeway facilities were collected on weekdays over the course of a three-year period between 2007 and 2009. The counts were taken during both the morning (between 7:00 and 9:00 AM) and afternoon (between 4:00 and 6:00 PM) peak periods. The traffic counts along the roadway segments were collected for a 24-hour period on weekdays during this same three-year period between 2007 and 2009. A comparison of the 2009

traffic count data with 2007 data indicated that the 2009 data was lower. Thus, the use of the 2007 data results in a worst-case evaluation.

See Plate TC-6 for average daily traffic volumes and LOS under existing conditions.

*STUDY INTERSECTION AND ROADWAY SEGMENT OPERATIONS – EXISTING CONDITIONS*

The results of the traffic study indicate that one of the study intersections exceed the County LOS standards under existing conditions. Additionally the study shows that three study roadway segments exceed the LOS standards under existing conditions.

Under existing conditions, the following intersection exceeds the LOS standard:

- Elkhorn Boulevard / 34<sup>th</sup> Street intersection operates unacceptably at LOS F during both the AM and PM peak hour, exceeding Sacramento County’s LOS “E” standard.

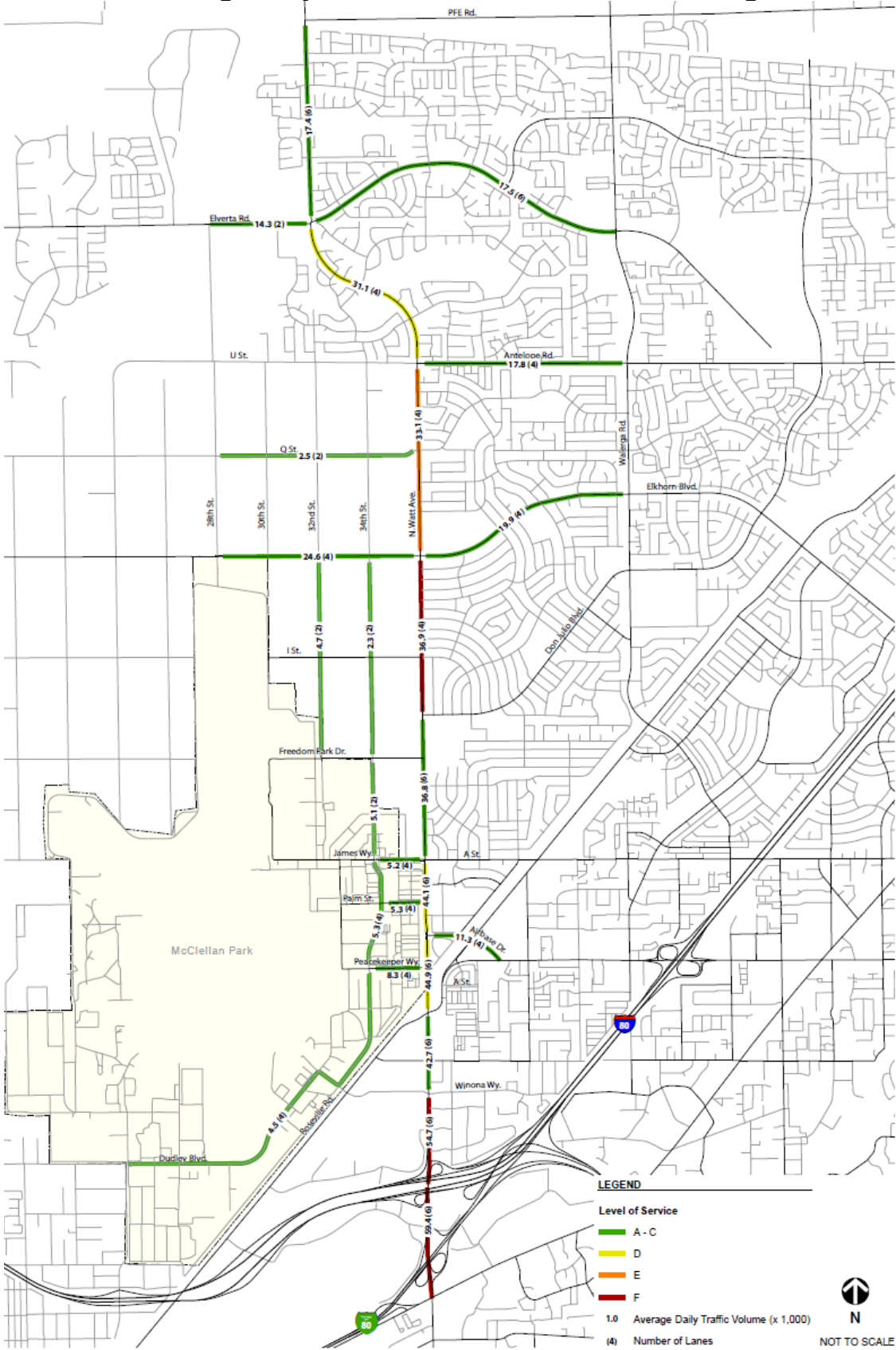
Under existing conditions, the following roadway segments exceed the LOS standard:

- Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard operates at LOS “F,” exceeding Sacramento County’s LOS “E” standard.
- Watt Avenue from Winona Way to I-80 Ramps operates at LOS “F”, exceeding Sacramento County’s LOS “E” standard.
- Watt Avenue from I-80 to Auburn Boulevard operates at LOS “F”, exceeding Sacramento County’s LOS “E” standard.

*FREEWAY FACILITY OPERATIONS – EXISTING CONDITIONS*

The LOS results presented in the traffic study for the freeway facilities under existing conditions indicate that all freeway facilities operate acceptably at LOS E or better; however, congested LOS F conditions were observed at the merge, diverge, and mainline sections along westbound I-80 during the AM peak hour at the Madison Avenue Interchange. This congestion is caused by a bottleneck at the I-80/SR-51 split.

Plate TC-6: Average Daily Traffic Volume and LOS for Existing Conditions



## EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project Condition is the existing traffic volume plus the traffic volumes expected from the proposed project. Ultimately, the proposed project will result in land use changes in the Corridor Plan area. Changes in the land uses along Watt Avenue will result in changes in traffic patterns on local roadways. The effects of changes in travel pattern due to the land use changes in the Corridor have been quantified through utilization of SACOG's regional SACMET travel demand model. The proposed North Watt Corridor Plan includes 7,200 medium density dwelling units, 1.17 million square feet of retail, and 714,000 square feet of office. For the purposes of the traffic study it is assumed that these uses would be in addition to those uses currently located within the Corridor Plan area.

### *PROPOSED PROJECT TRIP GENERATION, TRIP DISTRIBUTION, AND TRIP ASSIGNMENT – EXISTING PLUS PROJECT CONDITIONS*

The traffic characteristics associated with the proposed North Watt Avenue Corridor Plan was estimated using a three-step process:

1. Trip Generation – The Sacramento Metropolitan (SACMET) travel demand forecasting (TDF) model created by SACOG in 2007 was used to generate traffic based on existing condition and the proposed land uses.
2. Trip Distribution – The 2007 SACMET TDF model was used to forecast the origins and destinations of vehicles that would approach and depart the project area.
3. Trip Assignment – The 2007 SACMET TDF model was used to forecast the routes vehicles would take to get to/from their origins and destinations.

Each of the above are discussed further below.

### **TRIP GENERATION**

The proposed Corridor Plan's trip generation, as forecasted by the SACMET TDF model, is shown in Table TC-6. Table TC-6 presents the magnitude of the total trips generated by the proposed project using trip generation rates from *Trip Generation, 8<sup>th</sup> Edition*, Institute of Transportation Engineers.



**Table TC-6: North Watt Corridor Trip Generation**

Land Use	Quantity <sup>1</sup>	Trip Rate			Trips		
		AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour	Daily
Medium Density Residential	7,200 du's	0.46	0.58	6.59	3,312	4,176	47,448
General Commercial	1,170 ksf	0.75	3.55	36.6	878	4,154	42,822
Office Park	714.7 ksf	1.72	1.49	11.56	1,229	1,065	8,262
<b>Total Project Trips</b>					<b>5,419</b>	<b>9,395</b>	<b>98,532</b>
Notes: 1du's = dwelling units; ksf = 1,000 square feet Source: Trip Generation, 8 <sup>th</sup> Edition (Institute of Transportation Engineers, 2008)							

**TRIP DISTRIBUTION**

The 2007 SACMET TDF model was used to estimate the distribution of project trips during the AM peak hour, PM peak hour, and daily time periods for both Existing Plus Project and Cumulative Plus Project Conditions. Given the size of the proposed project in terms of both land uses and the extent of the project limits (approximately 4 miles north-south), the SACMET model was used to distribute project trips to the surrounding roadway network. The model takes into account how adding these new uses might influence overall traffic patterns in the region. For example, by adding a substantial number of jobs to the northern Sacramento area, the project may change commute patterns for some people who previously commuted to Downtown Sacramento or Roseville.

The overall daily trip distribution patterns of the proposed project varied based on specific land use type and location. For example, project trips near the north-end of the project area had an estimated trip distribution that was different when compared to project trip patterns near the south-end of the project area. This would be expected based on the quantity of land uses proposed and the approximate 4 miles that the project area covers. The variation in localized trip distribution patterns is the reason that the 2007 SACMET TDF model was used to distribute and assign project traffic to the study network. Table TC-7 below indicates the daily project trip distribution percentages for the roadways in the study area for the Elkhorn and Town Center Districts under Existing Plus Project Conditions. Table TC-8 shows the trip distribution percentages of the Triangle Gateway District.

**Table TC-7: Existing Plus Project Trip Distribution – Elkhorn and Town Center Districts**

Roadway Location	Trip Distribution
Watt Avenue north of Elverta Road	1%
Elverta Road west of Watt Avenue	1%
Elverta Road east of Watt Avenue	3%
U Street west of Watt Avenue	0%
Antelope Road east of Watt Avenue	5%
Q Street west of Watt Avenue	4%
Elkhorn Boulevard west of Watt Avenue	11%
Elkhorn Boulevard east of Watt Avenue	19%
Don Julio Boulevard east of Watt Avenue	13%
Roseville Road west of Watt Avenue	4%
Airbase Drive east of Watt Avenue	14%
Watt Avenue south of Roseville Road	25%
Source: SACMET TDF Model	

**Table TC-8: Existing Plus Project Trip Distribution – Triangle Gateway District**

Roadway Location	Trip Distribution
Watt Avenue north of Roseville Road	15%
Roseville Road west of Watt Avenue	22%
Roseville Road east of Watt Avenue	9%
Airbase Drive east of Watt Avenue	21%
I-80 west of Watt Avenue via Watt Avenue Interchange	7%
I-80 east of Watt Avenue via Watt Avenue Interchange	0%
SR-51 south of Watt Avenue	7%
SR-244 south of I-80	7%
Watt Avenue south of Auburn Boulevard	12%
Source: SACMET TDF Model	

**TRIP ASSIGNMENT**

The 2007 SACMET TDF model was used to assign project traffic to the study intersections and roadway segments based on the routes that would be used to get to/from origins and destinations. To account for model error, each respective alternative's forecasts were adjusted using a process known as the "difference method," which adjusts raw model volume forecasts based on expected incremental growth from Existing Conditions using the following formula:

$$\text{Alternative Volume} = (\text{Alternative Raw Model Volume} - \text{Base Year Raw Model Volume}) + \text{Existing Count}$$

*STUDY INTERSECTION AND ROADWAY SEGMENT OPERATIONS – EXISTING PLUS PROJECT CONDITION*

The results of the traffic study indicate that four of the study intersections exceed the County LOS standards under existing plus project conditions. Additionally the study shows that eight study roadway segments exceed the LOS standards under existing plus project conditions. Table TC-9 indicates the delay and corresponding LOS for the study intersections under the Existing Plus Project Condition. Table TC-10 shows the results and identifies the roadway segments that the project would significantly impact under the Existing Plus Project Condition.

**INTERSECTION OPERATIONS**

Under existing plus project conditions, the following intersections exceed the LOS standard:

- Watt Avenue / Don Julio Boulevard intersection will operate unacceptably during both the AM and PM peak hour.
- Watt Avenue / Airbase Drive intersection will operate unacceptably during the PM peak hour.
- Elkhorn Boulevard / 34<sup>th</sup> Street intersection will operate unacceptably during both the AM and PM peak hour.
- 34<sup>th</sup> Street / Freedom Park Drive intersection will operate unacceptably during both the AM and PM peak hour.

**ROADWAY SEGMENT OPERATIONS**

Under existing plus project conditions, the following roadway segments exceed the LOS standard:

- Watt Avenue from Antelope Road to Elkhorn Boulevard
- Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard.
- Watt Avenue from Don Julio Boulevard to James Way/A Street
- Watt Avenue from James Way/A Street to Airbase Drive
- Watt Avenue from Airbase Drive to Roseville Road
- Watt Avenue from Roseville Road to Winona Way
- Watt Avenue from Winona Way to I-80 Ramps
- Watt Avenue from I-80 Ramps to Auburn Boulevard

See Plate TC-7 for average daily traffic volumes and LOS under existing plus project conditions.

**Table TC-9: Peak Hour Intersection LOS – Existing Plus Project Conditions**

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay	LOS
1. Watt Avenue / Elverta Road	Signal	32	C	36	D
2. Watt Avenue / Antelope Road	Signal	73	E	59	E
3. Watt Avenue / Q Street	Signal	30	C	24	C
4. Watt Avenue / Elkhorn Boulevard	Signal	53	D	46	D
5. Watt Avenue / Don Julio Boulevard	Signal	<b>&gt;150<sup>3</sup></b>	<b>F</b>	<b>&gt;150</b>	<b>F</b>
6. Watt Avenue / Freedom Park Drive	Signal	33	C	25	C
7. Watt Avenue / A Street/James Way	Signal	33	C	34	C
8. Watt Avenue / Palm Street	Signal	14	B	11	B
9. Watt Avenue / Airbase Drive	Signal	43	D	<b>139</b>	<b>F</b>
10. Watt Avenue / Peacekeeper Way	Signal	19	B	20	B
11. Watt Avenue / Roseville Road	Signal	78	E	51	D
12. Watt Avenue / Winona Way	Signal	40	D	35	C
13. Watt Avenue / I-80 Westbound Off-Ramp	Signal	7	A	8	A
14. Watt Avenue / I-80 Eastbound Off-Ramp	Signal	20	B	18	B
15. Elkhorn Boulevard / 32 <sup>nd</sup> Street	Signal	22	C	31	C
16. 34 <sup>th</sup> Street / Q Street	All Way Stop	11	B	11	B
17. Elkhorn Boulevard / 34 <sup>th</sup> Street	Side Street Stop	<b>&gt;150</b>	<b>F</b>	<b>&gt;150</b>	<b>F</b>
18. 34 <sup>th</sup> Street / Freedom Park Drive	All Way Stop	<b>&gt;150</b>	<b>F</b>	<b>&gt;150</b>	<b>F</b>
19. Dudley Boulevard / James Way	All Way Stop	41	E	29	D
20. Watt Avenue / Auburn Boulevard	Signal	43	D	40	D

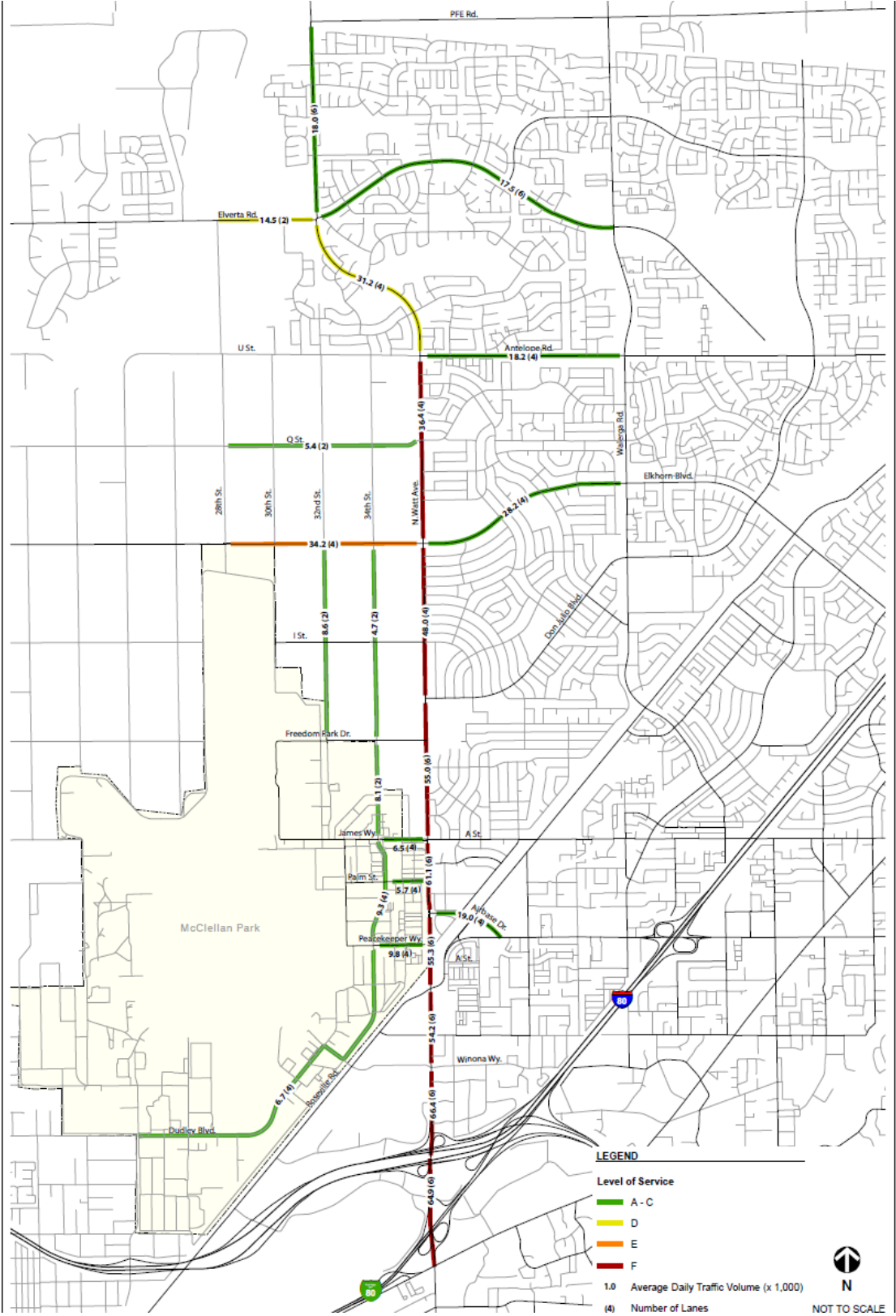
Notes: 1 For signalized and all-way stop-controlled intersections, the overall average intersection control delay is reported in seconds per vehicle. For side-street stop control, the average control delay for the worst movement is reported in seconds per vehicle.  
 2 Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000).  
 3 Delays greater than 2.5 minutes are not reported due to model insensitivity under extreme congestion.  
**BOLD** text indicates unacceptable operations with respect to the County of Sacramento criterion.  
UNDERLINE type indicated a significant impact with respect to the County of Sacramento significance criteria.

Source: Fehr & Peers, 2010

**Table TC-10: Roadway Segment Volume and LOS – Existing Plus Project**

Roadway Segment	Lanes	ADT <sup>1</sup>	V/C <sup>2</sup>	LOS <sup>3</sup>
1. Watt Avenue from PFE Road to Elverta Road	6	18,000	0.33	A
2. Watt Avenue from Elverta Road to Antelope Road	4	31,200	0.87	D
3. Watt Avenue from Antelope Road to Elkhorn Blvd	4	<b><u>36,400</u></b>	<b><u>1.01</u></b>	<b><u>F</u></b>
4. Watt Avenue from Elkhorn Blvd to Don Julio Blvd	4	<b><u>48,000</u></b>	<b><u>1.33</u></b>	<b><u>F</u></b>
5. Watt Avenue from Don Julio Blvd to James Way / A Street	6	<b><u>55,000</u></b>	<b><u>1.02</u></b>	<b><u>F</u></b>
6. Watt Avenue from James Way / A Street to Airbase Drive	6	<b><u>61,100</u></b>	<b><u>1.13</u></b>	<b><u>F</u></b>
7. Watt Avenue from Airbase Drive to Roseville Road	6	<b><u>55,300</u></b>	<b><u>1.02</u></b>	<b><u>F</u></b>
8. Watt Avenue from Roseville Road to Winona Way	6	<b><u>54,200</u></b>	<b><u>1.00</u></b>	<b><u>F</u></b>
9. Watt Avenue from Winona Way to I-80 Ramps	6	<b><u>66,400</u></b>	<b><u>1.23</u></b>	<b><u>F</u></b>
10. Elverta Road from 28 <sup>th</sup> Street to Watt Avenue	2	14,500	0.81	D
11. Elverta Road from Watt Avenue to Walerga Road	6	17,500	0.32	A
12. Q Street from 28 <sup>th</sup> Street to Watt Avenue	2	5,400	0.30	A
13. Antelope Road from Watt Avenue to Walerga Road	4	18,200	0.51	A
14. Elkhorn Blvd from 28 <sup>th</sup> Street to Watt Avenue	4	34,200	0.95	E
15. Elkhorn Blvd from Watt Avenue to Walerga Road	4	28,200	0.78	C
16. James Way from Dudley Blvd to Watt Avenue	4	6,500	0.18	A
17. Palm Avenue from Dudley Blvd to Watt Avenue	4	5,700	0.16	A
18. Airbase Parkway from Watt Avenue to Madison Avenue	4	19,000	0.53	A
19. Peacekeeper Way from Dudley Blvd to Watt Avenue	4	9,800	0.27	A
20. 32 <sup>nd</sup> Street from Elkhorn Blvd to Freedom Park Drive	2	8,600	0.48	A
21. 34 <sup>th</sup> Street from Elkhorn Blvd to Freedom Park Drive	2	4,700	0.26	A
22. Dudley Blvd from Freedom Park Drive to James Way	2	8,100	0.45	A
23. Dudley Blvd from James Way to Peacekeeper Way	4	9,300	0.26	A
24. Dudley Blvd from Peacekeeper Way to Bell Avenue	4	6,700	0.19	A
25. Watt Avenue from I-80 Ramps to Auburn Blvd	6	<b><u>64,900</u></b>	<b><u>1.20</u></b>	<b><u>F</u></b>
Notes: 1 Average Daily Traffic 2 Volume to capacity ratio (County of Sacramento Traffic Analysis Guidelines, 2004) 3 Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000). <b>BOLD</b> text indicates unacceptable operations with respect to the County of Sacramento criterion. <b>UNDERLINE</b> type indicated a significant impact with respect to the County of Sacramento significance criteria.  Source: Fehr & Peers, 2010				

**Plate TC-7: Average Daily Traffic Volume and LOS for Existing Plus Project Conditions**



*FREEWAY FACILITY OPERATIONS – EXISTING PLUS PROJECT CONDITIONS*

The freeway facilities were analyzed under Existing Plus Project Conditions using the methodology described above. According to the Caltrans significance criteria, only the weave section of Northbound SR-51 from Watt Avenue Slip On-ramp to Auburn Boulevard Slip Off-ramp during the PM peak hour would be significantly impacted by the proposed project by degrading operations to unacceptable LOS F conditions.

Table TC-11 presents the freeway facility results under the Existing Plus Project Condition. Plate TC-8 demonstrates freeway ramp and mainline peak hour traffic volume under the existing plus project condition.

*BICYCLE AND PEDESTRIAN FACILITIES – EXISTING PLUS PROJECT CONDITIONS*

As noted in the “Planned Bicycle and Pedestrian System” section above, the proposed project calls for the construction of bicycle and pedestrian facilities on both the east and west side of Watt Avenue. Additionally, other facilities throughout the Plan area are shown in Plate TC-5, the Bicycle Circulation Plan. Therefore, the proposed project would not adversely impact bicycle or pedestrian facilities; instead, it is intended to enhance the Corridor’s pedestrian and bicycle facilities by providing contiguous and more abundant facilities within the plan area. Impacts are **less than significant**.

*EXISTING PLUS PROJECT CONDITIONS CONCLUSIONS*

In the Existing Plus Project condition four study intersections, eight study roadway segments and one impacted freeway facility would exceed volume thresholds and operate at unacceptable levels of service. These impacts are considered significant impacts. Recommended mitigation and significance conclusions are discussed for each of the impacted facilities below.

It should be noted that all of the roadway segments that are modeled to operate at unacceptable levels in the existing plus project condition are located on Watt Avenue, which is proposed to be a Smart Growth Street. Additionally, two of the intersections that will operate at unacceptable levels are located on Watt Avenue, which, as stated, is proposed to be designated as a Smart Growth Street.

**INTERSECTION MITIGATION AND SIGNIFICANCE – EXISTING PLUS PROJECT**

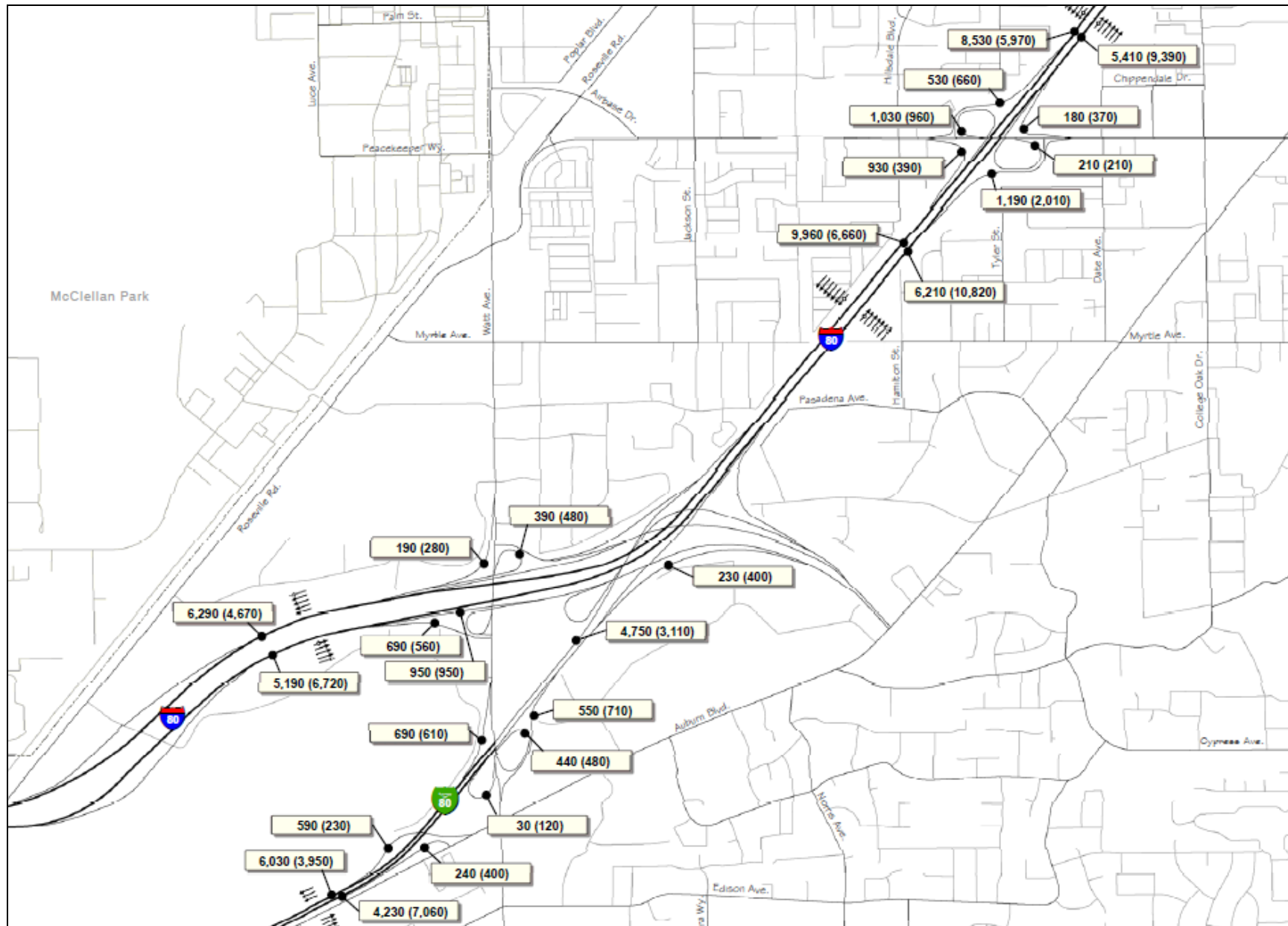
To mitigate the significant impacts related to the four significantly impacted study intersections, the following mitigation measures are proposed to increase intersection operations to acceptable levels. One of the listed mitigation measures includes modifications to the existing signal timings. To implement the signal timing changes it is recommended that an Intelligent Transportation System (ITS) signal coordination system/plan be installed on North Watt Avenue between I-80 and Elverta Road. The system would include signal interconnect, CCTV’s and connection to the County Traffic Operation Center (TOC). The ITS system would allow traffic to move more freely through the study corridor and would reduce delay at signalized intersections.

**Table TC-11: Peak Hour Freeway Facility LOS – Existing Plus Project Conditions**

Location	Type of Facility	AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS
<b>Interstate 80 / Madison Avenue Interchange</b>					
1. Eastbound I-80 west of Madison Avenue Interchange	Mainline	16	B	28	D
2. Eastbound I-80 east of Madison Avenue	Mainline	16	B	28	D
3. Westbound I-80 east of Madison Avenue	Mainline	32	D	21	C
4. Westbound I-80 west of Madison Avenue	Mainline	26	C	17	B
5. Eastbound I-80 Slip Off Ramp	Diverge	8	A	18	B
6. Eastbound I-80 Loop On Ramp	Merge	17	B	25	C
7. Eastbound I-80 Slip On Ramp	Merge	14	B	23	C
8. Westbound I-80 Slip Off Ramp	Diverge	35	D	27	D
9. Westbound I-80 Loop On Ramp	Merge	32	D	23	C
10. Westbound I-80 Slip On Ramp	Merge	29	D	19	B
<b>State Route 51 / Watt Avenue Interchange</b>					
11. Northbound SR-51 south of Watt Avenue Interchange	Mainline	21	C	42	E
12. Northbound SR-51 between Watt Avenue Loop Off and Slip On	Mainline	19	C	37	E
13. Southbound SR-51 north of Watt Avenue Interchange	Mainline	25	C	16	B
14. Southbound SR-51 south of Watt Avenue Interchange	Mainline	34	D	21	C
15. Southbound SR-51 Slip On Ramp from Watt Avenue	Merge	31	D	23	C
16. Southbound SR-51 Slip On Ramp from Auburn Boulevard	Merge	34	D	24	C
17. Northbound SR-51 from Fulton Avenue Slip On to Watt Avenue Slip Off	Weave	19	B <sup>1</sup>	--	E
18. Northbound SR-51 from Watt Avenue Loop On to Watt Avenue Loop Off	Weave	--	B	--	E
19. Northbound SR-51 from Watt Avenue Slip On to Auburn Boulevard Slip Off	Weave	--	B	<u>--</u>	<u>F</u>
<b>Interstate 80 / Watt Avenue Interchange</b>					
20. Eastbound I-80 from Longview Drive Slip On to Watt Avenue Slip Off/SR-244 Slip Off	Weave	--	C	--	E
21. Westbound I-80 from Watt Avenue Loop/Slip On Ramp to Longview Drive Slip Off Ramp	Weave	--	E	--	C
Notes:	<p>1 This segment has the geometry of a weaving section; however, during the AM peak hour, the analysis indicates it is outside the realm of a weaving section. Therefore, it was analyzed using the merge, diverge, and mainline segment analysis methodology of the HCM 2000. The density and LOS reported here for the AM peak hour is for the merge segment, which operates under the most congested conditions compared to the diverge and mainline segment analysis. <b>BOLD</b> text indicates unacceptable operations with respect to Caltrans criterion. <u>UNDERLINE</u> type indicated a significant impact with respect to Caltrans significance criteria.</p>				
Source:	Fehr & Peers, 2010				



Plate TC-8: Freeway Ramp and Mainline Peak Hour Traffic Volume – Existing Plus Project Condition



- (EP 1) North Watt Avenue / Don Julio Boulevard – provide the following improvements:
  - i. Widen the northbound approach to provide dual left-turn pockets, 2-through lanes, and 1-shared through/right lane, which is partially based on measure EP-6. The construction of a second left-turn pocket would require Don Julio Boulevard to provide 2-departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;
  - ii. Widen the southbound approach to provide 1-right-turn pocket;
  - iii. Widen the eastbound approach to provide 1-left-turn pocket, 1-through lane, and dual right-turn pockets;
  - iv. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.

These improvements would reduce project impacts at this intersection to ***less than significant***.

- (EP 2) North Watt Avenue / Airbase Drive – modify the lane striping of the westbound approach to provide 1-left-turn pocket and 2-right-turn lanes.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (EP 3) Elkhorn Boulevard / 34th Street – signalize the intersection. Widen the northbound and southbound approaches to provide an exclusive left-turn pocket and 1-shared-through/right lane. Allow protected left-turns on all approaches.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (EP 4) 34th Street / Freedom Park Drive – signalize the intersection and widen all of the approaches to provide 1-left-turn pocket and 1-shared through/right lane. Allow protected left-turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.

These improvements would reduce project impacts at this intersection to ***less than significant***.

**ROADWAY SEGMENT MITIGATION AND SIGNIFICANCE – EXISTING PLUS PROJECT**

The following list describes the mitigation measures recommended to improve the impacted roadway segment operations to acceptable levels under the Existing Plus Project Condition:

- (EP 5) North Watt Avenue from Antelope Road to Elkhorn Boulevard – widen the roadway from 4-lanes to 6-lanes.

The widening of this roadway segment would reduce project impacts to ***less than significant***. Implementation of this mitigation measure would result in LOS D during the AM peak hour and LOS E during the PM peak hour at the North Watt Avenue / Antelope Road intersection and LOS C during the AM peak hour and LOS B during the PM peak hour at the North Watt Avenue / Q Street intersection.

- (EP 6) North Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard – widen the roadway from 4-lanes to 6-lanes.

This improvement would reduce project impacts to ***less than significant***.

- (EP 7) North Watt Avenue from Don Julio Boulevard to James Way/A Street – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains ***significant and unavoidable***.

- (EP 8) North Watt Avenue from James Way/A Street to Airbase Drive – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains ***significant and unavoidable***.

- (EP 9) North Watt Avenue from Airbase Drive to Roseville Road – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains ***significant and unavoidable***.

- (EP 10) North Watt Avenue from Roseville Road to Winona Way – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (EP 11) North Watt Avenue from Winona Way to I-80 Ramps – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (EP 12) North Watt Avenue from I-80 Ramps to Auburn Boulevard – widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

#### **FREEWAY FACILITIES MITIGATION AND SIGNIFICANCE – EXISTING PLUS PROJECT**

The SR-51 Corridor System Management Plan (CSPM) (May 2009) identified that widening the freeway mainline was not feasible; however, the CSMP does propose strategies to enhance corridor mobility within the study area. Some of these strategies will be constructed along with the planned development of the proposed project, while others are mitigation measures for the proposed project. The strategies to enhance corridor mobility within the Corridor include:

- Enhance transit and rail service by implementing bus rapid transit routes.
- Optimize and coordinate traffic signals along parallel and connecting roadways.
- Construct additional bicycle/pedestrian facilities to improve accessibility to transit and destination points.

The strategies listed above would encourage travel by alternative modes of transportation and enhance mobility through the Corridor. However, the impact to the following freeway facility remains **significant and unavoidable** because there is no feasible mitigation that will directly improve the freeway facility:

Northbound SR-51 from Watt Avenue Slip On-ramp to Auburn Boulevard Slip Off-ramp – Weave

## 2035 CUMULATIVE CONDITIONS

This section analyzes the traffic operations for Cumulative No Project Conditions and the impacts caused by the proposed project under Cumulative Plus Project Conditions. Cumulative Plus Project impacts were identified by comparing the results of the Cumulative Plus Project scenarios to the results of the Cumulative No Project scenario. This section first identifies land use and roadway network improvements incorporated in the analysis. It then describes the forecasted volumes under each of the Cumulative Plus Project scenarios. **The Draft EIR analyzed two Cumulative Plus Projects scenarios because the General Plan update had not been adopted or approved at the time of publication. Since publication of the Draft EIR, the 2030 General Plan update has been adopted; therefore, were appropriate, analysis and mitigation has been deleted in regards to the 1993 General Plan scenario. Note that the following analysis refers to the adopted 2030 General Plan scenario as the “Cumulative Plus Project Plus Proposed General Plan” and though it is now adopted this title has been retained to reduce confusion and maintain overall document integrity.** It should be noted that there are two Cumulative Plus Project scenarios that were analyzed in the traffic study. These scenarios consist of the Cumulative Plus Project Plus the Existing General Plan (1993) and the Cumulative Plus Project Plus the Proposed General Plan (2009). Both of these scenarios had to be analyzed because future conditions will be influenced by the General Plan that is adopted, and since the proposed General Plan has not been approved, it was appropriate to analyze both cumulative scenarios. The different assumptions used in each of the cumulative scenarios are discussed further below.

### *TRAFFIC MODEL ASSUMPTIONS AND FORECAST METHODOLOGIES*

Cumulative year (2035) peak hour and daily traffic volume forecasts for study roadways and intersections were developed using the SACMET TDF model. The 2035 version of the SACMET TDF model includes SACOG “blueprint” compatible land uses that were approved and adopted by the SACOG board and are representative of the *Sacramento County General Plan*. The SACMET model also assumes infrastructure improvements included in both the *Sacramento County Transportation Development Fee (SCTDF) Program* (2008) and the Tier 1 list of improvements of the *SACOG 2035 Metropolitan Transportation Plan (MTP)*. Both of these documents include improvements that are fully funded and are identified to occur within the planning horizon.

### **CUMULATIVE LAND USE IMPROVEMENTS**

Included in the 2035 SACMET TDF model are land use assumptions within the project site and general project vicinity that are representative of what is included in the *Sacramento County General Plan* (1993). Even without the construction of the proposed North Watt Avenue Corridor Plan, future land use improvements within the project site include a mix of office, commercial, and industrial land uses. It is assumed that with the construction of the proposed North Watt Avenue Corridor Plan, the future land uses already planned for the project site would be replaced with the land uses consistent with the proposed project. Within the general project vicinity, the Area of Influence and West

of Watt locations are assumed to be built out to the land uses in the 2035 SACMET TDF model under both Cumulative No Project and Cumulative Plus Project Conditions. Both the Area of Influence and West of Watt locations include primarily residential housing and industrial land uses. The projected land uses in the study area are the same for the two Cumulative Plus Project scenarios.

Although the proposed project would be replacing already planned future land uses in the location of the project site with a net increase of housing, commercial, and office uses, there may be a decrease in volume at some study intersections and roadways under Cumulative Plus Project Conditions compared to Cumulative No Project Conditions. This is caused by a redistribution of traffic based on new travel patterns. For example, constructing housing and commercial uses near the north end of the project site would cause some traffic to divert to those locations while they may have been previously traveling to the southern end of the project site under No Project Conditions.

### **CUMULATIVE ROADWAY IMPROVEMENTS**

Based on the improvement projects identified in the 2008 SCTDF Program, the Tier 1 list of improvements found in the SACOG 2035 MTP, ~~and the roadway improvements identified in the most current version of the Sacramento County General Plan (1993),~~ the following list describes improvements to roadway facilities within the vicinity of the project site that are planned to occur prior to year 2035:

- Antelope Road – will be widened to six lanes from Don Julio Boulevard to Roseville Road
- Don Julio Boulevard – will be widened to four lanes between Antelope Road and North Loop Road
- Elkhorn Boulevard – will be widened to six lanes from Watt Avenue to I-80
- Elverta Road – will be widened to six lanes from Dutch Haven Avenue to Watt Avenue, and to six lanes from just southeast of Sand City Drive to Don Julio Boulevard
- Walerga Road – will be widened to four lanes from the Placer County line to Antelope Road
- Watt Avenue – will be widened to six lanes from Antelope Road to Don Julio Boulevard
- I-80 – will be widened from Longview Drive westward to the Sacramento River to include HOV lanes

~~These improvements are the same for the two Cumulative Plus Project scenarios.~~

### **CUMULATIVE TRANSIT SYSTEM IMPROVEMENTS**

Also planned for the 2035 roadway network is bus rapid transit (BRT) service. BRT service provides more frequent headways with fewer stops than the operations provided by local bus service. BRT buses can function in general purpose travel lanes, dedicated bus lanes, or high-occupancy vehicle travel lanes. Both the Elkhorn District and the Triangle Gateway District would be designed to support the presence of BRT service. The *Bus Rapid Transit Design Guidelines* (Sacramento Regional Transit, 2005) describes the operating conditions and goals for BRT service.

Prior to implementing BRT service, the introduction of business access transit (BAT) service should be developed. BAT buses would not operate in exclusive travel lanes as BRT buses would. Introduction of BAT service along North Watt Avenue with a six-lane cross-section would include the two inside lanes in each direction as the primary mixed flow lanes and the outside lanes would be shared by BAT buses as well as vehicles making a right-turn.

For the Cumulative No Project and Cumulative Plus Project Plus Existing General Plan alternatives, the analysis will account for exclusive BRT service using the following assumptions:

- **General Lane Configurations:** Under cumulative conditions, it is assumed that North Watt Avenue will have six lanes and 34th Street will have two lanes. There will also be exclusive BRT lanes on the inside medians of North Watt Avenue from Elverta Road to the I-80 interchange.
- **Intersection Operations:** To account for BRT operations at signalized intersections, signal prioritization would be given to the BRT traffic. Signal prioritization would allow the BRT buses to pass through intersections more quickly and efficiently by providing the BRT traffic with an extended green light. The operations analysis will account for signal prioritization by providing an extended all-red phase to the general purpose traffic at all of the intersection approaches.
- **Roadway Network Operations:** Due to the interaction with the BRT, certain maneuvers may not be made as freely as they would without the BRT, such as uncontrolled left turns from North Watt Avenue to the land uses on both sides of the street. To account for this in the analysis, the segments of North Watt Avenue that would have the BRT lanes will be analyzed with high access control. On-street bicycle facilities would be provided in coordination with the proposed project and operations of the BRT. Since the location of stations and operating conditions of the BRT system are unknown, an in-depth analysis of the BRT operations would need to be completed in a detailed transit study.

In the *Draft Sacramento County General Plan (2009)*, which is currently being updated and is near completion, a circulation alternative which would utilize North Watt Avenue and 34th Street as a one-way couplet is discussed as a possible circulation strategy. The following describes the nature of the one-way couplet and the BRT service, which

would also be present under the Cumulative Plus Project Plus Proposed General Plan alternative:

- **General Lane Configurations:** The one-way couplet would include three northbound lanes on North Watt Avenue and three southbound lanes on 34th Street from Q Street to James Way. There would also be an exclusive northbound BRT lane along North Watt Avenue (the BRT lane would be on the west-side of the street) and an exclusive southbound BRT lane on 34th Street (the BRT lane would be on the east-side of the street) between Q Street and James Way. The BRT lanes would continue in both directions on North Watt Avenue in the inside travel lane north of Q Street and south of James Way, but would be non-exclusive and would share a lane with the mixed flow traffic.
- **Intersection Operations:** In order for the BRT buses to operate effectively and efficiently, all major intersections along 34th Street and Dudley Boulevard between Antelope Road and James Way that would include BRT service would be signalized. The study intersections that would be signalized include:
  - 34th Street / Q Street
  - 34th Street / Elkhorn Boulevard
  - 34th Street / Freedom Park Drive
  - Dudley Boulevard / James Way

All other intersections along this segment would be side-street stop controlled. To account for BRT operations at signalized intersections, signal prioritization would be given to the BRT traffic. Signal prioritization would allow the BRT buses to pass through intersections more quickly and efficiently by providing the BRT traffic with an extended green light. The operations analysis will account for signal prioritization by providing an extended all-red phase to the general purpose traffic at all of the intersection approaches.

- **Roadway Network Operations:** The one-way couplet and BRT operations would restrict certain maneuvers from side-streets onto the major street, limiting access for vehicles, bicyclists, and pedestrians. To account for this limited access, the operations for the couplets that would include a BRT lane will be analyzed with high access control. Also with the construction of the one-way couplet, on-street bicycle facilities would be built in coordination with the operations of the BRT and general purpose traffic. Since the location of stations and operating conditions of the BRT system are unknown, an in-depth analysis of the BRT operations would need to be completed in a detailed transit study.



*PROPOSED PROJECT TRIP GENERATION, TRIP DISTRIBUTION, AND TRIP ASSIGNMENT – CUMULATIVE CONDITIONS*

Traffic associated with the proposed Corridor Plan was estimated using the 3-step process outlined above (see the “Proposed Project Trip Generation, Trip Distribution, and Trip Assignment – Existing Plus Project Condition” section above). In the case of the Cumulative Condition analysis, the 2035 SACMET TDF model was used in place of the 2007 model. Under the Cumulative Condition the trip generation does not change; however, the trip distribution is modified due to other assumed uses in the plan area depending on the Cumulative scenario modeled. Table TC-12 below indicates the project trip distribution percentages for the roadways in the study area for the Elkhorn and Town Center Districts under both Cumulative scenarios. Table TC-13 shows the trip distribution percentages of the Triangle Gateway District under both Cumulative scenarios.

**Table TC-12: Cumulative Plus Project Trip Distribution – Elkhorn and Town Center Districts**

Roadway Location	Trip Distribution	
	Existing General Plan	Proposed General Plan
Watt Avenue north of Elverta Road	5%	5%
Elverta Road west of Watt Avenue	4%	2%
Elverta Road east of Watt Avenue	4%	1%
U Street west of Watt Avenue	4%	1%
Antelope Road east of Watt Avenue	7%	6%
Q Street west of Watt Avenue	5%	9%
Elkhorn Boulevard west of Watt Avenue	12%	14%
Elkhorn Boulevard east of Watt Avenue	16%	17%
Don Julio Boulevard east of Watt Avenue	13%	23%
Roseville Road west of Watt Avenue	7%	4%
Airbase Drive east of Watt Avenue	10%	7%
Watt Avenue south of Roseville Road	10%	11%
Source: SACMET TDF Model		

**Table TC-13: Existing Plus Project Trip Distribution – Triangle Gateway District**

Roadway Location	Trip Distribution	
	Existing General Plan	Proposed General Plan
Watt Avenue north of Roseville Road	16%	13%
Roseville Road west of Watt Avenue	25%	25%
Roseville Road east of Watt Avenue	10%	11%
Airbase Drive east of Watt Avenue	17%	19%
I-80 west of Watt Avenue via Watt Avenue Interchange	6%	7%
I-80 east of Watt Avenue via Watt Avenue Interchange	1%	1%
SR-51 south of Watt Avenue	5%	6%
SR-244 south of I-80	6%	7%
Watt Avenue south of Auburn Boulevard	44%	11%
Source: SACMET TDF Model		

*STUDY INTERSECTION AND ROADWAY SEGMENT OPERATIONS – CUMULATIVE CONDITIONS*

**INTERSECTION OPERATIONS**

Table TC-14 below indicates the delay and corresponding LOS for the study intersections under all three future scenarios.

**Table TC-14: Peak Hour Intersection LOS – Cumulative Conditions**

Intersection	Traffic Control	Cumulative No Project				Cumulative Plus Project <sup>1</sup>				Cumulative Plus Project <sup>2</sup>			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay <sup>3</sup>	LOS <sup>4</sup>	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Watt Avenue / Elverta Road	Signal	91	F	94	F	93	F	98	F	72	E	91	F
2. Watt Avenue / Antelope Road	Signal	122	F	146	F	78	E	115	F	112	F	>150	F
3. Watt Avenue / Q Street	Signal	37	D	20	B	43	D	22	G	39	D	57	E
4. Watt Avenue / Elkhorn Boulevard	Signal	95	F	55	D	118	F	56	E	33	C	59	E
5. Watt Avenue / Don Julio Boulevard	Signal	117	F	>150	F	>150	F	>150	F	>150	F	>150	F
6. Watt Avenue / Freedom Park Drive	Signal	46	D	20	C	118	F	56	E	33	C	59	E
7. Watt Avenue / A Street/James Way	Signal	71	E	>150	F	118	F	>150	F	>101	F	>150	F
8. Watt Avenue / Palm Street	Signal	12	B	11	B	13	B	16	B	23	C	92	F
9. Watt Avenue / Airbase Drive	Signal	32	C	28	C	29	C	41	D	41	D	38	D
10. Watt Avenue / Peacekeeper Way	Signal	27	C	40	D	28	C	41	D	30	C	38	D
11. Watt Avenue / Roseville Road	Signal	45	D	52	D	47	D	66	E	54	D	69	E
12. Watt Avenue / Winona Way	Signal	37	D	30	C	73	E	53	D	68	E	51	D
13. Watt Avenue / I-80 Westbound Off-Ramp	Signal	13	B	10	B	12	B	13	B	12	B	12	B
14. Watt Avenue / I-80 Eastbound Off-Ramp	Signal	24	C	24	C	24	C	27	C	25	C	24	C
15. Elkhorn Boulevard / 32 <sup>nd</sup> Street	Signal	58	E	112	F	73	E	>150	F	75	E	>150	F
16. 34 <sup>th</sup> Street / Q Street	All Way Stop	29	D	52	F	87	F	119	F	140	F	101	F
17. Elkhorn Boulevard / 34 <sup>th</sup> Street	Side Street Stop	>150	F	>150	F	>150	F	>150	F	42	D	58	E
18. 34 <sup>th</sup> Street / Freedom Park Drive	All Way Stop	>150	F	>150	F	>150	F	>150	F	>150	F	>150	F
19. Dudley Boulevard / James Way	All Way Stop	30	D	60	F	76	F	118	F	33	C	39	D
20. Watt Avenue / Auburn Boulevard	Signal	44	D	46	D	48	D	50	D	46	D	55	D

Notes: 1 Cumulative Plus Project Plus Existing General Plan Conditions  
2 Cumulative Plus project Plus Proposed General Plan Conditions  
3 For signalized and all-way stop-controlled intersections, the overall average intersection control delay is reported in seconds per vehicle. For side-street stop control, the average control delay for the worst movement is reported in seconds per vehicle.  
4 Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000).  
5 Delays greater than 2.5 minutes are not reported due to model insensitivity under extreme congestion.  
**BOLD** text indicates unacceptable operations with respect to the County of Sacramento criterion.  
UNDERLINE type indicated a significant impact with respect to the County of Sacramento significance criteria.

Source: Fehr & Peers, 2010

~~Based on Table TC-14 and the County of Sacramento's significance criteria, the following nine intersections would be significantly impacted under Cumulative Plus Project Plus Existing General Plan Conditions during the AM and/or PM peak hour:~~

- ~~• Watt Avenue / Elkhorn Boulevard (AM peak hour)~~
- ~~• Watt Avenue / Don Julio Boulevard (AM and PM peak hour)~~
- ~~• Watt Avenue / Freedom Park Drive (AM peak hour)~~
- ~~• Watt Avenue / A Street/James Way (AM and PM peak hour)~~
- ~~• Elkhorn Boulevard / 32nd Street (PM peak Hour)~~
- ~~• 34th Street / Q Street (AM and PM peak hour)~~
- ~~• Elkhorn Boulevard / 34th Street (AM and PM peak hour)~~
- ~~• 34th Street / Freedom Park Drive (AM and PM peak hour)~~
- ~~• Dudley Boulevard / James Way (AM and PM peak hour)~~

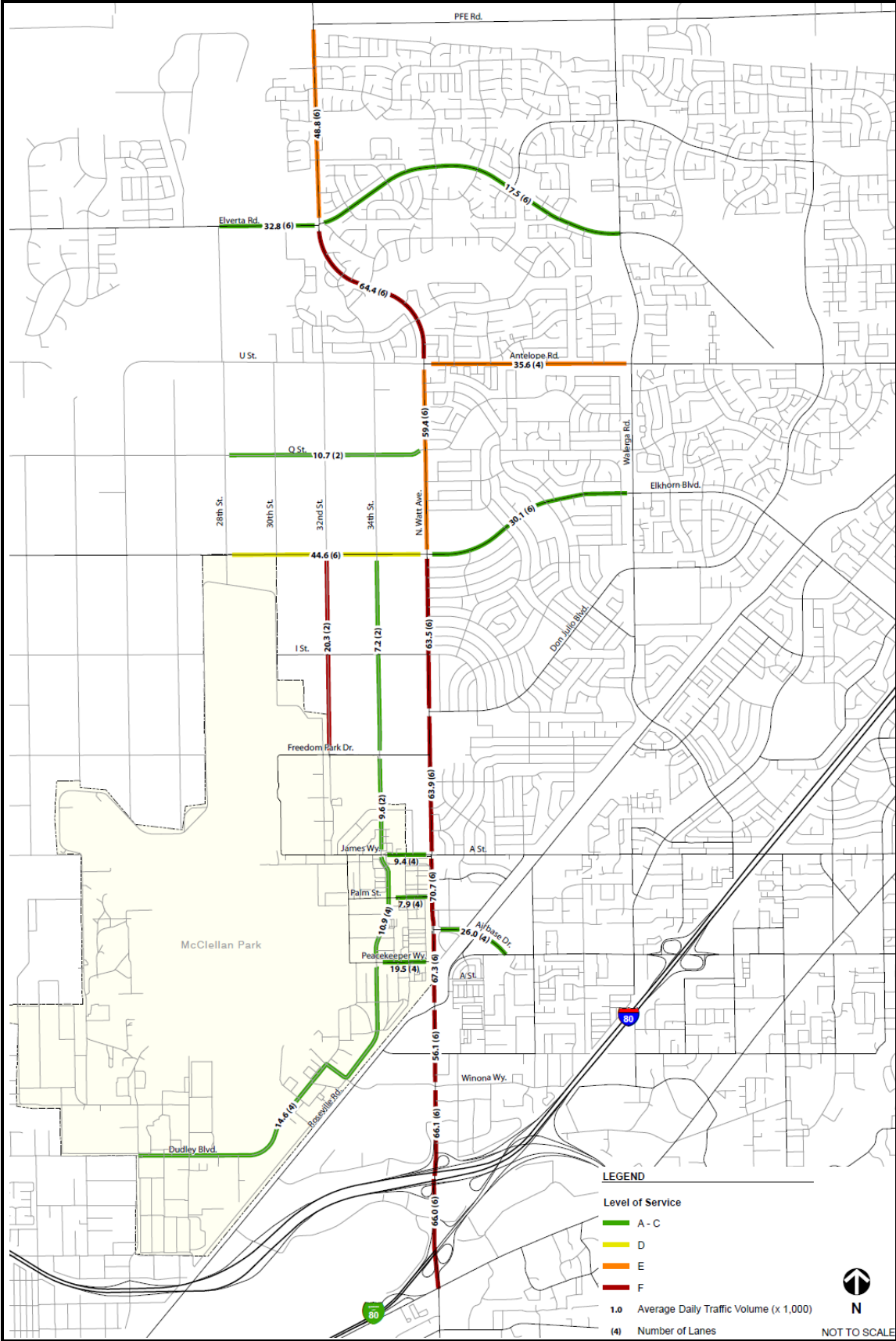
~~Additionally, b~~ **B**ased on Table TC-14 and the County of Sacramento's significance criteria the following five intersections would be significantly impacted under Cumulative Plus Project Plus Proposed General Plan Conditions during the AM and/or PM peak hour:

- Watt Avenue / Antelope Road (PM peak hour)
- Watt Avenue / Don Julio Boulevard (AM and PM peak hour)
- Watt Avenue / A Street/James Way (AM and PM peak hour)
- Watt Avenue / Palm Street (PM peak hour)
- Elkhorn Boulevard / 32nd Street (PM peak hour)
- 34th Street / Q Street (AM and PM peak hour)

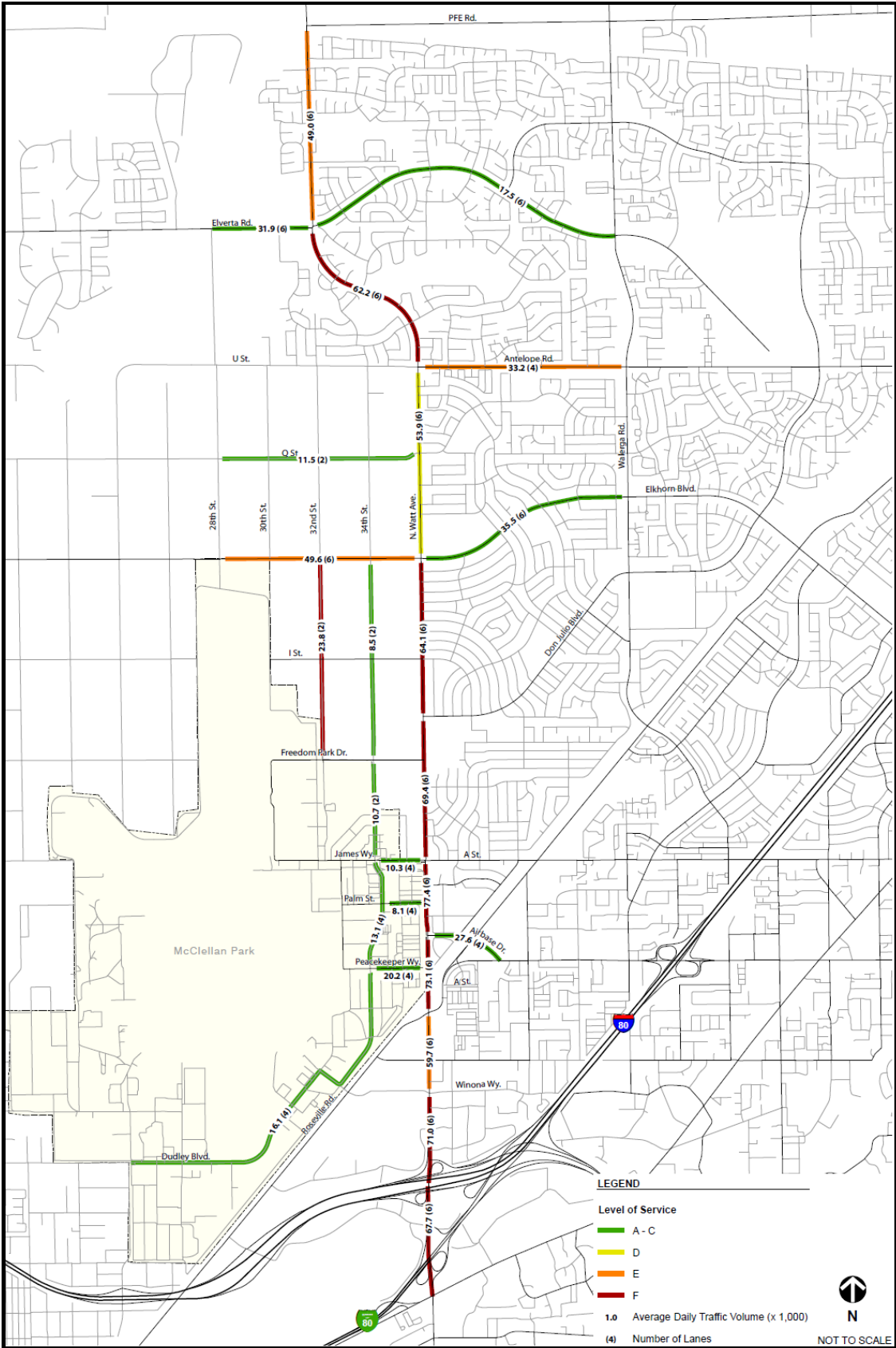
### **ROADWAY SEGMENT OPERATIONS**

The study roadway segments were analyzed based on forecasted daily roadway volumes under Cumulative No Project Conditions. Plate TC-9, Plate TC-10, and Plate TC-11 show the ADT and corresponding LOS for the study roadway segments under the Cumulative No Project Conditions, ~~the Cumulative Plus Project Plus Existing General Plan Conditions~~ and Cumulative Plus Project Plus Proposed General Plan Conditions, respectively. Table TC-15 tabulates the results and identifies the roadway segments that the project would significantly impact based on the County of Sacramento's significance criteria.

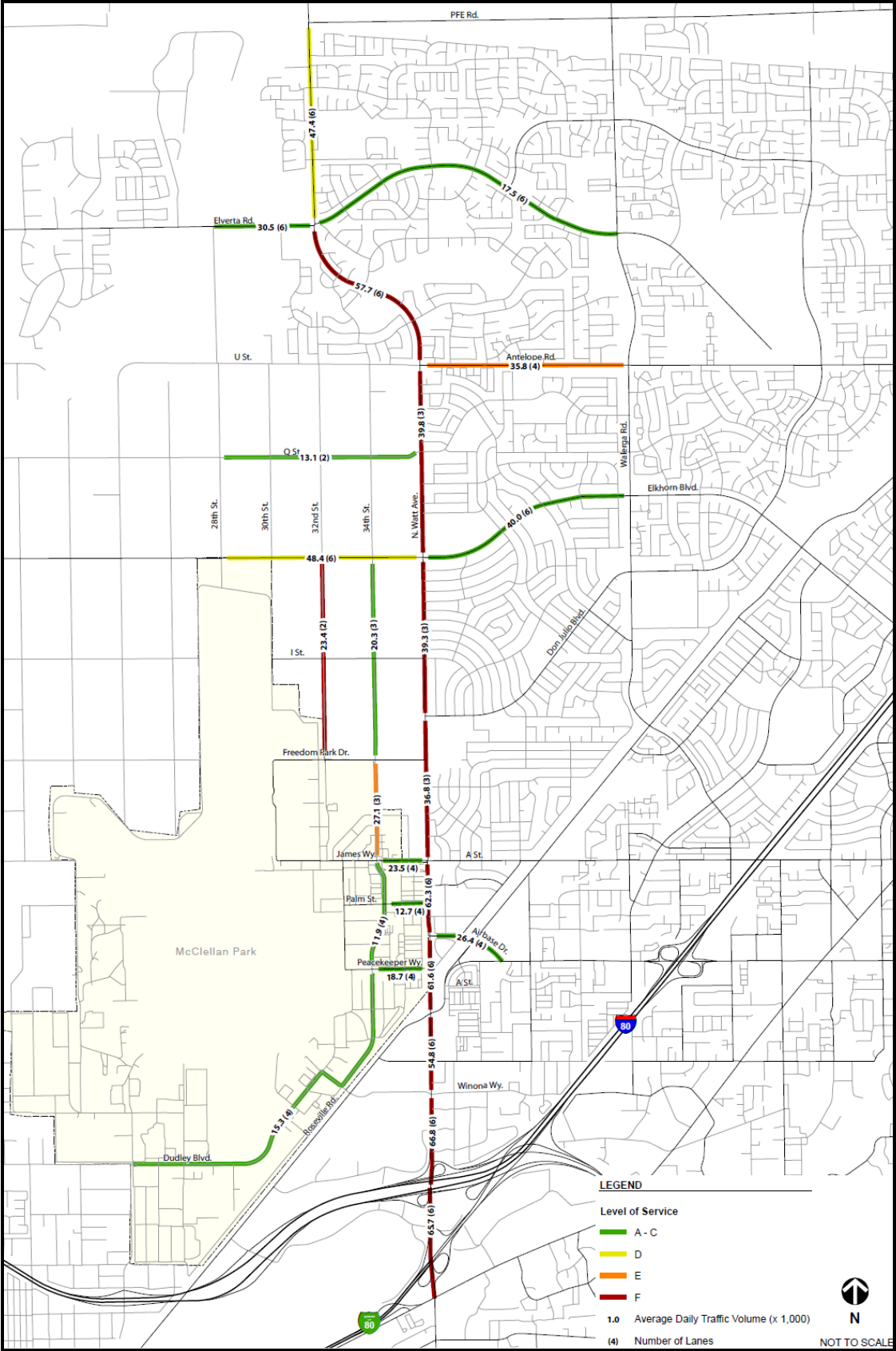
Plate TC-9: Average Daily Traffic Volume and LOS – Cumulative No Project



### Plate TC-10: Average Daily Traffic Volume and LOS – Cumulative Plus Project Plus Existing General Plan



**Plate TC -11: Average Daily Traffic Volume and LOS – Cumulative Plus Project Plus Proposed General Plan**





**Table TC-15: Roadway Segment Volume and LOS – Cumulative Conditions**

Roadway Segment	Lanes	Cumulative No Project			Cumulative Plus Project <sup>1</sup>			Cumulative Plus Project <sup>2</sup>		
		ADT <sup>3</sup>	V/C <sup>4</sup>	LOS <sup>5</sup>	ADT	V/C	LOS	ADT	V/C	LOS
1. Watt Avenue from PFE Road to Elverta Road	6	48,800	0.90	E	<del>49,000</del>	0.91	E	47,400	0.88	D
2. Watt Avenue from Elverta Road to Antelope Road	6	<b>64,400</b>	<b>1.07</b>	<b>F</b>	<del>62,200</del>	<del>1.04</del>	<del>F</del>	<b>57,700</b>	<b>1.07</b>	<b>F</b>
3. Watt Avenue from Antelope Road to Elkhorn Blvd	6*	59,400	0.99	E	<del>53,900</del>	0.90	D	<u>39,800</u>	<u>1.33</u>	<u>E</u>
4. Watt Avenue from Elkhorn Blvd to Don Julio Blvd	6*	<b>63,500</b>	<b>1.06</b>	<b>F</b>	<del>64,100</del>	<del>1.07</del>	<del>F</del>	<u>39,300</u>	<u>1.31</u>	<u>E</u>
5. Watt Avenue from Don Julio Blvd to James Way / A Street	6*	<b>63,900</b>	<b>1.07</b>	<b>F</b>	<del>69,400</del>	<del>1.16</del>	<del>F</del>	<u>36,800</u>	<u>1.23</u>	<u>E</u>
6. Watt Avenue from James Way / A Street to Airbase Drive	6	<b>70,700</b>	<b>1.18</b>	<b>F</b>	<del>77,400</del>	<del>1.29</del>	<del>F</del>	62,300	1.15	F
7. Watt Avenue from Airbase Drive to Roseville Road	6	<b>67,300</b>	<b>1.12</b>	<b>F</b>	<del>73,100</del>	<del>1.22</del>	<del>F</del>	61,600	1.14	F
8. Watt Avenue from Roseville Road to Winona Way	6	56,100	0.94	E	<del>59,700</del>	1.00	E	<u>54,800</u>	<u>1.01</u>	<u>F</u>
9. Watt Avenue from Winona Way to I-80 Ramps	6	<b>66,100</b>	<b>1.10</b>	<b>F</b>	<del>71,000</del>	<del>1.18</del>	<del>F</del>	<u>66,800</u>	<u>1.24</u>	<u>F</u>
10. Elverta Road from 28 <sup>th</sup> Street to Watt Avenue	6	32,800	0.61	B	<del>31,900</del>	0.59	A	30,500	0.56	A
11. Elverta Road from Watt Avenue to Walerga Road	6	17,500	0.32	A	17,500	0.32	A	17,500	0.32	A
12. Q Street from 28 <sup>th</sup> Street to Watt Avenue	2	10,700	0.59	A	11,500	0.64	B	13,100	0.73	C
13. Antelope Road from Watt Avenue to Walerga Road	4	35,600	0.99	E	<del>33,200</del>	0.92	E	35,800	0.99	E
14. Elkhorn Blvd from 28 <sup>th</sup> Street to Watt Avenue	6	44,600	0.83	D	<del>49,600</del>	0.92	E	48,400	0.90	D
15. Elkhorn Blvd from Watt Avenue to Walerga Road	6	30,100	0.56	A	<del>35,500</del>	0.66	B	40,000	0.74	C

Roadway Segment	Lanes	Cumulative No Project			Cumulative Plus Project <sup>1</sup>			Cumulative Plus Project <sup>2</sup>		
		ADT <sup>3</sup>	V/C <sup>4</sup>	LOS <sup>5</sup>	ADT	V/C	LOS	ADT	V/C	LOS
16. James Way from Dudley Blvd to Watt Avenue	4	9,400	0.26	A	<del>10,300</del>	<del>0.29</del>	A	23,500	0.65	B
17. Palm Avenue from Dudley Blvd to Watt Avenue	4	7,900	0.22	A	<del>8,100</del>	<del>0.23</del>	A	12,700	0.35	A
18. Airbase Parkway from Watt Avenue to Madison Avenue	4	26,000	0.72	C	<del>27,600</del>	<del>0.77</del>	C	26,400	0.73	C
19. Peacekeeper Way from Dudley Blvd to Watt Avenue	4	19,500	0.54	A	<del>20,200</del>	<del>0.56</del>	A	18,700	0.52	A
20. 32 <sup>nd</sup> Street from Elkhorn Blvd to Freedom Park Drive	2	<b>20,300</b>	<b>1.13</b>	<b>F</b>	<u>23,800</u>	<u>1.32</u>	<b>F</b>	<u>23,400</u>	<u>1.30</u>	<b>F</b>
21. 34 <sup>th</sup> Street from Elkhorn Blvd to Freedom Park Drive	2*	7,200	0.40	A	<del>8,500</del>	<del>0.47</del>	A	20,300	0.68	B
22. Dudley Blvd from Freedom Park Drive to James Way	2*	9,600	0.53	A	<del>10,700</del>	<del>0.59</del>	A	27,100	0.90	E
23. Dudley Blvd from James Way to Peacekeeper Way	4	10,900	0.30	A	<del>13,100</del>	<del>0.36</del>	B	11,900	0.33	A
24. Dudley Blvd from Peacekeeper Way to Bell Avenue	4	14,600	0.41	A	<del>16,100</del>	<del>0.45</del>	A	15,300	0.43	A
25. Watt Avenue from I-80 Ramps to Auburn Blvd	6	<b>66,000</b>	<b>1.22</b>	<b>F</b>	<u>67,700</u>	<u>1.25</u>	<b>F</b>	<u>65,700</u>	<u>1.22</u>	<b>F</b>

Notes: \* The lanes of these segments would change in the one-way couplet and are analyzed as 3-lane segments under this scenario.  
 1 ~~Cumulative Plus Project Plus Existing General Plan Conditions~~  
 2 Cumulative Plus project Plus Proposed General Plan Conditions  
 3 Average Daily Traffic  
 4 Volume to capacity ratio (County of Sacramento Traffic Analysis Guidelines, 2004)  
 5 Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000).  
**BOLD** text indicates unacceptable operations with respect to the County of Sacramento criterion.  
UNDERLINE type indicated a significant impact with respect to the County of Sacramento significance criteria.

Source: Fehr & Peers, 2010

~~Based on Table TC-15, the following five roadway segments would be significantly impacted based on the results of the Cumulative Plus Project Plus Existing General Plan Conditions:~~

- ~~• North Watt Avenue from Don Julio Boulevard to James Way/A Street~~
- ~~• North Watt Avenue from James Way/A Street to Airbase Drive~~
- ~~• North Watt Avenue from Airbase Drive to Roseville Road~~
- ~~• North Watt Avenue from Winona Way to I-80 Ramps~~
- ~~• 32nd Street from Elkhorn Boulevard to Freedom Park Drive~~

~~Also b~~ Based on Table TC-15, the following six roadway segments would be significantly impacted based on the results of the Cumulative Plus Project Plus Proposed General Plan Conditions:

- North Watt Avenue from Antelope Road to Elkhorn Boulevard
- North Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard
- North Watt Avenue from Don Julio Boulevard to James Way/A Street
- North Watt Avenue from Roseville Road to Winona Way
- North Watt Avenue from Winona Way to I-80 Ramps
- 32nd Street from Elkhorn Boulevard to Freedom Park Drive

~~A comparison of the ADT volumes along North Watt Avenue under Existing General Plan conditions to the couplet under Proposed General Plan conditions indicates that traffic is using alternative routes when the couplet is implemented. Based on the 2035 SACMET TDF model, the parallel routes of 16th Street, Larchmont Drive, and Walerga Road would increase in traffic based on a diversion of vehicles from North Watt Avenue. Also, vehicles that may have been traveling south on North Watt Avenue to I-80, instead travel to/from the east along Antelope Road, Elkhorn Boulevard, and Don Julio Boulevard to access I-80 when the couplet is employed.~~

#### *FREEWAY FACILITY OPERATIONS – CUMULATIVE CONDITIONS*

The study freeway facilities were analyzed based on forecasted AM and PM ramp and mainline volumes under Cumulative Conditions. Plate TC-12 shows the AM and PM peak hour volumes for all study freeway facilities under Cumulative No Project Conditions. Table TC-16 presents the freeway facility results under the Cumulative Conditions.

Plate TC-12: Freeway Ramp and Mainline Peak Hour Traffic Volume—Cumulative No Project Conditions

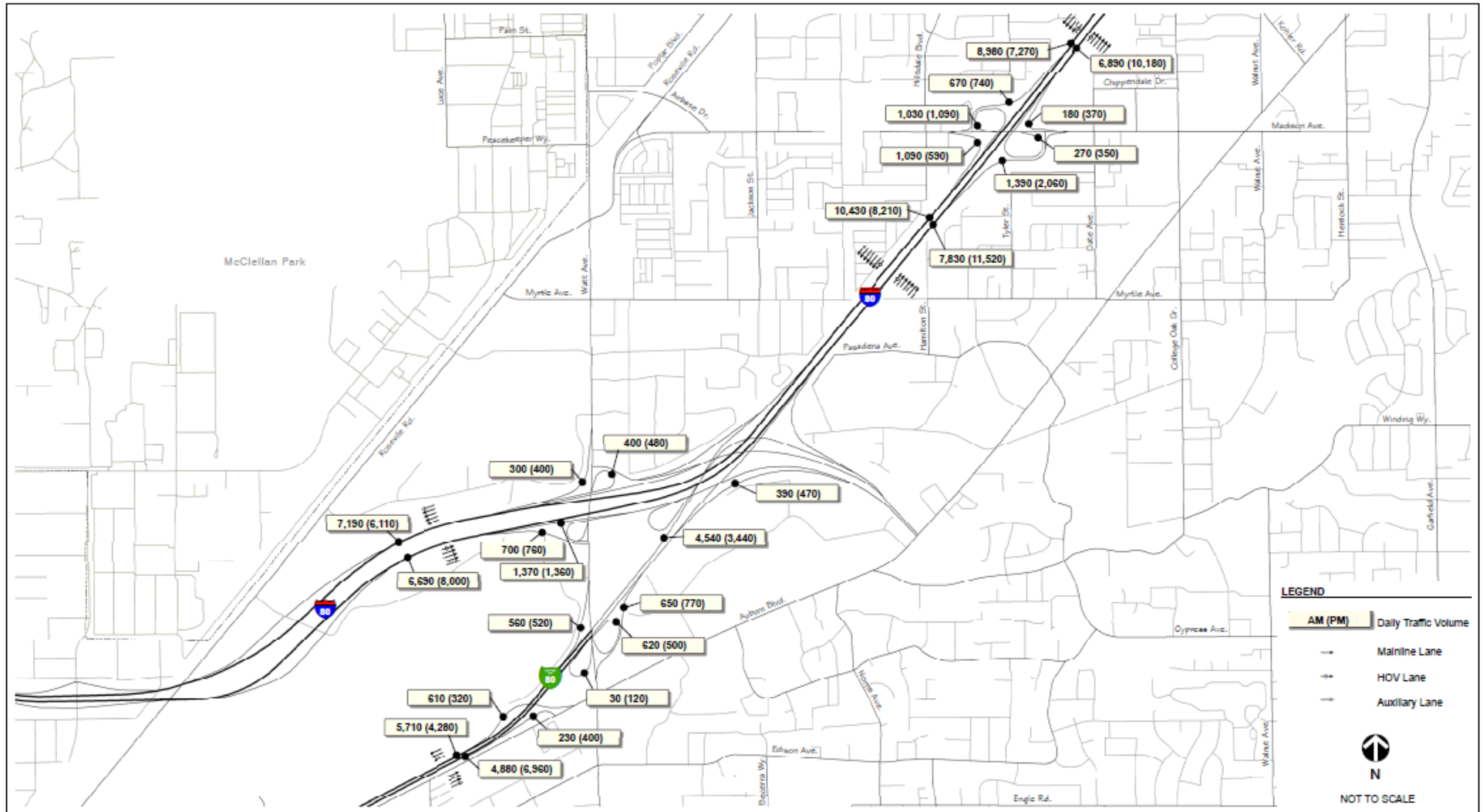


Plate TC-13: Freeway Ramp and Mainline Peak Hour Traffic Volume—Cumulative Plus Project Plus Existing General Plan

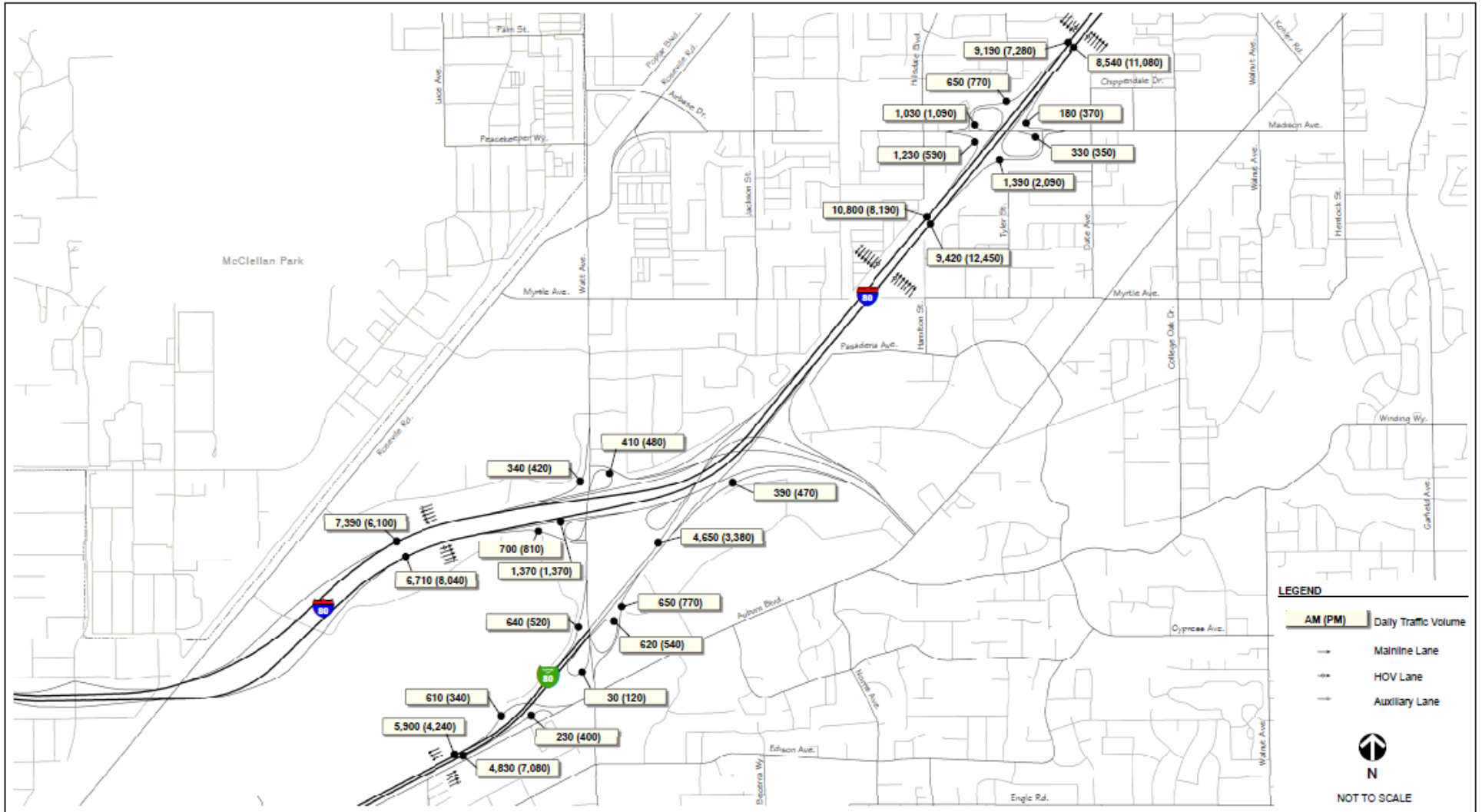
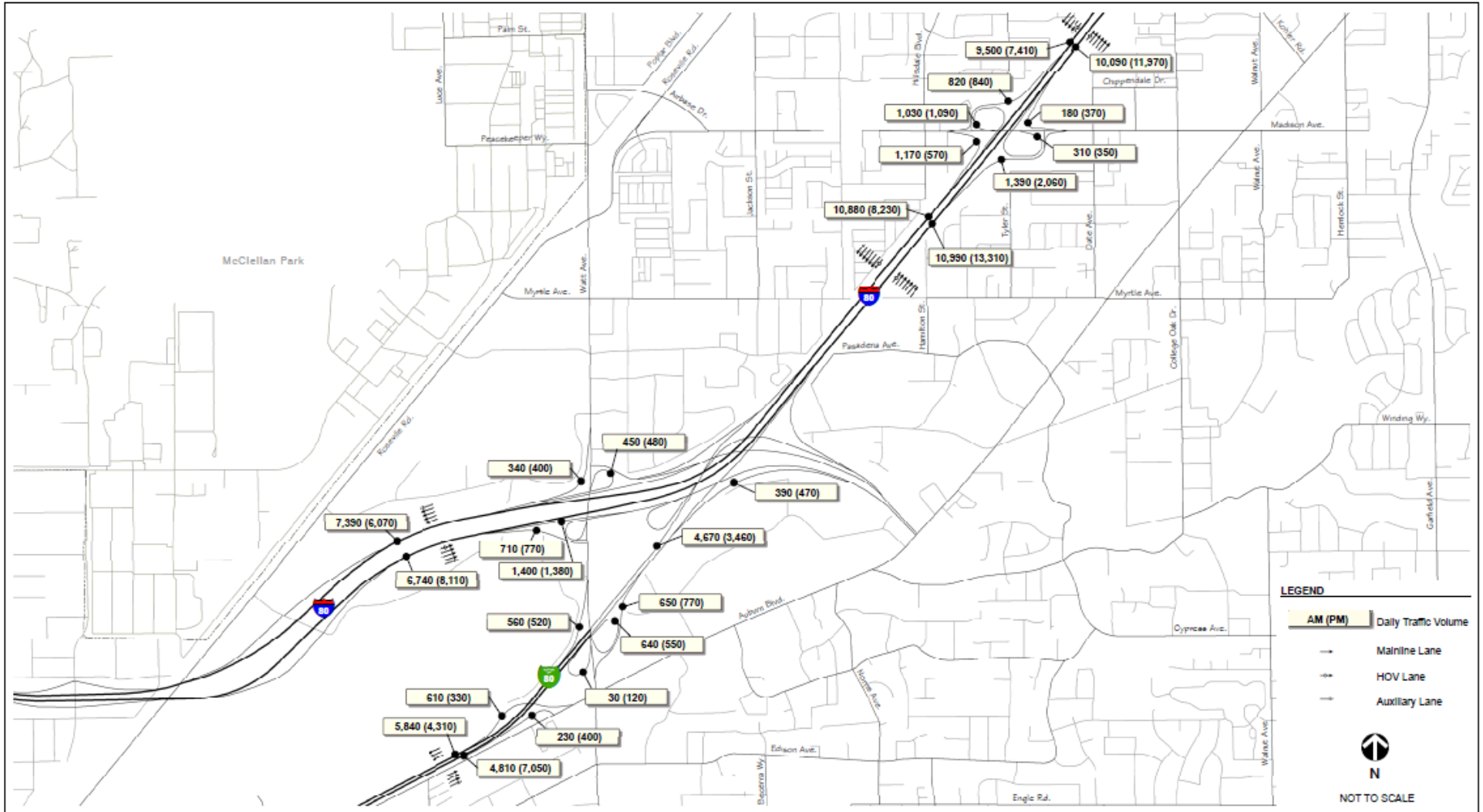


Plate TC-14: Freeway Ramp and Mainline Peak Hour Traffic Volume—Cumulative Plus Project Plus Proposed General Plan



**Table TC-16: Peak Hour Freeway Facility LOS – Cumulative Conditions**

Location	Type of Facility	Cumulative No Project				Cumulative Plus Project <sup>1</sup>				Cumulative Plus Project <sup>2</sup>			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
<b>Interstate 80 / Madison Avenue Interchange</b>													
1. Eastbound I-80 west of Madison Avenue Interchange	Mainline	19	C	29	D	23	E	32	D	28	D	36	E
2. Eastbound I-80 east of Madison Avenue	Mainline	20	C	27	D	24	E	31	D	29	D	34	D
3. Westbound I-80 east of Madison Avenue	Mainline	33	D	25	C	34	D	25	E	36	E	25	C
4. Westbound I-80 west of Madison Avenue	Mainline	26	C	17	B	27	D	19	E	27	D	19	C
5. Eastbound I-80 Slip Off Ramp	Diverge	10	B	19	B	12	B	21	E	14	B	22	C
6. Eastbound I-80 Loop On Ramp	Merge	21	C	27	C	24	E	22	E	27	C	29	D
7. Eastbound I-80 Slip On Ramp	Merge	17	B	24	C	20	B	27	E	24	C	30	D
8. Westbound I-80 Slip Off Ramp	Diverge	36	E	31	D	37	E	31	D	39	E	32	D
9. Westbound I-80 Loop On Ramp	Merge	32	D	26	C	29	D	26	E	--	F	26	C
10. Westbound I-80 Slip On Ramp	Merge	30	D	22	C	32	D	22	E	22	C	22	C
<b>State Route 51 / Watt Avenue Interchange</b>													
11. Northbound SR-51 south of Watt Avenue Interchange	Mainline	25	C	41	E	24	E	42	E	24	C	42	E
12. Northbound SR-51 between Watt Avenue Loop Off and Slip On	Mainline	21	C	36	E	21	E	37	E	21	C	36	E

Location	Type of Facility	Cumulative No Project				Cumulative Plus Project <sup>1</sup>				Cumulative Plus Project <sup>2</sup>			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
13. Southbound SR-51 north of Watt Avenue Interchange	Mainline	24	C	18	C	25	<u>G</u>	48	<u>B</u>	25	C	18	C
14. Southbound SR-51 south of Watt Avenue Interchange	Mainline	32	D	23	C	<del>33</del>	<u>D</u>	22	<u>G</u>	33	D	23	C
15. Southbound SR-51 Slip On Ramp from Watt Avenue	Merge	29	D	24	C	<del>30</del>	<u>D</u>	<del>23</del>	<u>G</u>	30	D	24	C
16. Southbound SR-51 Slip On Ramp from Auburn Boulevard	Merge	33	D	25	C	34	<u>D</u>	25	<u>G</u>	36	E	26	C
17. Northbound SR-51 from Fulton Avenue Slip On to Watt Avenue Slip Off	Weave	23	C <sup>3</sup>	--	E	22	<u>G<sup>3</sup></u>	<u>=</u>	<u>F</u>	22	C <sup>3</sup>	--	E
18. Northbound SR-51 from Watt Avenue Loop On to Watt Avenue Loop Off	Weave	--	C	--	E	--	<u>G</u>	--	<u>E</u>	--	C	--	E
19. Northbound SR-51 from Watt Avenue Slip On to Auburn Boulevard Slip Off	Weave	--	C	--	<b>F</b>	--	<u>G</u>	<u>=</u>	<u>F</u>	--	C	<u>=</u>	<u>F</u>
<b>Interstate 80 / Watt Avenue Interchange</b>													
20. Eastbound I-80 from Longview Drive Slip On to Watt Avenue Slip Off/SR-244 Slip Off	Weave	--	E	--	<b>F</b>	--	<u>E</u>	<u>=</u>	<u>F</u>	--	E	<u>=</u>	<u>F</u>
21. Westbound I-80 from Watt Avenue Loop/Slip On Ramp to Longview Drive Slip Off Ramp	Weave	--	E	--	C	--	<u>E</u>	--	<u>G</u>	--	E	--	C
Notes:	<p>1 Cumulative Plus Project Plus Existing General Plan Conditions                  2 Cumulative Plus project Plus Proposed General Plan Conditions                  3 This segment has the geometry of a weaving section; however, during the AM peak hour, the analysis indicates it is outside the realm of a weaving section. Therefore, it was analyzed using the merge, diverge, and mainline segment analysis methodology of the HCM 2000. The density and LOS reported here for the AM peak hour is for the merge segment, which operates under the most congested conditions compared to the diverge and mainline segment analysis.  <b>BOLD</b> text indicates unacceptable operations with respect to Caltrans criterion.  <u>UNDERLINE</u> type indicated a significant impact with respect to Caltrans significance criteria.</p>												
Source: Fehr & Peers, 2010													



Plate TC-13 and Plate TC-14 show the AM and PM peak hour volumes for the study freeway facilities under ~~Cumulative Plus Project Plus Existing General Plan Conditions and Cumulative Plus Project Plus Proposed General Plan Conditions, respectively.~~ Table TC-16 tabulates the results and identifies the freeway facilities that the project would significantly impact based on the Caltrans impact criterion.

~~Based on Table TC-16, the following three freeway facilities would be significantly impacted based on the results of the Cumulative Plus Project Plus Existing General Plan Conditions:~~

- ~~• Northbound SR-51 from Fulton Avenue Slip On-ramp to Watt Avenue Slip Off-ramp – Weave (PM peak hour)~~
- ~~• Northbound SR-51 from Watt Avenue Slip On-ramp to Auburn Boulevard Slip Off-ramp – Weave (PM peak hour)~~
- ~~• Eastbound I-80 from Longview Drive Slip On-ramp to Watt Avenue Slip Off-ramp/SR-244 Slip Off-ramp – Weave (PM peak hour)~~

~~Also b~~ **B**ased on Table TC-16, the following three freeway facilities would be significantly impacted based on the results of the Cumulative Plus Project Plus Proposed General Plan Conditions:

- Westbound I-80 Loop On-ramp from Madison Avenue – Merge (AM peak hour)
- Northbound SR-51 from Watt Avenue Slip On-ramp to Auburn Boulevard Slip Off-ramp – Weave (PM peak hour)
- Eastbound I-80 from Longview Drive Slip On-ramp to Watt Avenue Slip Off-ramp/SR-244 Slip Off-ramp – Weave (PM peak hour)

#### *BICYCLE AND PEDESTRIAN FACILITIES – CUMULATIVE PLUS PROJECT CONDITIONS*

As noted in the “Planned Bicycle and Pedestrian System” section above, the proposed project calls for the construction of bicycle and pedestrian facilities on both the east and west side of Watt Avenue. Additionally, other facilities throughout the Plan area are shown in Plate TC-5, the Bicycle Circulation Plan. Therefore, the proposed project would not adversely impact bicycle or pedestrian facilities; instead, it is intended to enhance the Corridor’s pedestrian and bicycle facilities by providing contiguous and more abundant facilities within the plan area. Impacts are ***less than significant***.

#### *CUMULATIVE CONDITIONS CONCLUSIONS*

~~Two different future cumulative scenarios were analyzed and conclusions and applicable mitigation varies between the two scenarios. Therefore concluding impacts, mitigation, and significance after mitigation is included separately below.~~

### **CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN**

In the Cumulative Plus Project Plus Existing General Plan condition nine study intersections, five study roadway segments and three impacted freeway facilities would exceed volume thresholds and operate at unacceptable levels of service. These impacts are considered significant impacts. Recommended mitigation and significance conclusions are discussed for each of the impacted facilities below.

It should be noted that four of the roadway segments that are modeled to operate at unacceptable levels in the cumulative plus project plus existing general plan condition are located on Watt Avenue, which is proposed to be a Smart Growth Street. Additionally, four of the intersections that will operate at unacceptable levels are located within Watt Avenue, which is proposed to be designated as a Smart Growth Street.

### **INTERSECTION MITIGATION AND SIGNIFICANCE – CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN**

To mitigate the significant impacts related to the nine significantly impacted study intersections, the following mitigation measures are proposed to increase intersection operations to acceptable levels:

- (CP 1-1) North Watt Avenue / Elkhorn Boulevard – widen the southbound approach to provide an exclusive right turn pocket. This improvement may require relocating the traffic signal head at the northwest corner of the intersection.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (CP 1-2) North Watt Avenue / Don Julio Boulevard – provide the following improvements:
  - i. Widen the northbound approach to provide dual left turn pockets. The construction of a second left turn pocket would require Don Julio Boulevard to provide 2 departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;
  - ii. Widen the eastbound approach to provide 1 left turn pocket, 1 through lane, and dual right turn pockets.

These improvements would reduce project impacts at this intersection to ***less than significant***.

- (CP 1-3) North Watt Avenue / Freedom Park Drive – widen the southbound approach to provide an exclusive right turn pocket. This improvement may require relocating a utility pole and traffic signal head at the northwest corner of

the intersection. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.

These improvements would reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-4) North Watt Avenue / A Street / James Way — widen the northbound and southbound approaches to provide an exclusive right turn pocket. These improvements may require relocating a utility pole and traffic signal head at the northwest corner of the intersection and a traffic signal head at the southeast corner of the intersection.~~

These improvements would reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-5) Elkhorn Boulevard / 32nd Street — Installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34th Street.~~

The redistribution of traffic will reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-6) 34th Street / Q Street — signalize the intersection and widen all of the approaches to provide 1 left turn pocket and 1 shared through/right lane. Allow protected left turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.~~

These improvements would reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-7) Elkhorn Boulevard / 34th Street — signalize the intersection and widen the northbound and southbound approaches to provide 1 left turn pocket and 1 through-right turn lane. Allow protected left turns on all approaches.~~

These improvements would reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-8) 34th Street / Freedom Park Drive — signalize the intersection and widen all of the approaches to provide 1 left turn pocket and 1 shared through/right lane. Allow protected left turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.~~

These improvements would reduce project impacts at this intersection to ***less than significant***.

- ~~(CP 1-9) Dudley Boulevard / James Way — provide the following improvements:~~

~~i. Signalize the intersection;~~

- ii. ~~Modify the striping of the southbound approach to provide 1 left turn pocket and 1 through/right lane;~~
- iii. ~~Modify the striping of the northbound approach to provide 1 left turn pocket, 1 through lane and 1 right lane;~~
- iv. ~~Modify the striping on the eastbound approach to provide 1 left turn lane and 1 through/right lane;~~
- v. ~~Modify the striping of the westbound approach to provide 1 left turn lane, 1 through lane, and 1 right turn pocket;~~
- vi. ~~Allow protected left turns on all approaches.~~

~~These improvements would reduce project impacts at this intersection to **less than significant**.~~

**~~ROADWAY SEGMENT MITIGATION AND SIGNIFICANCE — CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN~~**

~~The following list provides the proposed mitigation measures recommended to improve the roadway segment operations to acceptable levels:~~

- ~~(CP 1 10) North Watt Avenue from Don Julio Boulevard to James Way/A Street — widen the roadway from 6 lanes to 8 lanes.~~

~~This measure is considered infeasible because the maximum number of lanes on a County roadway is 6 lanes (3 lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.~~

- ~~(CP 1 11) North Watt Avenue from James Way/A Street to Airbase Drive — widen the roadway from 6 lanes to 8 lanes.~~

~~This measure is considered infeasible because the maximum number of lanes on a County roadway is 6 lanes (3 lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.~~

- ~~(CP 1 12) North Watt Avenue from Airbase Drive to Roseville Road — widen the roadway from 6 lanes to 8 lanes.~~

~~This measure is considered infeasible because the maximum number of lanes on a County roadway is 6 lanes (3 lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.~~

- ~~(CP 1-13) North Watt Avenue from Winona Way to I-80 Ramps—widen the roadway from 6-lanes to 8-lanes.~~

~~This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.~~

- ~~(CP 1-14) 32nd Street from Elkhorn Boulevard to Freedom Park Drive—installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34<sup>th</sup> Street.~~

~~The redistribution of traffic will reduce project impacts to **less than significant**.~~

#### **~~FREEWAY FACILITIES MITIGATION AND SIGNIFICANCE—CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN~~**

~~The I-80 and SR-51 Corridor System Management Plans (May 2009) identified that widening the freeway mainline was not feasible; however, the GSMP does propose strategies to enhance corridor mobility within the study area. Some of these strategies will be constructed along with the planned development of the proposed project, while others are mitigation measures for the proposed project. The strategies to enhance mobility within the corridor include:~~

- ~~Enhance transit and rail service by implementing bus rapid transit routes.~~
- ~~Optimize and coordinate traffic signals along parallel and connecting roadways.~~
- ~~Construct additional bicycle/pedestrian facilities to improve accessibility to transit and destination points.~~

~~The strategies listed above would encourage travel by alternative modes of transportation and enhance mobility through the corridor. However, the impact to the following freeway facilities remain **significant and unavoidable** as there is no feasible mitigation that will directly improve the freeway facility:~~

- ~~Northbound SR-51 from Fulton Avenue Slip-On ramp to Watt Avenue Slip-Off ramp—Weave~~
- ~~Northbound SR-51 from Watt Avenue Slip-On ramp to Auburn Boulevard Slip-Off ramp—Weave~~
- ~~Eastbound I-80 from Longview Drive Slip-On ramp to Watt Avenue Slip-Off ramp/ SR-244 Slip-Off ramp—Weave~~

**CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN**

In the Cumulative Plus Project Plus proposed General Plan condition six study intersections, six study roadway segments and three impacted freeway facilities would exceed volume thresholds and operate at unacceptable levels of service. These impacts are considered significant impacts. Recommended mitigation and significance conclusions are discussed for each of the impacted facilities below.

It should be noted that five of the roadway segments that are modeled to operate at unacceptable levels in the cumulative plus project plus proposed general plan condition are located on Watt Avenue, which is proposed to be a Smart Growth Street. Additionally, four of the intersections that will operate at unacceptable levels are located within Watt Avenue, which is proposed to be designated as a Smart Growth Street.

***INTERSECTION MITIGATION AND SIGNIFICANCE – CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN***

To mitigate the significant impacts caused by the project, the following mitigation measures are proposed to increase intersection operations to acceptable levels for the Cumulative Plus Project Plus Proposed General Plan scenario:

- (CP 2-1) North Watt Avenue / Antelope Road – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (CP 2-2) North Watt Avenue / Don Julio Boulevard – Widen the eastbound approach to provide dual left-turn pockets and two through lanes.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (CP 2-3) North Watt Avenue / A Street/James Way – provide the following improvements:
  - i. Provide an overlap phase for the eastbound right-turn movement during the northbound phase. This would require prohibiting northbound u-turn movements;
  - ii. Widen the northbound approach to provide an exclusive right-turn pocket.

These improvements would reduce project impacts at this intersection to ***less than significant***.

- (CP 2-4) North Watt Avenue / Palm Street – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.

This improvement would reduce project impacts at this intersection to ***less than significant***.

- (CP 2-5) Elkhorn Boulevard / 32nd Street – provide the following improvements:
  - i. Widen the westbound approach to provide a second left-turn pocket. Widening 32<sup>nd</sup> Street from 2- to 4-lanes between Freedom Park Drive and Elkhorn Boulevard as specified in roadway segment measure CP 2-12 would provide the additional required receiving lane on the south-leg of the intersection;
  - ii. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.

These improvements would reduce project impacts at this intersection; **however widening 32<sup>nd</sup> Street to 4-lanes is considered infeasible because the maximum number of lanes allowed on 32<sup>nd</sup> Street is 2 lanes. This improvement would require a General Plan amendment to allow a second left-turn lane; thus impacts are significant and unavoidable less than significant.**

- (CP 2-6) 34<sup>th</sup> Street / Q Street – widen the southbound and eastbound approaches to provide 1-shared through/left-turn lane and 1-right-turn pocket.

These improvements would reduce project impacts at this intersection to ***less than significant***.

#### ***ROADWAY SEGMENT MITIGATION AND SIGNIFICANCE – CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN***

The following list provides the proposed mitigation measures that would be required to improve the roadway segment operations to acceptable levels:

- (CP 2-7) North Watt Avenue from Antelope Road to Elkhorn Boulevard – widen the roadway from 3-lanes to 5-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains ***significant and unavoidable***.

- (CP 2-8) North Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard – widen the roadway from 3-lanes to 4-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (CP 2-9) North Watt Avenue from Don Julio Boulevard to James Way/A Street – widen the roadway from 3-lanes to 4-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (CP 2-10) North Watt Avenue from Roseville Road to Winona Way - widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (CP 2-11) North Watt Avenue from Winona Way to I-80 Ramps - widen the roadway from 6-lanes to 8-lanes.

This measure is considered infeasible because the maximum number of lanes on a County roadway is 6-lanes (3-lanes in each direction) and is not included as a recommended mitigation measure. This impact remains **significant and unavoidable**.

- (CP 2-12) 32nd Street from Elkhorn Boulevard to Freedom Park Drive – widen the roadway from 2-lanes to 4-lanes.

This improvement would reduce project impacts; **however widening 32<sup>nd</sup> Street to 4-lanes is considered infeasible because the maximum number of lanes allowed on 32<sup>nd</sup> Street is 2 lanes. This improvement would require a General Plan amendment; thus impacts are significant and unavoidable to less than significant.**

#### ***FREEWAY FACILITIES MITIGATION AND SIGNIFICANCE – CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN***

The I-80 and SR-51 Corridor System Management Plans (May 2009) identified that widening the freeway mainline was not feasible; however, the CSMP does propose strategies to enhance corridor mobility within the study area. Some of these strategies will be constructed along with the planned development of the proposed project, while others are mitigation measures for the proposed project. The strategies to enhance mobility within the corridor include:



- Enhance transit and rail service by implementing bus rapid transit routes.
- Optimize and coordinate traffic signals along parallel and connecting roadways.
- Construct additional bicycle/pedestrian facilities to improve accessibility to transit and destination points.

The strategies listed above would encourage travel by alternative modes of transportation and enhance mobility through the corridor. However, the impacts to the following freeway facilities remain **significant and unavoidable** because there is no feasible mitigation that will directly improve the freeway facility:

- Westbound I-80 Loop On-ramp from Madison Avenue – Merge
- Northbound SR-51 from Watt Avenue Slip On-ramp to Auburn Boulevard Slip Off-ramp – Weave
- Eastbound I-80 from Longview Drive Slip On-ramp to Watt Avenue Slip Off-ramp/ SR-244 Slip Off-ramp – Weave

## MITIGATION MEASURES

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### **MITIGATION MEASURE TC-1:**

Prior to Development Plan Review or issuance of building permits for projects resulting in intensification of use or increased square footage associated with development pursuant to the North Watt Avenue Corridor Plan, the Sacramento County Municipal Services Agency (MSA) shall prepare, or facilitate the preparation of, a phasing plan that identifies thresholds of development for when necessary improvements are required. The phasing plan shall also identify a mechanism to track when thresholds are met so infrastructure improvements are constructed when needed.

If private applicants/developers wish to proceed with development ahead of MSA's phasing plan, project specific analyses (i.e. sewer study, water study, traffic study) will be required to ensure that the existing infrastructure can accommodate the proposed development. Infrastructure improvements that are needed to accommodate proposed development shall be constructed prior to issuing building permits.

The following improvements shall be installed:

- (EP 1) North Watt Avenue / Don Julio Boulevard – provide the following improvements:
  - i. Widen the northbound approach to provide dual left-turn pockets, 2-through lanes, and 1-shared through/right lane, which is partially

based on measure EP-6. The construction of a second left-turn pocket would require Don Julio Boulevard to provide 2-departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;

- ii. Widen the southbound approach to provide 1-right-turn pocket;
  - iii. Widen the eastbound approach to provide 1-left-turn pocket, 1-through lane, and dual right-turn pockets;
  - iv. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.
- (EP 2) North Watt Avenue / Airbase Drive – modify the lane striping of the westbound approach to provide 1-left-turn pocket and 2-right-turn lanes.
  - (EP 3) Elkhorn Boulevard / 34th Street – signalize the intersection. Widen the northbound and southbound approaches to provide an exclusive left-turn pocket and 1-shared-through/right lane. Allow protected left-turns on all approaches.
  - (EP 4) 34th Street / Freedom Park Drive – signalize the intersection and widen all of the approaches to provide 1-left-turn pocket and 1-shared through/right lane. Allow protected left-turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.
  - (EP 5) North Watt Avenue from Antelope Road to Elkhorn Boulevard – widen the roadway from 4-lanes to 6-lanes.
  - (EP 6) North Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard – widen the roadway from 4-lanes to 6-lanes.
  - ~~(CP 1-1) North Watt Avenue / Elkhorn Boulevard – widen the southbound approach to provide an exclusive right-turn pocket. This improvement may require relocating the traffic signal head at the northwest corner of the intersection.~~
  - ~~(CP 1-2) North Watt Avenue / Don Julio Boulevard – provide the following improvements:~~
    - i. ~~Widen the northbound approach to provide dual left turn pockets. The construction of a second left-turn pocket would require Don Julio Boulevard to provide 2-departing lanes for the west leg of the intersection. These lanes would eventually taper to 1-lane prior to or at the first downstream intersection;~~

- ii. ~~Widen the eastbound approach to provide 1 left turn pocket, 1 through lane, and dual right turn pockets.~~
- ~~(CP 1-3) North Watt Avenue / Freedom Park Drive — widen the southbound approach to provide an exclusive right turn pocket. This improvement may require relocating a utility pole and traffic signal head at the northwest corner of the intersection. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.~~
- ~~(CP 1-4) North Watt Avenue / A Street / James Way — widen the northbound and southbound approaches to provide an exclusive right turn pocket. These improvements may require relocating a utility pole and traffic signal head at the northwest corner of the intersection and a traffic signal head at the southeast corner of the intersection.~~
- ~~(CP 1-5) Elkhorn Boulevard / 32nd Street — Installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34th Street.~~
- ~~(CP 1-6) 34th Street / Q Street — signalize the intersection and widen all of the approaches to provide 1 left turn pocket and 1 shared through/right lane. Allow protected left turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.~~
- ~~(CP 1-7) Elkhorn Boulevard / 34th Street — signalize the intersection and widen the northbound and southbound approaches to provide 1 left turn pocket and 1 through-right turn lane. Allow protected left turns on all approaches.~~
- ~~(CP 1-8) 34th Street / Freedom Park Drive — signalize the intersection and widen all of the approaches to provide 1 left turn pocket and 1 shared through/right lane. Allow protected left turns on all approaches. The installation of a roundabout could also be analyzed as a possible option to improve the intersection operations.~~
- ~~(CP 1-9) Dudley Boulevard / James Way — provide the following improvements:
 
  - i. ~~Signalize the intersection;~~
  - ii. ~~Modify the striping of the southbound approach to provide 1 left turn pocket and 1 through/right lane;~~
  - iii. ~~Modify the striping of the northbound approach to provide 1 left turn pocket, 1 through lane and 1 right lane;~~
  - iv. ~~Modify the striping on the eastbound approach to provide 1 left turn lane and 1 through/right lane;~~
  - v. ~~Modify the striping of the westbound approach to provide 1 left turn lane, 1 through lane, and 1 right turn pocket;~~~~

vi. ~~Allow protected left turns on all approaches.~~

- ~~(CP 1-14) 32nd Street from Elkhorn Boulevard to Freedom Park Drive – installation of mitigation measure CP 1-7 will result in a redistribution of traffic from 32nd Street to 34<sup>th</sup> Street.~~
- (CP 2-1) North Watt Avenue / Antelope Road – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.
- (CP 2-2) North Watt Avenue / Don Julio Boulevard – Widen the eastbound approach to provide dual left-turn pockets and two through lanes.
- (CP 2-3) North Watt Avenue / A Street/James Way – provide the following improvements:
  - i. Provide an overlap phase for the eastbound right-turn movement during the northbound phase. This would require prohibiting northbound u-turn movements;
  - ii. Widen the northbound approach to provide an exclusive right-turn pocket.
- (CP 2-4) North Watt Avenue / Palm Street – modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.
- (CP 2-5) Elkhorn Boulevard / 32nd Street – provide the following improvements:
  - i. ~~Widen the westbound approach to provide a second left turn pocket. Widening 32<sup>nd</sup> Street from 2- to 4-lanes between Freedom Park Drive and Elkhorn Boulevard as specified in roadway segment measure CP 2-12 would provide the additional required receiving lane on the south leg of the intersection;~~
  - ii. Modify the signal timing splits and cycle length for the implementation of ITS signal coordination through the corridor.
- (CP 2-6) 34<sup>th</sup> Street / Q Street – widen the southbound and eastbound approaches to provide 1-shared through/left-turn lane and 1-right-turn pocket.
- ~~(CP 2-12) 32nd Street from Elkhorn Boulevard to Freedom Park Drive – widen the roadway from 2 lanes to 4 lanes.~~

# 9 AIR QUALITY

## INTRODUCTION

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The Sacramento Metropolitan Area is a federal non-attainment area, and one of the top ten worst air quality areas nationally. In Sacramento County, pollutants of greatest concern are ozone precursors (hydrocarbons and nitrogen oxides), carbon monoxide (CO), particulate matter (PM), and other visibility-reducing material.

## AIR QUALITY SETTING

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### ATMOSPHERIC CONDITIONS

The geography and weather patterns of the Sacramento Valley are conducive to high air pollution levels. The mountain ranges surrounding the valley are natural air current barriers, which restrict most of the circulating winds of lower elevations from mixing and dispersing air pollutants of the valley. Sacramento is also subject to thermal air inversions, especially during the summer and fall months, wherein a layer of cool air is overlain by warmer air. Also, solar radiation from the abundant sunshine in Sacramento acts as a catalyst to drive chemical reactions between atmospheric pollutants such as reactive hydrocarbons and nitrogen oxides; the result is photochemical smog. Thus, the combination of surrounding mountains, abundant sunshine, thermal air inversions and wind patterns make the Sacramento area susceptible to high levels of air pollution.

### EXISTING AIR QUALITY

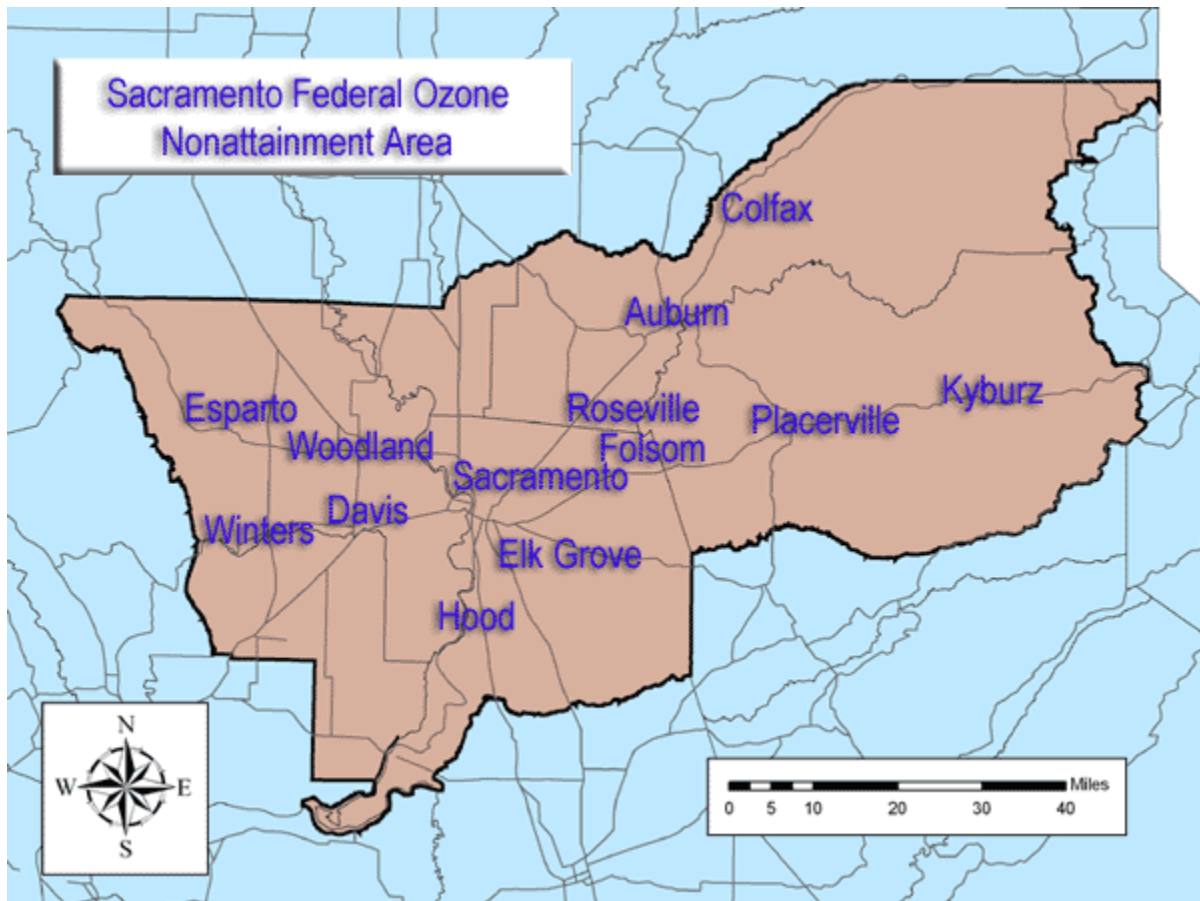
The Sacramento Federal Nonattainment Area for ozone (SFNA) is comprised of five air districts in the southern portion of the Sacramento air basin. The SFNA air districts include all of Sacramento and Yolo Counties, and portions of El Dorado, Placer, Sutter and Solano Counties (see Plate AQ-1). With two exceptions, this area is in attainment for all state and national ambient air quality standards (AAQS). However, the SFNA is designated a “serious” nonattainment area for the federal eight hour AAQS for ozone, and is also a “serious” nonattainment area for the state one hour ozone standard. As a part of the SFNA, Sacramento County is out of compliance with the state and federal ozone standards.

With respect to the state and federal 24-hour PM<sub>10</sub> AAQS, Sacramento County is designated nonattainment, although the four remaining air districts in the Sacramento region are designated nonattainment for the state AAQS and unclassified/attainment areas for the federal AAQS. Additionally, in June 2004, the USEPA proposed to classify Sacramento County in attainment of the new federal PM<sub>2.5</sub> standard.

Ambient air quality standards define clean air. Specifically, federal and state AAQS establish the concentration above which a pollutant is known to cause adverse health effects to sensitive groups within the population, such as children and the elderly. Because AAQS have been established for specific pollutants using health-based criteria, the pollutants for which standards have been set are known as “criteria” pollutants. For some of the criteria pollutants, the state standards are more stringent than the federal standards. The differences in the standards are due to variations in health studies and interpretations involved in the standard-setting process.

The amount of pollutants released and the atmosphere’s ability to transport and dilute the pollutants affect a given pollutant’s concentration in the atmosphere. Factors affecting transport and dilution include terrain, wind, atmospheric stability, and, for photochemical pollutants, sunlight. Sacramento’s poor air quality can largely be attributed to emissions, geography, and meteorology.

**Plate AQ-1:  
Sacramento Federal Nonattainment Area (SNFA) for Ozone**



Source: SMAQMD Website [www.airquality.org](http://www.airquality.org): <http://64.143.64.21/cleanairplan/index.shtml> (7/2004)

## REGULATORY SETTING

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### FEDERAL, STATE AND LOCAL AGENCIES

Air quality in Sacramento County is regulated by several agencies, which include the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), and Sacramento Metropolitan Air Quality Management District (SMAQMD). Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. In general, air quality is evaluated based upon standards developed by federal and state agencies. Mobile sources of air pollutants are largely controlled by federal and state agencies, while local air pollution control districts (APCD) or air quality management districts (AQMD) regulate stationary sources.

Air pollution problems in Sacramento County are primarily the result of locally generated emissions. However, Sacramento County has been identified as a source of ozone precursor emissions that occasionally contribute to air quality problems in the San Joaquin Valley Air Basin and the Northern Sacramento Valley Air Basin. Consequently, the air quality planning for Sacramento County must not only correct local air pollution problems but must also reduce the impacts from the area on downwind air basins.

### *SACRAMENTO METROPOLITAN AIR QUALITY RULES AND REGULATIONS*

SMAQMD regulates air quality in Sacramento County through its permit authority over stationary sources of emissions, through its vehicle and fuels management program, and through planning and review activities.

All projects are subject to SMAQMD Rules and Regulations in effect at the time of construction. Several SMAQMD Rules pertinent to the project include:

**RULE 201: GENERAL PERMIT REQUIREMENTS.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generator, compressors, pile drives, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

**RULE 403: FUGITIVE DUST.** The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

**RULE 442: ARCHITECTURAL COATINGS.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

*SACRAMENTO COUNTY GENERAL PLAN AIR QUALITY ELEMENT POLICIES*

The following relevant policies are from the 2030 Sacramento County General Plan Air Quality Element:

- AQ-1 New development shall be designed to promote pedestrian/bicycle access and circulation to encourage community residents to use alternative modes of transportation to conserve air quality and minimize direct and indirect emission of air contaminants.
- AQ-3 Buffers **and/or other appropriate mitigation** shall be established on a project-by-project basis and incorporated during review to provide for **protection of sensitive receptors from sources of air pollution or odor** ~~buffer separations between sensitive land uses and sources of air pollution or odor.~~ The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective", and the AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.
- AQ-4 Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review **and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District** ~~and endorsement by the Sacramento Metropolitan Air Quality Management District.~~
- AQ-16 Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.
- AQ-17 Promote optimal air quality benefits through energy conservation measures in new development.
- AQ-18 Require the recovery of chlorofluorocarbons (CFC's) when older air conditioning and refrigeration units are serviced or disposed.
- AQ-19 Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.



AQ-20 Promote Cool Community strategies to cool the urban heat island, reduce energy use and ozone formation, and maximize air quality benefits by encouraging four main strategies including, but not limited to: plant trees, selective use of vegetation for landscaping, install cool roofing, and install cool pavements.

## POLLUTANTS AND AIR QUALITY STANDARDS

The criteria pollutants of greatest concern are due to construction activities and vehicle emissions. The pollutants from these activities are carbon monoxide (CO), ozone (O<sub>3</sub>), and inhalable particulate matter less than 10 microns in diameter (PM<sub>10</sub>). A summary of state and federal ambient air quality standards for criteria pollutants is shown in Table AQ-1, below. Table AQ-2 shows the pollutants of concern and their attainment status with state and federal standards.

### *CARBON MONOXIDE (CO)*

State and federal CO standards have been set for both 1-hour and 8-hour averaging times. The state 1-hour standard is 20 parts per million (ppm) by volume, while the federal 1-hour standard is 35 ppm. Both state and federal standards are 9 ppm for the 8-hour averaging period. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream.

Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

### *INHALABLE PARTICULATE MATTER (PM<sub>10</sub> & PM<sub>2.5</sub>)*

Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs, but the smaller particles have been shown to have the most serious health risks. Consequently, there are federal and state air quality standards for particulate matter 10 microns or less in diameter (PM<sub>10</sub>) and for particulate matter 2.5 microns or less in diameter (PM<sub>2.5</sub>).

The state PM<sub>10</sub> standards are 50 micrograms per cubic meter (µg/m<sup>3</sup>) as a 24-hour average and 20 µg/m<sup>3</sup> as an annual arithmetic mean. The federal PM<sub>10</sub> standard is 150 µg/m<sup>3</sup> as a 24-hour average. The PM<sub>2.5</sub> standard has been set by the state at a concentration of 12 µg/m<sup>3</sup> as an annual arithmetic mean, and the federal standards are 15 µg/m<sup>3</sup> as an annual arithmetic mean and 35 µg/m<sup>3</sup> in a 24-hour period.

Particulate matter conditions in Sacramento County reflect a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

*OZONE (O<sub>3</sub>)*

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>), react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

State and federal standards for ozone have been set for an 8-hour averaging time, and the state also has set a standard for a 1-hour averaging time. There is a federal 1-hour standard in existence, but the standard only applies to Early Action Compact Areas, and Sacramento County is not in such an area. The state 8-hour standard is 0.070 ppm (137 µg/m<sup>3</sup>) and the 1-hour standard is 0.09 ppm (180 µg/m<sup>3</sup>). The federal 8-hour standard is 0.075 ppm (147 180 µg/m<sup>3</sup>). Currently, Sacramento County is classified as a “non-attainment” area for the state and federal ozone standards. (“Non-attainment” refers to the goal of attainment of both the state and federal ambient air quality standards.)

Table AQ-1: State and Federal Ambient Air Quality Standards

Pollutant	Symbol	Average Time	Standard, as <u>parts</u> <u>per million</u>		Standard, as <u>micrograms per cubic</u> <u>meter</u>		Violation Criteria	
			California	National	California	National	California	National
Ozone	O <sub>3</sub>	1 hour	0.09	0.12	180	--	If exceeded	If exceeded more than 3 days in 3 years
		8 hours	0.070	0.075	137	--	If exceeded	If exceeded more than 3 days in 3 years
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded more than 1 day per year
Nitrogen dioxide	NO <sub>2</sub>	Annual arithmetic mean	0.030	0.053	57	100	If exceeded	If exceeded
		1 hour	0.18	--	339	--	If exceeded	
Sulfur dioxide	SO <sub>2</sub>	Annual arithmetic mean	--	0.03	--	80	N/A	If exceeded
		24 hours	0.04	0.14	105	365	If exceeded	If exceeded more than 1 day per year
		1 hour	0.25	--	655	--	If exceeded	N/A
Hydrogen sulfide	H <sub>2</sub> S	1 hour	0.03	--	42	--	If ≥	N/A
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> Cl	24 hours	0.01	--	26	--	If ≥	N/A
Inhalable particulate matter	PM <sub>10</sub>	Annual arithmetic mean	--	--	20	--	If exceeded	N/A
		24 hours	--	--	50	150	If exceeded	If exceeded more than 1 day per year
Fine particulate matter	PM <sub>2.5</sub>	Annual arithmetic mean	--	--	15	15	See National	If exceeded over 3-year average
		24 hours	--	--	35	35	See National	If exceeded over 3-year average
Sulfate particles	SO <sub>4</sub>	24 hours	--	--	25	--	If ≥	N/A
Lead particles	Pb	Quarterly average	--	--	--	1.5	N/A	If exceeded more than 1 day per year
		Rolling 3-month average	--	--	--	0.15	If ≥	N/A
		30-day average	--	--	1.5	--	If ≥	

**NOTES:** 1) All standards are based on measurements at 25 C and 1 atmosphere pressure. 2) National standards shown are the primary (health effects) standards. 3) N/A = not applicable.

**Table AQ-2: Attainment Status**

<b>Pollutant</b>	<b>Attainment with State Standards</b>	<b>Attainment with Federal Standards</b>
PM <sub>10</sub>	Non-attainment	Non-attainment
CO	Attainment	Attainment
Ozone	Non-attainment	Non-attainment

## METHODOLOGY

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The impacts related to construction related emissions of PM<sub>10</sub>, NO<sub>x</sub>, and ROG were analyzed qualitatively because a construction analysis requires detailed information about the exact amount of acreage of construction involved, the amount of pavement, the number and type of construction equipment, and other information that cannot be known at the plan-level stage. The emissions that would result from the operation of the project, if built to its maximum foreseeable density, were analyzed using the URBEMIS air quality modeling program (version 9.2.4). 2008 land use data from SACOG was utilized in order to accurately represent existing conditions, and the proposed Corridor Plan land use assumptions were utilized in the existing plus project model runs.

## SIGNIFICANCE CRITERIA

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A project may be deemed to have a significant effect on the environment if it will violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. SMAQMD has adopted significance thresholds for CEQA projects within the District, found within the SMAQMD Guide to Air Quality Assessment (December 2009, hereinafter SMAQMD Guide). The adopted significance thresholds for criteria pollutants of the greatest concern in the Sacramento area include the following:

1. Mass emissions of 85 lbs/day for NO<sub>x</sub> during project construction (short-term emissions), and 65 lbs/day for ROG and NO<sub>x</sub> during project operation (long-term emissions).
2. Emissions that cause exceedence of the CAAQS for PM<sub>10</sub>, or emissions that contribute substantially to an existing or projected violation of the CAAQS for PM<sub>10</sub> (a project is considered to contribute substantially to an existing or projected violation of CAAQS if it emits pollutants at a level equal to or greater than 5% of the CAAQS.). The CAAQS threshold for PM<sup>10</sup> is 50µ/m<sup>3</sup>.

Short-term impacts are associated with project construction, and long-term impacts are associated with mobile and area emissions during operation of a completed project.

## IMPACTS AND ANALYSIS

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### IMPACT: CONSTRUCTION EMISSIONS

#### *DUST PARTICULATE MATTER*

There are two main air quality pollutants of concern with construction: particulate matter (dust and diesel particles) and ozone precursors. Construction would result in numerous activities that would generate dust. The fine, silty soils in the project area and possibility of strong winds exacerbate the potential for dust, particularly in the summer months. Grading, leveling, earthmoving and excavation are the activities that generate the most fugitive dust, a particulate emission. Impacts would be localized and variable, and construction impacts would last for a period of several months at any one location. Construction dust impacts are considered to be potentially adverse on a localized basis. In particular, the potential for dust nuisance would exist during early stages of construction when disturbance of soil is greatest.

Construction activities would temporarily affect local air quality, causing a temporary increase in particulate matter and dust emissions. Although the future amount of construction activity on any given day is unknown, it is likely that dust emissions during construction would have the potential to exceed local ambient air quality standards and result in nuisance complaints. Therefore, construction activities associated with implementation of the proposed project would have a significant impact on air quality. The SMAQMD Guide includes a list of Basic Construction Emissions Control Practices that should be implemented on all projects, regardless of size. Dust abatement practices are required pursuant to SMAQMD Rule 403 and state law; the SMAQMD Guide simply lays out the basic practices needed to comply. Since these are already required by existing rules and regulations, it is not necessary to include them as mitigation.

Dispersion modeling on past projects indicates that projects that will actively disturb more than 15 acres per day are likely to result in significant dust emissions despite the application of all standard dust control. The proposed project covers a large area in which construction could occur on multiple sites at any given time, so the amount of construction activity on any given day within the project area cannot be predicted. Therefore, while adherence to standard conditions would reduce project fugitive particulate matter impacts, impacts to air quality from fugitive dust emissions would be considered a short-term **significant and unavoidable** impact.

#### *OZONE PRECURSORS AND DIESEL PARTICULATES*

As stated in the section on particulate matter, the future amount of construction activity on any given day is unknown, and thus the likely emissions of ozone precursors are also unknown. It is reasonable to assume that construction activities for one or more developments could result in construction emissions above the SMAQMD construction threshold of significance for ozone precursors (85 pounds per day of NO<sub>x</sub>).

Construction-related emissions of ozone precursors resulting from implementation of the proposed project would likely result in an adverse impact to air quality.

For projects that exceed the threshold, SMAQMD recommends implementation of a standard construction mitigation measure that will reduce heavy-duty off-road diesel powered equipment emissions by 20% for NO<sub>x</sub> and by 45% for particulates, as compared with the most recent ARB fleet average, and that also limits the opacity of visible exhaust emissions.

For projects with NO<sub>x</sub> emissions that remain significant even after the 20% reduction afforded by the standard construction mitigation measure, SMAQMD recommends payment of an off-site air quality mitigation fee to further reduce NO<sub>x</sub> emissions to a less than significant level. The mitigation fee is based on the amount of emissions that remain over the threshold after implementation of the standard construction mitigation measure, and the cost of reducing an equivalent amount of off-site emissions. SMAQMD uses the mitigation fees to help fund regional air quality programs, such as the replacement of older construction equipment with newer models, and the retrofitting of older equipment with pollution-reducing components. Since NO<sub>x</sub> is a precursor to regional ozone formation, mitigation fees are used on projects anywhere within the ozone non-attainment area that meet the cost-effectiveness criteria used to determine the fee. The mitigation fee is based on cost-effectiveness standards established by ARB for the Carl Moyer Incentive Program, a state-funded program for reducing emissions from off-road equipment. The SMAQMD mitigation fee for a specific project is calculated using the following formula: number of pounds per day of construction NO<sub>x</sub> remaining over the 85 lbs/day significance threshold (after accounting for the 20% emission reduction due to standard construction mitigation), multiplied by the number of days of construction, multiplied by the standard fee, converted to tons. Implementation of the following mitigation measures would reduce impacts associated with construction emissions of ozone precursors and diesel particulate matter to a **less than significant** level.

*MITIGATION MEASURES:*

- AQ-1.** All future construction projects shall include an ozone precursor analysis. If the analysis results indicate that the project will generate ozone precursors that exceed the current Sacramento Metropolitan Air Quality Management District thresholds this mitigation shall apply. This mitigation may be modified if guidance from the Sacramento Metropolitan Air Quality Management District changes in the future.
- A. The project shall provide a plan for approval by the District demonstrating that the heavy-duty (50 horsepower [hp] or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NO<sub>x</sub> reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative

- fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
- B. The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and District shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other District or state rules or regulations.
- C. If at the time of construction, the District has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with the District prior to construction will be necessary to make this determination.

#### IMPACT: OPERATIONAL EMISSIONS

Once a project is completed, additional pollutants are emitted through the use, or operation, of the site. As an example, a new residential development will emit pollutants from fireplaces, the use of lawnmowers, and primarily from the cars of the new homeowners. The proposed project will generate long-term emissions of ozone precursors (ROG and NO<sub>x</sub>), particulate matter (PM<sub>10</sub>) and carbon monoxide (CO). These long term impacts are often referred to as operational impacts.

#### *EXISTING CONDITIONS*

The land use assumptions for the existing condition URBEMIS run includes residential dwelling units, building square footages and land use acreages from 2008 SACOG land use data. The URBEMIS model estimates the project area's ROG and NO<sub>x</sub> emissions for operation of the existing condition in the summer and winter reported as mass emissions (in lbs/day). These results are summarized below in Table AQ-3 and Table AQ-4.

**Table AQ-3: Operational Summer Emissions (Mass Emissions in lbs/day)  
Existing Condition**

<i>Existing Condition Emissions</i>	<i>Ozone Precursors</i>	
	<i>ROG (lbs/day)</i>	<i>NO<sub>x</sub> (lbs/day)</i>
<i>Area Source Emissions</i>	28.00	14.26
<i>Mobile Source (vehicle) Emissions</i>	293.58	319.41
<i>Total Operational Emissions</i>	321.58	333.67

**Table AQ-4: Operational Winter Emissions (Mass Emissions in lbs/day)  
Existing Condition**

<i>Existing Condition Emissions</i>	<i>Ozone Precursors</i>	
	<i>ROG (lbs/day)</i>	<i>NO<sub>x</sub> (lbs/day)</i>
<i>Area Source Emissions</i>	48.58	18.79
<i>Mobile Source (vehicle) Emissions</i>	281.55	475.75
<i>Total Operational Emissions</i>	330.13	494.54

The Plan area is comprised of mostly developed parcels, with only a small amount of vacant land. URBEMIS modeling demonstrates that the existing development results in substantial emissions of air pollutants.

#### *EXISTING PLUS PROJECT CONDITIONS*

The Existing Plus Project condition URBEMIS run included the proposed Corridor Plan land use assumptions, while existing development stayed in the run as a model constant. The URBEMIS modeling estimates the project area's ROG and NO<sub>x</sub> emissions for operation of the proposed project condition in the summer and winter reported as mass emissions (in lbs/day). In order to isolate the project impact, results from the existing no project model run were subtracted from the existing plus project condition run. These results are summarized below in Table AQ-5 and Table AQ-6 and represent the total isolated project impact.

The modeling results indicate that the project's mass emissions of ROG, and NO<sub>x</sub> exceed SMAQMD thresholds of significance of 65 lbs/day in the summer and winter. These emissions would be considered significant.

Under General Plan policy AQ-4, developments which meet or exceed thresholds of significance for ozone precursor pollutants, as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant



environmental impact and an Air Quality Mitigation Plan shall be provided subject to review and endorsement by the Sacramento Metropolitan Air Quality Management District. The goal of the review is to achieve a 15 percent reduction of emissions from the base-case level. The SMAQMD has prepared a list of measures with corresponding point values that can be applied to a project to achieve a reduction of emissions.

The SMAQMD has already endorsed the North Watt Avenue Corridor Plan Air Quality Mitigation Plan (AQMP, 07/16/2010; Appendix H). The implementation of the measures identified in the AQMP achieves a 15.75 percent reduction in emissions. Mitigation is included requiring that the endorsed AQMP plan be incorporated into the Corridor Plan language.

Even with a 15% reduction in operational emissions, the estimated ROG and NO<sub>x</sub> levels would exceed the operational threshold of 65 lbs/day and result in impacts that are **significant and unavoidable**.

**Table AQ-5: Operational Summer Emissions (Mass Emissions in lbs/day)  
for the Proposed Corridor Plan**

<i>Proposed Project Condition Emissions</i>	<i>Ozone Precursors</i>	
	<i>ROG (lbs/day)</i>	<i>NO<sub>x</sub> (lbs/day)</i>
<i>Area Source Emissions</i>	390.9	81.26
<i>Mobile Source (vehicle) Emissions</i>	347.89	208.59
<i>Total Operational Emissions</i>	738.79	289.85

**Table AQ-6: Operational Winter Emissions (Mass Emissions in lbs/day)  
for the Proposed Corridor Plan**

<i>Proposed Project Condition Emissions</i>	<i>Ozone Precursors</i>	
	<i>ROG (lbs/day)</i>	<i>NO<sub>x</sub> (lbs/day)</i>
<i>Area Source Emissions</i>	1,044.82	223.13
<i>Mobile Source (vehicle) Emissions</i>	287.88	312.85
<i>Total Operational Emissions</i>	1,332.70	535.98

*CONCLUSION: OPERATIONAL AIR QUALITY IMPACTS FOR REDEVELOPMENT*

Existing Plus Project impacts are considered a worst case scenario and although they represent a conservative estimate of potential impacts, they are utilized to determine the

overall significance findings. Based on the URBEMIS modeling the proposed project would result in a significant and unavoidable operational air quality impact.

For the purposes of disclosure it should be noted that air quality impacts are modeled based on what the impacts of the project would be over what is operating at that time. Thus, model inputs are the near term increase in land use over existing use, which is represented above in the Existing Plus Project analysis. However, the proposed project has a planning horizon of 20 years, and given the current climate in the development field, it is unlikely that full buildout will be reached in the near term. It is more likely that full buildout will be realized at a later date, closer to the end of the planning horizon. Over time it is assumed that some percent of air quality benefit in emissions for each progressive year would be realized in the future due to stricter air quality regulations and enforcement and project impacts may be lower than those shown above.

Additionally, it should be noted, given that it is a mixed use land use plan, there are potential air quality benefits of the proposed plan. There has been extensive research into the overall air quality benefits of these types of plans/developments over traditional zoning. In theory, these types of plans increase the walkability of the area and make people less dependent on their automobile, which translates to lower vehicle miles traveled and lower vehicle emissions which may result in a cumulative air quality benefit.

These types of reductions and benefits cannot be fully captured with the current model paradigms, both for air quality and traffic analyses, although currently much work is being applied to this effort. Ultimately, although the project may result in a cumulative benefit, operational impacts could significantly increase over what is currently located within the Corridor Plan area with full buildout of the land use plan. Mitigation is included to implement the SMAQMD endorsed AQMP for the Corridor; however, even with the 15% reduction realized with the AQMD, operational impacts are still considered **significant and unavoidable**.

#### *MITIGATION MEASURES*

- AQ-2.** All development projects within the North Watt Avenue Corridor Plan shall comply with the SMAQMD endorsed Air Quality Mitigation Plan (7-16-2010), which requires implementation of reduction measures that will achieve a minimum of 15.75 percent reduction in operational and area source emissions, consistent with General Plan Policy.

#### IMPACT: CANCER RISK ASSOCIATED WITH HIGH-TRAFFIC ROADWAYS AND UP RAILROAD

##### *HIGH TRAFFIC ROADWAYS*

The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective" (Handbook) makes recommendations for siting

sensitive land uses based on air pollution/epidemiological studies. Increased cancer risk as well as non-cancer health effects are associated with increased ambient air pollution levels. Traffic-related studies have indicated that living near high-traffic roadways and their associated emissions may lead to adverse health conditions beyond those typically associated with urban air pollution levels. The studies mostly focused on health effects in children but similar effects can be expected in the elderly, pregnant women, people with illnesses or anyone with increased sensitivities. Potential cancer risk increases with proximity to heavy traffic roadways. Particulate matter is also of concern because health studies have shown an association between particulate matter and premature death in people with heart disease.

The Handbook discusses sensitive land use siting concerns and resulted in the *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* (SMAQMD Protocol) by the Sacramento Metropolitan Air Quality Management District; the current version is dated January 2010. The SMAQMD Protocol provides a methodology for assessing the potential cancer risk of siting sensitive land uses – such as residences, parks and schools – adjacent to major roadways. While the SMAQMD Protocol provides a methodology to show the relationship between potential cancer risk level from diesel particulate matter exposure and distance from the major roadway, it does not provide an acceptable cancer risk level or regulatory threshold, nor does it provide quantifiable mitigation measures.

According to the Handbook, studies of California freeways show that diesel particulate matter, listed by the California Air Resources Board as a toxic air contaminant, decreases by 70% at 500 feet from the roadway. The Handbook recommends that local agencies “avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day”. On this basis, the SMAQMD Protocol states that if a project is at least 500 feet from a major roadway (as defined above), no further air quality analysis is needed. For projects within 500 feet, the SMAQMD Protocol recommends that it be determined if the nearest sensitive receptor’s increase in individual cancer risk is lower than the evaluation criterion of 281 chances per million (equivalent to a 70% reduction in the highest risk). If the risk is lower, then no further roadway-related air quality evaluation is recommended under this Protocol but mitigation is recommended. Where the risk is higher, a site specific Health Risk Assessment is recommended. The SMAQMD Protocol includes screening tables to determine the individual cancer risk (see Table AQ-7).

The portion of the Plan area that borders Interstate-80 (I-80) is already developed, and includes various commercial and industrial uses and a transient lodging facility as close as 100± feet from the edge of the nearest I-80 traffic lane. The portion of the Corridor that is within 500 feet of I-80 is Subdistrict 3 of the Triangle Gateway District. The proposed project envisions Subdistrict 3 as a mixed-use employment area primarily made up of a business park; however residential uses and other sensitive uses are permitted in this area under the Plan. Thus, the project has the potential to introduce residential development or other sensitive uses in areas that are currently developed commercially or industrially.

I-80, at the project site, currently carries approximately 147,000 daily trips, and in the cumulative condition will carry approximately 193,100 trips (source: Traffic Impact Study for the Draft 2030 General Plan). According to the California Department of Transportation Traffic and Vehicle Data Systems Unit data (year 2008), the peak hour volumes on I-80 are 11,900 vehicles. Assuming that the cumulative peak traffic remains is proportionally the same as the existing year traffic (that is, 8.1% of total volume), it can be expected that cumulative peak hour volumes on I-80 will be 15,632 vehicles.

**Table AQ-7: 2010 Diesel PM Cancer Risk (Potential Incremental Cancer Chances per Million People) North and South of a East-West Roadway**

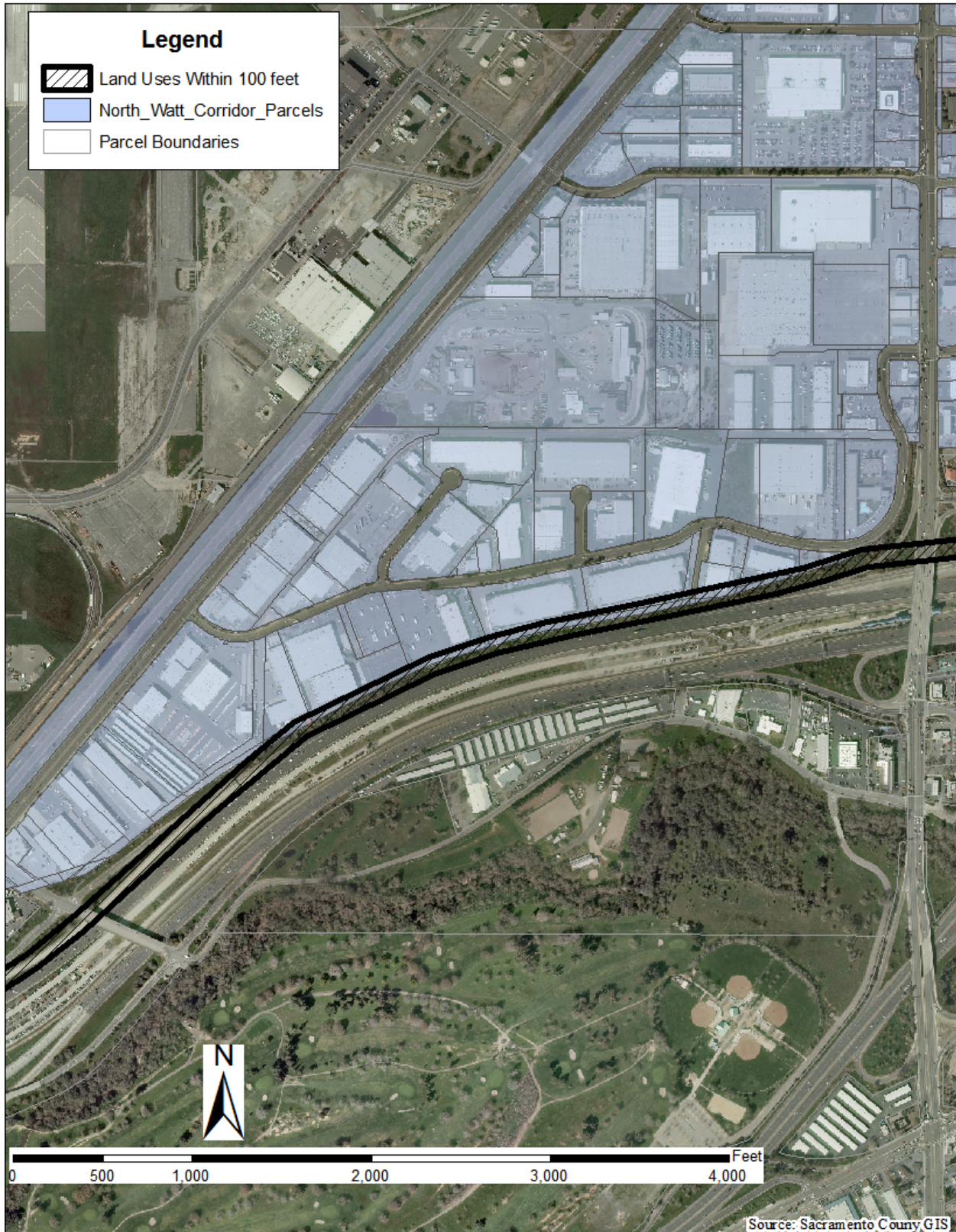
PROJECTS NORTH AND SOUTH OF A EAST-WEST ROADWAY Version 2.3 EMFAC2007 (Analysis Year 2010)								
Peak Hour Traffic (vehicle/hr)	Receptor Distance from Edge of Nearest Travel Lane (feet)							
	10	25	50	100	200	300	400	500
<b>Incremental Cancer Risk Per Million: North (downwind)</b>								
<b>4000</b>	194	172	143	105	70	51	41	35
<b>8000</b>	388	343	286	210	137	105	86	70
<b>12000</b>	585	518	429	318	207	156	127	105
<b>16000</b>	779	690	572	423	277	210	169	143
<b>20000</b>	973	862	716	528	347	261	210	178
<b>24000</b>	1170	1037	859	633	413	315	254	213
<b>Incremental Cancer Risk Per Million: South (upwind)</b>								
<b>4000</b>	108	89	70	51	32	25	19	16
<b>8000</b>	216	181	143	102	67	48	38	32
<b>12000</b>	328	270	213	153	99	73	60	48
<b>16000</b>	436	363	286	204	130	99	80	67
<b>20000</b>	544	452	356	254	165	124	99	83
<b>24000</b>	655	544	429	305	197	146	118	99

Source: SMAQMD Protocol, January 2010

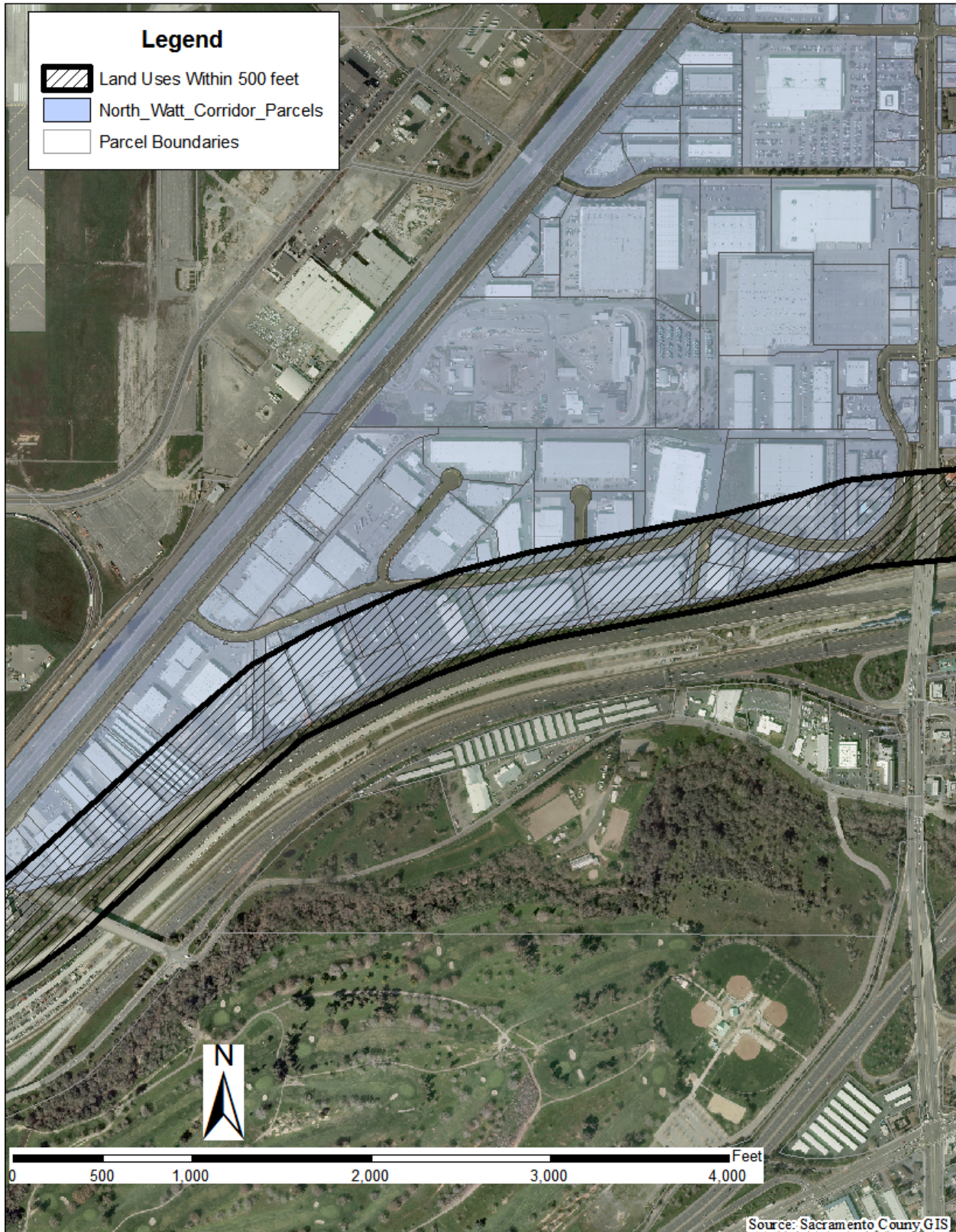
Based on the cancer risks of Table AQ-7, existing-condition commercial and transient lodging buildings located 100 feet from the nearest traffic lane of I-80 will be exposed to a cancer risk of approximately 318 chances per million (the project area is north, and downwind, of I-80) (see Plate AQ -2). In the cumulative condition, risks are approximately 423 chances per million when 100 feet from I-80. In the cumulative condition, risks will not decrease to at or below the 281 chances per million evaluation criterion until sensitive receptors are at least 200 feet from the nearest travel lane.

Though the 281 chances per million has been used as a CEQA significance threshold in the past, the SMAQMD Protocol does state that the evaluation criterion is not a

**Plate AQ -2: Corridor Area Within 100 feet of Interstate-80**



**Plate AQ -3: Corridor Area Within 500 feet of Interstate-80**



threshold of significance – no threshold of “acceptable” cancer risk has been set. Analyses of cancer risk are primarily included for disclosure purposes, so that both the public and the hearing bodies understand the risks associated with the proposal. Specifically because there is no specific threshold, all feasible mitigation is typically applied to any residential project (or other project with sensitive receptors) within 500 feet of a major roadway (see Plate AQ -3 for 500 foot buffer area), regardless of whether the project is within the 281 chances per million risk area. Mitigation strategies include:

- Tiered Vegetative Plantings along the Freeway (redwood, deodar cedars, etc)
- Electrostatic Filters for Sensitive Land Uses
- Site redesign – for mixed use projects, sites could be designed such that non-sensitive uses are closest to the roadway.

The above mitigation strategies are potential measures that could be implemented in the Corridor Plan area when sensitive land uses are proposed within 500-feet of I-80. Ultimately, future applicants of development projects must implement feasible measures in coordination with SMAQMD. Though it is not a significance threshold, mitigation is nonetheless included to prohibit the placement of new sensitive receptors within the 281 per million cancer risk area. As this is a developing field, additional mitigation options may become available in the future. With mitigation impacts are considered to be **less than significant**.

#### *UNION PACIFIC RAIL LINE*

The Corridor Plan area is bisected by the Union Pacific Rail Line (UP), which operates freight and passenger rail through the project area. The locomotives that haul the freight are a source of several toxic air contaminants including but not limited to: nitrogen oxides, diesel particulate matter, and carbon monoxide. Up until recently, air quality efforts associated with rail have focused on railyards where numerous locomotives can sit idle running for long periods of time, thereby intensifying the air quality impacts in the vicinity of the railyard. The project area is not located adjacent to a railyard; however, air quality information from railyards provides some useful information regarding potential impacts to land uses adjacent to rail lines. Health Risk Assessments have been conducted for major railyards and have identified health hazards associated with emissions at the railyards. According to the California Air Resources Board (ARB) the following estimates of cancer health risk were identified for 2005 and 2015:

Estimated Railyard Cancer Risks in 2005: Based on the 18 railyard health risk assessments, staff determined that railyard diesel PM emissions resulted in significant local and regional excess cancer risks. Maximum individual cancer risks (MICRs) were as high as a 500 to 2,500 in a million for four railyards, 250 to 500 in a million for six railyards, and 40 to 250 in a million for eight railyards. The four Commerce railyards combined were estimated to be responsible for cancer

risks in excess of 10 in a million for a population of nearly 1.3 million. The railyard diesel PM cancer and non-cancer health effects are considered significant, and will require accelerated and aggressive actions to reduce public exposure expeditiously.

Estimated Railyard Diesel PM Cancer Risks in 2015 : Staff estimates that railyard mitigation plan diesel PM emission reductions will lower maximum individual cancer risks (MICR), in nearly all of the 18 railyards, from a range between 40 to 2,500 in a million to between 10 and 300 in a million by as early as 2015. Further, there would also be corresponding reductions in the population exposure to greater than 10 in a million cancer risks.

The reduction estimates discussed above for the year 2015 are the result of numerous agreements, requirements and activities in which the state and federal government have worked hand-in-hand with the rail companies to reduce locomotive emissions. For example, “in 2005, ARB, UP, and BNSF voluntarily entered into another enforceable agreement to reduce diesel particulate matter (PM) emissions by about 20 percent statewide and lower diesel PM health risks in and around railyards. The 2005 Agreement required UP and BNSF to install idle reduction devices on over 400 intrastate locomotives, use at least 80 percent ultra-low sulfur diesel fuel for interstate line haul locomotives, and meet a 99 percent compliance rate for smoking locomotives (*Technical Options to Achieve Additional Emissions and Risk Reductions from California Locomotives and Railyards*, Updated August 2009, ARB)”. This agreement highlights one of the many efforts that have occurred to reduce air quality impacts associated with rail.

As noted above, the proposed project is not located next to a railyard; however, DERA staff has consulted with SMAQMD regarding potential air quality impacts and related health risk associated with siting sensitive land uses adjacent to rail lines within Sacramento County, where the haul locomotive is not stationary (as it can be in railyards). Staff indicated that although a project site is not located near a railyard, potentially significant health risks could occur by siting sensitive land uses adjacent to rail lines. This is a reasonable assumption as it has been shown through numerous studies that mobile sources such as high traffic roadways can have serious health impacts on adjacent sensitive land uses. The correlation can be made between impacts associated with vehicles on roadways and locomotive emissions on rail lines where both sources are not stationary sources.

At present there is no published literature providing specific recommendations on siting sensitive land uses adjacent to rail lines. According to the *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) (California Environmental Protection Agency and ARB, 2005) the following recommendations were made for siting land use near freeways/high traffic roadways and railyards:

Freeways/High Traffic Roadways: Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.



Railyards: Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.

Based on the above, it appears that the more appropriate recommendations for the proposed project would be those made for Freeways/High Traffic Roadways, since the locomotive travel through the Corridor Plan area is mobile, unlike the stationary emissions at railyards. Thus, sensitive land uses within 500 feet of the rail line would be discouraged (see Plate AQ -4 for 500 foot area). The proposed project would allow sensitive land uses, including residential receptors, within 500 feet of the UP rail line.

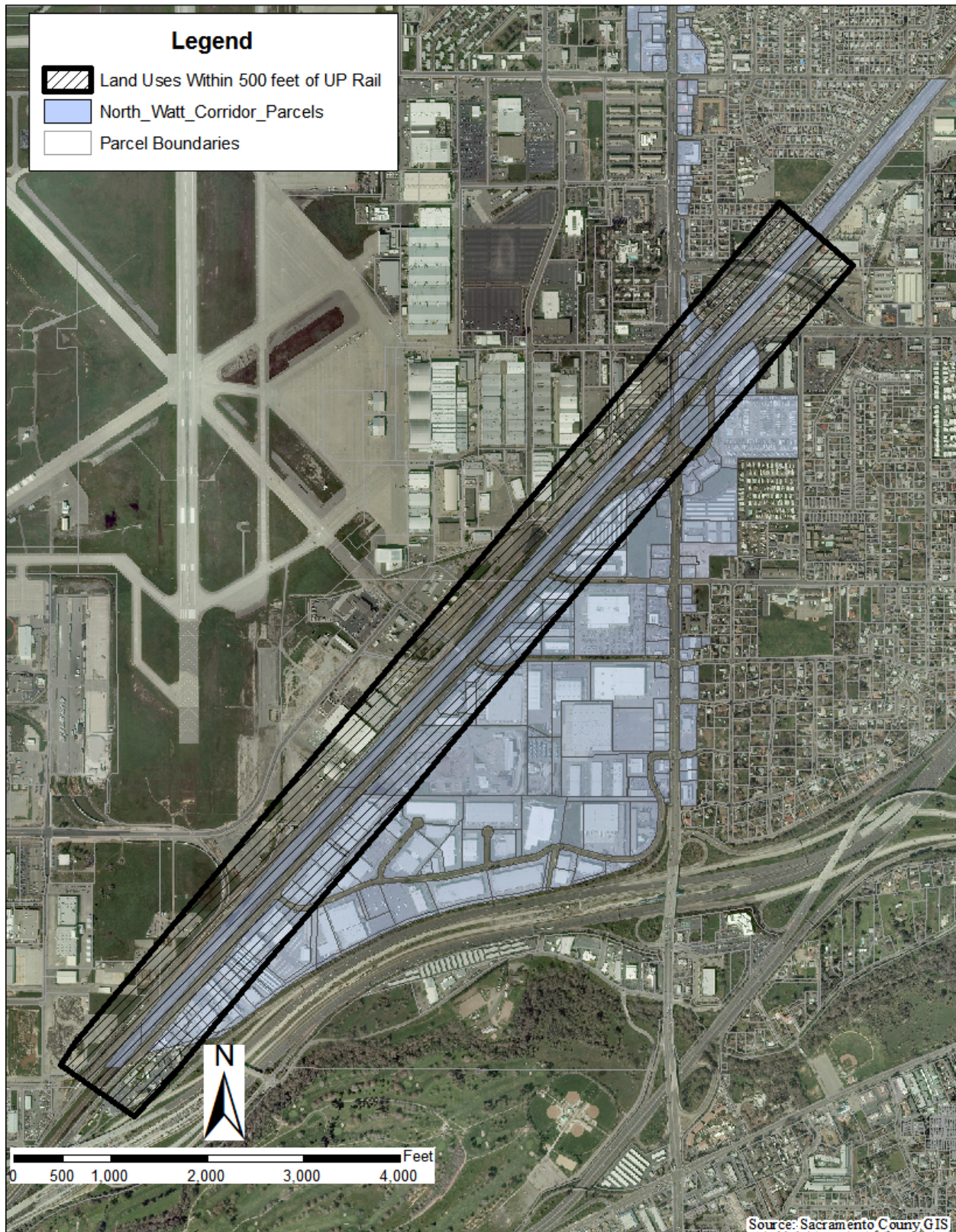
As noted above in the “Impact: Cancer Risk Associated with High-Traffic Roadways” discussion, there are no thresholds of significance or quantifiable mitigation measures for diesel particulate matter exposure along rail lines; however, SMAQMD has recommended mitigation strategies such as:

- Tiered Vegetative Plantings along the Rail Line (redwood, deodar cedars, etc)
- Electrostatic Filters for Sensitive Land Uses
- Site redesign – for mixed use projects, sites could be designed such that non-sensitive uses are closest to the rail line.

The above mitigation strategies are potential measures that could be implemented in the Corridor Plan area when sensitive land uses are proposed within 500-feet of the rail line. Ultimately, future applicants of development projects should implement feasible measures in conjunction with SMAQMD. Mitigation Measure AQ-3 has been added and is intended to mitigate air quality impacts associated with high traffic roadways and rail lines in order to reduce potentially significant health impacts related to toxic air containments. As this is a developing field, additional mitigation options may become available in the future.

With mitigation impacts are considered to be **less than significant**.

Plate AQ -4: Corridor Area Within 500 feet of UP Railroad



*MITIGATION MEASURES:*

- AQ-3.** All projects within 500 feet of I-80 or the UP rail line which involve sensitive uses (residential uses, and those with concentrations of the very young, elderly, or infirm such as parks, daycares, nursing homes, or hospitals), shall develop a mitigation plan to reduce impacts associated with toxic air contaminants, in consultation with SMAQMD. The mitigation plan may include measures such as vegetative plantings, the installation of electrostatic filters, and/or site redesign.
- AQ-4.** The following policy shall be added to the Corridor Plan: To avoid significant health impacts due to chronic pollutant exposure related to I-80, new sensitive uses (residential uses, and those with concentrations of the very young, elderly, or infirm such as parks, daycares, nursing homes, or hospitals) shall not be permissible within 200 feet of the nearest I-80 travel lane. The location of this restricted area may be altered consistent with any new protocols for major roadways that may be published by the Sacramento Metropolitan Air Quality Management District which alters the location of the evaluation criterion (currently 281 chances per million).

# 10 NOISE

## INTRODUCTION

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This chapter identifies noise impacts of the project using information from the Sacramento County General Plan, the Noise Ordinance, and the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model.

## NOISE ENVIRONMENTAL SETTING

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### NOISE FUNDAMENTALS AND TERMINOLOGY

Noise is often described as unwanted sound and thus is a subjective reaction to the physical phenomenon of sound. Sound is variations in air pressure that the ear can detect. Sound levels are measured and expressed in decibels (dB); a decibel is the unit for describing the amplitude of sound and is equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals.

Because sound pressure levels are defined as logarithmic numbers, the values cannot be directly added or subtracted. For example, two sound sources, each producing 50 dB, will produce 53 dB when combined, not 100 dB. This is because two sources have two times the energy of one source, which results in a 3 dB increase in noise levels.

Most environmental sounds consist of several frequencies, with each frequency differing in sound level. The intensities of each frequency combine to generate sound. Acoustical professionals quantify sounds by “weighting” frequencies based on how sensitive humans are to that particular frequency. Using this method, low and extremely high frequency sounds are given less weight, or importance, while mid-range frequencies are given more weight, because humans can hear mid-range frequencies much better than low and very high frequencies. This method is called “A” weighting, and the units of measurement are called dBA (A-weighted decibel level). In practice, noise is usually measured with a meter that includes an electrical “filter” that converts the sound to dBA. The threshold at which one hears sounds is considered to be zero (0) dB. The range of sound in normal human experience is 0 to 140 dBA. Decibels and other technical terms are defined in Table NS-1.

The ambient noise level is defined as the noise from all sources near and far, and refers to the noise levels that are present before a noise source being studied is introduced. A synonymous term is pre-project noise level.

**Table NS-1: Acoustical Terminology**

<b>TERM</b>	<b>DEFINITION</b>
<b>Ambient Noise Level:</b>	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
<b>Intrusive Noise:</b>	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
<b>Decibel, dB:</b>	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
<b>Frequency, Hz</b>	The number of complete pressure fluctuations per second above and below atmospheric pressure.
<b>Community Noise Equivalent Level, CNEL*:</b>	The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
<b>Day/Night Noise Level, L<sub>dn</sub>*:</b>	The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
<b>Equivalent Noise Level, L<sub>eq</sub>:</b>	The average noise level during the measurement or sample period. L <sub>eq</sub> is typically computed over 1, 8 and 24-hour sample periods.
<b>L<sub>max</sub>, L<sub>min</sub>:</b>	The maximum or minimum sound level recorded during a noise event.
<b>L<sub>n</sub> :</b>	The sound level exceeded "n" per percent of the time during a sample interval. L <sub>10</sub> equals the level exceeded 10 percent of the time ( L <sub>90</sub> , L <sub>50</sub> , etc.)
<b>Noise Exposure Contours:</b>	Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and L <sub>dn</sub> contours are frequently utilized to describe community exposure to noise.
<b>Sound Exposure Level, SEL; or Single Event Noise Exposure Level, SENEL:</b>	The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time integrated A-weighted squared sound pressure level for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.
<b>Sound Level, dBA:</b>	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

Source: Sacramento County Noise Element, Appendix A, 1993.

## NOISE PERCEPTION

Expected human reactions to changes in ambient noise levels have been quantified by metrics that define short-term exposure (e.g., hourly L<sub>eq</sub>, L<sub>max</sub> and L<sub>n</sub>). These metrics are usually used to describe noise impacts due to industrial operations, machinery and other sources that are not associated with transportation. An increase of at least 3 dB is

usually required before most people will perceive a change in noise levels, and an increase of 5 dB is required before the change will be clearly noticeable.

Table NS-2 is included to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source.

**Table NS-2: Subjective Reaction to Changes in Noise Levels of Similar Sources**

Change in Level	Subjective Reaction	Factor Change in Acoustical Energy
1 dB	Imperceptible (Except for tones)	1.3
3 dB	Just Barely Perceptible	2.0
5 dB	Clearly Noticeable	3.2
10 dB	About Twice (or Half) as loud	10.0

Source: *Architectural Acoustics*, M. David Egan, 1988.

#### EXISTING NOISE CONDITIONS

The plan area is generally located east and west of Watt Avenue from Interstate-80 to Antelope Road. Within the project area Watt Avenue currently is configured as a four to six lane thoroughfare and is projected to be an entirely six lane thoroughfare in the future. Most of the parcels within the Corridor Plan are adjacent to Watt Avenue and will experience traffic noise due to the thoroughfare. The Plan area also contains other major roadways, such as Roseville Road, Elkhorn Boulevard, Antelope Road, and to a lesser degree, roadways such as Don Julio Boulevard and Freedom Park Drive that contribute noise to the project area due to roadway traffic.

The Corridor Plan also contains various commercial and light-industrial uses as well as side-street traffic in the area that contribute, to a minor degree, to the noise environment. The mixed-use land use designation will combine sensitive receptors with noise generating uses and will inherently be louder than if the two uses were separated.

## NOISE REGULATORY SETTING

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### STATE OF CALIFORNIA

#### *STATE OF CALIFORNIA GENERAL PLAN GUIDELINES*

The Governor's Office of Planning and Research (OPR) published the State of California General Plan Guidelines (OPR 2003), which provide guidance for the acceptability of projects within specific day-night average noise level ( $L_{dn}$ ) contours. Generally, residential uses (e.g. mobile homes) are considered to be acceptable in areas where exterior noise levels do not exceed 60 A-weighted decibels (dBA)  $L_{dn}$ . Residential uses are normally unacceptable in areas exceeding 70 dBA  $L_{dn}$  and conditionally acceptable within 55-70 dBA  $L_{dn}$ . Schools are normally acceptable in areas up to 70 dBA  $L_{dn}$  and normally unacceptable in areas exceeding 70 dBA  $L_{dn}$ . Commercial uses are normally acceptable in areas with a community noise equivalent level (CNEL) of up to 70 dBA. Commercial uses are conditionally acceptable where the  $L_{dn}$  is between 67.5 and 77.5 dBA, depending on the noise insulation features and the noise reduction requirements. The guidelines also provide adjustment factors for determining noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

### LOCAL

#### *SACRAMENTO COUNTY GENERAL PLAN NOISE ELEMENT*

For the purposes of evaluating noise impacts, the Sacramento County General Plan establishes acceptable noise level criteria for both transportation and non-transportation noise sources through the General Plan Noise Element Policies. The following policies from the Noise Element are applicable to the proposed project:

- NO-1 The noise level standards for noise-sensitive areas of **new** uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1 (Table NS-3). Where the noise level standards of Table 1 (Table NS-3) are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 (Table NS-3) standards.
- NO-5 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2 (Table NS-4). Where the noise level standards of Table 2 (Table NS-4) are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise

sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 (Table NS-4) standards within sensitive areas.

NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 (Table NS-4) at existing noise-sensitive areas in the project vicinity.

NO-7 The “last use there” shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 (Table NS-4) standards at the property line of the generating use in anticipation of the future neighboring development.

NO-13 Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

NO-14 Noise analyses prepared for multi-family residential projects, town homes, mixed-use, condominiums, or other residential projects where floor ceiling assemblies or party-walls shall be common to different owners/occupants, shall be consistent with the State of California Noise Insulation standards.

NO-15 The County shall have the flexibility to consider the application of 5 dB less restrictive exterior noise standards than those prescribed in Tables 1 and 2 in cases where it is impractical or infeasible to reduce exterior noise levels within infill projects to a state of compliance with the Table 1 or 2 (Table NS-3 and Table NS-4 respectively) standards. In such cases, the rationale for such consideration shall be clearly presented and disclosure statements and noise easements should be included as conditions of project approval. The interior noise level standards of Tables 1 and 2 (Table NS-3 and Table NS-4 respectively) would still apply. **The maximum allowable long-term noise exposure permissible for non-industrial uses is 75 dB.**

NO-16 The following sources of noise shall be exempt from the provisions of this Noise Element:

- a. Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and generators which are activated during power outages. The routine testing of such warning devices and equipment shall also be exempt provided such testing occurs during daytime hours.
- b. ~~Activities at schools, parks or playgrounds, provided such activities occur during daytime hours.~~



c. Activities associated with events for which a permit has been obtained from the County.

**Table NS-3: Noise Standards for New Uses Affected by Traffic and Railroad Noise  
(Table 1 from the Sacramento County General Plan, Noise Element)**

<b>New Land Use</b>	<b>Sensitive<sup>1</sup> Outdoor Area - Ldn</b>	<b>Sensitive Interior<sup>2</sup> Area - Ldn</b>	<b>Notes</b>
All Residential	65	45	5
Transient Lodging	65	45	3,5
Hospitals & Nursing Homes	65	45	3,4,5
Theaters & Auditoriums	---	35	3
Churches, Meeting Halls	65	40	3
Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	---	50	3
Playgrounds, Parks, etc.	70	---	
Industry	65	50	3

**Notes:**

1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

**Table NS-4: Non-Transportation Noise Standards  
Median (L50)/Maximum (Lmax)<sup>1</sup>  
(Table 2 from the Sacramento County General Plan, Noise Element)**

<b>Receiving Land Use</b>	<b>Outdoor Area<sup>2</sup></b>		<b>Interior<sup>3</sup></b>	<b>Notes</b>
	<b>Daytime</b>	<b>Nighttime</b>	<b>Day &amp; Night</b>	
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5,6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	6
Office Buildings	60 / 75	---	45 / 65	6
Commercial Buildings	---	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

**Notes:**

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime

	hours.
5.	Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6.	The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7.	Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

### *SACRAMENTO COUNTY NOISE CONTROL ORDINANCE*

The County of Sacramento's Noise Control Ordinance (Chapter 6.68 of Sacramento County Code) is very similar to the standards of the General Plan Noise Element; however, the standards of the Noise Ordinance are enforceable whereas the Noise Element standards are for planning purposes only. In general, although very similar, the Noise Control Ordinance is less restrictive than the Noise Element standards.

In terms of noise resulting from construction, this temporary noise is not subject to Noise Element standards. Construction related noise is also exempt from the Sacramento County Noise Ordinance with the stipulation that construction activities may not take place between 8 p.m. and 6 a.m. on weekdays and between 8 p.m. and 7 a.m. on weekends.

### SIGNIFICANCE CRITERIA

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According to State CEQA Guidelines Appendix G, a noise impact is considered significant if it would result in any of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above level existing without the project.
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise level.
- Exposure of people residing or working in the project area to excessive airport noise levels.

The definition of what is “excessive” or “substantial” noise in a given jurisdiction is typically laid out within the General Plan, various Noise Ordinances, and for airports is based on a document called the Comprehensive Land Use Plan (or similar). Projects complying with the provisions of Noise Element of the General Plan, specifically the policies stated in the prior sections of this chapter, are considered to have less than significant noise impacts.

Based on the nature of the proposed project, implementation of the proposed Corridor Plan is not expected to result in exposure of persons to the generation of excessive ground borne vibration; thus, this impact is not discussed further in this EIR. Additionally, noise impacts associated with exposure to airport noise is discussed in Chapter 5, Airport Compatibility.

## IMPACTS AND ANALYSIS

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### IMPACT: EXCESSIVE CONSTRUCTION GENERATED NOISE

Future construction within the North Watt Corridor Plan area would temporarily increase noise levels in the vicinity of construction activities intermittently over the construction period. Although construction activities would likely occur only during daytime hours, construction noise could still be considered disruptive to office and residential uses in the vicinity. The Sacramento County Noise Ordinance specifically exempts construction-related noise under certain circumstances. The Noise Ordinance states the following:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of eight p.m. and six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and each Sunday after the hour of eight p.m. Provided however, when an unforeseen or unavoidable condition occurs during a construction project, and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.  
[Sacramento County Code, Section 6.68.090 (e)]

Construction noise impacts associated with build out of the proposed Corridor project fall under this exemption. Construction noise may be considered a nuisance by existing community members; however, the environmental impact would be considered **less than significant**.

*MITIGATION MEASURES:*

None required.

## IMPACT: EXCESSIVE OPERATIONAL NOISE

Eventual construction of commercial, retail, office, mixed-use or residential uses in the plan area could result in the exposure of persons to and/or generation of noise levels in excess of standards established by the Sacramento County noise ordinance. The noise level experienced at a receptor depends on the distance between the source and the receptor, presence or absence of noise barriers and other shielding devices, and the amount of noise attenuation (lessening) provided by the intervening terrain. For moving point sources (vehicle traffic), noise decreases by about 4.5 dBA for every doubling of the distance from the roadway. For point or stationary noise sources, such as electric motors, a noise reduction of 6.0 dBA is normally experienced for each doubling of the distance from the source.

A site specific noise analysis was not undertaken for non-traffic related noise sources within the proposed plan area, given the nebulous nature of future impacts. However, prior noise analyses were consulted to make a quantitative assessment of potential impacts that may occur during future build-out/redevelopment within the plan area. The following analysis is based on results of applicable acoustical studies conducted within Sacramento County and utilizing the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108).

*EXCESSIVE TRAFFIC NOISE IMPACTS***METHODOLOGY**

To evaluate the effect of traffic noise on the proposed site, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was utilized. The model is based upon the Calveno reference noise factors of automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The traffic data and roadway segments input into the model (daily volumes and roadway speeds) are those reported in the traffic impact study for the Project (refer to the Traffic and Circulation chapter). I-80 was screened out of the traffic noise analysis. The proposed project will not increase daily freeway traffic by an amount sufficient to increase noise levels.

The FHWA model was used to calculate the 65 dB, 70 dB and 75 dB traffic noise contours for each of the roadway segments identified in the tables which follow. Table NS-5 provides the existing condition noise environment, Table NS-6 provides the existing plus project condition, Table NS-7 provides the cumulative condition, and Table NS-8 and Table NS-9 provide the cumulative plus project conditions results. Plate NS-1 thru Plate NS-7 illustrate the noise contours for the roadway segments along the Watt Avenue corridor.

### **EXISTING NOISE ENVIRONMENT**

As shown in Table NS-5, the modeled location of the existing condition 65 dB contour is ~400 to 600 feet from the center of many Plan area roadways and ultimately encompasses most of the Plan area. This model does not take into account existing noise shielding structures. Although most of the buildings within the Plan area and some of the residential areas outside of the Plan area are theoretically within the 65 dB contour, noise levels are much lower for any building that lies behind another building or other tall structure. Modeling for noise barriers indicates that on average each additional foot of barrier reduces noise by approximately one decibel. For buildings that front the roadway, any person standing at the rear of a standard residential or commercial building would be experiencing noise volumes at least 10 dB lower than people standing at the front of the building.

The 70 dB contour is generally no more than 150 feet from the centerline. Only the buildings right next to Watt Avenue are within the existing 70 dB contour (See Plate NS-1 thru Plate NS-7).

**Table NS-5: Existing No Project Condition Noise Model Results**

<b>Roadway Section</b>	<b>Daily Traffic</b>	<b>Distance to 75 dB contour (ft)</b>	<b>Distance to 70 dB contour (ft)</b>	<b>Distance to 65 dB contour (ft)</b>
<b>Watt Avenue:</b> Antelope Road to Elkhorn Boulevard	33,100	38	121	383
<b>Watt Avenue:</b> Elkhorn Boulevard to Don Julio Boulevard	36,900	43	135	427
<b>Watt Avenue:</b> Don Julio Boulevard to James Way/A Street	36,800	43	135	426
<b>Watt Avenue:</b> James Way/A Street to Airbase Drive	44,100	51	161	510
<b>Watt Avenue:</b> Airbase Drive to Roseville Road	44,900	52	164	520
<b>Watt Avenue:</b> Roseville Road to Winona Way	42,700	49	156	494
<b>Watt Avenue:</b> Winona Way to I-80 Ramps	54,700	63	200	633

**Table NS-6: Existing Plus Project Condition Noise Model Results**

<b>Roadway Section</b>	<b>Daily Traffic</b>	<b>Distance to 75 dB contour (ft)</b>	<b>Distance to 70 dB contour (ft)</b>	<b>Distance to 65 dB contour (ft)</b>
<b>Watt Avenue:</b> Antelope Road to Elkhorn Boulevard	36,400	42	133	421
<b>Watt Avenue:</b> Elkhorn Boulevard to Don Julio Boulevard	48,000	56	176	556
<b>Watt Avenue:</b> Don Julio Boulevard to James Way/A Street	55,000	64	201	637
<b>Watt Avenue:</b> James Way/A Street to Airbase Drive	61,100	71	224	707

Roadway Section	Daily Traffic	Distance to 75 dB contour (ft)	Distance to 70 dB contour (ft)	Distance to 65 dB contour (ft)
<b>Watt Avenue:</b> Airbase Drive to Roseville Road	55,300	64	202	640
<b>Watt Avenue:</b> Roseville Road to Winona Way	54,200	63	198	627
<b>Watt Avenue:</b> Winona Way to I-80 Ramps	66,400	77	243	769
<b>Watt Avenue:</b> I-80 Ramps to Auburn Boulevard	64,900	49	154	488

**Table NS-7: Cumulative No Project Condition Noise Model Results**

Roadway Section	Daily Traffic	Distance to 75 dB contour (ft)	Distance to 70 dB contour (ft)	Distance to 65 dB contour (ft)
<b>Watt Avenue:</b> Antelope Road to Elkhorn Boulevard	59,400	69	217	688
<b>Watt Avenue:</b> Elkhorn Boulevard to Don Julio Boulevard	63,500	73	232	735
<b>Watt Avenue:</b> Don Julio Boulevard to James Way/A Street	63,900	74	234	740
<b>Watt Avenue:</b> James Way/A Street to Airbase Drive	70,700	82	259	818
<b>Watt Avenue:</b> Airbase Drive to Roseville Road	67,300	78	246	779
<b>Watt Avenue:</b> Roseville Road to Winona Way	56,100	65	205	649
<b>Watt Avenue:</b> Winona Way to I-80 Ramps	66,100	77	242	765

**Table NS-8: Cumulative Plus Project Plus Existing General Plan Condition Noise Model Results**

Roadway Section	Daily Traffic	Distance to 75 dB contour (ft)	Distance to 70 dB contour (ft)	Distance to 65 dB contour (ft)
<b>Watt Avenue:</b> Antelope Road to Elkhorn Boulevard	53,900	62	197	624
<b>Watt Avenue:</b> Elkhorn Boulevard to Don Julio Boulevard	64,100	74	235	742
<b>Watt Avenue:</b> Don Julio Boulevard to James Way/A Street	69,400	80	254	803
<b>Watt Avenue:</b> James Way/A Street to Airbase Drive	77,400	90	283	896
<b>Watt Avenue:</b> Airbase Drive to Roseville Road	73,100	85	268	846
<b>Watt Avenue:</b> Roseville Road to Winona Way	59,700	69	219	691
<b>Watt Avenue:</b> Winona Way to I-80 Ramps	71,000	82	260	822

**Table NS-9: Cumulative Plus Project Plus Proposed General Plan Condition Noise Model Results**

<b>Roadway Section</b>	<b>Daily Traffic</b>	<b>Distance to 75 dB contour (ft)</b>	<b>Distance to 70 dB contour (ft)</b>	<b>Distance to 65 dB contour (ft)</b>
<b>Watt Avenue:</b> Antelope Road to Elkhorn Boulevard	39,800	76	241	762
<b>Watt Avenue:</b> Elkhorn Boulevard to Don Julio Boulevard	39,300	75	238	752
<b>Watt Avenue:</b> Don Julio Boulevard to James Way/A Street	36,800	70	223	704
<b>Watt Avenue:</b> James Way/A Street to Airbase Drive	62,300	72	228	721
<b>Watt Avenue:</b> Airbase Drive to Roseville Road	61,600	71	225	713
<b>Watt Avenue:</b> Roseville Road to Winona Way	54,800	63	201	634
<b>Watt Avenue:</b> Winona Way to I-80 Ramps	66,800	77	245	773

### **TRAFFIC NOISE IMPACTS TO RESIDENTIAL USES**

#### ***EXTERIOR NOISE LEVELS***

New residential outdoor activity areas located at the 65 dB contour and farther away from the noise source will not be subject to significant levels of noise, pursuant to General Plan Policy NO-1. Plate NS-1 thru Plate NS-7 depict the approximate location of the 65 dB contour in the Existing scenario, Existing Plus Project scenario, and in the Cumulative Plus Project scenarios. The Cumulative No Project scenario is not included on the exhibits because the exhibits are designed to visually depict the project impact (the difference between the Existing and the Existing Plus Project conditions), as well as the ultimate noise environments.

In general, louder volumes affecting outdoor residential activity areas would be significant but pursuant to General Plan Policy NO-15 the County has the flexibility to consider the application of a 5 dB less restrictive exterior noise standard for infill projects where it may be impractical or infeasible to reduce exterior noise levels to the 65 dB level for residential projects. In the case of the proposed Project, most of the Plan area is within the 65 dB contour – though as previously discussed, many of these areas are actually subject to noise of 55 dB or lower due to the shielding affects of buildings closer to Watt Avenue. Nonetheless, there are still many areas affected by the Watt Avenue noise environment, and given the mixed-use goals of the Project it would be infeasible to locate all residential outdoor uses outside of the 65 dB contour. Given that the project is designed to increase walkability and non-vehicular mobility, it may also be impractical to utilize some of the typical control technologies, such as soundwalls, because they hamper mobility. It may be possible to design many outdoor



Plate NS-1: Watt Avenue – Antelope to Elkhorn Noise Contours

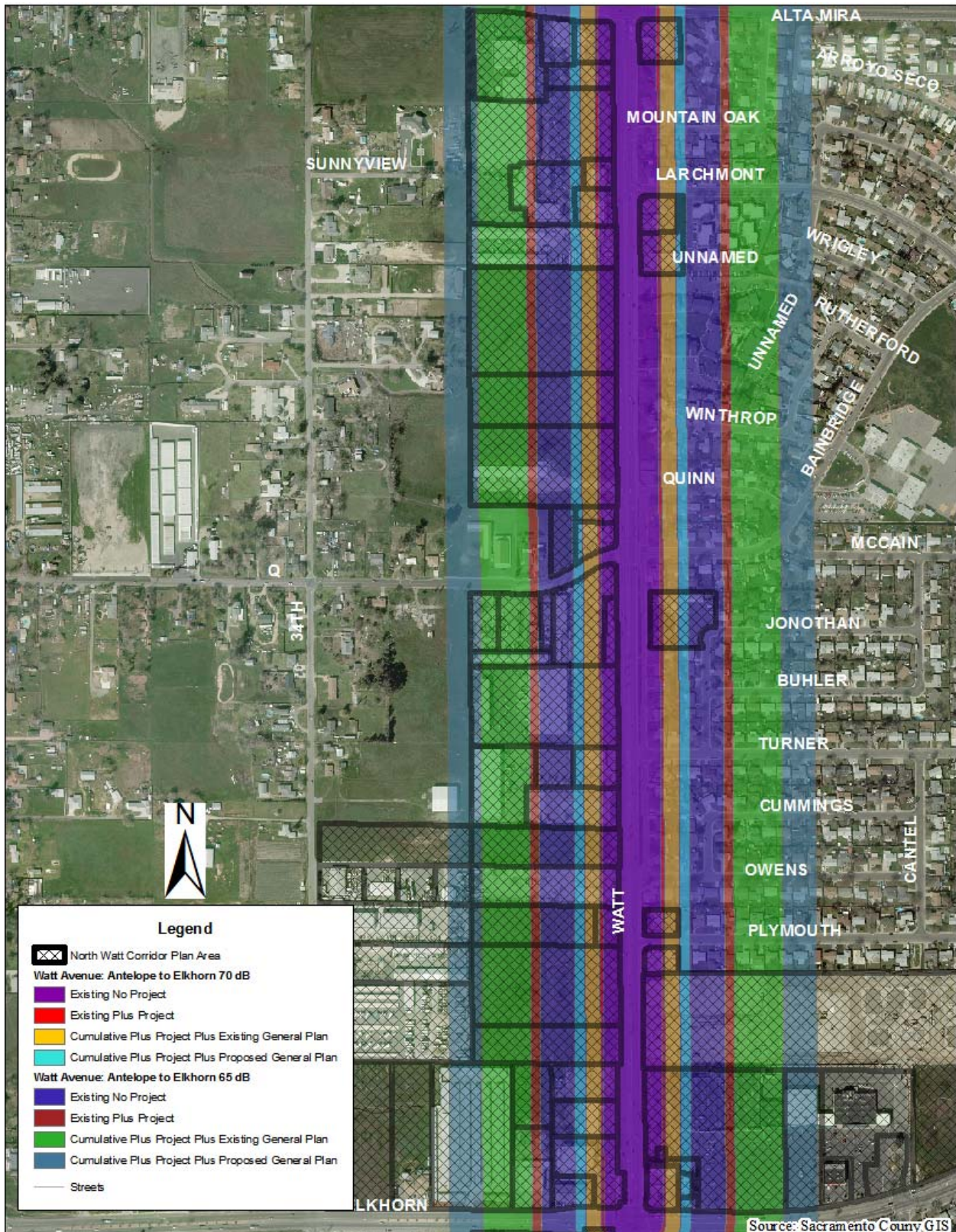


Plate NS-2: Watt Avenue – Elkhorn to Don Julio Noise Contours

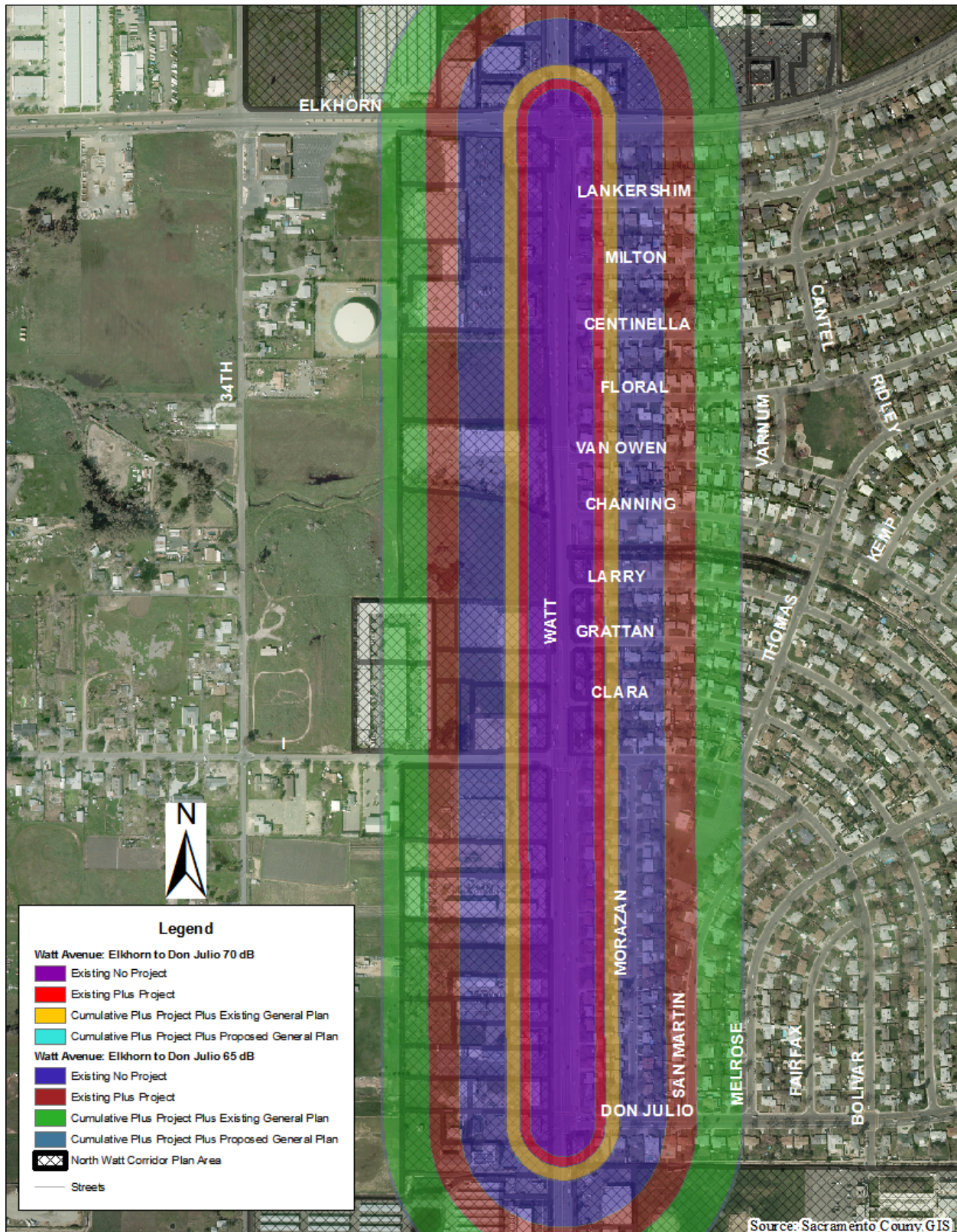


Plate NS-3: Watt Avenue – Don Julio to James/A Street Noise Contours

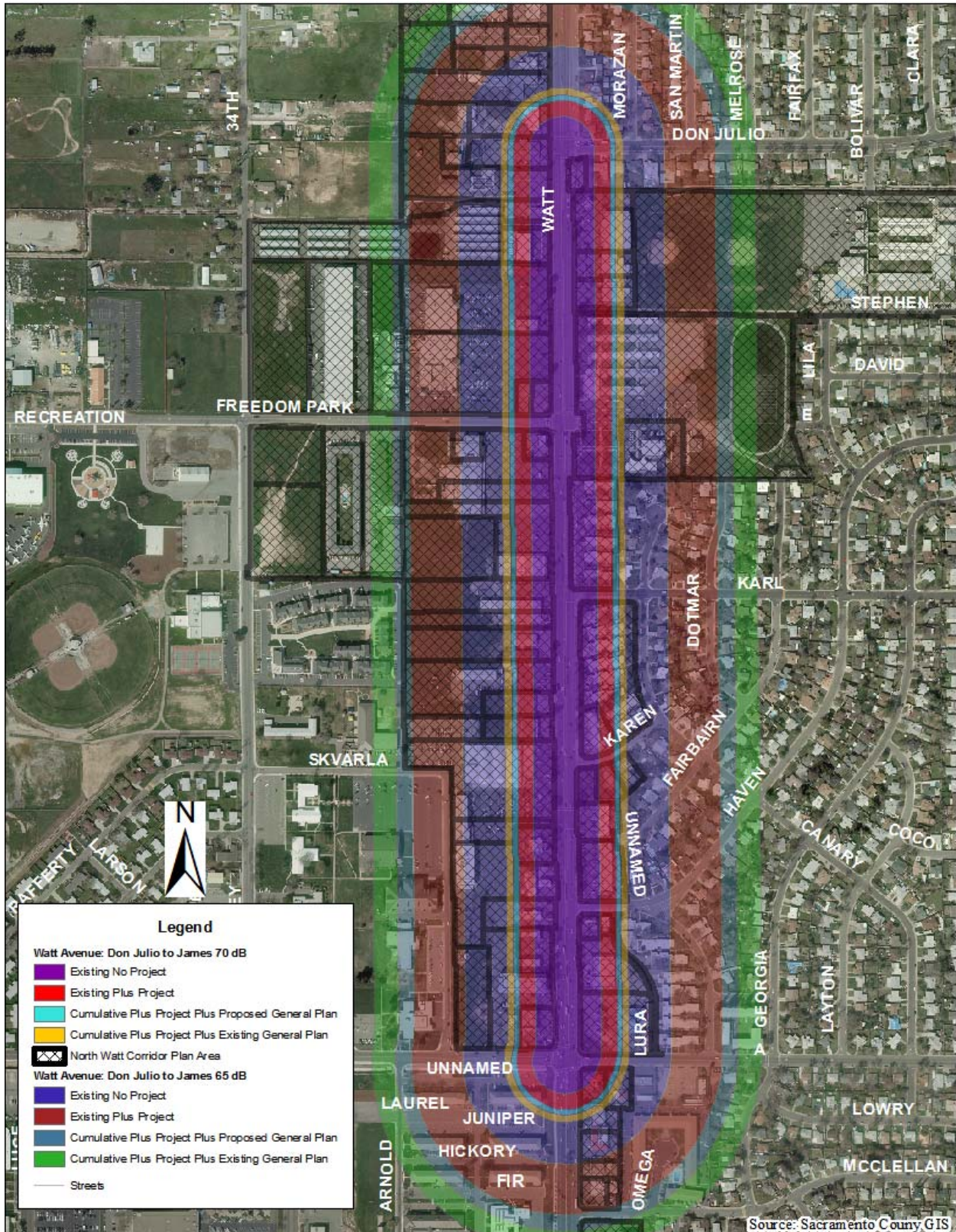


Plate NS-4: Watt Avenue – James/A Street to Airbase Noise Contours

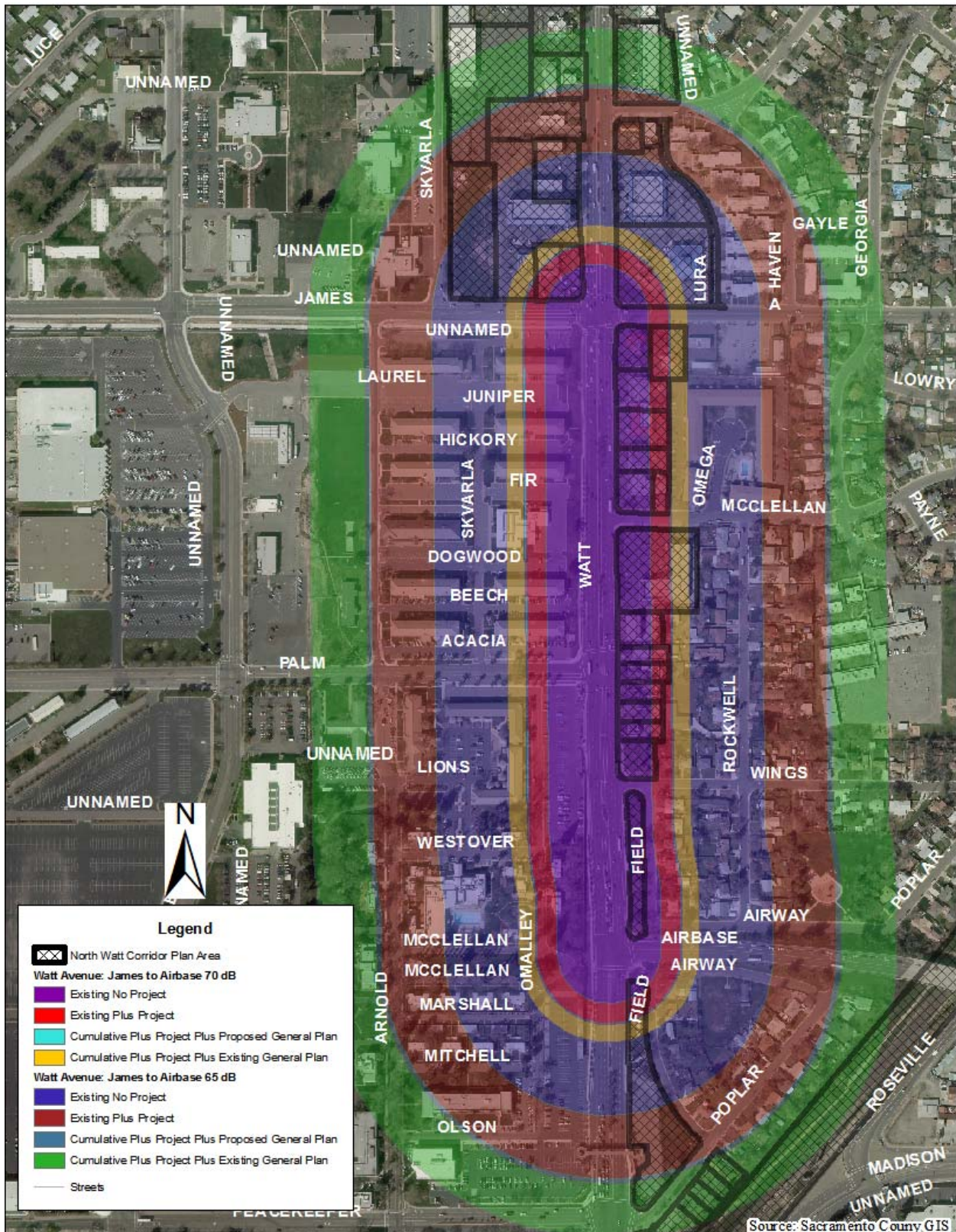


Plate NS-5: Watt Avenue – Airbase to Roseville Road Noise Contours

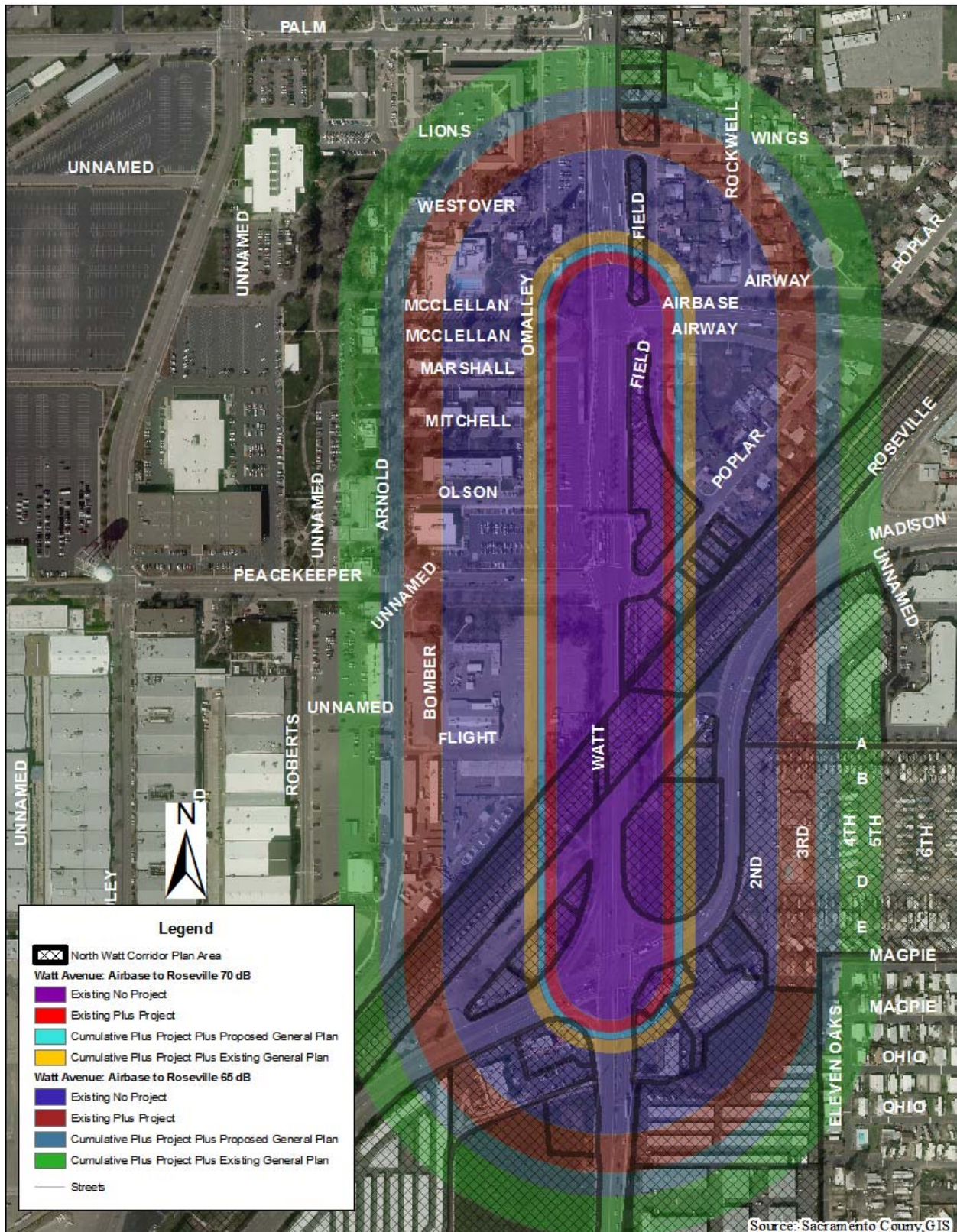


Plate NS-6: Watt Avenue – Roseville Road to Winona Noise Contours

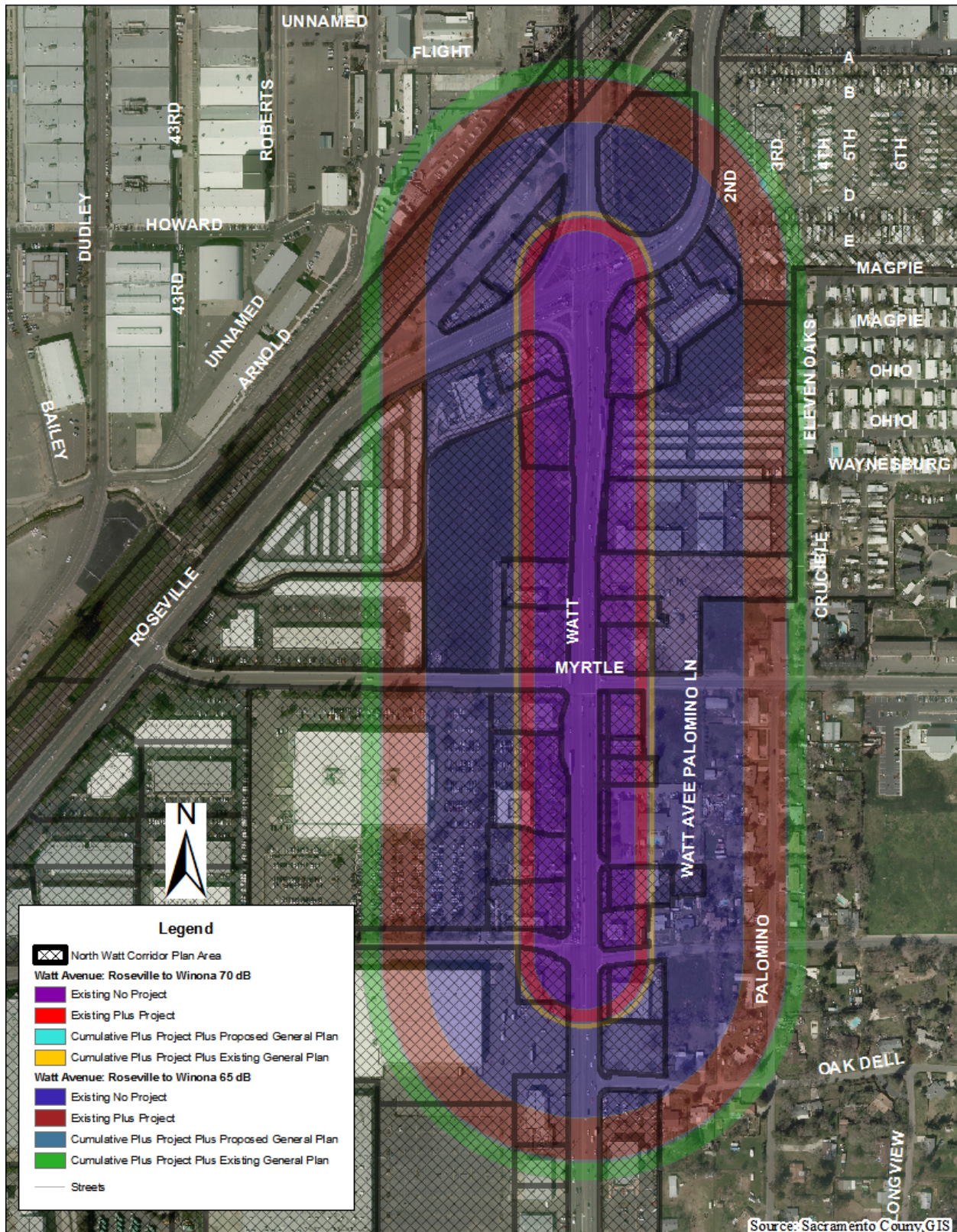
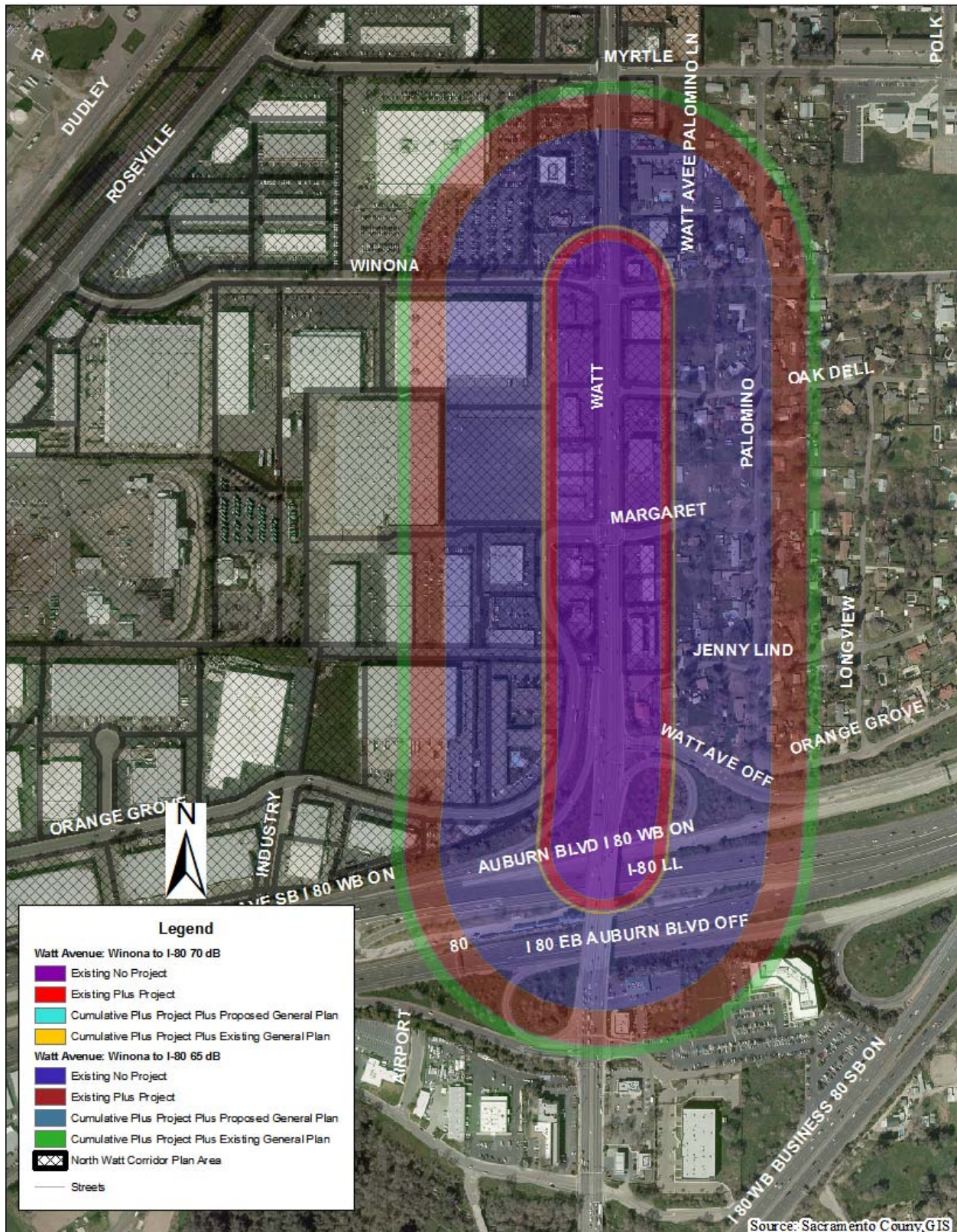


Plate NS-7: Watt Avenue – Winona to I-80 Ramps Noise Contours



areas so that they are shielded by buildings, but it may also be desirable to have open space areas visible from Watt Avenue.

Given the general intent of the Corridor Plan and proposed mixed-use land uses adjacent to major roadways, it is expected that residential development would occur in areas where exterior noise levels would be in excess of 65 dB. The application of policy NO-15 would provide some flexibility, given that the project area is intended to be a dense urban infill center, where higher noise levels would be expected. Even with the application of policy NO-15, exterior noise levels may be in excess of 70 dB. This is a significant impact which would require mitigation.

As noted in policy NO-13, above, an emphasis shall be placed on the use of setbacks and site design prior to the consideration of noise barriers as measures to reduce noise impacts. In this particular instance, sound walls and other noise barriers would directly conflict with the Corridor plan, which as noted previously, is intended to create a connected community-based urban environment. The viability of the proposed project is directly dependent on the major roadways within the plan area and the ability of pedestrians and bicyclists to move freely throughout the plan area and access businesses from the roadways. The use of sound barriers can severely impede pedestrian mobility through real or perceived impasses or obstacles.

While it is encouraged that outdoor living areas are shielded to the extent possible to reduce impacts due to excessive noise levels, it is foreseeable that in some instances it may be infeasible to reduce impacts to a less than significant level consistent with General Plan policy. Given the nebulous nature of future residential development and the uncertainty that noise levels can feasibly be reduced to meet exterior noise standards without compromising the intent of the proposed project, exterior noise impacts to residential uses are considered **significant and unavoidable**.

### ***INTERIOR NOISE LEVELS***

Standard façade construction for residential structures typically results in a minimum 25 dB exterior-to-interior reduction in noise. Indoor residential environments exposed to exterior noise environments no greater than 70 dB will not be subject to noise in excess of the 45 dB threshold of General Plan Policy NO-1. Mitigation is recommended that would require all residential construction to remain outside the 70 dB contour unless sound resistant construction materials are utilized such that interior noise levels do not exceed 45 dB. With mitigation, interior residential noise exposure impacts are **less than significant**.

### **TRAFFIC NOISE IMPACTS TO NON-RESIDENTIAL USES**

#### ***EXTERIOR NOISE LEVELS***

The non-residential uses of the proposed project would also be subjected to traffic noise. For non-residential uses which typically have outdoor activity areas, those areas located at the 65 dB contour and farther away from the noise source will not be subject



to significant noise, pursuant to General Plan Policy NO-1. Playgrounds and parks, because they themselves generate loud noises, can be subject to noise levels up to 70 dB.

In the “residential” section, it is not considered feasible to mitigate exterior noise levels for outdoor activity areas within the plan area. Although it is encouraged to provide some shielding through site design, as is the case with the residential impacts, there are foreseeable impacts that can not be mitigated to less than significant levels without impeding the proposed plan. Thus, exterior noise impacts at non-residential uses are considered **significant and unavoidable**.

### ***INTERIOR NOISE LEVELS***

The noise environment for property adjacent to Watt Avenue would be in the 65 to 70 dB range, with a few areas exposed to up to 75 dB. Assuming a 25 – 30 dB reduction in noise from standard commercial construction, the interior noise environment would be 35 to 45 dB L<sub>dn</sub>. Generally, these noise levels are within the acceptable noise levels for interior spaces for non-residential uses (see Table NS-3, above), but depending on the particular use, noise levels could be in excess of applicable standards per Table NS-3 above. Mitigation is included stipulating that non-residential buildings shall not be permitted at locations exposed to noise in excess of the applicable General Plan thresholds. With the recommended mitigation, traffic noise impacts to the interior non-residential environment would be **less than significant**.

### *RAILROAD NOISE IMPACTS*

The Union Pacific (UP) Railroad line transects the Corridor Plan area directly north of the Triangle Gateway district and parallel to Roseville Road. Railroad noise is classified as an intermittent transportation noise source. Under existing conditions, the UP line crosses Watt Avenue north of Roseville Road via an elevated bridge/track; thus, vehicular traffic on Watt Avenue travels beneath the bridge and is uninhibited by rail operations. With the exception of this portion of elevated track, the remaining UP rail line, located adjacent to the project area, is level with the surrounding plan area topography. In general, the rail line is separated from existing uses within the plan area by Roseville Road. The only land uses within the Corridor vicinity that are located directly adjacent to the rail line are those within McClellan Park. Parcels located in the vicinity of the UP line are developed with commercial and industrial uses.

Noise along freight and passenger heavy rail lines is intermittent but trains use the tracks at all times of the day and the loud noise can disturb residential and non-residential uses. Based on the Sacramento County General Plan background to the Noise Element, under the worst case scenario, noise levels exceeding 65 dB L<sub>dn</sub> can be experienced within 742 feet of the railroad tracks. However, the noise level varies based on several factors, namely the number of daily operations and whether or not a horn is utilized. See Table NS-10, for estimated daily operations and distances to railroad contours.

**Table NS-10: Estimated Daily Operations and Distances to Railroad Contours**

Daily Operations	Distance to 65 dB Ldn (feet)	
	Without Horn	With Horn
20	217	467
25	252	542
30	284	612
35	315	679
40	344	742

As shown on Table NS-10, interior and exterior noise environments of new residential and non-residential uses located adjacent to or within close proximity to the UPRR will be affected by rail traffic noise. Depending on how many daily operations occur along the UPRR, distance from the track centerline, and whether or not a horn is utilized in the project vicinity will significantly alter the noise environment. It should be noted that according to Table I (see Table NS-3, above), from the General Plan Noise Element, all residential, transient lodging, hospitals and nursing homes are also subjected to the following noise standard (note 5):

If this use is affected by railroad noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

The above standard refers to noise levels within interior sleeping areas of residential, transient lodging, hospital, and nursing home uses.

The analysis of noise impacts related to the UPRR on interior and exterior noise levels is similar to that of the analysis of potential impacts associated with other transportation sources discussed above. Essentially, it is considered infeasible to effectively mitigate exterior noise levels from the UPRR without directly impacting the overall intent of the Corridor Plan. Noise barriers, including sound walls, would alienate parts of the plan area from one another and would piecemeal the community, which is in conflict with the intent of the Corridor Plan. Although mitigation for exterior noise levels appears infeasible, the impact on portions of the Corridor Plan's exterior noise environment may be substantial and is considered a significant and unavoidable impact.

As discussed previously, the interior noise environment is particularly important in an urbanized area because it provides sanctuary from the exterior noise environment. Noise levels in the interior living area can directly impact sleep habits and overall human health. As shown above, standard construction techniques provide a 25-30 dB reduction in noise levels; however, based on Table NS-10, this may not provide

sufficient noise attenuation to reach interior noise level standards within close proximity to the UPRR.

In order to address interior noise levels at sensitive receptors associated with the railroad, the Corridor Plan should include a policy requiring future project proponents adjacent to the railroad to demonstrate interior noise attenuation such that compliance with interior noise standards consistent with General Plan Noise Element policy is met. Mitigation to that effect is included below. With mitigation impacts of railroad noise on interior noise levels at sensitive receptors is considered less than significant. However, as noted above, impacts to the exterior noise environment due to railroad noise is considered **significant and unavoidable**.

### *MITIGATION MEASURES*

**NS-1.** To ensure compliance with General Plan Noise Element standards of 45 dB L<sub>dn</sub> or less for residential interiors, the following measure shall apply: Any/all new residential construction shall be located at or beyond the 70 dB noise contours, as found in the Cumulative Plus Project conditions tables describing noise contour locations (Table NS-8 and Table NS-9 of this EIR).

Any departure or deviation from the above measure must be accompanied by an acoustical analysis, prepared by a qualified acoustical consultant and verified by the Division of Environmental Review and Assessment, substantiating that the General Plan Noise Element standard cited above is met.

**NS-2.** To ensure compliance with General Plan Noise Element standards for non-residential interiors, as indicated in Table I of the Sacramento County General Plan, the following measure shall apply: Any/all new non-residential construction shall remain outside the 60 to 75 dB contour, as applicable, assuming a 25 dB standard construction reduction, unless sound resistant construction materials are utilized such that interior noise levels do not exceed the applicable noise level standards.

Any departure or deviation from the above measure must be accompanied by an acoustical analysis, prepared by a qualified acoustical consultant and verified by the Division of Environmental Review and Assessment, substantiating that the General Plan Noise Element standard cited above is met.

**NS-3.** To ensure compliance with General Plan Noise Element standards for interior noise levels at sensitive residential receptors subjected to railroad noise, the following policy shall be added to the Corridor Plan:

No use shall be operated or constructed that would result in interior noise levels at sensitive residential receptors that exceed the General Plan Noise Element noise standards. Proponents applying for sensitive uses in close proximity to the Union Pacific Railroad shall submit a noise analysis substantiating compliance with interior noise standards of the General Plan Noise Element noise standards.

## IMPACT: EXCESSIVE OPERATIONAL COMMUNITY GENERATED NOISE

The term community generated noise is used here to define the potential nuisance noise created by the build-out or redevelopment of the North Watt Corridor Plan such as interior street noise, loading dock noise, customer noise/voices, restaurant use noise, and other commercial noise generating activities. In traditional development, when a commercial center is proposed a noise analysis is conducted for the project, when warranted, to determine the noise impacts to any adjacent residential receptors. As often is the case, the commercial center is analyzed as an addition or intrusion into the neighborhood. For mixed-use development no one use should be viewed as an intrusion to another; instead the uses should be viewed as complimentary and evaluated based on the guidelines present in the proposed Corridor Plan.

In the case of the North Watt Corridor Plan, the goal is to develop a cohesive community with a sense of identity, with a mix of uses developed in a complimentary and integrated fashion in order to encourage growth and create pedestrian connectivity and access in and adjacent to the plan area. This concept demands that commercial, office and residential uses be mixed in a density which is high enough to support high quality transit service and is connected to adjacent properties. People will be living closer together; customers, employees and residents will co-exist in the community; and more people will be out of their cars, walking and biking. In turn this invariably can result in the increased perception of noise by some individuals.

Noise is a very subjective matter. An objective measurement can be made regarding a noise's intensity (a decibel reading); however, different people will perceive the same noise differently. A bustling outdoor café with people talking, dishes being cleared and meals being served could be perceived by one person as a "racket", while another person may feel a sense of contentment when presented with the same sounds.

The General Plan addresses non-transportation noise through policies NO-5, and NO-6 which are as follows:

NO-5 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2 (Table NS-4). Where the noise level standards of Table 2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 standards within sensitive areas.

NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 (Table NS-4) at existing noise-sensitive areas in the project vicinity.

The noise standards above were created to evaluate a project's impacts to adjacent land uses; they do not apply to mixed use development where the noise producer and receptor are part of the same project. The Sacramento County noise ordinance regulates exterior noise that affects residentially zoned property. Mixed-use zoning is not listed in the Ordinance as a residential property subject to regulation. Since the overall Plan is a mixed use development, and retail uses are allowed together with residential uses, any residential uses may experience nuisance noise impacts from commercial operations. Any potential nuisance impacts could be minimized by effective site design and management controls. In fact, Policy NO-5 above notes that "appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 (Table NS-4) standards within sensitive areas". Some controls that could reduce the potential for nuisance noise impacts from noise sources are listed below:

- Provide noise resistant construction for residential units near excessive noise generators.
- Place residential units strategically as to be shielded from excessive noise generators.
- Restrict excessive noise operations and truck arrivals and departures to the daytime hours.
- Prohibit engine idling at commercial uses.
- Place noise attenuating barriers and landscaping around excessive noise generators.

Ultimately, community generated noise will inevitably be produced by the myriad of activities in the Plan area; and the associated noises will be perceived differently by individuals. Since it is the intent of the Planning Division to mix uses within the Plan area in a cohesive way, policy should be in place within the Corridor Plan which would protect receptors within the Plan area and immediately adjacent residential properties from excessive noise generators, or provide provisions to mitigate such noises. Thus, mitigation is added below that requires the addition of a Corridor Plan policy that addresses community noise. With mitigation, excessive noise will be prohibited by the Plan, and community noise impacts would be expected to be less than significant.

To ensure impacts are less than significant mitigation is recommended below that states that no use shall be operated so as to generate recurring noises that are unreasonably loud, cause injury, or create a nuisance to any person of ordinary sensitivities and that no nonresidential use shall be operated so as to generate any noise in an adjacent residential area, as detected in that area without instruments, that is louder than the noise which could be generally expected from uses permitted in that area. Impacts are **less than significant**.

*MITIGATION MEASURES*

**NS-4.** To ensure compliance with General Plan Noise Element standards for non-transportation sources, the following policy shall be added to the Corridor Plan:

No use shall be operated so as to generate recurring noises that are unreasonably loud, cause injury, or create a nuisance to any person of ordinary sensitivities. No nonresidential use shall be operated so as to generate any noise in an adjacent residential area, as detected in that area without instruments, that is louder than the noise which could be generally expected from uses permitted in that area.

# 11 BIOLOGICAL RESOURCES

## INTRODUCTION

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This chapter describes the biological resources that occur within the Corridor Plan area, includes a description of applicable federal, state and local regulations and policies that influence biological resources, identifies impacts to these resources, and recommends mitigation measures to reduce or eliminate impacts.

Impacts to biological resources that may result from implementation of the North Watt Avenue Corridor plan, and associated required public infrastructure are discussed in an overview manner with potential mitigation measures that would apply to future projects since specific site development strategies are unknown at this time.

## BIOLOGICAL RESOURCES SETTING

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The biological resources and overall environmental setting of the Corridor Plan area is diverse. Much of the Plan area is highly urbanized; however, portions of the plan area are semi-rural, vacant, or underutilized. In particular, lands to the west of the Corridor Plan area are agricultural-residential and contain ample open-space utilized, in some cases, for small animal husbandry operations. On the whole, most of the project area, including those areas that are vacant or semi-rural, have been subjected to site modifications and the project area does not contain pristine habitat, woodlands or agricultural lands.

In the urbanized area, vegetation is sparse due to development paired with expansive paved parking areas. Where vegetation does occur it consists of typical roadside and urban landscaping as well as native and non-native trees commonly found in developed areas. The vacant and semi-rural portions of the plan area are vegetated in non-native grasses and annual weeds. Some native and non-native trees occur throughout the vacant portions of the plan area.

The project area also includes several water-features including: Dry Creek, two branches of Robla Creek, Magpie Creek, and Don Julio Creek. Wetland indicators, including potential vernal pools and seasonal drainages also occur within the Plan area. However, no critical habitat for threatened or listed species occurs within the project limits.

## REGULATORY SETTING

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### FEDERAL AND STATE REGULATIONS

#### *U.S. FISH AND WILDLIFE SERVICE*

As site-specific projects are presented for construction, consultation with the USFWS will be necessary if federally listed species are present within the immediate project area and/or if work will be carried out on the banks of rivers, streams or other waterways. Consultation with the USFWS on an informal or formal basis may generate additional requirements for avoidance, minimization and/or mitigation beyond those identified in this document.

The following discussion was submitted to the County by the USFWS for inclusion into environmental documents when threatened or endangered species may be adversely affected.

“As a requirement of the Department of Interior, U.S. Fish and Wildlife Service, the following notification is provided to proponents of any project that has the potential to adversely affect threatened or endangered species:

The applicant is hereby notified of additional conditions as stipulated by the U.S. Fish and Wildlife Service. Features of the applicant's project may adversely affect federally listed threatened or endangered species. An applicant must go through one of two processes to obtain authorization to take federally listed species incidental to completing his or her project. One of the processes is formal consultation. When the authorization or funding of a Federal agency is an aspect of a project that may affect federally listed species, section 7 of the Endangered Species Act requires the Federal agency to formally consult with the Service. Formal consultation is concluded when the Service issues a biological opinion to the Federal agency. The biological opinion includes terms and conditions to minimize the effect of take on listed species. The Federal agency must make the terms and conditions of the biological opinion into binding conditions of its own authorization to the project applicant. An example of this process is when the U.S. Army Corps of Engineers consults with the Service prior to issuing a permit to fill jurisdictional waters under Section 404 of the Clean Water Act. The terms and conditions of the biological opinion become binding on the project applicant through the Corps' 404 authorization. When no Federal funding or authorization is involved in a project, an applicant must prepare a habitat conservation plan and obtain a permit directly from the Service in accordance with section 10(a)(1)(B) of the Act. For additional information on these processes please contact the Endangered Species Division of the U.S. Fish and Wildlife Service's Sacramento Fish and Wildlife Office at (916) 414-6600.”



In essence, the permitting process is used to determine whether a project would jeopardize the continued existence of a listed species and, if so, what mitigation measures would be required to avoid, minimize, and compensate for project impacts so that a no jeopardy finding can be made.

#### *UNITED STATES ARMY CORPS OF ENGINEERS*

The U.S. Army Corps of Engineers (Corps) has jurisdiction and permitting authority under Section 404 of the Clean Water Act (CWA) over the discharge of dredged or fill material into waters of the United States, including wetlands. The Corps determines the significance of and approves, restricts, or prohibits discharges through application of the Section 404(b)(1) guidelines, the substantive criteria for dredged and fill material discharges under the CWA. These guidelines have been developed by the U.S. Environmental Protection Agency in conjunction with the Corps. The guidelines are based on the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and /or probable impacts of other activities affecting the ecosystems of concern. Under the Fish and Wildlife Coordination Act, the USFWS advises the Corps on projects involving dredge and fill activities in waters and wetlands of the U.S.

#### *ENDANGERED SPECIES ACT*

The federal Endangered Species Act of 1973 (FESA) (50 CFR 17) provides legal protection, and requires definition of critical habitat and development of recovery plans for plant and animal species in danger of extinction. This law regulates the listing of plant and animal species as endangered, threatened, or in the case of plants, rare. The federal Endangered Species Act requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of a Section 10/404 permit, as to the potential to jeopardize the continued existence of any listed species potentially/impacted by the action. Section 9 of the federal Endangered Species Act prohibits the “take” of any member of an endangered species. “Take” is defined by the act as, “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has further defined the terms “harass” and “harm” to include indirect injury through habitat destruction or modification. Section 10(a) of the federal Endangered Species Act permits the incidental “take” of an endangered species if the take is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”

#### *CLEAN WATER ACT*

Water quality certification is a requirement under the federal Clean Water Act, Section 401. Issuance and enforcement are the responsibility of the state Regional Water Quality Control Board. Like Section 404, Section 401 regulates only surface waters that are considered navigable or not isolated. All activities that may result in the discharge

of pollutants into waters of the United States must obtain certification from the state. Section 404 and 401 permits go hand in hand when a project proposes to discharge into a jurisdictional wetland.

In addition to Section 401 regulations, California also regulates surface water quality under the Porter-Cologne Water Quality Control Act. Unlike Section 404 and 401 regulations, Porter-Cologne does not require waters be navigable. Thus, non-navigable or isolated wetlands can also be regulated by the State of California pursuant to Porter-Cologne.

Like the federal ESA, the California Endangered Species Act (CESA) provides protection for species identified as threatened or endangered within the state of California by regulating the take of state-listed species. CESA was passed in 1984 by the State of California to recognize and protect species that are endangered or threatened with extinction. The California Endangered Species Act is intended to operate in conjunction with the California Environmental Quality Act (CEQA) to help protect the ecosystems upon which endangered and threatened species depend.

#### *MIGRATORY BIRD TREATY ACT*

The Migratory Bird Treaty Act implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the Fish and Game Code (FGC).

#### *CALIFORNIA DEPARTMENT OF FISH AND GAME*

The California Department of Fish and Game (CDFG) is responsible for administering the CESA, as discussed above. Additionally the CDFG has oversight over stream courses. To construct in streams or drainage channels, Fish and Game requires project proponents obtain a Streambed Alteration Agreement, under Section 1602 of the State Fish and Game Code. Section 1602 requires any person, state or local governmental agency, or public utility to notify the Department before beginning any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Fish and Game Code section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes.

## LOCAL REGULATIONS

### *GENERAL PLAN (GP) CONSERVATION ELEMENT*

The Conservation Element includes policies that protect natural resources such as wetlands, vernal pools, streams and rivers, riparian habitat, woodlands, and native trees. When impacts to these natural resources cannot be avoided during development, certain policies require mitigation to ensure that impacts are minimized and that there is no net loss of the affected resource. The purpose of the Conservation Element is to manage and protect the County's natural resources for the use and enjoyment of present and future generations while maintaining the long-term ecological health and balance of the environment.

The Sacramento County General Plan policies that are pertinent to biological resources including vegetation and wildlife are policies CO-5874 through CO-149465. These policies are intended to support the stated goals of the Vegetation and Wildlife Section of the General Plan which are to:

Preserve and manage natural habitats and their ecological functions throughout Sacramento County;

Preserve, enhance and restore special status species habitat in Sacramento County to aid in the recovery of these species,

Preserve, protect and manage the health and integrity of aquatic resources in Sacramento County,

Preserve and enhance self-sustaining vernal pool habitats,

Preserve, protect, and enhance natural open space functions of riparian, stream and river corridors,

Preserve and protect fisheries in County Waterways and water bodies, and to

Preserve and protect vegetative habitat in Sacramento County.

The policies in the Conservation Element that support the County's biological resource goals and are relevant to the project are as follows:

- CO-5874. Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.
- CO-5972. Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function:
  - vernal pools,

- wetlands,
  - riparian,
  - native vegetative habitat, and
  - special status species habitat.
- CO-~~87~~104. Encourage private landowners to protect, enhance and restore riparian habitat.
  - CO-~~89~~106. Protect, enhance and maintain riparian habitat in Sacramento County.
  - CO-~~91~~108. Discourage introductions of invasive non-native aquatic plants and animals.
  - CO-~~92~~109. Enhance and protect shaded riverine aquatic habitat along rivers and streams.
  - CO-~~114~~133. Protect stream corridors to enhance water quality, provide public amenities, maintain flood control objectives, preserve and enhance habitat, and offer recreational and educational opportunities.
  - CO-~~138~~156. Protect and preserve non-oak native trees along riparian areas if used by Swainson's Hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.
  - CO-~~139~~157. Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.
  - CO-~~140~~158. For projects involving native oak woodlands, oak savannah, or mixed riparian areas, ensure mitigation through either of the following methods:
    - An adopted habitat conservation plan.
    - Ensure no net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration.
    - Removal of native oaks shall be compensated with native oak species with a minimum of a one to one dbh replacement.

- A provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary.
- If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to the County's Tree Preservation Fund or another appropriate tree preservation fund.
- If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity.
  - **Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigations.**
    - Equal or greater in area to the total area that is included within a radius of 30 feet of the dripline of all trees to be removed;
    - Adjacent to protected stream corridor or other preserved natural areas;
    - Supports a significant number of native broadleaf trees; and
    - Offers good potential for continued regeneration of an integrated woodland community.

## SIGNIFICANCE CRITERIA

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Based on Section 15065 and Appendix G of the CEQA Guidelines, a significant biological impact is defined. The following sections apply:

*Section 15065* states that implementation of a project would result in a significant biological impact if:

The project has the potential to: 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; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

*Appendix G* states that implementation of the SPA would result in a significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

CEQA Section 15380 provides that a plant or animal species may be treated as “rare or endangered” even if not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future. As species of plants and animals become restricted in range and limited in population numbers, species may become listed or candidates for listing as endangered or threatened and become recognized under CEQA as a significant resource. Examples of such species are the western spadefoot toad and the burrowing owl.

## IMPACTS AND ANALYSIS

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Implementation of the proposed Corridor Plan has the potential to impact a number of trees within the project area including native oaks as well as, wetlands, riparian habitat and nesting birds. A discussion of these impacts follows.

## IMPACT: SUBSTANTIAL ADVERSE EFFECT ON NATIVE OAK TREES

Although an arborist report was not conducted for the proposed project, field reconnaissance conducted by DERA staff has revealed that the Corridor area includes some native oak trees. In general, most of the plan area is developed and due to the extensive development few native oak trees, or trees in general, remain in the Corridor Plan area; however some oak trees were observed along roadways and within landscaped areas adjacent to development. Vacant lots within the plan area are generally void of trees except the occasional outliers along periphery property lines. Since most vacant parcels were fenced or access was not granted, most outlying trees were not inspected; however canopies were observed by DERA staff that appeared to have the characteristics of native oak trees.

A general background on native oak trees found within the County and potential impacts to native oak trees are discussed below.

### *BACKGROUND*

The Sacramento County Tree Preservation and Protection Ordinance (Chapter 19.12 of the County Code) states that “it shall be the policy of the County to preserve all trees possible through its development review process.” In addition, the “approving body shall have the authority to adopt mitigation measures as conditions of approval for projects in order to protect other species of trees.” This protection is afforded to native oak trees, other native trees, and landmark trees (defined in Section 19.04.030 of the County Code as “an especially prominent or stately tree on any land in Sacramento County”). Furthermore, the Sacramento County General Plan Conservation Element Policy CO-130 states that the County “make every effort to protect and preserve non-oak native...and landmark trees and protect and preserve native oak trees measuring 6 inches in diameter at 4.5 feet above ground in urban and rural areas, excluding parcels zoned exclusively for agriculture.”

The preservation of oak trees enhances natural scenic beauty, sustains the long term potential increase in property values which encourages quality development, maintains the original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County to visitors, helps to reduce soil erosion, increases the oxygen output of the area, and increases the overall aesthetic value and environmental quality of land for both humans and wildlife.

Native oaks, when young trees, are very tolerant of their environment and make excellent and adaptable landscape assets. The mature native oak is an invaluable part of our environment, but any substantial change in its environment will weaken a healthy specimen and may eventually kill it. Native oak trees have adapted to the long dry summers of the Sacramento Valley, primarily through the development of their root system. The initial root is a taproot extending deep for more dependable moisture. As the oak grows, the taproot is outgrown by an extensive lateral root system that spreads horizontally out from the trunk to, and well beyond, the dripline. For a mature oak, this horizontal root system is the primary supporter of the tree for the rest of its life. It

includes the important feeder roots, which absorb moisture and nutrients. Nearly all of the lateral root system occurs within the top five feet of the soil surface. In shallower soils, the root system is concentrated in even a shallower zone, typically 1 to 2 feet below the surface. As oak trees mature, particularly in the summer-dry Sacramento Valley, deep growing vertical roots form off the laterals, usually within ten feet of the trunk. These are called “sinker” roots and they exploit deeper soil moisture and add stability to an increasingly massive tree. By the time the mature tree has established an elaborate root system designed for its environment and particular site conditions, it has lost the vigor of youth. It is less tolerant to change and/or damage and can less easily support its massive living structure. The activities that are likely to cause significant impacts to mature oak trees are discussed below.

The amount of soil that can be removed from beneath an oak before permanent root damage occurs varies depending on several factors including the individual tree size, species, location, and health. Although small amounts of soil may sometimes be removed without permanently damaging an oak, it is generally recommended that no soil be removed and the area beneath the tree remain undisturbed. The addition of fill and the operation of heavy equipment beneath an oak tree compacts the surface soils, prohibits the natural exchange of gases between the feeder roots and the atmosphere, and also restricts water percolation to the root zone. Excessive moisture may also be trapped by fill, which can cause root and crown rot. There is no guarantee that additional soil can be safely added around a mature oak tree. Arborists usually recommend not tampering with the natural grade within the root zone, using retaining walls where necessary. The major damage done to oaks in fill operations occurs because the soil is first excavated down to firmer and denser layers. Roots are damaged and removed. Then fill and native soil are knitted together in successive layers, each usually compacted to 90% to form a firm base for development.

Paving can cause the same problems associated with soil compaction. Impervious paving, such as asphalt and concrete, prevent water percolation and the exchange of gases between roots, soil and the atmosphere. In addition, paving usually requires excavation to create a stable base and to allow for depth of paving material. This process damages and removes roots, and compacts the soil.

Mechanical damage to the trunk or limbs of oak trees is very detrimental, especially to older, less vigorous trees. Any wounds that remove bark and penetrate the cambium layer allow an opening for decay-causing organisms. This can weaken a tree to the point of structural failure. The best cure in this case is prevention.

Chemical spills can be directly toxic to the roots. The best way to avoid this type of damage is to prevent vehicles from being parked near a tree and not to store any materials under or near a tree.

Good drainage is very important because oaks need a proper balance of moisture, air, and nutrients to grow and survive. Too much moisture, particularly during the warm growing months when the oak in nature is normally dry, can smother the roots and/or encourage the proliferation of crown and root rot fungus.



Trenching is an often-overlooked cause of oak tree death. Trenching usually occurs when utilities are installed, and can result in severing a significant portion of the total root area from a tree. A single three-foot deep trench at the dripline along one edge of an oak tree will remove approximately 15% of the roots. A similar trench made midway between the dripline and the trunk will remove approximately 30% of the roots. Trenches made within ten (10) feet of a large oak are considered very damaging. Severing any horizontal roots means the loss of any sinker roots that are attached beyond the point of severance. A root loss of 50% or greater usually causes immediate water stress and reduces photosynthesis (food production). Growth is reduced and die back, or death, may result.

Young, healthy, vigorous trees can survive moderate root loss, while large, old, or declining trees may not. Recovery following the shock of severe root loss depends on rapid root replacement. Root growth requires adequate food resources, growth stimulating hormones, water and minerals. If these are available and there are no other restrictive influences or construction impacts, root growth and replacement will generally proceed rapidly. Low or depleted food reserves will delay root replacement. If the soil conditions have been altered by construction, root replacement will be slowed or stopped. A delay in recovery from root loss will result in growth loss, die back or death. The worst time to cut roots is just prior to bud break in the spring because growth hormones are not present in the roots to stimulate root growth. Also, cutting roots later in the spring should be avoided as food reserves have been nearly depleted by leaf growth. Root growth proceeds most rapidly in the summer and fall when top growth has slowed, food reserves are high and growth hormones are present in the roots.

#### *IMPACTS TO NATIVE OAK TREES*

Implementation of the proposed Corridor Plan has the potential to result in the removal or encroachment within some or all native tree resources within the Corridor through development or redevelopment and proposed improvements associated with drainage, sewer and/or water and the Corridor's "public realm" design. An arborist report was not conducted for the Corridor Plan. However, information from visual inspections performed by DERA staff and work conducted for the North Highlands Town Center project (Control Number: 2005-GPB-CZB-0938) was utilized in order to provide a generalized baseline condition of tree resources within the project area.

Although the North Highlands Town Center project area is excluded from the current project review, the presence of oak trees within parcels in the Town Center directly adjacent to Watt Avenue indicates that additional oak trees are present on internal portions of parcels within the Corridor Plan area. After a visual inspection of aerial photographs and windshield surveys of the project area, oak trees were identified within the plan area.

The degree of impacts to native trees that will result from development and redevelopment associated with the North Watt Corridor Plan is uncertain at this time. The Corridor's proposed change to land use designations within the plan area does not in itself require the removal of any on-site native or non-native trees. Because specific

parcel redevelopment and development plans are not part of the proposed Corridor project, impacts associated with development on native trees can not be determined at this time. It should be noted that based on the Corridor Plan's public realm design guidelines, there will likely be impacts to tree resources located within existing right-of-way or future dedicated right-of-way, due to the Corridor Plan's requirements for extensive pedestrian-friendly improvements along all area roadways. It is likely that native trees could be incorporated into the enhanced public realm; however, depending on design constraints, native and non-native trees may be removed. Additionally, specific impacts to native oak trees, both on- and off- Corridor project area, associated with the installation of required public infrastructure (water, sewer, etc.) to support growth in the project area, are unknown at this time; however, it is reasonable to assume that impacts could occur.

Impacts to tree resources due to implementation of the Corridor Plan are considered potentially significant. Mitigation is included to provide for the protection and preservation of native tree resources within the Corridor Plan area. Environmental impacts of the Corridor Plan associated with tree resources are **less than significant** with mitigation.

#### *MITIGATION MEASURES*

#### **MITIGATION MEASURE BR-1: CORRIDOR PLAN DEVELOPMENT AND REDEVELOPMENT OAK TREE PROTECTION AND COMPENSATION**

Prior to execution of redevelopment/ development projects within the Corridor Plan area or installation of public service infrastructure, the project proponent(s) shall submit an arborist report for the project impact areas if trees are present on the site. The report shall include the species, diameter, dripline, and health of the trees, and shall be prepared by an ISA certified arborist. The report shall include an exhibit that shows the trees and their dripline in proximity to the project improvements. The report shall identify any tree that will be removed and quantify the dripline encroachment from project equipment or facilities.

- A. With the exception of the trees removed and compensated for through Part B below, all healthy native trees that are 6 inches dbh or larger on the project site, all portions of adjacent off-site healthy native oak trees that are 6 inches dbh or larger which have driplines that extend onto the project site, and all off-site healthy native oak trees that are 6 inches dbh or larger which may be impacted by utility installation and/or improvements associated with this project, shall be preserved and protected as follows:
  1. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.

2. Any protected trees on the site that require pruning shall be pruned by a certified arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."
3. Prior to initiating construction, temporary protective fencing shall be installed at least one foot outside the driplines of the protected trees within 100-feet of construction related activities, in order to avoid damage to the tree canopies and root systems. Where encroachment occurs, temporary high visibility protective fencing shall be installed a maximum of one foot outside the work areas in order to minimize damage to the tree canopies and root systems.
4. Any removal of paving or structures (i.e. demolition) that occurs within the dripline of a protected oak tree shall be done under the direct supervision of a certified arborist. To the maximum extent feasible, demolition work within the dripline protection area of the oak tree shall be performed by hand. If the certified arborist determines that it is not feasible to perform some portion(s) of this work by hand, then the smallest/lightest weight equipment that will adequately perform the demolition work shall be used.
5. No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of preparing tree reports and inventories shall be allowed.
6. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.
7. No grading (grade cuts or fills) shall be allowed within the driplines of protected trees, except for the minimum required for construction and streetscape improvements.
8. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
9. No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
10. The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per County standard detail shall be installed under the supervision of a certified arborist.

11. All portions of any masonry wall that will encroach into the dripline protection area of any protected tree shall be constructed using grade beam wall panels and posts set no closer than 10 feet on center. Any wrought iron fencing shall be similarly installed, with posts set no closer than 10 feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the trees.
  12. Trunk protection measures, per Sacramento County standards, shall be used for all protected trees where development/construction activity, including installation of any masonry wall and wrought iron fence, occurs within 10 feet of the trunk of a tree.
  13. No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An above ground drip irrigation system is recommended.
  14. Landscaping beneath oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. The only plant species which shall be planted within the driplines of oak trees are those which are tolerant of the natural semi-arid environs of the trees. A list of such drought-tolerant plant species is available at the Community Planning Development Department, Division of Environmental Review and Assessment. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
- B. To the maximum extent feasible, all on-site healthy native oak trees shall be protected and preserved. Any substantial (>20%) encroachment and/or removal of native oak trees shall be compensated by planting native trees (valley oak/*Quercus lobata*, interior live oak/*Quercus wislizenii*, blue oak/*Quercus douglasii*, and California black walnut), equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Division of Environmental Review and Assessment. On-site preservation of native oak trees that are less than 6 inches (<6 inches) dbh, may also be used to meet this compensation requirement. Encroachment of over 20 percent within the dripline radius of native trees will require compensatory mitigation based on the percentage of encroachment multiplied by the dbh. Encroachment over 50 percent will require compensation for the entire tree.

Equivalent compensation based on the following ratio is required:

- one preserved native oak tree < 6 inches dbh on-site = 1 inch dbh
- one deepot seedling (40 cubic inches or larger) = 1 inch dbh
- one 15-gallon tree = 1 inch dbh
- one 24-inch box tree = 2 inches dbh
- one 36-inch box tree = 3 inches dbh

Replacement tree planting shall be completed prior to the issuance of building permits or a bond shall be posted by the applicant in order to provide funding for purchase, planting, irrigation, and 3-year maintenance period, should the applicant default on replacement tree mitigation. The bond shall be in an amount equal to the prevailing rate of the County Tree Preservation Fund.

Prior to the approval of Improvement Plans or building permits, a Replacement Oak Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Oak Tree Planting Plan(s) shall include the following minimum elements:

1. Species, size and locations of all replacement plantings and < 6-inch dbh trees to be preserved;
2. Method of irrigation;
3. The Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage;
4. Planting, irrigation, and maintenance schedules;
5. Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 3-year establishment period, and to replace any of the replacement oak trees which do not survive during that period.
6. Designation of 20 foot root zone radius and landscaping to occur within the radius of oak trees < 6-inches dbh to be preserved on-site.

No replacement tree shall be planted within 15 feet of the driplines of existing oak trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement oak trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.

Oak trees <6 inches dbh to be retained on-site shall have at least a 20-foot radius suitable root zone. The suitable root zone shall not have impermeable surfaces, turf/lawn, dense plantings, soil compaction, drainage conditions that create ponding, utility easements, or other overstory tree(s) within 20 feet of the tree to be preserved. Trees to be retained shall be determined to be healthy and structurally sound for future growth, by an ISA Certified Arborist subject to Division of Environmental Review and Assessment approval.

If oak tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.

#### IMPACT: SUBSTANTIAL ADVERSE EFFECT ON STREAMS, WETLANDS AND OTHER SURFACE WATERS

Based on a review of aerial photographs of the project area, review of USGS 7.5 Topographic Maps as well as Sacramento County Geographic Information System databases the project site and vicinity contains potential wetland features including drainage swales, seasonal wetlands, and vernal pools as well as a number of open creek tributaries and channels. The primary wetted features in and adjacent to the project area are Dry, Robla and Magpie Creeks. The onsite potential wetland features, located primarily in northern portions of the project area, appear to drain to Dry and Robla Creeks. Most of the potential wetland features are located on private property and were inaccessible for the purpose of review. See Plate BR -1 for mapped creeks, swales and open drainages within the Corridor area and Plate BR -2 for wetland indicators that were observed in aerial photos.

#### *WETLANDS*

As noted above, based on review of aerial photographs the project area contains potential wetland features. Most of the visible wetland features are concentrated within the northern portions of the project area. Unlike nearly all of the central and southern portions of the project area, much of the northern portions of the Corridor Plan are void of extensive parking areas and dense commercial developments; thus, the chance of encountering wetland features in the Elkhorn District is greater. The Corridor Plan proposes dense development within the Elkhorn District and throughout the Plan area which could lead to impacts to some or all of the wetland features within the Plan area. Consultation with the U.S. Army Corps of Engineers would be required if wetlands are directly impacted as a result of development or redevelopment. At that time, through consultation, a determination as to whether the particular impacted wetland is a Waters of the United States, or an isolated wetland, will be made. Regardless of this determination, if any wetlands within the Corridor are impacted, compensation will be required per the County's no net loss of wetland acreage policy. With mitigation impacts to wetlands are expected to be less than significant. If it is determined that potential wetland features are in fact not wetlands then impacts to these features are less than significant and no mitigation is required.

Plate BR -1: Mapped Creeks, Swales and Drainages

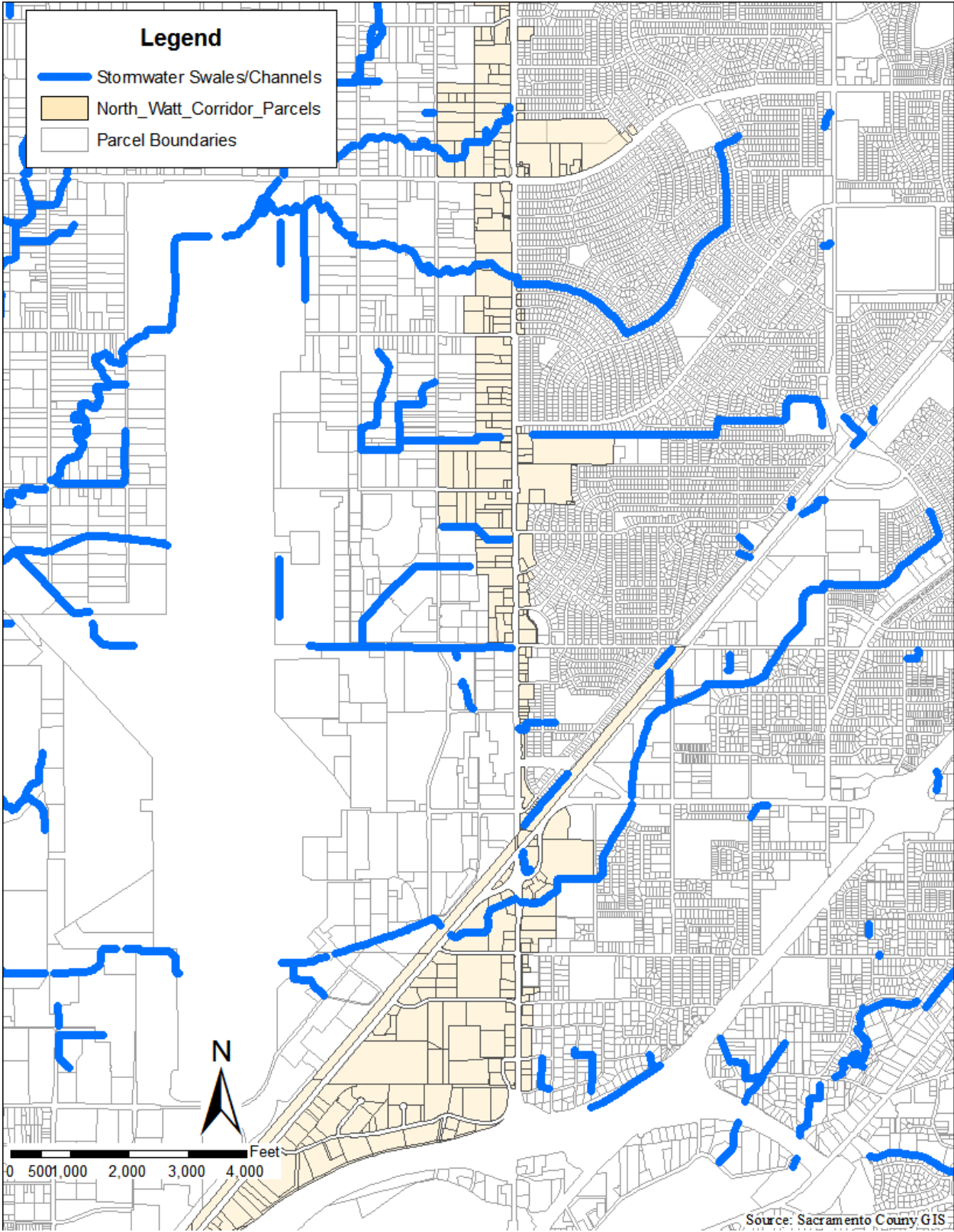
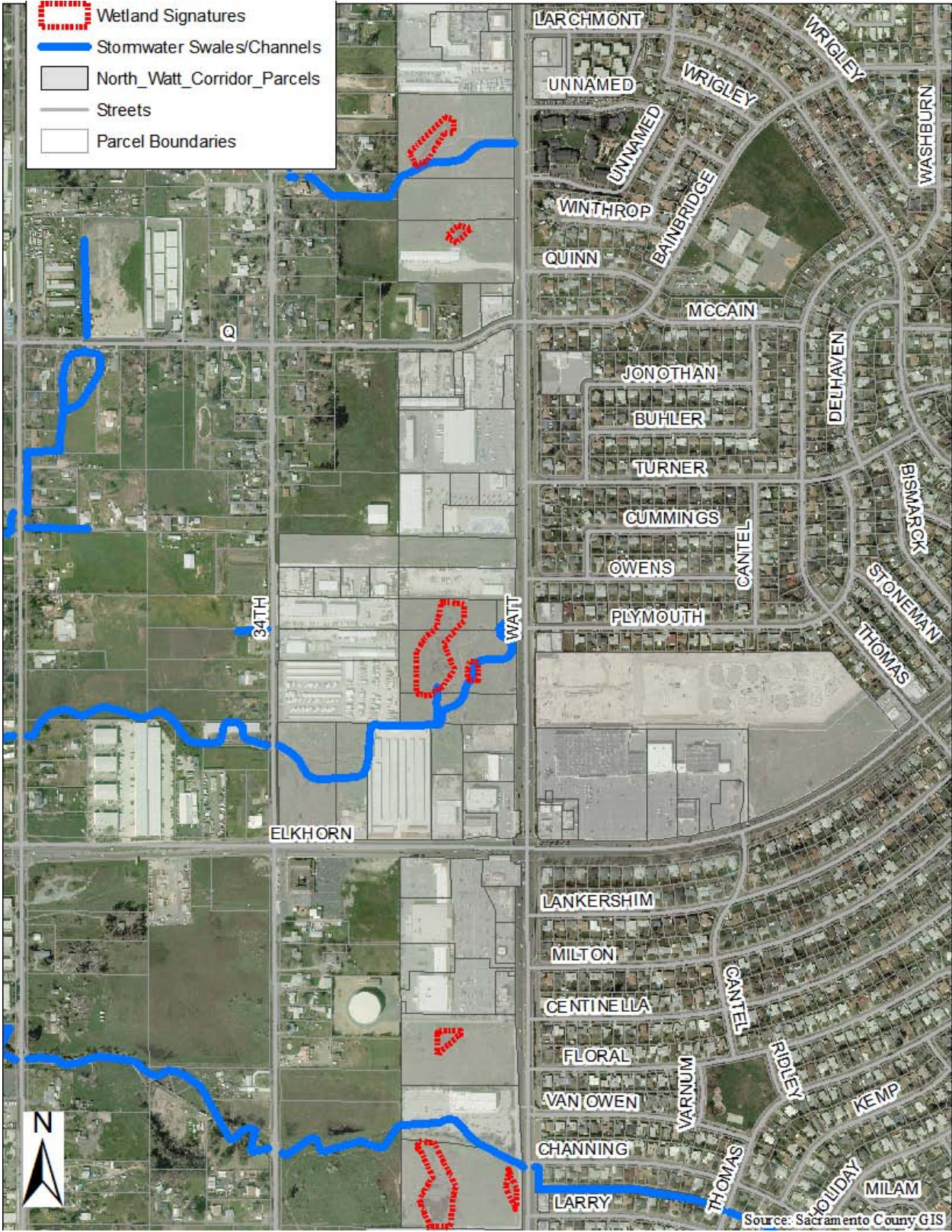


Plate BR -2: Potential Wetland Signatures





### *CREEKS, TRIBUTARIES AND OPEN CHANNELS*

Other open waterways within the plan area include segments or tributaries of Dry Creek, Robla Creek, and Magpie Creek. Magpie Creek traverses the project area in the southern portion of the Corridor within the Triangle District. Robla Creek and one of its tributaries along with a tributary of Dry Creek are located within the northern sectors of the Corridor within the Elkhorn District. The project area also includes a segment of what may be Don Julio Creek, located adjacent to Don Julio Road. The Don Julio Creek segment appears to be undergrounded at Watt Avenue. Portions of all the creek features are located on private property and were largely inaccessible for the purpose of review. A background setting for each of the plan area creeks is presented below.

#### **MAGPIE CREEK**

Magpie Creek originates east of the project area and flows in a westward direction through the project area within the Triangle Gateway District, Subdistrict 1. The Creek flows under Watt Avenue through culverts and continues its progression through the Corridor area until it exits the Plan at a set of culverts under Roseville Road. From the Plan boundaries, Magpie Creek flows westerly through the McClellan Business Park (formerly McClellan Air Force Base). Eventually Magpie Creek and Don Julio Creek flow together into the Magpie Creek Diversion west of the McClellan Business Park property. The Magpie Creek Diversion flows into Robla Creek west of Raley Boulevard and eventually empties into Steelhead Creek.

With the exception of the small sections that are culverted within the plan area, Magpie Creek is generally an open channel that is concrete lined. Due to the channelized and concrete lined condition of Magpie Creek it does not support riparian vegetation along the segment of the creek within the Plan area. Segments of the creek that are west of the project Corridor follow the original course and have not been re-routed or channelized; however, within the Plan area Magpie Creek has been substantially modified.

#### **DON JULIO CREEK**

Don Julio Creek originates east of the project area and flows, in general, from east to west. The segment of Don Julio Creek within the project area is almost entirely undergrounded and does not daylight until it reaches the west side of the former McClellan Base. As discussed above, Don Julio Creek eventually flows into Magpie Creek and into the Magpie Creek Diversion.

This segment of Don Julio Creek is not specifically addressed in the Corridor Plan. This is due to the fact that it is almost entirely undergrounded in the Plan area.

#### **ROBLA CREEK**

The headwaters of Robla Creek (sometimes referred to as Rio Linda Creek) are also located east of the project site within an adjacent residential neighborhood bordering the

Corridor Plan area. As is the case with the above referenced creeks, Robla Creek, generally, flows east to west. West of the project area, the Magpie Creek diversion empties into Robla Creek, which finally flows into Steelhead Creek west of Rio Linda Boulevard.

In the project area, the main channel of Robla Creek and one of its tributaries are open channels that flow through the Elkhorn District. Both channels are vegetated channels.

### **DRY CREEK**

One of the tributaries of Dry Creek flows through the northerly portion of the Elkhorn District. The main branch of Dry Creek is located to the west and northwest of the project area. The main branch of Dry Creek originates in western Placer County and generally flows south-southwest. Dry Creek eventually merges with Steelhead Creek south-southwest of the Elkhorn District. Within the Corridor Plan area, the tributary of Dry Creek is an open channel that is vegetated throughout.

### **TREATMENT OF CREEKS UNDER THE CORRIDOR PLAN**

The Corridor Plan provides specific direction regarding the treatment of creeks within the Plan area in §5.4.3. Specifically, the Corridor Plan states the following:

...creeks should be preserved and restored (Dry and Robla Creeks) or designed as urban greenways (Magpie Creek). All creek corridors should serve as landscaped open space corridors with local and regional trail connections. Trail buffers should include multi-use trails and passive recreation amenities. A minimum 50-foot landscape buffer shall be provided on either side of each creek.

Dry and Robla Creeks should be restored to their natural functions, where feasible, to manage stormwater runoff, improve water quality, and serve as habitat areas for native plant and riparian species. The creeks and their associated landscape buffers should be analyzed and designed to incorporate native tree and plant species suitable to the local environment.

Magpie Creek consists of an open concrete drainage channel with some undergrounded portions. Magpie Creek may be designed as an urban greenway, with tree species selected from Table 5.11, "Recommended Trees for Parks and Open Space."

Additionally, the plan states the following natural resource goal and corresponding Plan policies in §2.5.8 pertaining to creeks and adjacent open space:

**Goal 2.18** Protect open space corridors along existing creeks and drainageways to preserve habitat, promote recreational values, and encourage mobility alternatives.

- Policy 2.8** Opportunities shall be identified during redevelopment of properties to daylight creeks and drainageways that have been undergrounded to promote connectivity of open space corridors.
- Policy 2.9** Low impact development (LID) practices shall be employed to manage stormwater drainage through waterways (creeks, drainageways, swales, and pools) to promote groundwater recharge, maximize water quality, and protect and enhance habitat along waterways.
- Policy 2.10** Creeks and drainageways shall be considered for restoration where appropriate.

Creeks are also addressed within the specific design guidelines for the Districts in which they are located. In general, the Plan calls for buffers along all area plan creek corridors, and the Plan encourages the active recreational use of such creek corridors. In fact, one of the policies of the plan, Policy 5.1.2, states that creek corridors “shall incorporate Class I multi-use trails whenever that use does not conflict with the protection of sensitive habitat”. Additionally, the Plan calls for restoration of the creek corridors and provides guidelines for the creek corridors to serve as habitat areas for native plant and riparian species. Overall, the impact of the Plan policies and goals on creeks within the corridor area appears to be beneficial and should not result in significant impacts if there is strict adherence to plan policies.

Although there is policy within the Corridor Plan to retain, restore, and enhance the creeks and associated tributaries located within the Plan area, there is always the possibility that impacts could occur as a result of a future project, or during installation of required public services infrastructure. Unmitigated, this impact would be considered significant. Thus, as discussed above in the “Wetlands” section, direct impacts to delineated waterways in the plan area would require consultation with the Army Corps of Engineers, as appropriate. The mitigation proposed above for wetlands, would apply in the instance that a future project is to impact a creek, tributary or open channel. With mitigation, impacts are **less than significant**.

### *MITIGATION MEASURES*

#### **MITIGATION MEASURE BR-2: WETLANDS & WATERS OF THE U.S.**

Prior to execution of redevelopment/ development projects within the Corridor Plan area or installation of public service infrastructure, the project proponent(s) shall submit a wetland delineation to the Division of Environmental Review and Assessment for the project impact areas if appropriate habitat exists. The wetland delineation shall be prepared by a qualified biologist.

When a construction level project is proposed in the future, and appropriate habitat exists on the project site, to compensate for the loss of wetlands and Waters of the U.S., one of the following measures shall be implemented:

1. Preserve or create wetlands sufficient to result in no net loss of wetland acreage, and protect their required watersheds as is necessary for the continued function of wetlands on the project site. The project design, configuration, and wetland management plan shall provide reasonable assurances that the wetlands will be protected and their long-term ecological health maintained.
2. Where a Section 404 Permit has been issued by the Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of satisfying Paragraph 1, provided a no net loss of wetlands is achieved.
3. Pay to the County an amount based on a rate of \$35,000 per acre of the unmitigated/uncompensated wetlands, which shall constitute mitigation for purposes of implementing adopted no net loss policies and CEQA required mitigation. The payment shall be collected by the Community Planning and Development Department, Planning Division at the time of Improvement Plan or Building Permit approval, whichever occurs first, and deposited into the Wetlands Restoration Trust Fund.

#### IMPACT: SUBSTANTIAL ADVERSE IMPACT ON RIPARIAN HABITAT

Riparian habitat is simply defined as a distinct community of plants and animals found in and alongside a stream or river. These communities can be up to a mile wide adjacent to large rivers, or a narrow border along the banks of small creeks. The Sacramento County General Plan recognizes that riparian areas are an integral and vital element of the County's natural landscape. These communities provide a rich and diverse habitat that serves as a permanent or seasonal home to a plethora of wildlife species and provide open space and flood control. In 1993, within the Sacramento River Valley, only 25,000 of the estimated 500,000 acres of riparian habitat existing in 1850 remained. Recognizing the need to protect this valuable and dwindling habitat; Sacramento County adopted policies to preserve and protect existing habitat while encouraging the creation and/or restoration of riparian habitat when possible.

As discussed above, there is no riparian habitat located along the reaches of Magpie Creek, which is concrete lined and entirely void of vegetation, within the plan area. The tributary of Dry Creek located in the northern section of the Elkhorn District is a vegetated open-channel; however, the vegetation is not riparian in nature in that it consists of numerous non-native grasses and weeds and does not have the typical riparian signatures. The only creek within the Plan area that maintains riparian habitat signatures is the main branch of Robla Creek, which crosses the Elkhorn District south of Elkhorn Boulevard. Robla Creek, especially near its crossing of Watt Avenue, contains a variety of plants and trees that are riparian in nature. (See Plate BR -3)

Plate BR -3: North Watt Corridor Riparian Habitat



Impacts to the Robla Creek riparian habitat could occur from development/ redevelopment within the area and possibly could occur during development of recreational uses along the creek corridor. As mentioned above, the Corridor Plan has specific goals and policies that specifically are designed to protect creeks and the land immediately adjacent to the creek; however many of the policies are directly related to providing trail systems and general public access along creek corridors. Such development, although intended to preserve the creeks, could have adverse affects on riparian habitat. For example, some riparian habitat may need to be removed to accommodate pedestrian or bicycle trails.

The degree of impacts to riparian habitat that will result from development and redevelopment associated with the Corridor Plan is currently uncertain. As specific parcel redevelopment and development plans are not part of the proposed Plan, impacts associated with development within riparian habitat can not be determined at this time. Impacts are considered potentially significant. Mitigation is included to ensure no net loss of riparian resources within the Corridor consistent with General Plan policies. Environmental impacts of the Corridor associated with riparian resources are **less than significant** with mitigation.

It should be noted that any channel modifications will be subject to permitting through state and/or federal agencies, alternative measures may be required by those agencies that would differ from the riparian habitat mitigation recommended in this EIR, but would adequately mitigate impacts to less than significant. In the event that alternative mitigation is developed through the federal and/or state permitting processes that would result in no net loss of riparian acreage, those measures may be utilized in place of those described in the "Mitigation Measures" section below.

### *MITIGATION MEASURES*

#### **MITIGATION MEASURE BR-3: RIPARIAN HABITAT**

Where riparian habitat exists, the project proponent(s) of redevelopment/ development projects within the Corridor Plan area shall submit a biological assessment performed by a qualified biologist or botanist to the Division of Environmental Review and Assessment delineating the extent of on-site riparian habitat and shall ensure no net loss of habitat consistent with County Policies with the following mitigation:

1. Prior to initiating project construction install chain link fencing or a similar protective barrier at the limits of any on site riparian zone as dictated by the biological assessment in order to protect and preserve the riparian habitat. No earthwork shall be conducted within the protection area and fencing shall remain in place for the duration of all construction work.

Or,

2. Where preservation is found to be infeasible, prior to the issuance of building, grading or other improvement permits, the applicant shall prepare a re-

vegetation plan for any altered riparian habitat, consistent with General Plan Policies, that compensates for riparian habitat removals.

The re-vegetation plan shall be prepared by a qualified biologist or botanist and provide quantifiable success criteria and include at least a one year monitoring and adaptive management program as well as implementation and funding mechanisms. The plan shall be subject to the approval of the Division of Environmental Review and Assessment.

Or,

3. Any mitigation required by the state or federal permitting agencies that compensates for the loss of riparian vegetation, functions and values and that provides for a native re-vegetation plan consistent with or exceeding the requirements of measure 1 above shall be deemed mitigation sufficient to reduce impacts to a less than significant level and may be utilized in place of items 1 and 2 above.

#### IMPACT: SUBSTANTIAL ADVERSE IMPACT ON SPECIAL STATUS SPECIES

Review of USFWS species lists and the California Natural Diversity Database (CNDDDB) indicates that some sensitive habitats, plants, and animals occur within the Rio Linda and Citrus Heights 7.5 minute USGS quadrangles. However, none of those species identified by the USFWS or CNDDDB as species of concern, rare, threatened, or endangered are known to occur within the Corridor Plan area. The primary limitation is suitable habitat, as many of those species and habitats identified as sensitive require environmental conditions that are not widely present at the project site.

Although, there is no known special status species within the project area and no raptor nest were observed during site surveys, there are a number of large trees on the project site which may provide suitable nesting habitat for protected raptor species that may be disturbed by project development and redevelopment.

The Corridor's proposed change to land use designations within the plan area does not in itself introduce a potential for disturbing nest sites. However, as specific parcel redevelopment and development occurs throughout the site in accordance with the Corridor Plan and associated infrastructure is installed, protected raptor nests may be disturbed by project related construction.

Disturbing these species during the nesting season is considered a significant impact. To minimize this impact, preconstruction surveys are recommended to avoid disturbance to nesting sites. Implementation of recommended mitigation will ensure that impacts to nesting raptors are less than significant.

Although no nests were observed during site visits there is a potential for migratory nesting birds to exist on site that, although may not be considered Special Status Species or requiring discussion under CEQA, are afforded protection through the

Migratory Bird Treaty Act (MBTA). The MBTA implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. In order to comply with the Migratory Bird Treaty Act (MBTA), trees with nesting migratory birds should not be removed. Suggested ways to comply with the law would be to survey the tree for nesting birds prior to removal or remove the tree outside of typical nesting season. While removal of a tree or disturbance near a tree could result in a loss of an active nest of a migratory bird, there are no threatened or endangered birds known to nest in the plan area and the inadvertent loss of a nest would not substantially affect the continued viability of any local population of migratory bird. It is up to the property owner to comply with Federal law, and impacts to the MBTA are **less than significant**.

#### *MITIGATION MEASURES*

##### **MITIGATION MEASURE BR-4: RAPTOR NESTING HABITAT**

Where appropriate raptor nesting habitat exists, if construction, grading, or project-related improvements are to occur between March 1 and September 15, a focused survey for raptor nests on the site and on nearby trees shall take place within ½ mile of the project site and shall be conducted by a qualified biologist within 14 days prior to the start of construction work (including clearing and grubbing). If active nests are found, the California Department of Fish and Game (CDFG) shall be contacted to determine appropriate protective measures. If no active nests are found during the focused survey, no further mitigation will be required.



# 12 HAZARDOUS MATERIALS

## INTRODUCTION

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This chapter describes the hazardous materials and waste in the project area resulting from past and ongoing uses of the property, includes a description of applicable federal, state and local regulations and policies that influence hazardous materials and waste, identifies potential impacts to future residents and workers relating to exposure to hazardous materials and waste and recommends mitigation measures to reduce or eliminate significant impacts.

The Sacramento County Community Planning and Development Department, Division of Environmental Review and Assessment conducted an overview analysis of potential hazardous materials impacts for the proposed Corridor in consultation with the County's Environmental Management Department (EMD). The analysis was conducted to evaluate the possibility of hazardous substances impacting soil and/or groundwater below the project area, and to evaluate possible impacts to the project area from potential and known contaminated sites.

The hazardous materials analysis is based on information compiled from the following sources:

- Reconnaissance of the subject property and surrounding vicinity;
- Review of historical aerial photographs of the project area (1947, 1952, 1961, 1971, 1984, 1993, and 1998);
- Review of historical USGS topographic maps of the subject property and surrounding area (1893, 1902, 1951, 1954, 1967, 1975, and ;1992)
- Review of environmental databases provided by EDR, Inc., which is headquartered in Milford, Connecticut, and maintains a field office in San Francisco, California;
- Review of files at the Sacramento County Environmental Management Department, in Sacramento;
- Interviews with EMD personnel; and persons knowledgeable about the site history.

## BACKGROUND

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The term “hazardous substances” refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency.

A “hazardous material” is defined in the Code of Federal Regulations (CFR) as “a substance or material that is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

The definition of a hazardous waste, as regulated by the California Environmental Protection Agency, Department of Toxic Substances Control (CAL-EPA, DTSC), is found in the California Health and Safety Code Section 25141 (b), as follows:

“...as hazardous waste because of its quantity, concentration, or physical, chemical, or infectious characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.”

A hazardous waste is a “solid waste” that exhibits hazardous characteristics. The Federal Environmental Protection Agency (EPA) has defined the term “solid waste” to include the following: any gaseous, liquid, semi-liquid, or solid material that is discarded or has served its intended purpose, unless the material is excluded from regulation. Such materials are considered wastes whether they are discarded, reused, recycled, or reclaimed. The EPA classifies a waste as hazardous if it (1) is listed on the EPA’s list of hazardous waste and/or (2) exhibits one or more of the following properties: ignitability (including oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (including strong acids and bases), reactivity (including materials that are explosive or generate toxic fumes when exposed to air or water), or toxicity (including materials listed by the EPA as capable of inducing systemic damage in humans or animals).

## HAZARDOUS MATERIALS ENVIRONMENTAL SETTING

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The North Watt Avenue Corridor area is situated along Watt Avenue between Interstate 80 to the south and Antelope Road to the north. This area has been developed for a number of years and contains primarily commercial uses with some residential and industrial uses. Many of the commercial and industrial properties have the potential to contain hazardous wastes and many of the existing uses have the potential to house hazardous materials. Specifically, fuel stations and auto repair service facilities, both of which are located within the project area, have the potential to house hazardous materials on site as well as utilize hazardous materials during common business practices.

In addition to the above possible sources of hazardous materials, the project area is immediately adjacent to the former McClellan Air Force Base, which housed numerous hazardous materials. Historically, hazardous materials were not only stored on site but were also actively disposed of in toxic dump sites located on the Base. Consequently, the former Air Force Base is highly contaminated with dangerous hazardous materials and is a Federal Superfund site on the National Priority List (NPL). Contamination on the former Base occurs in surface and subsurface soils and has migrated to the groundwater. Remediation is occurring on site through a variety of methods.

Due to the past hazardous materials contamination on the project site and directly adjacent to the project site, several properties within the plan area contain groundwater monitoring wells. These wells are located in areas that may be redeveloped under the Corridor Plan and care should be taken not to damage these wells during construction activities.

### *ASBESTOS*

Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1986. Asbestos poses a health risk only when it becomes friable, such as through disturbance or damage. Once airborne, asbestos fibers may be inhaled into the lungs where they can cause serious health problems (US EPA, 2008). All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos is commonly used as an acoustic insulator and in thermal insulation (fire proofing and other building materials).

US EPA issued a final rule banning most asbestos-containing products in July 1989; however, this regulation was overturned in 1991, by the Fifth Circuit Court of Appeals in New Orleans. The Courts ruled that the US EPA ban shall remain for specific asbestos-containing products. These banned products are flooring felt; rollboard; and corrugated, commercial, or specialty paper. The regulation continues to ban the use of asbestos in products that have not historically contained asbestos, otherwise referred to as "new uses" of asbestos.

*LEAD*

Lead is commonly found in paint, dust and soil. In 1978 the Federal government banned the use of lead-based paint in housing. Many homes built before 1978 have lead-based paint. If the paint is in good condition it is usually not a hazard. However, if lead-based paint is dry scrapped, dry sanded, or heated, lead dust can form. This lead dust can get on surfaces and objects that people touch and settled lead dust can re-enter the air when people vacuum, sweep, or walk through it. Also lead can settle in soil from flaking or chipped exterior lead-based paint. This can be tracked into a house by children playing in bare soil, causing a possible hazard. Lead poisoning, especially in children, can cause damage to the brain and nervous system, behavior and learning problems, hearing problems and headaches. Adults are also susceptible and can have difficulties during pregnancy, high blood pressure, nerve disorders, muscle and joint pain, and memory and concentration problems, to name a few (US EPA, 2007).

## REGULATORY SETTING

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### FEDERAL REGULATIONS

Many agencies regulate hazardous substances. At the federal level, the principal agency regulating the generation, transport and disposal of hazardous waste is the EPA, under the authority of the Resource Conservation and Recovery Act (RCRA). The EPA regulates hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

- Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA) of 1976 (substantially amended in 1984), administered by the U. S. Environmental Protection Agency, is the principal federal legislation regulating hazardous waste. The RCRA imposes reporting, permitting, and operational control requirements on businesses or individuals that generate, treat, store, or dispose of hazardous materials or hazardous waste. The RCRA is implemented by Title 40 of the Code of Federal Regulations. The 1984 amendments to the RCRA involve stringent monitoring of landfills and underground storage tanks for hazardous materials and hazardous wastes.
- Comprehensive Environmental Response, Compensation and Liability Act. In response to the need to clean up hazardous waste sites created before implementation of the RCRA, Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1980. CERCLA is commonly referred to as "Superfund". Subsequently, abandoned hazardous waste sites have to be inspected and cleaned up, and the waste has to be disposed of properly.
- Superfund Amendments and Reauthorization Act. The risk of exposure to hazardous waste as a result of RCRA and CERCLA was addressed in the

Superfund Amendments and Reauthorization Act (SARA) of 1986. As a result of SARA, the federal Occupational Safety and Health Administration (OSHA) published hazardous waste cleanup regulations in 29 CFR 1910.120.

## STATE REGULATIONS

California regulations governing hazardous materials are as stringent as (and in some cases, more stringent than) federal regulations. The state has been granted primacy (primary responsibility for oversight) by the EPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health risks. California regulations pertaining to hazardous waste management are published in the California Code of Regulations (CCR), previously called the California Administrative Code. The CCR is updated yearly and incorporates all legislation and final regulations enacted during the year, as well as specifying the agencies responsible for enforcing the various regulations.

- Department of Toxic Substances Control. 22 CCR gives the California Department of Toxic Substances Control (DTSC) responsibility for regulating hazardous waste management at the state level. The DTSC regulates the treatment, storage, and disposal of hazardous waste in accordance with 22 CCR and the RCRA. The DTSC administers the state and federal Superfunds for cleanup of major hazardous waste contamination sites.
- Regional Water Quality Control Board. 23 CCR charges the nine RWQCBs with responsibility for overseeing water quality control. The RWQCBs are responsible for protecting actual or potential beneficial uses of water, including municipal, industrial, and agricultural water supplies and recreation. Each RWQCB has authority to supervise hazardous waste cleanup at sites referred by local agencies and in cases where water quality is affected or threatened. Either the DTSC or the RWQCB may be responsible for cleanup of sites of significant contamination by hazardous wastes. The two agencies often work together to ensure that their requirements are consistent and are implemented as intended.
- California Occupational Safety and Health Administration. Health and safety regulations applying to the investigation and cleanup of sites contaminated with hazardous waste are enforced by Cal-OSHA under 8 CCR and the adopted federal regulations (29CFR 1910).

## LOCAL REGULATIONS

### *ENVIRONMENTAL MANAGEMENT DEPARTMENT*

Sacramento County is responsible for enforcing the state regulations, both in the City of Sacramento and the County, governing hazardous waste generators, hazardous waste storage, and underground storage tanks (including inspections, enforcement and

removals). The Sacramento County Environmental Management Department (EMD) regulates the use, storage and disposal of hazardous materials in Sacramento County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities. The EMD oversees remediation of certain contaminated sites resulting from leaking underground storage tanks.

#### *SACRAMENTO COUNTY GENERAL PLAN*

The Sacramento County General Plan Hazardous Materials Element provides a hazardous materials policy plan to manage hazardous materials and minimize their effects on humans and the environment. The General Plan policies include measures to educate and inform the public about hazardous waste management, implement public health and safety programs, and coordinate with other agencies to enforce hazardous materials regulations. The General Plan also provides details on emergency response plans for responding to hazardous material spills and other emergency actions.

The Sacramento County General Plan policies that are pertinent to Hazardous Materials are policies HM-1 through HM-15. These policies are intended to support the stated objectives of the Hazardous Materials Element of the General Plan. As presented in the element the objectives are as follows:

- County- wide public awareness of all available hazardous material informational and disposal programs;
- Protect the residents of Sacramento County from the effects of a hazardous material incident via the implementation of various public health and safety programs;
- Coordinated efforts by the applicable regulatory agencies, thereby facilitating effective long-term hazardous materials management;
- Enforce all federal, state, and local regulations and if necessary prosecute those cases involving the mismanagement of hazardous materials; and
- The availability of reliable and solvent funding sources to augment hazardous materials management

The policies in the Hazardous Materials Element that support the above objectives and are relevant to the project are as follows:

HM-4. The handling, storage, and transport of hazardous materials shall be conducted in a manner so as not to compromise public health and safety standards.

HM-8. Continue the effort to prevent groundwater and soil contamination.

HM-9. Continue the effort to prevent surface water contamination.

HM-10. Reduce the occurrences of hazardous material accidents and the subsequent need for incident response by developing and implementing effective prevention strategies.

## METHODOLOGY

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As part of the hazardous materials analysis, DERA utilized the environmental database record search services of Environmental Data Resources, Inc. (EDR). EDR maintains, among other things, a database of records and documentation of underground storage tanks, contaminated sites, remediated sites, hazardous waste generators, and permitted hazardous materials and hazardous waste storage facilities.

EDR performed a database search for facilities located within various search radii depending on the type of database, the search radii being in accordance with the *American Society of Testing and Materials (ASTM) Standard E 1527-05 for Environmental Assessments*. Some of the more important databases searched by EDR included the following:

- *Leaking Underground Storage Tanks (LUSTs) and Permitted Underground Storage Tanks - California State*. State Water Resources Control Board.
- *National Priorities List (NPL) and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)*, commonly known as the “Superfund” databases. U.S. Environmental Protection Agency.
- *Spills, Leaks, Investigations and Cleanups (SLICs.)* list. California Regional Water Quality Control Board, Central Valley Region.
- *Envirostor Database*, comprised of various former databases including but not limited to *Active Annual Work Plan (AWP)* sites, *Site Mitigation and Brownfields Reuse Database (a.k.a. “CalSites”)*, *Voluntary Cleanup Program (VCP)* and *Schools* sites. California Department of Toxic Substances Control.
- *Hazardous Waste and Substances Sites (“CORTESE”)* list. California Office of Planning and Research/Office of Environmental Health Hazard Assessment (updated using LUST list above).
- *Solid Waste Information System (SWIS)* databases. California Integrated Waste Management Board.
- *Resource Conservation and Recovery Act (RCRA) Information System – Generators and Emergency Response Notification System (ERNS)* databases, U.S. EPA.

- *Master List of Facilities.* Sacramento County Environmental Management Department.
- *Toxisite List.* Sacramento County Environmental Management Department.

## SIGNIFICANCE CRITERIA

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Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Relative to hazards and hazardous materials, a project will normally have a significant effect on the environment if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Specific conditions include:
  - Located within 1,000 feet of a known contamination site
  - Located within 2,000 feet of a known “border zone property” (i.e., “Superfund” site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes
  - Involve excavation at a Department of Toxic Substances Control closed site that could disturb contaminated soils
  - Located on or near an active or former landfill
  - Be located on properties historically developed with industrial or commercial uses that involve dewatering in association with major excavation in an area of high groundwater
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or



- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

## IMPACTS AND ANALYSIS

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### IMPACT: CONTAMINATED PARCELS WITHIN THE PLAN AREA

The hazardous materials analysis identified several sites that are known to be contaminated or are likely to be contaminated. Sources of contamination found within and directly adjacent to the Corridor Plan are from a wide variety of contaminants and, correspondingly, the manner in which dispersal of hazardous materials has occurred also varies widely.

According to the above referenced databases, the Corridor has 27 recorded toxic sites that were contaminated due to leaking underground storage tanks (LUSTs). USTs could contain diesel, gasoline or other hazardous materials. The Corridor also has sites that contain or formerly contained dry cleaning facilities, which can result in contamination from chemicals utilized in the dry cleaning process and released in vapor or liquid forms. Other sites could be contaminated due to illegal drug labs, above ground storage tanks (ASTs), and accidental releases or spills related to certain land use types, such as auto dismantling or manufacturing activities. Additionally, most of the project area borders the former McClellan Air Force Base, which is contaminated by several different hazardous materials and involves different mediums, including but not limited to the top and middle soil horizons and groundwater within and adjacent to the former Base. Ultimately, contamination within and adjacent to the project area can result in direct and indirect impacts within the Corridor area.

Each of these different types of contaminated sites, as they relate to the Corridor Plan specifically, are discussed below.

#### **LEAKING UNDERGROUND STORAGE TANK (LUST)**

The Corridor Plan contains 27 recorded toxic sites that have been contaminated due to LUSTs. Table HM-1 lists the properties noted in the Corridor's Phase I report that either are known to be contaminated or have been contaminated in the past due to a LUST. As shown in Table HM-1, there are 5 LUST sites that are in active remediation (shaded) and 22 LUST sites that have been officially closed in the Corridor. Table HM-1 also shows the distribution of contaminated sites within each of the Corridor's land use districts. Overall, there is almost equal numbers of LUST contaminated parcels (past or present) within each of the Corridor Plan districts.

The parcels of concern, listed in Table HM-1, are located in areas proposed to be designated as Commercial Mixed-Use, Residential-Mixed-Use and Transient Oriented Development and, with approval of the proposed project, will be allowed to develop with

various commercial, retail and residential uses. The proposed land use designations may expose development that is incompatible with certain types of contamination, specifically residential uses on sites that currently house service stations and/or have contaminated soils or groundwater.

In prior communication with EMD staff they have stressed that a “closed” toxic site may still have contamination remaining; however, it was deemed as not a risk to human health or the environment at the time of closure or for the particular land use currently occupying the site. Although some of the sites listed in Table HM-1 have been officially closed, EMD staff has cautioned that site closures are based on a set criteria and a knowledge base in effect at the time of closure, which may be considered outdated in comparison to standards in effect at the time a property is developed in the future. Additionally, many times if a land use changes on a formerly contaminated site, further review should occur to ensure there is no risk to the new use. This is particularly important when former commercial or industrial uses, that were also contaminated, are proposed for sensitive land uses such as residential or certain institutional uses, such as schools or senior care facilities. Thus, EMD staff has recommended that all prior known toxic sites, which have been “closed”, should be re-evaluated prior to any development related activities. Additional analysis could range from a Phase II Site Assessment to soil sampling or file review.

**Table HM-1: List of Toxic Sites Resulting from LUST Contamination**

<b>Elkhorn District</b>					
<b>Site Number</b>	<b>Business Name</b>	<b>Address</b>	<b>Contaminant</b>	<b>Contaminated Media</b>	<b>Clean Up Status</b>
1	Kennedys Service (aka Beacon #3783)	7550 Watt Avenue	Gasoline	Aquifer used for drinking water	Completed- Case closed as of 12/21/2009
2	National Rentals	7415 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 3/19/1996
3	7-Eleven	3601 Elkhorn Boulevard	Gasoline	Soil	Completed- Case closed as of 3/14/2008
4	Chevron	6801 Watt Avenue	Gasoline	Aquifer used for drinking water	Completed- Case closed as of 12/6/2005
5	Goodyear Tire (aka Holland & Sons Tire & Auto)	3535 Elkhorn Boulevard	Waste Oil/Motor/ Hydraulic/ Lubricating	Under Investigation	Completed- Case closed as of 12/2/1994
6	Former Texaco	6749 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 8/28/1990
7	Jiffy Lube	6709 Watt Avenue	Waste Oil/Motor/ Hydraulic/ Lubricating	Soil	Completed- Case closed as of 1/1/1996
8	Darpetro (former)	6421 Watt Avenue	Gasoline	Soil	Completed- Case closed 5/20/1997

Town Center District					
Site Number	Business Name	Address	Contaminant	Contaminated Media	Clean Up Status
9	Digol's Gas	6323 Watt Avenue	Gasoline	Aquifer used for drinking water supply	Open- remediation as of 4/19/2004
10	Fast Gas	6101 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 6/10/2002
11	Fatta Property	5949 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 2/20/1998
12	Unocal	5750 Watt Avenue	Gasoline	Aquifer used for drinking water supply	Open- Verification monitoring as of 4/21/2003
13	North Highlands Shell	5701 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 3/19/1996
14	Vacant Property	5645 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 3/19/1996
15	Cheaper #134	3519 A Street	Gasoline	Soil	Completed- Case closed as of 3/19/1996
16	Standard Oil	5544 Watt Avenue	Other solvent or non-petroleum hydrocarbon	Under Investigation	Completed- Case closed as of 10/16/2000

<b>Triangle Gateway District</b>					
<b>Site Number</b>	<b>Business Name</b>	<b>Address</b>	<b>Contaminant</b>	<b>Contaminated Media</b>	<b>Clean Up Status</b>
17	Watt Avenue Pump Station	Watt Avenue & Roseville Road	Diesel	Soil	Completed- Case closed as of 11/18/1986
18	Ross Pacini Property	4900 Watt Avenue	Gasoline	Aquifer used for drinking water supply	Open- Remediation as of 2/1/2004
19	Arco	4745 Watt Avenue	Gasoline	Aquifer used for drinking water supply	Open- Remediation as of 10/30/2003
20	Arco	4745 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 3/9/1994
21	Former Hudson	4800 Watt Avenue	Gasoline	Soil	Completed- Case closed as of 4/25/1989
22	Unocal	4631 Watt Avenue	Diesel	Soil	Completed- Case closed as of 4/22/1999
23	North Area Transfer Station	4450 Roseville Road	Diesel, Gasoline	Soil	Completed- Case closed as of 2/20/1996
24	North Area Transfer Station	4450 Roseville Road	Diesel, Gasoline	Soil	Completed- Case closed as of 5/8/2007
25	Hunt & Sons, Inc.	4200 Roseville Road	Other solvent or non-petroleum hydrocarbon	Soil	Open- Site assessment as of 2/23/1994

<b>Site Number</b>	<b>Business Name</b>	<b>Address</b>	<b>Contaminant</b>	<b>Contaminated Media</b>	<b>Clean Up Status</b>
26	Western Home Services	3270 Orange Grove Avenue	Not listed	Not listed	Completed- Case closed
27	TRANS	3050 Orange Grove Avenue	Not listed	Not listed	Completed- case closed

The currently “open” sites listed in Table HM-1 are considered to be contaminated and further development cannot occur until remediation is completed and the site is officially “closed”. Existing regulations preclude development of any known hazardous materials site until the hazardous condition has been abated to the point that the proposed use will neither aggravate the hazard condition nor be adversely affected by the hazard condition. As with the “closed” sites discussed above, the open sites will be subject to additional analysis, above and beyond remediation, by EMD prior to development. Additional site assessment and any required remediating activities on existing contaminated sites are the responsibility of the current property owners not the County.

Project proponents of any development/redevelopment proposed on the parcels noted in Table HM-1 will need to contact the Sacramento County Environmental Management Department to determine if parcels within a proposed project site are still considered to be contaminated and what measures need to be taken prior to site redevelopment. Because the plan area contains known contaminated sites, environmental impacts associated with ground disturbances are potentially significant. Implementation of the mitigation measures noted below will reduce this impact to **less than significant**.

EMD has stated that parties desiring to buy, sell or finance parcels located within the subject Corridor should not rely on the information contained in this EIR chapter as their sole source for hazardous materials-related environmental due diligence because of the often changing nature of site status. For example, sites currently not known as contaminated sites can become contaminated in the future.

### **DRY CLEANERS**

The Phase I report identified four current or former dry cleaning facilities within the plan area. Dry cleaning facilities are routinely monitored by the Sacramento Metropolitan Air Quality Management District (SMAQMD) and EMD to ensure exposure to the hazardous material, perchloroethylene (perc), which is utilized at some modern dry cleaning facilities and all former dry cleaning facilities, is maintained at safe levels. It should be noted, that while the use of perc is currently being phased out and regulations strictly regulate its use, improper use of perc prior to stricter regulations has led to contamination more often than not. Thus, EMD recommends that sites which currently or formerly contained dry cleaning facilities, in which perc was or was likely utilized, be reviewed by EMD prior to redevelopment to ensure appropriate remediation efforts occur if contamination is present in order to proceed with development in a safe manner.

Sites listed in the Phase I report that are current or former dry cleaning facilities, that will require further EMD review prior to redevelopment are listed in Table HM-2.

**Table HM-2: Former or Current Dry Cleaning Facilities within Corridor Plan**

Dry Cleaning Facility	Address
Curly's Cleaners	6013 Watt Avenue
Park Place Cleaners (formerly Highland Cleaners)	7471 Watt Avenue
George's Cleaners	5911 Watt Avenue
Elkhorn Cleaners	6705 Watt Avenue

Mitigation is included below which would require review of these properties prior to redevelopment. With mitigation, impacts are considered **less than significant**.

### **CLANDESTINE DRUG LABS**

According to the U.S. Department of Justice, Office of Community Oriented Policing Services, Problem-Oriented Guides for Police Series No. 16 entitled "Clandestine Drug Labs":

Each pound of manufactured methamphetamine produces about 5 to 6 pounds of hazardous waste. Clandestine drug lab operators commonly dump this waste into the ground, sewers, or streams and rivers. The water used to put out lab fires can also wash toxic chemicals into sewers. More research is needed to understand this toxic dumping's long-term environmental effects. Residual contamination of the ground, water supplies, buildings, and furniture may last for years.

As part of the Phase I report, a search of the Clandestine Drug Lab (CDL) list (maintained by the Department of Toxic Substances Control) was conducted. The list includes locations where illegal drug labs have been reported as well as locations where abandoned drug lab waste has been encountered. Many of the sites listed in the CDL do not require additional remediation because they consisted solely of abandoned drug lab waste, which has been removed; thus, there is nothing left to remediate.

The search uncovered 5 CDL sites within the Corridor Plan area and 26 in the project vicinity. Four of the sites within the Corridor consisted of locations where abandoned drug lab waste was uncovered and one location was the site of an illegal drug lab. The illegal drug lab occurred at a self-storage facility within the plan area and no further remediation is required. None of the CDL sites (listed in June 2009) require additional remediation or future site assessments, thus no mitigation is required. If future development/redevelopment in the plan area uncovers hazardous conditions associated with a CDL, the Sacramento County Environmental Management



Department is the authority to determine the appropriate remediation efforts that should occur in order to proceed with development in a safe manner.

### **McCLELLAN AIR FORCE BASE (FORMER)**

The former McClellan Air Force Base borders the Corridor Plan area north of the Triangle Gateway District and west of the Town Center District and is within the general vicinity of the entire Corridor Plan. As discussed above, the former base is a highly contaminated Superfund site on the National Priorities List. The following background information, including a site description, general information on contaminants present, affected media and potential risks, is from the U.S. Environmental Protection Agency's website on Superfund sites, specifically related to the McClellan site (EPA website 2010):

The 3,452-acre McClellan Air Force Base (AFB) site was established in 1936 and operated as an Air Force Logistics Command Base with a primary mission of management, maintenance, and repair of aircraft, electronics, and communication equipment. The operation and maintenance of aircraft have involved the use, storage, and disposal of hazardous materials including industrial solvents, caustic cleansers, paints, metal plating wastes, low-level radioactive wastes, and a variety of fuel oils and lubricants. The Air Force has identified 326 waste areas of known and suspected contamination.

Contaminated media includes: groundwater, surface water, soil and sludges.

The primary contaminants in groundwater are volatile organic compounds (VOCs). Contaminants detected in soil include PCBs, heavy metals, and several non-VOCs. Radionuclides have also been identified in surface soil and in former disposal pits. People may face a health risk if they accidentally ingest or come into direct contact with contaminants. People also may be at risk if they eat foods containing accumulated contaminants or if they inhale contaminated dust or soil vapors. Risks to wildlife and their habitat may occur on and adjacent to the former Base in some areas of the creeks, vernal pools, and other parts of the flood plain.

The Base was proposed for listing on the National Priorities List on October 15, 1984 and its listing became final on July 22, 1987. The National Priorities List (NPL) is the list of the most hazardous sites across the U.S. and its territories. The names of some of the contaminants found on site include: trichloroethane, acetone, arsenic, chloroform, ethylbenzene, mercury, lead, and selenium. The United States Air Force along with a variety of other organizations and parties are engaged in active remediation of the contamination. Given the wide variety of contaminants and associated affected media, this process is highly complicated and lengthy but work is being conducted with the intent of "cleaning-up" and redeveloping the former base.

The proposed Corridor Plan does not include areas that are part of the McClellan Superfund site; however, it does occur immediately adjacent to a significant portion of

the Corridor Plan. Additionally, the Corridor contains creeks that flow through the former base and some of the associated floodplain is congruent with the McClellan site. It should be noted that the creeks that occur within the plan area flow in an east-to-west direction, thus contamination from the former base in the area creeks should not occur in the plan area because it is upstream from the base. When consulted, EMD staff did not think there was risk of contamination “spilling” into the project area from flood waters, even in an extreme flood event, due to the Corridor being upstream of contamination and due to the nature (i.e. solubility) of the contaminants on McClellan.

Most of the area immediately adjacent to the former base is already developed and under existing conditions a certain amount of redevelopment and possible intensification could occur with existing zoning. Nonetheless, the proposed Corridor Plan undoubtedly calls for a more intensified Corridor with a greater range of possible land uses. For example, most of the area bordering the former base is currently zoned for commercial or industrial uses; however, under the Corridor Plan these same properties would be zoned for Commercial Mixed-Use or Transit Oriented Development, where highly dense residential projects would be allowable. Thus, while the Plan does not propose any specific development or redevelopment, it would allow the area to be developed with a variety of urban uses, some of which may be considered more sensitive to contamination that has occurred at McClellan as compared to existing uses.

As noted above in the “Significance Criteria” section, one of the criteria of significance states that a project could have a significant impact related to hazardous materials if it would:

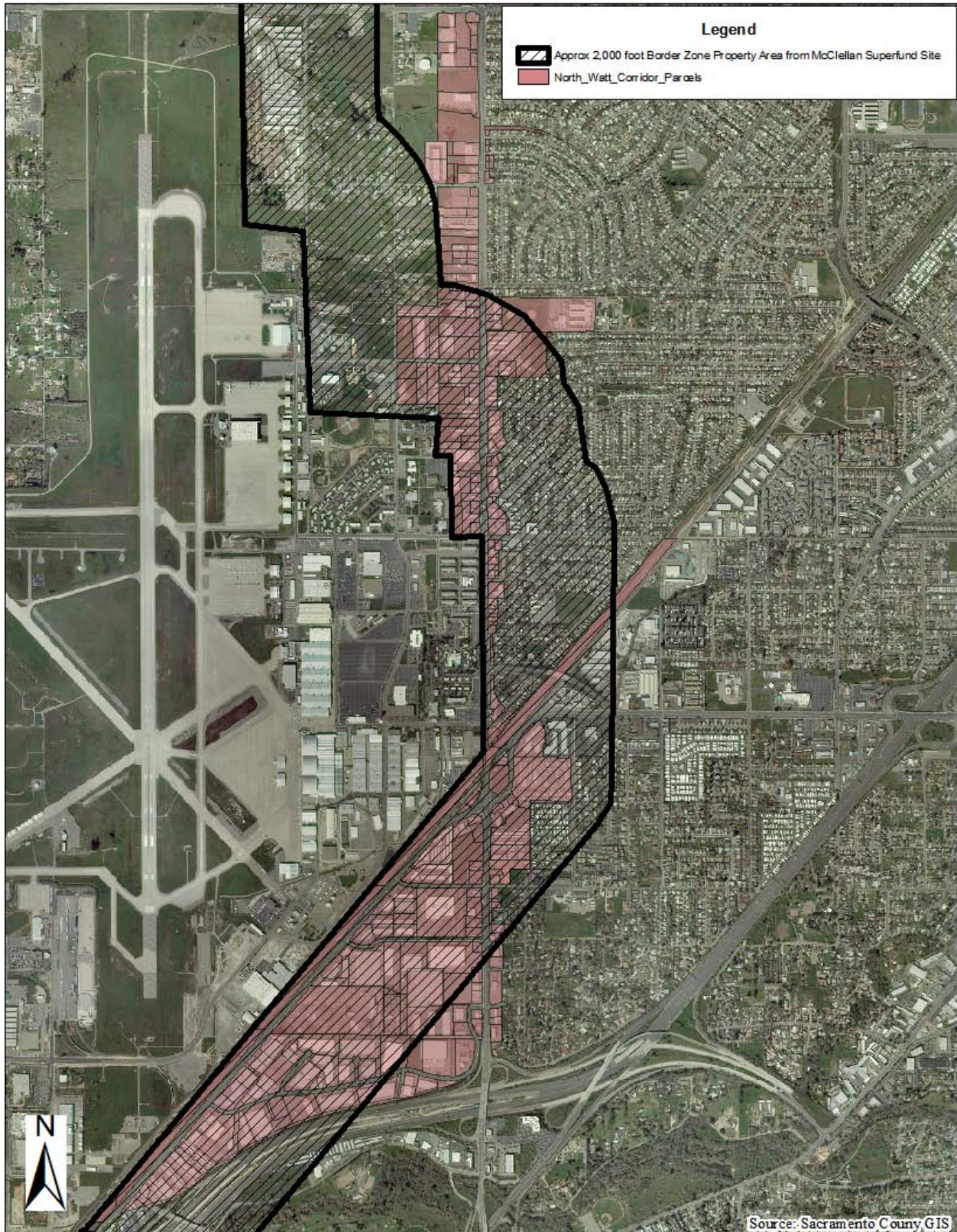
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The Significance Criteria goes on to qualify that a project could create a significant hazard to the public or environment if it is:

Located within 2,000 feet of a known “border zone property” (i.e., “Superfund” site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes.

Based on the above criterion, siting new uses, especially sensitive land uses such as residential uses, within 2,000 feet of the former base could result in potentially significant environmental impacts related to hazardous materials. However, potential impacts would only occur if a property within 2,000 feet of the Superfund site was determined to be a true “Border Zone Property” (BZP) (determination is made by the State of California Department of Toxic Substance Control (DTSC)) and the associated land use covenants were not followed (See Plate HM-1 for approximate location of the 2,000 foot BZP area within the Corridor Plan area). Health and Safety Code requires developers of properties within 2,000 feet of a Superfund site to send a “request for determination” to the DTSC. The DTSC is then required to determine if there is

Plate HM-1: Location of 2,000 Foot Border Zone Property Area



sufficient evidence that the neighboring Superfund site would impact the property through exposure, directly or indirectly, such that a land use covenant imposing appropriate land use limitations is required.

Based on the nature of the contamination at McClellan and the fact that the Corridor Plan occurs upstream from the Superfund site, EMD staff believes that although property owners would have to formally submit a “request for determination”, it is unlikely that properties on the east side of McClellan would be formally designated as a BZP. For example, the properties located on the east side of McClellan are not impacted by the groundwater contamination from the Superfund site as they are served with public water, whereas, some properties on the west side of McClellan are served with water from private wells within the contaminated plume. Thus, it is more likely and appropriate for a property on the west side of McClellan to be formally designated as a BZP so appropriate land use restrictions could be put in place.

Ultimately, State Health and Safety Code requires property owners within 2,000 feet to request a determination, and based on the DTSC determinations appropriate land use restrictions will be put into place. Environmental impacts resulting from being located within 2,000 feet of McClellan Superfund site are **less than significant** with the adherence to existing regulations and laws.

#### *MITIGATION MEASURES:*

##### **MITIGATION MEASURE HM-1:**

Prior to the issuance of any building or grading permits on the properties listed in **Table HM-1** or **Table HM-2** the project applicant shall consult with the Sacramento County Environmental Management Department (EMD), to obtain a site evaluation and to determine the need for a Phase II Environmental Site Assessment, Soil Management Plan or a Health Risk Assessment. If said analyses are required, all site clean-up recommendations, in consultation with EMD, shall be completed prior to the issuance of any building or grading permit, unless EMD approves clearance due to extenuating circumstances.

#### IMPACT: ASBESTOS EXPOSURE THROUGH RENOVATION OR DEMOLITION OF EXISTING STRUCTURES THAT CONTAIN ASBESTOS

The renovation or demolition of existing structures constructed prior to 1989 can pose an exposure risk to workers from asbestos-containing material if the material is chipped away or sanded, becoming friable and then is inhaled. When an individual applies for a demolition or renovation permit through the County Building Department, the applicant will be required to get a permit from the Sacramento Metropolitan Air Quality Management District. As part of the permit process, the applicant will need to show compliance with Federal regulations and Air District Rule 902, which require a survey for asbestos prior to demolition. Any asbestos found would require abatement. Given

that there is already a process requiring the applicant to survey for and abate any asbestos, impacts related to asbestos exposure are **less than significant**.

*MITIGATION MEASURES:*

None recommended.

IMPACT: LEAD EXPOSURE THROUGH RENOVATION OR DEMOLITION OF EXISTING STRUCTURES THAT CONTAIN LEAD-BASED PAINT

The renovation or demolition of existing structures constructed prior to 1978 can pose an exposure risk of workers to lead-based paint if the paint were chipped away and then accidentally ingested, or if the paint became an airborne dust and was inhaled. Also, lead can deposit on exposed soil, which can then be tracked into the home, ingested by children and adults. Exposure to and containment of lead is regulated by Cal EPA's DTSC and the California Code of Regulations Title 8 and Title 22. As stipulated by the law, workers are required to be informed about the potential exposure to lead and that employers must have a Lead Compliance Plan in place that provides a protocol for worker safety, transport and disposal of the hazardous material. Environmental impacts resulting from lead exposure are less than significant with the adherence to existing regulations and laws.

*MITIGATION MEASURES:*

None recommended.

## 13 CULTURAL RESOURCES

### INTRODUCTION

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Under CEQA, lead agencies must consider the effects of their projects on cultural resources. This chapter describes the potential impacts to cultural resources that could occur as a result of implementation of the proposed North Watt Corridor project. Cultural resources may include historic buildings and structures, historic districts, historic sites, culturally sacred sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts.

The project site contains buildings that are 50 years or older, and the Corridor contains several creeks, which were an important resource during both prehistoric and historic time periods. These factors indicate sensitivity for known and unknown cultural resources within the North Watt Corridor.

Overall, cultural resources that are known to exist and those that may be present in the North Watt Corridor could include the categories described in Table CR-1, identified pursuant to *California Code of Regulations, Title 14, Section 4852*.

**Table CR-1  
Categories of Cultural Resources**

<u>Category</u>	<u>Description</u>	<u>Example</u>
<b>Building</b>	Structures created principally to shelter or assist in carrying out any form of human activity. May also refer to a historically and functionally related unit (e.g., courthouse and jail).	Houses, barns, churches, factories, and hotels
<b>Site</b>	A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historical, cultural, or archeological value regardless of the value of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric event, and if no buildings, structures, or objects marked it at that time.	Trails, designed landscapes, battlefields, habitation sites, Native American ceremonial areas, petroglyphs, and pictographs
<b>Structure</b>	The term "structure" is used to describe a construction made for a functional purpose rather than creating human shelter.	Mines, bridges, and tunnels
<b>Object</b>	The term "object" is used to describe those constructions that are primarily artistic in nature or	Fountains, monuments, maritime resources, sculptures, and

	are relatively small in scale and simply constructed, as opposed to a building or a structure. Although it may be moveable by nature or design, an object is associated with a specific setting or environment. Objects should be in a setting appropriate to their significant historic use, role, or character. Objects that are relocated to a museum are not eligible for listing in the California Register.	boundary markers
<b>Historic District</b>	Unified geographic entities which contain a concentration of historic buildings, structures, objects, or sites united historically, culturally, or architecturally. Historic districts are defined by precise geographic boundaries. Therefore, districts with unusual boundaries require a description of what lies immediately outside the area, in order to define the edge of the district and to explain the exclusion of adjoining areas.	---

The following analysis provides an overview of known cultural resources within the Corridor area and identifies any potential adverse impacts to them associated with the project. Potential unknown resources are also addressed. The analysis also recommends mitigation measures to reduce impacts to cultural resources within the Corridor.

The Community Planning and Development Department, Division of Environmental Review and Assessment retained PAR Environmental Services, Inc (PAR), to conduct a cultural resources inventory for the North Watt Corridor Plan area (*Cultural Resources Study of the North Watt Corridor Planning Area, North Highlands, Sacramento County, California, March 2010*). The following chapter is based on and contains portions of the inventory study.

## CULTURAL RESOURCES SETTING

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### PREHISTORIC ARCHAEOLOGY

One of the earliest clearly dated contexts for human occupation in north central California is from site CA-SHA-475 located north of Redding on Squaw Creek, where a charcoal based C-14 date suggests initial Native American presence within this area around 6,500 years ago. Continuous use of the region is indicated on the basis of evidence from this and other regional sites, particularly within the Farmington area and along the Truckee River drainage east of Sacramento within the Sierra Nevada. Most of the artifactual material dating to this early time period suggests cultural affiliation with the Borax Lake area—the presence of large wide-stemmed projectile points and manos and metates being the most prominent and distinctive artifact types represented. The possibility exists that this early culture represents Hokan-speaking peoples who were

also ancestral to those who subsequently expanded into the southern Cascade, the southern Klamath, the North Coast Range, and the lower reaches of the Sierra Nevada near Folsom and Sacramento.

Sometime around AD 200-400, the first major disruption of this early California culture is believed to have occurred. Arriving ultimately from Southern Oregon and the Columbia and Modoc Plateau region and proceeding down the major drainage systems (including the Feather, Yuba and American Rivers), Penutian-speaking peoples began arriving in the area and soon occupied much of the Sacramento Valley floor and the margins of the Sacramento River. Presumably introduced by these later arrivals were more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and corner-notched projectile points. In the northernmost Sacramento Valley, the so-called Shasta (archaeological) Complex represents the material culture record of the local Penutian speakers. Generally similar archaeological expressions also define the Penutian-speaking occupants of the northern Sierra Nevada around Grass Valley and Nevada City, and the Nisenan ancestors who occupied the area in the foothills above and valley margins around, Sacramento, Folsom, Orangevale and Citrus Heights.

## ETHNOLOGY

Ethnography is the written record of a culture. Archaeology can be combined with ethnography to identify groups more specifically. Ethnographic records (from missions and other documents) show that the groups that inhabited Sacramento County are the Nisenan, or Southern Maidu, and the Plains Miwok, a subgroup of the Eastern Miwok. The Plains Miwok traditional territory included the lower reaches of the Cosumnes and Mokelumne Rivers and extended west to the Sacramento River from Rio Vista north to Freeport (Levy 1978). Ethnographers generally agree that Nisenan territory included the drainages of the Bear, American, Yuba, and southern Feather Rivers and extended from the Sacramento River east to the crest of the Sierra Nevada (Beals 1933, Faye 1923, Gifford 1927, Kroeber 1925, Powers 1976, Wilson and Towne 1978). Thus, the proposed project is located within the territory commonly attributed to the ethnographic Nisenan.

### *NISENAN*

The Nisenan built their villages on low, natural rises along streams and rivers or on gentle slopes with a southern exposure, usually in places protected from flooding. Village populations ranged from 15 to 500 people, with one village usually playing a dominant role in the sociopolitical organization of a particular area. The ethnographic village of Pusune or Pushuni (CA-SAC-26), located at the confluence of the American and Sacramento Rivers, served as the head village for the area (Wilson and Towne 1978).



Nisenan settlements varied from three to as many as 50 houses. Structures were dome-shaped; 10-15 feet in diameter; and covered with earth, tule mats, or grass. A variety of other structures, including sweat houses, dance houses, and acorn granaries, were also constructed (Kroeber 1925, Wilson and Towne 1978). Ethnographic village sites located along the American River area in Nisenan territory include Ekwo (on Sunrise Boulevard), Shiba (on Hazel Avenue), and Yodok (at Folsom) (Wilson and Towne 1978).

The Sacramento Valley and lower foothills were rich in natural resources, and the Nisenan took advantage of the wide variety of food sources. Waterfowl, fish, and freshwater mussels and clams were readily available in the rivers. Acorns were important to their diet and were supplemented with seeds, nuts, berries, herbs, and fruit. Except for lizards, snakes, and grizzly bears, virtually every animal was a food source, including tule elk, deer, and antelope. The Nisenan moved with the seasons, following game and collecting plants. Manzanita berries, pine nuts, black oak acorns, skins, bows and bow wood were traded to the valley people in exchange for fish, roots, grasses, shells, beads, salt, and feathers (Kroeber 1925, Wilson and Towne 1978).

Because early contact with the Spaniards was limited to the southern edge of their territory, the Nisenan were not affected by Spanish soldiers searching for mission converts in the late 1700s, although they often sheltered Plains Miwok who had escaped from the missions (Wilson and Towne 1978). In 1808, Gabriel Moraga crossed Nisenan territory, but it was not until the Hudson's Bay Company trappers journeyed through the region in the 1820s and 1830s that the first impacts on the native residents were felt. The fur trappers introduced malaria into the Central Valley, leading to an epidemic that decimated the local population in 1833. The Valley Nisenan were particularly affected by the disease, with entire villages wiped out (Wilson and Towne 1978). Cook (1955) estimates that 75% of the Valley Nisenan population died during this epidemic.

John Sutter initiated further disruption when he introduced Plains Miwok into the region in the early 1840s and persuaded or forced the local Nisenan village people to either work for him or live peaceably with him. The Nisenan that had survived the epidemic and Sutter's working conditions had little chance against the gold miners that poured into the valley and foothills in the later 1840s. Most of the Nisenan population was completely eliminated by the mid-1850s (Wilson and Towne 1978). The survivors eked out a living working in agricultural activities, ranching activities, logging and/or in the domestic sphere (Wilson and Towne 1978).

## HISTORICAL CONTEXT

The project area is within the boundaries of historic Rancho Del Paso, a land grant encompassing 30 square miles awarded to Eliab Grimes by the Mexican government in 1844. By 1849 the Rancho was owned by Samuel Norris, who spent the next decade defending his claim to ownership in U. S. Courts. By the time Norris was recognized legally as the owner, he was deeply in debt and eventually lost the Rancho to his lawyers, James Ben Ali Haggin and Lloyd Tevis (Beck and Haas 1977; Miller 1982).

Haggin had a passion for horses and in 1873 hired John Mackley, a horse trainer, to run the rancho. Under Mackley's guidance, backed by Haggin's considerable wealth, Rancho del Paso became synonymous with well-trained, thoughtfully-bred race horses. Haggin race horses dominated the racing world for nearly 20 years. In 1891 Haggin retired from racing, although he continued to breed and sell horses until 1905 (Miller 1982).

Haggin and Tevis sold Rancho del Paso in 1910 to the Sacramento Valley Colonization Company for 1.5 million dollars. The new owners immediately divided the land into 20-acre lots and began a nationwide campaign to entice people to California. The ads invited potential farmers to experience a "Garden of Eden" promising that "the table will be kept supplied with fresh fruit of some variety or other every day of the year" (Miller 1982). In reality, the lack of water and difficulty of transporting goods and produce to and from Sacramento inhibited the success of the new colony, and most of the former Rancho was occupied only by jackrabbits, grasshoppers and the occasional turkey into the 1930s.

#### *MCCLELLAN AIR FORCE BASE*

In the early 1930s the Army was actively searching for an air depot site capable of expanding with the military's increased reliance on aviation. Although several California sites were considered, including Mather Field, most were unsuitable or lacked adequate space for future growth. With the assistance and lobbying of Arthur Dudley, Secretary-Manager of the Sacramento Chamber of Commerce, a 1,200-acre site was selected within the old Rancho del Paso and money was appropriated by congress to purchase the property (Miller 1982).

The site of the future McClellan AFB was ideal for several reasons. First, there were less than two dozen land owners, most who were more than willing to sell their unproductive farms and move elsewhere. Second, the land was primarily vacant, providing a blank slate for base designers. Third, it was ideally located close to the Sacramento River and adjacent to the Southern Pacific Railroad mainline, meeting the Army's transportation needs. Title to all parcels passed to the federal government in October 1936, although the official groundbreaking ceremony was held a month earlier, on September 8, 1936 (Miller 1982). Construction of the new depot took several years, partially because of the size of the immense hangars and warehouses, designed to accommodate the largest bombers used by the military at that time (Miller 1982).

Dedication of the installation occurred on April 29, 1939. At that time, the depot had been operating for several months. The dedication ceremony was attended by an estimated 50,000 people who toured the maintenance building, hangars and headquarters. High-level military officers spoke, as did Sacramento officials. Lunch was served to 900 dignitaries and reporters in one of the new hangars. The ceremonies closed with an air show (Miller 1982). Initially, the new base was called the Sacramento Air Depot. On December 1, 1939, the War Department officially changed the name to McClellan Field to honor Major Hezekiah McClellan, an Army aviation expert who lost his life testing a new aircraft (Miller 1982).

When the base was dedicated in 1939 it employed about 350 civilian workers, who transferred to McClellan AFB from Rockwell Field in San Diego. The workers moved to Sacramento in small groups, since housing in Sacramento was not readily available. With the outbreak of World War II the base expanded rapidly. By 1943 nearly 22,000 military and civilian workers were employed on the base. Space was at a premium and housing was difficult to find and obtain. With the end of the war, the base began reducing its task force from 21,902 in 1943 to 4,780 by June 1947. The reduction only lasted a few years, however. The growth of the base in response to hostilities in Korea, was instrumental to the development of the surrounding area (Miller 1982).

### *THE BEGINNING OF NORTH HIGHLANDS*

In 1950 McClellan Air Force Base once again began gearing up for war, facing action in Korea. At that time Watt Avenue, built as part of the initial base development, ended at Gate 1; beyond that point it was a two-track dirt lane. The land surrounding the base was open, although a few developments had occurred. Southwest of base, across the railroad tracks in “Splinter City,” several trailer parks provided housing for military and civilian families. Small houses were present in the Plane Haven subdivision, built across Watt Avenue from Gate 1 soon after the completion of the base. A new elementary school, Fruitvale, was built in 1949 to serve children whose military and civilian parents worked on base. Most civilians and military, however, drove into base from Sacramento locations, creating traffic bottlenecks and lengthy commutes (Miller 1982, *Sacramento Bee* June 3, 1953:N3).

In August 1950, Jefe Strizek, a local developer, envisioned planned communities around the base to house its growing employee base. Strizek was an American of East European descent, educated in Prague and Vienna. He had successfully completed subdivisions in Tracy and Sacramento prior to World War II. In 1945 he designed and built Town and Country Village, a shopping center at Fulton Avenue and Marconi. By 1950 he had completed subdivisions around his shopping center and was searching for new opportunities (*Sacramento Bee*, June 3, 1953:N5).

In 1950 Strizek purchased 2,000 acres east of Watt Avenue near McClellan and, with the encouragement of the Air Force officials, began work. North Haven Subdivision contained 351 homes built in “Town and Country Modern Style” and the first resident moved in 1951 (Figure 4). At the same time, he developed The Highlands Subdivision, with 181 homes. He sold part of his holdings to the other developers to accelerate the development of the area in response to the increasing demand by Air Force for local, nearby housing (*Sacramento Bee*, June 3, 1953:N5).

Heraty and Gannon bought a large section of Strizek’s land track and began building 629 homes in “McClellan Meadows” and 154 homes in “Highland Terrace.” Artaz, Ellis and Carson bought some of the land and constructed apartments and four-plexes on Watt Avenue. Their Santa Rita Gardens complex was heralded as the first major construction effort. The name of the new community came from Jere Strizek, who combined the first names of his two subdivisions (North Haven and The Highlands), while successfully petitioning for a post office. The North Highlands Post Office opened

in 1952, officially launching the new community (*Sacramento Bee*, June 3, 1953: N2, N4).

#### *POPULATION EXPLOSION: 1951-1965*

Local newspapers heralded the new community and followed its growth with great enthusiasm. By 1953 the newspapers noted that with so much construction going on, new residents could only move into their new homes during the weekends, when the builders were not working. North Highlands Shopping Center opened on June 3, 1953 across from McClellan AFB at Watt Avenue and A Street. The building's center point was a grocery store, but the strip mall also housed a pharmacy, bakery, and restaurant. A second shopping center opened soon after at the southwest corner of Watt Avenue and E Street and the commercial businesses available to the new residents expanded considerably. The second center contained another grocery, as well as a cleaner, beauty and barber shop, dress shop, pharmacy, shoe repair, dentist and a hardware store (*Sacramento Bee* June, 3, 1953: N3, N9).

By 1955 the *Sacramento Union* reported that North Highlands was the most rapidly growing suburb in the region (*Sacramento Union* January 29, 1955). Besides the two original subdivisions, eight more were under construction or planned. The largest, Larchmont Tract in the 6500 block of Watt, had 3,400 housing sites (*Sacramento Bee* November 30, 1955). In 1955 North Highlands had 7 churches, 6 schools, 7 doctors and 52 other businesses. Two community parks, Strizek and Larchmont, were planned. By 1960 the number of churches had doubled, as had the businesses. The nine schools in the new community served 10,000 students, instead of the 250 students enrolled in 1950 (O'Brien 2001; *Sacramento Bee*, November 30, 1955: M10; *Sacramento Suburban Directory* 1960; *Sacramento Union*, January 30, 1955). Fire stations, parks and recreational facilities also developed and then expanded between 1952 and 1960.

The population growth increased the number of vehicles in the area, creating daily traffic jams. In response, the County Road Department widened Watt to four lanes in 1955 and finally to six lanes in 1958 (Gallisdorfer 1969; *Sacramento Bee*, November 30, 1955).

The developmental growth and focus of North Highlands always has been intricately linked with McClellan AFB. Houses in every subdivision built between 1950 and 1970 were modest in size and price, averaging five to six rooms. The developers designed and built with military families and entry-level civilian workers as a target consumer.

Until McClellan AFB closed in 2001 the newspapers often reported on events within the community that celebrated the military and McClellan AFB. For example, following the historic moon walk in 1969, North Highlands commemorated the event for the next 12 years with an annual Moon Day festival, complete with a parade. Military officials, astronauts, and other dignitaries were honored and led the parade (O'Brien 2001).

Through the years North Highlands' success and community growth has been hampered by the lack of a more diversified housing base. The developers of the 1950s and 1960s strove to create housing for the average blue-collar worker and to keep costs reasonable for military and civilians working on base. While the houses were affordable, the lack of any higher end or larger homes created an economically sterile community with no opportunity or room for upward mobility. As families grew the houses became too small, forcing the families to find new homes outside of the North Highlands community (O'Brien 2001).

Subsequent to the end of the Cold War, McClellan AFB fell victim to a nationwide divestiture of military installations as part of the Base Closure and Realignment Act. The base was officially closed in 2001. Withdrawal of the military occurred over a five-year period and the base was slowly relinquished to private enterprises. McClellan Business Park operates today as a premier aviation maintenance and repair facility, in addition to a suite of other businesses and has 3,500 people working at the former base, with a goal of 35,000. Former military housing and apartments is offered for rent to encourage workers to live at the site.

When McClellan closed around 2000, North Highlands began declining. By 2000 the population was down to 44,187 and many businesses closed. By 2005, however, the pace began to pick up, aided by a large influx of Ukrainian and Russian immigrants into the community. By 2007 the population stood at nearly 50,000 and many new businesses were operating, designed to serve the needs of the immigrants. Today, the unincorporated area is rich in culture, with Asian markets existing next to Russian restaurants, churches and music stores. North Highlands is once more becoming a vibrant community (O'Brien 2001).

## CULTURAL RESOURCES REGULATORY SETTING

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### FEDERAL

Cultural resources are considered during federal undertakings chiefly under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws pertinent to cultural resources include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act (ARPA) of 1979, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1989, among others. Below is a more detailed description of applicable federal regulations.

*ANTIQUITIES ACT*

The federal Antiquities Act of 1906 was created with the intent to protect cultural resources in the United States. The Act prohibits appropriation, excavation, injury, and destruction of “any historic or prehistoric ruin or monument, or any object of antiquity” located on lands owned or controlled by the federal government, without permission of the secretary of the federal department with jurisdiction. Accordingly, the Act provided early framework to protect cultural resources within the United States.

*NATIONAL ENVIRONMENTAL POLICY ACT*

NEPA requires that federal agencies assess whether federal actions would result in significant effects on the human environment. The Council on Environmental Quality’s (CEQ’s) NEPA regulations further stipulate that identification of significant effects should incorporate “the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register for Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources” (40 CFR 1508.27[b][8]).

*NATIONAL HISTORIC PRESERVATION ACT*

Section 106 of NHPA (16 USC 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure or object that is included in or eligible for inclusion in the NRHP and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed, or are eligible for listing, on the NRHP per the criteria listed at 36 CFR 60.4 (Advisory Council on Historic Preservation 2000) below.

The quality of *significance* in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:

- a. Are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. Are associated with the lives of persons significant in our past; or
- c. Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- d. Have yielded, or may be likely to yield, information important in prehistory or history.

## STATE OF CALIFORNIA

### *CALIFORNIA ENVIRONMENTAL QUALITY ACT*

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources. If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). Section 21083.2(g) describes a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Sacramento County does not currently have a local register.

Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were used as the basic guidelines for the cultural resources study. PRC Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the register is to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the California Register were expressly developed to be in accordance with previously established criteria developed for listing on the National Register of Historic Places (NRHP).

### *NATIVE AMERICAN BURIALS AND ACCIDENTAL DISCOVERIES*

California law protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity and provides for the sensitive treatment and

disposition of those remains (Section 7050.5 of the Health and Safety Code and Public Resources Code 5097.9).

When human remains are discovered, the protocol to be followed is specified in California Health and Safety Code, which states:

*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.*

State CEQA Guidelines Section 15064.5, subdivision (e), requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the State CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5, subdivision (f), these provisions should include “an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an 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. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”

LOCAL

#### *SACRAMENTO COUNTY GENERAL PLAN*

The Sacramento County General Plan Conservation Element, states under Section VI, Cultural Resources, the following goal:



GOAL Promote the inventory, protection and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic historical, religious or socio-economical importance.

Also, the Cultural Resources section of the Conservation Element has specific objectives related to the protection of archaeological sites during development, historic structure preservation, and destruction of cultural resources sites. Following are the applicable General Plan Conservation Element cultural resources objectives that would be applicable to the proposed project:

OBJECTIVE: Attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to **cultural and ethnic values of all affected.** ~~Native American values.~~

OBJECTIVE: **Preserve structures such as buildings, bridges, or other permanent structures with architectural or historical importance to maintain contributing design elements.** ~~Structures with architectural or historical importance preserved to maintain contributing design elements.~~

OBJECTIVE: **Protect any** known cultural resources ~~protected~~ from vandalism, unauthorized excavation, or accidental destruction.

OBJECTIVE: **Increase public education,** public awareness and appreciation of both visible and intangible ~~historic and~~ cultural resources.

The following policies may apply to the project:

CO-~~154~~**170** Protection of significant prehistoric, ethnohistoric and historic sites within open space easements to ensure that these resources are preserved in situ for perpetuity.

CO-~~155~~**171** Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinterment shall have priority. The project developer shall provide the burden of proof that off site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.

CO-~~156~~**172** The cost of all excavation conducted prior to completion of the project shall be the responsibility of the project developer.

- CO-~~157~~173 Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.
- CO-~~158~~174 As a condition of approval of discretionary permits, a procedure shall be included to cover the potential discovery of archaeological resources during development or construction.
- CO-~~164~~176 Structures having historical and architectural importance shall be preserved and protected.
- CO-~~165~~177 Refer projects involving structures or within districts having historical or architectural importance to the Cultural Resources Committee to recommend appropriate means of protection and mitigation.
- CO-~~166~~178 Development surrounding areas of historic significance shall have compatible design in order to protect and enhance the historic quality of the areas.
- CO-~~171~~181 Design and implement interpretive programs about known archeological or historical sites on public lands or in public facilities. Interpretation near or upon known sites should be undertaken only when adequate security is available to protect the site and its resources.
- CO-~~172~~182 Provide historic and cultural interpretive displays, trails, programs, living history presentations, and public access to the preserved artifacts recovered from excavations.

#### DISCLOSURE OF CULTURAL RESOURCES INFORMATION

Public disclosure of site specific cultural resources information is expressly exempt from the California Public Records Act, Government Code Sections 6250-6270. Furthermore, information obtained during Native American consultation or through consultation with the local and state agencies, including the North Central Information Center (NCIC), should remain confidential and is exempt from public disclosure under Senate Bill 922. Additionally Sacramento County staff has signed an "Agreement to Confidentiality" with the NCIC that states that site specific information will not be distributed or released to the public or unauthorized individuals. An authorized individual is a professional archaeologist or historian that qualifies under the Secretary of Interior's standards to view confidential cultural resources materials.

## METHODOLOGY

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Archival research, Native American consultation, oral inquiries of residents, school officials and business owners, and fieldwork were conducted to establish what cultural resources may be present within the project area and, furthermore, may be impacted as a result of implementation of the proposed project.

### PRE-FIELD RESEARCH

#### *INFORMATION CENTER RECORD SEARCH*

Data maintained by the North Central Information Center (NCIC) of the California Historical Resources Information System (CSU-Sacramento) including State and federal listings of significant cultural resources and associated data bases was conducted by PAR Environmental on September 22, 2009. Standard references and lists consulted include the following:

- National Register of Historic Places (United States department of the Interior [USDI] 1979, computerized updates through September 2009);
- California Register of Historic Resources (California Department of Parks and Recreation [DPR] 1998, computerized updates through September 2009);
- California Historical Landmarks (California DPR 1996, computerized updates through September 2009);
- California Inventory of Historic Resources (California DPR 1976, obsolete);
- Historic Properties Directory (California DPR, computerized updates through September 2009);
- California Points of Historical Interest (California DPR 1992, computerized updates through September 2009);
- Archaeological Site Records – computerized updates through September 2009, and
- NCIC, California Historic Resource Information System historic resource records and maps – September 2009.

The record search at the NCIC identified thirteen previous cultural resources studies that include portions of the project area or directly adjacent to the project area. None of these studies identified archaeological remains within or directly adjacent to the Corridor Plan area. Aside from the route of the Central Pacific Railroad corridor (recorded as CA-SAC-478H), later the Southern Pacific Railroad and now owned and operated by the Union Pacific Railroad, no historic resource records were found in the NCIC archives.

The *Office of Historic Preservation Directory of Properties in the Historic Property Data File* for Sacramento County lists only two properties within the study area. These are Fire Stations 41 and 42 of the Sacramento Metro Fire District. These properties were evaluated in 1995 and found ineligible for listing on the National Register of Historic Properties. McClellan Air Field is in part included in the Sacramento Air Depot Historic District.

In addition to the background research conducted at the NCIC, PAR also conducted archival research at the California History Section and the Government Publications Section of the California State Library and the Sacramento Archives and Museum Collection Center for pertinent county maps and historical accounts. Additional research included contacting the Sacramento County Historical Society, and research on the North Highlands-Foothill Farms website (North Highlands 2009). Historic aerial photography was researched at the Shields Library on the campus of the University of California at Davis. Sacramento Suburban Directories and telephone books were examined at the Sacramento History Room, Sacramento Central Library. Finally, a telephone interview was conducted with facilities management personnel at the North Highlands School District and SMUD offices.

#### *NATIVE AMERICAN CONSULTATION*

A letter was sent to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands files. The check failed to reveal any properties listed as Sacred Lands. The NAHC did provide a list of individuals and groups to contact regarding the property. No responses were received as of writing this chapter.

#### FIELD ASSESSMENT

##### *PEDESTRIAN SURVEY*

The publically accessible areas of the proposed Corridor were subjected to a pedestrian survey conducted by a qualified archaeologist from PAR. The Corridor is highly developed with residential, commercial and recreational uses that have been paved, graded, filled and landscaped, or contain structures. PAR was not able to gain access to private property; thus the pedestrian survey was limited to examination of road sides, visible cuts and views of yards adjacent to public rights of way. Where possible exposed ground surfaces and road cuts were carefully inspected for evidence of historical use such as fragments of ceramics, metal, and glass, and for indications of prehistoric use such as chipped stone artifacts and debitage, ground stone artifacts, bone fragments, and soil color changes. Boot scuffs and trowel scrapes were also employed to expose soil where possible.

##### *ARCHITECTURAL SURVEY*

The architectural survey consisted of a cultural resource specialist walking the study area and documenting and photographing the structures and other elements of the built

environment using a digital camera. California Department of Parks and Recreation (DPR) 523 forms were completed for buildings, structures, objects and sites 50 years or older within the project area. Extensively modified buildings that no longer retain their historical mass, detailing, or appearance were not recorded.

## SIGNIFICANCE CRITERIA

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In order for a cultural resource to be considered a “historic property” under NRHP criteria (i.e., eligible for inclusion on the NRHP), it must be demonstrated that the resource possesses *integrity* of location, design, setting, materials, workmanship, feeling and association, and must meet at least one of the following four criteria delineated by Section 106 (Advisory Council on Historic Preservation 2000), as listed in 36 CFR 60.4:

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) That have yielded, or may be likely to yield, information important in prehistory or history.

The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the NRHP, enumerated above, and require similar protection to what NHPA Section 106 mandates for historic properties. According to PRC Section 5024.1(c)(1-4), a resource is considered *historically significant* if it meets at least one of the following criteria:

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

Under CEQA, if an archeological site is not a significant “historical resource” but meets the definition of a “unique archeological resource” as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

Resources that neither meet any of these criteria for listing on the NRHP or CRHR nor qualify as a “unique archaeological resource” under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, “A nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC Section 21083.2(h)).

Impacts to *significant* cultural resources (“historic properties” under NHPA and “historical resources” under CEQA) that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed on or eligible for listing on the CRHR are considered a significant effect on the environment (CEQA guidelines 15065(a)(1)). Impacts to *significant* cultural resources from the proposed project are thus considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

## FIELD ASSESSMENT RESULTS, IMPACTS AND ANALYSIS

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The field assessment identified limited potential for prehistoric and historic archaeological remains. 45 newly-identified architectural properties were recorded and evaluated in light of the California Register of Historical Resources criteria and CEQA section 5024. The following discussions are divided into impacts to cultural resources within the specific land use district proposed by the Corridor Plan.

## ELKHORN DISTRICT

### *ARCHAEOLOGY*

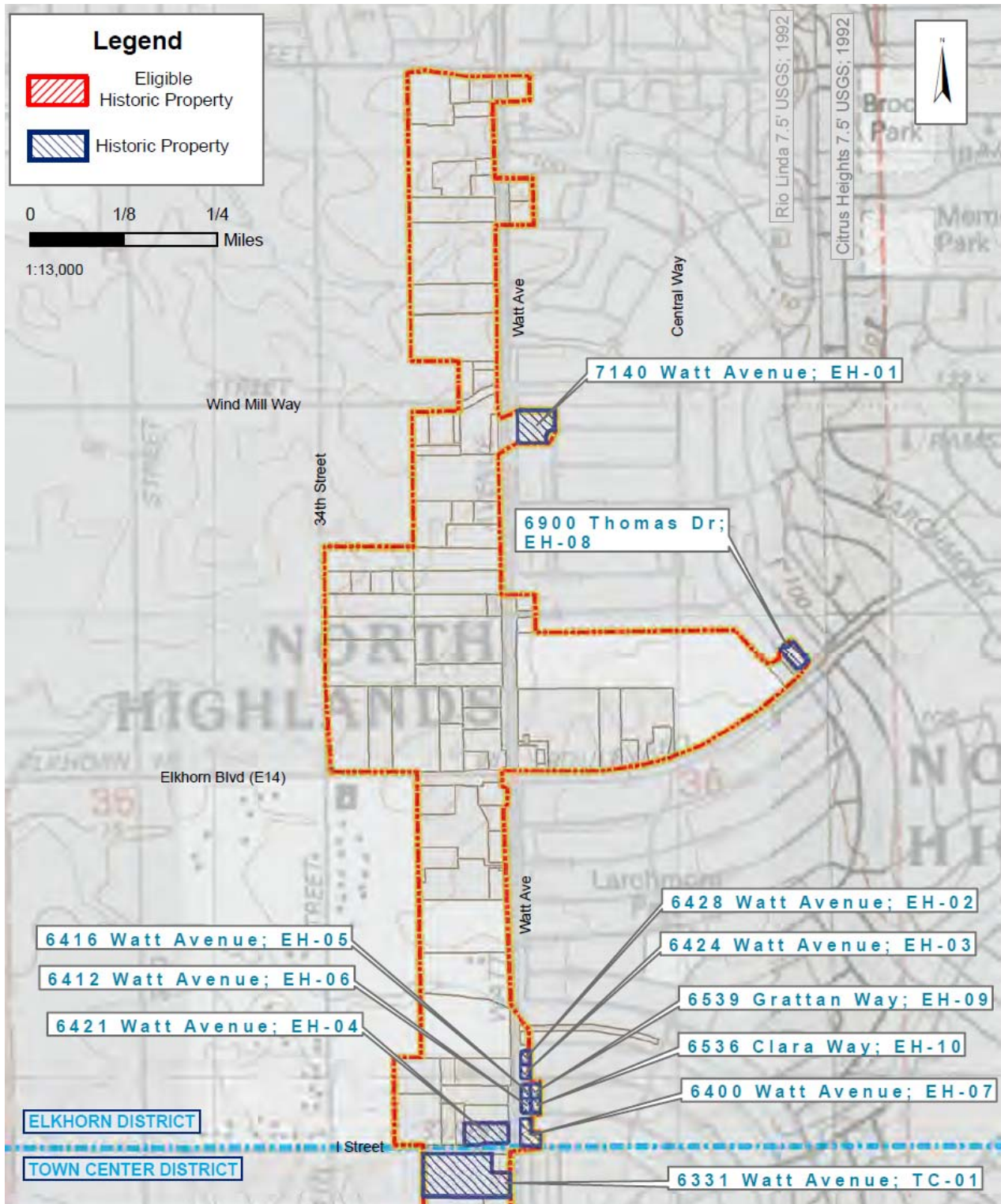
PAR noted that most of the Elkhorn District located on the east side of Watt Avenue is paved and/or developed. Open areas, void of development, exist along the west side of Watt Avenue. PAR noted that access to these areas was limited due to fencing. The record search and physical examination of road sides indicate a low potential for extensive resources. There is a potential for isolated artifacts and small processing prehistoric sites related to hunting or plant resource collection; however, no isolated artifacts or other indicators were noted during fieldwork.

### *ARCHITECTURE*

The Elkhorn District was the last to develop within the project corridor, as the subdivision progression began near Interstate 80 and slowly marched north. In 1964 the east side of Watt Avenue from I Street to Q Street had been developed with thousands of houses. These houses were within Larchmont Village and Highlands Terrace developments. North of Q Street the land remained open fields, with the exception of a gas station at the southeast corner of Antelope Road and Watt Avenue. The west side of Watt Avenue contained just a handful of buildings, likely warehouse or shopping centers. The many open fields were broken by small drainages that meandered their way south and west toward the river. A few farmsteads dotted the landscape on both sides of 34<sup>th</sup> Street and were surrounded by open land.

Today, this district has a total of 76 parcels that contain buildings; 10 of these were recorded and evaluated (Plate CR -1). In addition to those buildings over 50 years of age, 6 of the 76 were built between 1961 and 1965 and are rapidly approaching 50 years of age. They were not recorded during the current study, because they are not yet old enough to qualify under the California Register, but will require evaluation and recordation in the near future, if projects occur that could affect them. Table CR-2 summarizes the properties within Elkhorn District that were constructed in 1960 or before. Table CR-3 summarizes properties constructed between 1961 and 1965 that will require recordation and evaluation in the near future. Detailed information and individual historical summaries were conducted and included in the DPR 523 forms prepared within the Elkhorn District.

Plate CR -1: Elkhorn District Historic Resources



Source: PAR Environmental, Inc., 2010



**Table CR-2: Elkhorn District – Recorded Architectural Resources Built 1960 or Before**

Street	Address No.	Date of Construction	Use	Style	Status
Watt Avenue	7140	ca. 1956	Church	Modern	6Z
Watt Avenue	6428	ca. 1952	Residential/ Commercial	Ranch	6Z
Watt Avenue	6424	ca. 1952	Residential/ Commercial	Ranch	6Z
Watt Avenue	6421	ca. 1955	Commercial	Vernacular	6Z
Watt Avenue	6416	ca. 1952	Residential/ Commercial	Ranch	6Z
Watt Avenue	6412	ca. 1951	Residential/ Commercial	Ranch	6Z
Watt Avenue	6400	ca. 1951	Residential/ Commercial	Ranch	6Z
Thomas Drive	6900	1957	Fire Station	Modern	6Z
Grattan Way	6539	ca. 1951	Residential	Ranch	6Z
Clara Way	6536	ca. 1951	Residential	Ranch	6Z

3CS: Eligible for inclusion in the California Register

6Z: Ineligible for inclusion in the California Register

**Table CR-3: Elkhorn District – Properties Built 1961-1965 (not recorded)**

Street	Address No.	Date of Construction	Use
Watt Avenue	7550	ca. 1962	USA Today Gas Station
Watt Avenue	7459	ca. 1962	Commercial
Watt Avenue	7145	ca. 1962	Commercial
Watt Avenue	7039	ca. 1962	Commercial
Watt Avenue	7001	ca. 1962	Commercial
Watt Avenue	6831	ca. 1962	Napa Auto Parts
Elkhorn Ave	3451	ca. 1962	Highlands Animal Hospital (former residence)

The commercial and residential properties in Elkhorn District are among many structures constructed in the project area in the post-World War II population explosion in California and Sacramento County specifically. All of the properties are of common design and construction techniques and nearly all exhibit evidence of modifications, ranging from minor to significant. These properties are not associated with any person or event significant in state or local history, do not represent an unique architectural or building style, are not the work of a master, and do not otherwise contribute to our understanding of our past. As a result, these 10 resources do not appear to be historic resources for the purposes of CEQA.

## TOWN CENTER DISTRICT

### *ARCHAEOLOGY*

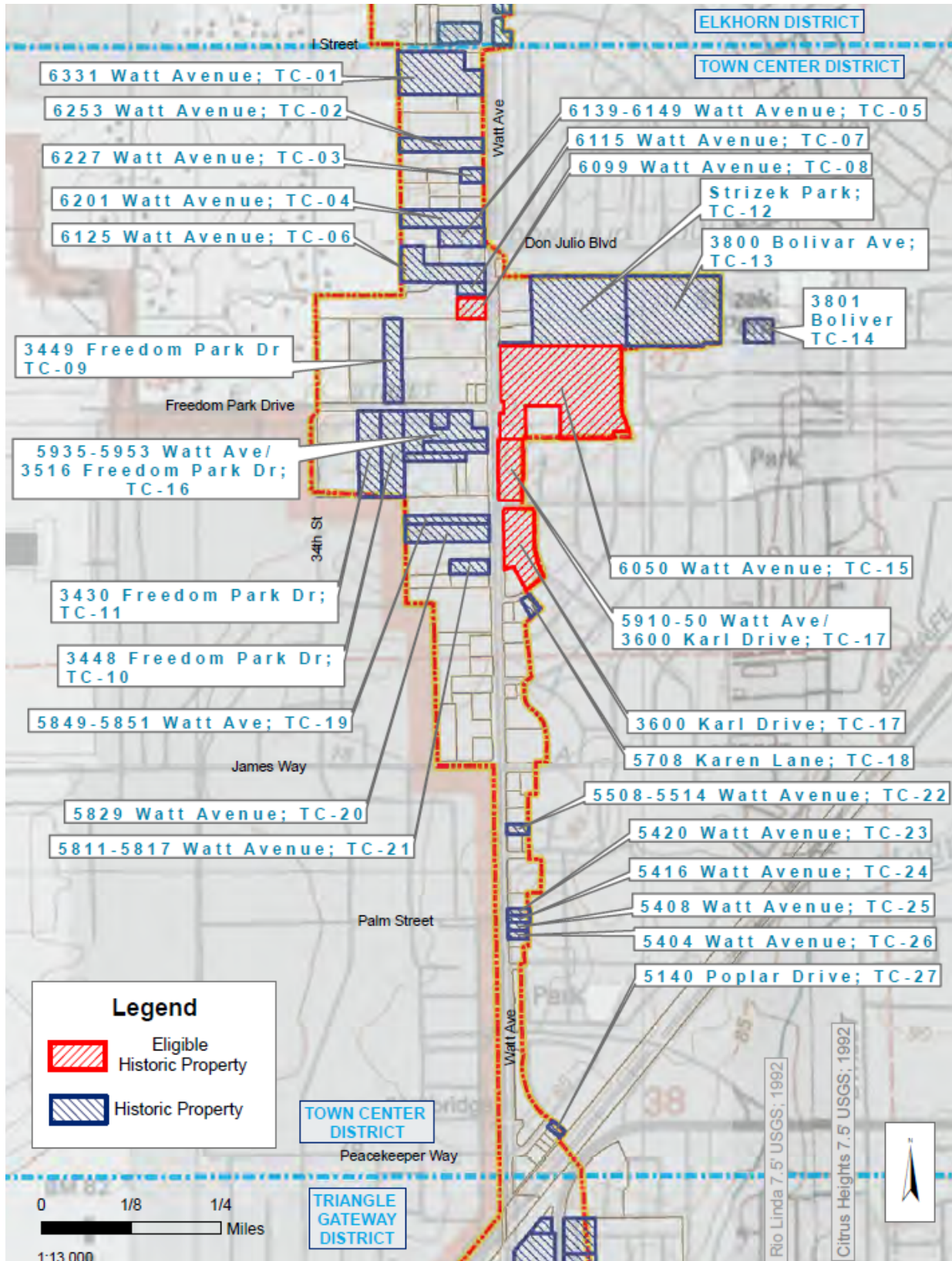
The field survey concluded that most of the Town Center District is developed, with little unpaved, open ground. However, there are limited open areas and fields located behind existing development. There was limited access to open areas because they are located on private property and are fenced. The record search and physical examination of accessible areas indicated a low potential for extensive resources. There is a potential for isolated artifacts and small processing sites related to hunting or plant resource collection; however, no isolated artifacts or other indicators were noted during fieldwork.

### *ARCHITECTURE*

Town Center District developed as North Highlands central business district after World War II. This district was next to McClellan AFB and its pace of development mirrored that of the base. Soon after McClellan was dedicated in 1939 the first subdivision in the area, Plane Haven, developed east of Watt Avenue adjacent to Gate 1. Little additional development occurred until after World War II. In 1949 the first school in the region, Fruitvale Elementary, opened in the 6000 block of Watt. A year later the first two subdivisions were laid out and in 1952 North Highlands Post Office was established in this district. The majority of the shopping centers, community services and churches were built in this area in the early to mid 1950s. By 1955 a high school and middle school had joined Fruitvale. Strizek Park was laid out and developed in 1957 and the core of fire, police and library services was established in the area. With the exception of Santa Rita Gardens Apartments and two large barrack-style apartments on Freedom Park Drive, residents lived in small, single-family dwellings primarily located east of Watt (O'Brien 2001; Sacramento Suburban Directory 1957, 1959, 1964).

Today, this district is comprised of 81 parcels containing buildings. Twenty-seven historic properties were recorded during the current study (Table CR-4). In addition to those buildings over 50 years of age, 11 of the 81 were built between 1961 and 1965 and are rapidly approaching 50 years of age. They were not recorded during the current study, because they are not yet old enough to qualify under the California Register, but will require evaluation and recordation in the near future, if projects occur that could affect them. Table CR-4 summarizes the properties within Town Center District that were constructed in 1960 or before. Table CR-5 provides information on properties built between 1961 and 1965. Plate CR -2 depicts locations of resources within the District. Detailed information and individual historical summaries were conducted and included in the DPR 523 forms prepared within the Town Center District.

Plate CR -2: Town Center District Historic Resources



Source: PAR Environmental, Inc., 2010

**Table CR-4: Town Center District – Recorded Architectural Resources Built 1960 or Before**

Street	Address No.	Date of Construction	Use	Style	Status
Watt Avenue	6331	1955	Commercial /Church	Vernacular	6Z
Watt Avenue	6253	ca. 1955	Commercial	Vernacular	6Z
Watt Avenue	6227	1958	Commercial	Contemporary	6Z
Watt Avenue	6201	1955	Church	Modern	6Z
Watt Avenue	6139-6149	ca. 1958	Commercial	Vernacular	6Z
Watt Avenue	6125	1957	Church	Vernacular	6Z
Watt Avenue	6115	1959	Commercial	Vernacular	6Z
Watt Avenue	6099	1960	Commercial	Modern	3CS
Freedom Park	3449	1952	Residential/ Commercial	Ranch	6Z
Freedom Park	3448	1959	Apartments	Modern	6Z
Freedom Park	3430	1959	Apartments	Modern	6Z
Watt Avenue	0	1957	Strizek Park	N/A	6Z
Boliver	3800	1955	School	Contemporary	6Z
Boliver	3801	1955	Church	Vernacular	6Z
Watt Avenue	6050	1949-1955	School	Contemporary	3CS
Watt Avenue Freedom Park	5935-5953, 3516	1953	Commercial	Vernacular	6Z
Watt Avenue Karl Way	5910-5950 3600	1951	Woodfield Apartments	Modern	3CS
Karen Way	5708	1951	Residential	Contemporary	6Z
Watt Avenue	5849	ca. 1955	Auto	Modern	6Z
Watt Avenue	5829	1959	Church	Vernacular	6Z
Watt Avenue	5811-5817	ca. 1953	Commercial	Vernacular	6Z
Watt Avenue	5508-5514	ca. 1958	Commercial	Vernacular	6Z
Watt Avenue	5420	ca. 1940	Residential/ Commercial	Vernacular	6Z
Watt Avenue	5416	ca. 1940	Residential/ Commercial	Minimal Traditional	6Z
Watt Avenue	5408	ca. 1940	Residential/ Commercial	Minimal Traditional	6Z
Watt Avenue	5404	ca. 1940	Residential/ Commercial	Minimal Traditional	6Z
Poplar Ave	5140	ca. 1940	Residential	Minimal Traditional	6Z

3CS: Eligible for inclusion in the California Register

6Z: Ineligible for inclusion in the California Register

**Table CR-5: Town Center District – Properties Built 1961-1965 (not recorded)**

Street	Address No.	Date of Construction	Use
Watt Avenue	6349	ca. 1963	Commercial
Watt Avenue	6323	ca. 1963	Digol's Gas Station
Watt Avenue	6229	ca. 1963	Auto Garage
Watt Avenue	6225	ca. 1963	Pancake Palace
Watt Avenue	6100-6150	ca. 1962	Strip Mall
Watt Avenue	6043	ca. 1962	Commercial
Watt Avenue	5801-5807	ca. 1963	Strip mall
Watt Avenue	5701	ca. 1963	Valero Gas
Watt Avenue	5715	ca. 1963	Highland Faire
Watt Avenue	5514	ca. 1963	Commercial
North Haven	5608	1962	Fire Station No. 42

Three properties within Town Center District appear to meet criteria of the California Register and qualify as historical resources for the purposes of CEQA. They are described and evaluated in more detail below. The remaining commercial and residential properties are among the many constructed in the project area in the post-World War II population explosion in California and Sacramento County specifically. All of the properties are of common design and construction techniques and nearly all exhibit evidence of modifications ranging from minor to significant. These properties are not associated with any person or event significant in state or local history, do not represent an unique architectural or building style, are not the work of a master, and do not otherwise contribute to our understanding of our past. As a result, these resources do not appear to be historical resources for the purposes of CEQA.

### **6099 WATT AVENUE**

This is a nearly square one-story with flat roof with an asymmetrical gable parapet (Plate CR -3). A mirror image of the reversed parapet eave line is below the roof line on the east-facing façade and provides a modernistic decorative element. The south façade has five rock-covered columns that extend up past the eave line. The overhanging parapet eave has gaps to allow for the column and appears cantilevered. The rock veneer is also present on the east façade and wraps around onto a small portion of the north façade. Vertical boards are also on the east façade. Fenestration consists of metal-sash plate glass windows. The glass and metal double entry doors are currently boarded over.

The 1960 suburban directory notes that the shopping center at 6043 Watt was under construction at that time. This building, while not attached to the larger 6043 building, was likely constructed at the same time. Given the configuration of space and the detailed façade it appears to have been used as a restaurant (Sacramento Suburban

**Plate CR -3: 6099 Watt Avenue, South and East Façade**

Directory 1960). It was one of many restaurants or commercial buildings developed in the late 1950s and early 1960s in North Highlands. It is not associated with a significant event or person, precluding its eligibility under Criteria 1 or 2.

The architecture exhibited in this building is striking in the use of the asymmetrical gable parapet, cantilevered roof elements, and rock pillars. The building clearly reflects the passion for futuristic-oriented and modern designs evident in the early 1960s. It is the only one of its kind in North Highlands or the surrounding area south of I-80 and is architecturally unique. As such, it meets Criterion 3 of the California Register of Historical Resources and is a historical resource for the purposes of CEQA.

**SANTA RITA GARDENS - 5910-5950 WATT AVENUE AND 3600 KARL AVENUE**

These two parcels are spread over portions of two blocks and comprise the historic Santa Rita Garden Apartments (now Woodfield Apartment Homes). There are six contemporary style buildings at the 5950 address and eight facing Karl Avenue. Each of the 14 residential buildings contains four units. Every two buildings face one another and have reversed designs. (See Plate CR -4)

The Santa Rita Garden Apartments (now Woodfield Apartment Homes) were completed in 1953 and were developed and owned by George Artz, Harry Carlson, Hal Ellis and George Reed. The June 3, 1953 issue of the *Sacramento Bee* noted their

**Plate CR -4: Santa Rita Gardens, View Southwest**

completion, calling the complex “an unusual development...designed to give apartment dwellers the widest possible enjoyment of outdoor living” (*Sacramento Bee* 6/3/53:N3). According to the *Bee*, each of the 108 units had two bedrooms, a hall, bath, kitchen and living/dining room. One special feature was an enclosed, cemented patio, meant for use as a children’s play area or relaxation. The patios, low profile, and surrounding trees and grass were one reason the apartments were advertized as the complex “where the outdoors comes inside.” The designer’s philosophy and the styling of the buildings reflects a contemporary style, one where landscaping and integration into the landscape was stressed. This style became popular after World War II.

The apartments were located on four separate blocks and were strung along Watt in a linear fashion. Shopping centers were interspersed halfway between the four blocks, and were a major attraction when the apartments were finished. The two northern groups of apartments are within the North Watt Corridor Planning Area and are evaluated here. The southern apartments are outside the current study area but appear to retain integrity. They are not evaluated at this time.

The Santa Rita Garden Apartments were the first multi-family units in North Highlands and reflect a contemporary architectural style. The architects designed a series of low buildings surrounded by trees and shrubs, with a plan to create an outdoor feel to the complex. The use of the ladder design elements, separation of front doors by a utility room to create more privacy, diagonal support posts and stall dividers in the car ports are all characteristic of the 1950s style or of the designers’ intent to create the outdoor, private feel to the units. With the exception of replacement of a few windows, the units have not been altered significantly and retain the sense of time and place. Their setting

has not altered significantly and they retain integrity of design, materials, workmanship and location. The feel and association of an early 1950s apartment complex is still evident, increasing their significance. The Woodfield Apartment Homes units located at 3600 Karl and 5910-5950 Watt Avenue appears to meet Criterion 3 of the California Register of Historic Resources, and is a historic resource for the purposes of CEQA.

### **FRUITVALE ELEMENTARY SCHOOL (F.C. JOYCE SCHOOL), 6050 WATT AVENUE**

Fruitvale Elementary School (now F. C. Joyce Elementary) is within the Rio Linda School District (Plate CR -5). The school opened in 1949 and went through two expansions by 1955. Buildings 1 and 2 represent the initial construction period in 1949. Buildings 3 and 4 were added in 1951. The last two buildings, were added in 1953.

The historic Fruitvale Elementary School, now known as F. C. Joyce School, was constructed to educate the 250 students living in the Plane Haven Subdivision. During World War II, McClellan expanded in many directions to accommodate the war effort and movement of troops through the base to the Pacific. Camp Kohler was established on 3,000 acres of land just north of the base. Camp Kohler closed in 1947 and some of the land was bought by the County. The school was built soon after World War II ended on the Camp Kohler abandoned rifle range, and opened on September 12, 1949. When it opened it contained two buildings, housing five classrooms, a kindergarten and an administration office. The completion of the North Havens Subdivision, quickly followed by other housing tracts, created an explosion of school age children in the area. As the only school in the newly-formed community, Fruitvale Elementary rapidly expanded. By September 1951 it had two new buildings containing six classrooms, another kindergarten, library and all purpose room. The *Sacramento Bee* reported in June of 1953 that the school was again expanding by eight classrooms, to be ready for the fall. The newspaper noted that the expansion was planned to accommodate an estimated 501 new students (*Sacramento Bee*, 6/3/53:N10). Additional grammar schools were built in the community by 1955, halting the continued expansion of Fruitvale. The current configuration of five wings and an administrative building is that depicted on 1958 and 1964 aerials, and appears to match the configuration after the 1953 construction period.

The historic Fruitvale School was built in 1949 and reflects the desire by the County, with the full support of the military, to create educational opportunities for families of military and civilian personnel living on or near McClellan AFB. It opened with only 250 students. By 1951 the influx of families created a space problem and the school expanded twice more to accommodate the growing North Highlands community. As the first school (and only until 1955), it played a vital role in the development of North Highlands. Fruitvale allowed families moving into the rapidly growing community to have immediate access to educational benefits within walking distance of their homes for their school age children. It was not until 1955 that additional schools were constructed to serve the thousands of new residents in the area. As such, Fruitvale School appears to meet Criterion 1 of the California Register of Historic Resources, and is a historic resource for the purposes of CEQA for the role it played in the educational development of North Highlands. The period of significance under this criterion is 1949, when the



**Plate CR -5: Fruitvale Elementary School**



school first opened, to 1955, when additional schools were opened, lessening the importance of Fruitvale Elementary School.

It is not associated with a particular person under Criterion 2. The architectural style of the school is not unique. School layouts built during the late 1940s and 1950s included centralized areas for all purpose and library spaces and long straight corridors of rooms. The blend of Modern and Contemporary styles, as seen in the use of shed and flat roofs, modern lines, and asymmetrical windows is common in schools of this era and is found throughout Sacramento County (for example, Pershing Elementary in Orangevale). Therefore, the school does not represent a unique architectural or building style, and is not the work of a master. It does not meet Criterion 3.

## TRIANGLE GATEWAY DISTRICT

### *ARCHAEOLOGY*

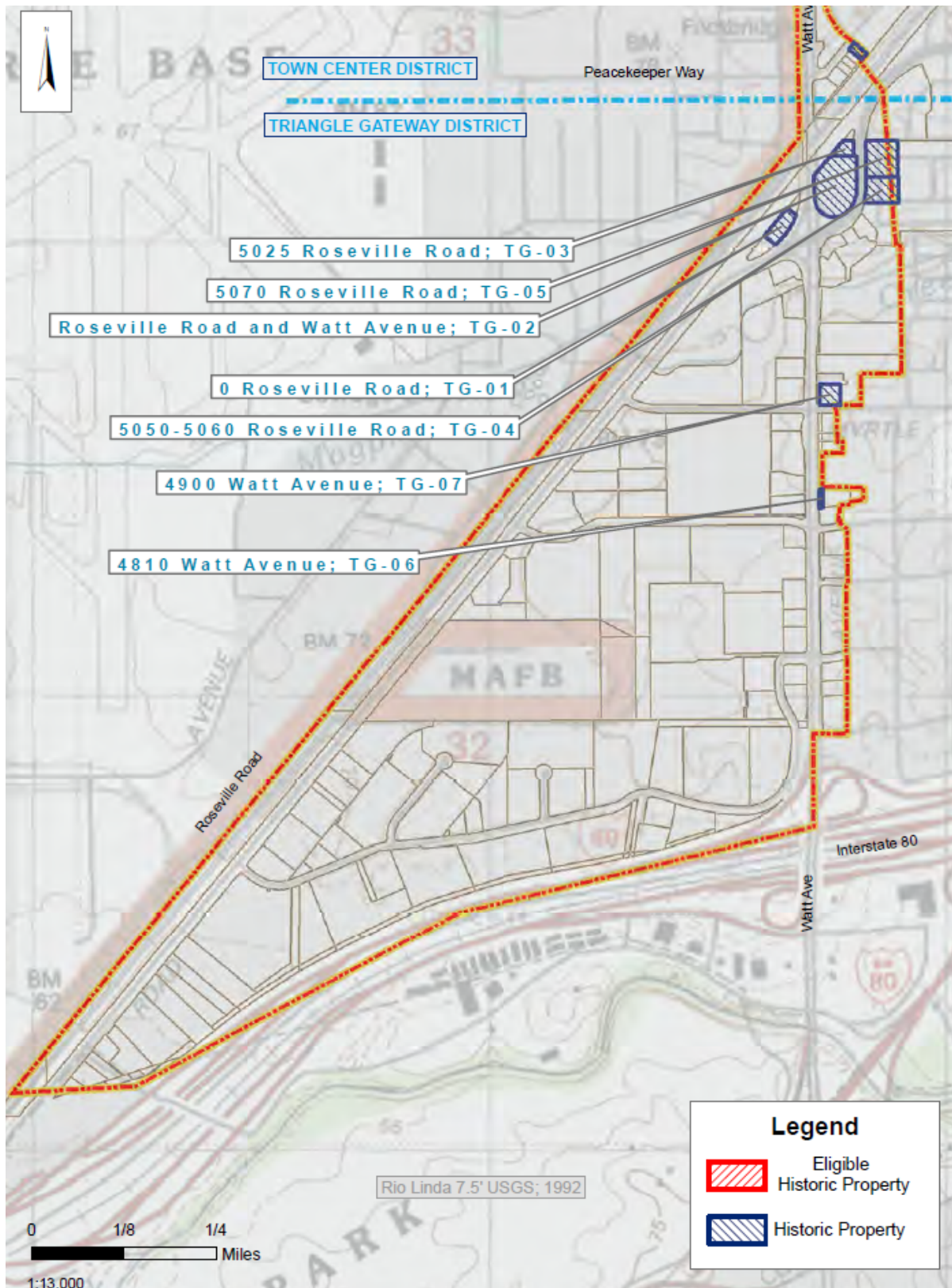
Most of the Triangle Gateway District is developed. A minor amount of open land is present east of Watt Avenue between the Union Pacific Railroad and Roseville Road and behind developed land between Roseville Road and Magpie Creek. An open area remains along the west side of Watt Avenue between Roseville Road and Myrtle, although historical aerial photographs and maps indicate that the area was previously developed and structures on it have since been razed. Most of the “open areas” within the district are fenced. The record search and physical examination indicate a low potential for extensive resources. There is a potential for isolated artifacts and small processing sites related to hunting or plant resource collection. No isolated artifacts or other indicators were noted during fieldwork.

### *ARCHITECTURE*

Triangle Gateway District was known as “Splinter City” in the 1940s and served as overflow housing for military personnel and their families, as well as civilians. It contained a number of trailer parks and warehouses but much of the area was swamp land and undeveloped. Small businesses developed north of I-80 in the early 1950s in response to the massive construction and development occurring just a few blocks north. This area, however, remained on the fringe of the central core district and development was slow. Today most of the older buildings have been removed or significantly enlarged and altered.

This district has changed the most since 1960, with many of the older houses, trailer parks and buildings removed and replaced with new shopping centers and fast food restaurants. A total of 104 parcels contain buildings; seven of these were recorded and evaluated (Plate CR -6). No buildings were identified that were constructed between 1961 and 1965 and retain their historic appearance. Table CR-6 summarizes the properties within Triangle Gateway District that were constructed in 1960 or before. Detailed information and individual historical summaries were conducted and included in the DPR 523 forms prepared within the Triangle Gateway District.

**Plate CR -6: Triangle Gateway District Historic Resources**



Source: PAR Environmental, Inc., 2010

**Table CR-6: Triangle Gateway District – Recorded Architectural Resources Built 1960 or Before**

Street	Address No.	Date of Construction	Use	Style	Status
Roseville Road	0	ca. 1955	Pumphouse	Vernacular	6Z
Roseville Road	0	ca. 1955	Concrete Enclosure	N/A	6Z
Roseville Road	5025	ca. 1940	Residential	Minimal Traditional	6Z
Roseville Road	5050	ca. 1940	Commercial, trailer park	Vernacular	6Z
Roseville Road	5070	ca. 1950	Commercial	Vernacular	6Z
Watt Avenue	4810	ca. 1940	Commercial	Vernacular	6Z
Watt Avenue	4900	ca. 1940	Commercial	Vernacular	6Z

3CS: Eligible for inclusion in the California Register

6Z: Ineligible for inclusion in the California Register

The commercial and residential properties in Triangle Gateway District are among many structures constructed in the project area in the post-World War II population explosion in California and Sacramento County specifically. All of the properties are of common design and construction techniques and nearly all exhibit evidence of modifications ranging from minor to significant. These properties are not associated with any person or event significant in state or local history, do not represent an unique architectural or building style, are not the work of a master, and do not otherwise contribute to our understanding of our past. As a result, these resources do not appear to be historical resources for the purposes of CEQA.

## SUMMARY AND CONCLUSIONS

### *IMPACT: ARCHITECTURAL RESOURCES*

There are 45 properties that are 50 or more years old within the project area. Detailed architectural descriptions and individual evaluations of these properties have been conducted and are on file with the Division of Environmental Review and Assessment (827 7<sup>th</sup> Street, Room 220, Sacramento, CA 95814) and the NCIC. Three properties older than 50 years of age appear to meet criteria of the California Register and are considered historical resources for the purposes of CEQA. They are summarized in Table CR-7.

**Table CR-7: Summary of Eligible Properties in the North Watt Avenue Corridor Planning Area**

District	Resource No.	Address	Property Type	Criteria	Period of Significance
Town Center	TC-17	5910-5950 Watt 3600 Karl	Santa Rita Gardens Apartments	3	1951
Town Center	TC-18	6099 Watt	Vacant commercial	3	1960
Town Center	TC-15	6050 Watt	Fruitvale (F. C. Joyce) School	1	1949-1955

Additionally, approximately 17 additional properties are between 45 and 49 years of age and are rapidly reaching the 50-year mark that requires evaluation as an historical resource under CEQA.

Ultimately, impacts to architectural resources located within the North Watt Avenue Corridor can be divided into three categories: (1) those properties that have been evaluated and have been determined to be significant resources, (2) those properties that have been evaluated and were not considered historically significant, and (3) those properties that have not been evaluated because they are not of age or were inaccessible.

At present there are no plans to impact the three eligible properties. If future projects propose impacts to these significant properties, impacts would be considered significant. In all cases, demolition (and rehabilitation or remodeling not done to the Secretary of Interior's Standards) of known significant historical resources should be discouraged and all feasible alternatives should be exhausted prior to consideration of demolition of historical structures. In the instance that there are no feasible alternatives to demolition of historic structures within the Corridor, mitigation would be required, including the preparation of detailed architectural and photographic materials to mitigate impacts associated with structures eligible under Criterion 3 of the CRHR or preparation of public interpretation documents (such as video, articles, etc) for treatment of structures eligible under Criterion 1. Mitigation would reduce impacts; however, the effective removal of a significant architectural resource would be considered **significant and unavoidable**.

As noted above, several structures within the Corridor have been evaluated for historical significance and do not meet the criteria to be considered significant. In those cases, no further mitigation is required. Environmental impacts to those structures would be considered **less than significant**.

In the case of those structures that are unevaluated due to not meeting the 50 years of age criteria at the time of the study: if future projects are planned that could result in extensive modifications or demolition of these unevaluated properties they shall be

recorded and evaluated in light of CEQA criteria by a qualified architectural historian prior to demolition or modification. If it is determined that the structures are not significant no further action is required and impacts would be considered less than significant. In the case that a structure is determined to have significance and demolition is proposed impacts would be **significant**. In this instance, projects would be subject to mitigation as outlined for the current significant resources. With mitigation, if demolition occurs, impacts would be considered **significant and unavoidable**.

### *MITIGATION MEASURES*

#### **MITIGATION MEASURE CR-1:**

Significant historical architectural resources within North Watt Avenue Corridor Plan shall be preserved in situ with all proposed modifications carried out to *The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. In the instance that demolition of a significant historical architectural resource is proposed, the applicant shall have a qualified architectural historian prepare a historical report with archival prints of the structure, including architectural details, for CRHR Criterion 3 eligible properties and/or preparation of public interpretation documents (video, articles, local history) for treatment of CRHR Criterion 1 eligible properties. All documentation shall be archived with the Sacramento Archives and Museum Collection Center (SAMCC) and the County of Sacramento.

#### **MITIGATION MEASURE CR-2:**

Properties that have not been subject to a previous architectural evaluation and are at least 50 years or older shall have a historic architectural study performed by a qualified, professional architectural historian if potential historic structures present on the project site are subject to demolition or otherwise impacted. The resulting report should include results of a background literature search and field survey, an historic context statement, and analysis of the potential significance of the noted resource, and recommendations for preservation and/or mitigation. If the structure is considered significant and demolition is proposed, mitigation documentation, as detailed in Mitigation Measure CR-1, shall be prepared, reviewed and endorsed by the Community Planning and Development Department, Planning Division.

### *IMPACT: ARCHAEOLOGICAL RESOURCES*

Archaeologically the Corridor Plan area appears to be of low sensitivity. However, there remains a potential to encounter buried or as yet undiscovered resources during land clearing and construction work. Buried resources may consist of historic remains such as structural features (foundations, cellars, etc.) or buried trash deposits containing glass, ceramics and metal, or the resources may be of prehistoric origin containing

chipped stone, shell, bone and other remains. If such subsurface resources are encountered, work should halt in the vicinity of the discovery until its significance can be evaluated by a professional archaeologist. If during land clearing further surface resources such as additional mining, historic trash scatters, or prehistoric resources are encountered, work should halt in the vicinity of the find until the discovery can be evaluated by a professional archaeologist. Mitigation is recommended below to reduce impacts to less than significant.

### *MITIGATION MEASURES*

#### **MITIGATION MEASURE CR-3:**

If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained at the Applicant's expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed, and the monitor shall be retained at the Applicant's expense.

Work cannot continue within the 200-foot radius of the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.

If a potentially-eligible resource is encountered, then the archaeologist, DERA, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination shall be formally documented in writing and submitted to DERA as verification that the provisions of CEQA for managing unanticipated discoveries have been met.

In addition, pursuant to Section 5097.97 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

*IMPACT: HUMAN REMAINS*

Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. In the unlikely circumstance that a burial is discovered during implementation of the Corridor Plan, strict adherence to mitigation as outlined in Mitigation Measure CR-3 (see above) would reduce this impact to less than significant levels.

*MITIGATION MEASURES*

*Implement Mitigation Measure CR-3*



# 14 CLIMATE CHANGE

## INTRODUCTION

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The following chapter provides an introduction and background information on climate change and global warming. Additionally, it presents an analysis of impacts of the Corridor Plan area on climate change and impacts to the Corridor Plan area due to climate change.

## INTRODUCTION TO CLIMATE CHANGE AND GLOBAL WARMING

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The average surface temperature of the Earth has risen by about 1 degree Fahrenheit in the past century, with most of that occurring during the past two decades (World Meteorological Organization, 2005). To the layperson, this apparently small amount of warming may appear insignificant. Correspondingly, the probable increases in average temperatures of between 3 to 8 degrees Fahrenheit (Cayan, et al., 2006) may appear noticeable, but still insignificant. The word *average* is of critical importance to understanding climate change and global warming. In July, the average high temperature in Sacramento is 94 degrees Fahrenheit (The Weather Channel website, 2007). This number is created by averaging temperatures over decades, not just for one particular year. Although the average is 94 degrees Fahrenheit, residents know that the individual days and weeks making up that average are as much as 20 degrees warmer or cooler in the extreme cases and up to 10 degrees warmer or cooler on a more regular basis. Therefore, applying an average increase of 8 degrees in a strictly linear way (omitting forcing effects) would mean that the *average* July temperature in Sacramento would be 102 degrees, and that temperatures could get as hot as 122 degrees in an extreme event (the current record is 114) and could regularly reach 112 degrees. This kind of temperature shift would have significant consequences to citizens and the environment alike.

The principal greenhouse gases that enter the atmosphere because of human activities are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and fluorinated gases. From 1750 to 2004, concentrations of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O have increased globally by 35, 143, and 18 percent, respectively. Other greenhouse gases, such as fluorinated gases, are created and emitted solely through human activities. (EPA 2006.) Carbon dioxide, or CO<sub>2</sub>, is the gas that is most commonly referenced when discussing climate change because it is the most commonly emitted gas. While some of the less common gases do make up less of the total greenhouse gases emitted to the atmosphere, some have a greater climate-forcing effect per molecule and/or are more toxic than carbon dioxide.

“In order to stabilize the concentration of GHGs in the atmosphere, emissions would need to peak and decline thereafter. The lower the stabilization level, the more quickly this peak and decline would need to occur. Mitigation efforts over the next two to three decades will have a large impact on opportunities to achieve lower stabilization levels.” (IPCC 2007c)

## CARBON DIOXIDE

Carbon dioxide emissions are mainly associated with combustion of carbon-bearing fossil fuels such as gasoline, diesel, and natural gas used in mobile sources and energy-generation-related activities. The U.S. EPA estimates that CO<sub>2</sub> emissions accounted for 84.6% of greenhouse gas emissions in the United States in 2004. (EPA 2006.) The California Energy Commission (CEC) estimates that CO<sub>2</sub> emissions account for 84% of California’s anthropogenic (manmade) greenhouse gas emissions, nearly all of which is associated with fossil fuel combustion. (CEC 2005.) Total CO<sub>2</sub> emissions in the United States increased by 20% from 1990 to 2004. (EPA 2006.)

## METHANE

CH<sub>4</sub> has both natural and anthropogenic sources. Landfills, natural gas distribution systems, agricultural activities, fireplaces and wood stoves, stationary and mobile fuel combustion, and gas and oil production fields categories are the major sources of these emissions. (EPA 2006) The U.S. EPA estimates that CH<sub>4</sub> emissions accounted for 7.9% of total greenhouse gas emissions in the United States in 2004. (EPA 2006.) The CEC estimates that in CH<sub>4</sub> emissions from various sources represent 6.2% of California’s total greenhouse gas emissions. (CEC 2005.) Total CH<sub>4</sub> emissions in the United States decreased by 10% from 1990 to 2004. (EPA 2006.)

## NITROUS OXIDE

N<sub>2</sub>O is produced by microbial processes in soil and water, including those reactions which occur in fertilizers that contain nitrogen. Global concentration for N<sub>2</sub>O in 1998 was 314 ppb, and in addition to agricultural sources for the gas, some industrial processes (fossil fuel fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. (EPA 2006.)

The U.S. EPA estimates that N<sub>2</sub>O emissions accounted for 5.5% of total greenhouse gas emissions in the United States in 2004. (EPA 2006.) The CEC estimates that nitrous oxide emissions from various sources represent 6.6% of California’s total greenhouse gas emissions. (CEC 2005.) Total N<sub>2</sub>O emissions in the United States decreased by 2% from 1990 to 2004. (EPA 2006.)

## FLUORINATED GASES (HFCs, PFCs, AND SF<sub>6</sub>)

Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF<sub>6</sub>), are powerful greenhouse gases that are emitted from a variety

of industrial processes. The primary sources of fluorinated gas emissions in the United States include the production of HCFC-22 production, electrical transmission and distribution systems, semiconductor manufacturing, aluminum production, magnesium production and processing, and substitution for ozone-depleting substances. The U.S. EPA estimates that fluorinated gas (HFC, PFC, and SF<sub>6</sub>) emissions accounted for 2.0% of total greenhouse gas emissions in the United States in 2004. (EPA 2006.) The CEC estimates that fluorinated gas emissions from various sources represent 3.4% of California's total greenhouse gas emissions. (CEC 2005.) Total fluorinated gas emissions in the United States increased by 58% from 1990 to 2004. (EPA 2006.)

## WORLDWIDE, NATIONAL AND STATEWIDE EMISSIONS

Table CC-1 presents estimated GHG emissions from California, the United States, and from worldwide sources. The results are presented in units of million metric tons per year of CO<sub>2</sub> equivalents (MMTCO<sub>2</sub>Eq). Worldwide GHG emissions were taken from the World Resources Institute's Climate Analysis Indicators Tool (CAIT) version 4 for calendar year 2000 (the latest year for which complete data are available). The United States GHG emissions were taken from Energy Information Administration's Emissions of Greenhouse Gases in the United States 2004. While data for 2005 are available, 2004 data were used because the California data are for 2004. California GHG emissions were taken from the California Energy Commission's Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 (the latest year for which complete data are available).

**Table CC-1:  
Greenhouse Gases Emissions Worldwide, United States, and California**

Geographic Region	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	MMTCO <sub>2</sub> Eq <sup>a</sup>	MMTCO <sub>2</sub> Eq <sup>b</sup>	MMTCO <sub>2</sub> Eq <sup>c</sup>
Worldwide GHG Emissions for calendar year 2000 <sup>1</sup>	32,541.3	5,854.9	3,349.4
United States GHG Emissions for calendar year 2004 <sup>2</sup>	5,973.0	639.5	353.7
California GHG Emissions for calendar year 2004 <sup>3</sup>	427.4	25.9	15.1

Notes:

<sup>a</sup>MMTCO<sub>2</sub>Eq means million metric tons per year of CO<sub>2</sub> equivalent, using Global Warming Potential (GWP) values provided by IPCC in its Fourth Assessment Report (TAR) (IPCC 2007a). The GWP for CO<sub>2</sub> is 1.

<sup>b</sup>The GWP from IPCC's TAR for CH<sub>4</sub> is 21.

<sup>c</sup>The GWP from IPCC's TAR for N<sub>2</sub>O is 310.

CO<sub>2</sub> = carbon dioxide; N<sub>2</sub>O = Nitrous oxide; CH<sub>4</sub> = Methane.

<sup>1</sup>Worldwide GHG emissions taken from Climate Analysis Indicators Tool (CAIT) version 4.0. Washington, DC: World Resources Institute, 2007. Available at <http://cait.wri.org>.

<sup>2</sup>United States GHG emissions taken from *Emissions of Greenhouse Gases in the United States 2004*, Energy Information Administration, U.S. Department of Energy, Washington, DC, December 2005.

<sup>3</sup>California GHG emissions taken from *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, California Air Resources Board, November 2007.

## SACRAMENTO COUNTY EMISSIONS

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The ICLEI (Local Governments for Sustainability) Clean Air and Climate Protection Model (CACP) was used to estimate unincorporated Sacramento County emissions, along with the emissions of all of the incorporated cities in the County. This complete inventory was done to provide a regional picture, but the County does not have control over incorporated city emissions (<http://www.climatechange.saccounty.net/default.htm>, click on the Reports and Publications link to download the full Greenhouse Gas Emissions Inventory for Sacramento County). The baseline year 2005 was chosen based on availability of information. In cases where 2005 data was unavailable, 2006 or other recent-year data was substituted. The software inventories community GHG emissions for all operations, with a separate government analysis tab that determines GHG emissions of local government operations as a subset of the community analysis. The community analysis divides GHG emissions among residential (energy usage), commercial (energy usage), industrial (energy usage), transportation (exhaust emissions), off-road vehicle use (exhaust emissions), waste (landfill emissions), wastewater treatment (energy usage), agriculture (fertilizers, enteric fermentation, etc), High GWP (high global warming potential, such are refrigerants), and airport (emissions from County buildings and fleets – does not include fleet owned by airlines) sectors. The government analysis divides emissions among buildings, vehicle fleet, employee commute, streetlights, water/sewage, and waste sectors.

For the community analysis, energy use was obtained for the Sacramento Municipal Utility District (SMUD) and the Pacific Gas and Electric Company (PG&E). Community waste generation for Sacramento County was collected through the California Integrated Waste Management Board (CIWMB) web site and through consultation with staff of Sacramento County Municipal Services Agency. The SMUD reported its 2005 GHG emissions and an emissions factor for all electricity sold to customers that was verified and certified by the California Climate Action Registry. This emissions factor was input into the model as a replacement for the statewide emissions factor for electricity consumption to generate more accurate GHG emissions estimates for Sacramento County electricity consumption. The software default emissions factors for other GHGs, which is based on statewide averages, were used in all other instances.

As shown in Table CC-2, the County 2005 emission baseline is approximately 6.5 MMT per year, with the transportation sector as the largest contributor at 55% of the total. The emissions per sector drop precipitously from there, with the residential sector emitting only a quarter of the transportation sector total. However, the residential and commercial sectors can be combined to give a more overarching view, because though

these sectors operate differently, the source of emissions are the same: private building and interior equipment energy usage. Combining these sectors, transportation accounts for 55% of emissions, and operation of residential, commercial, and industrial buildings accounts for 28% of emissions. The industrial-specific, off-road vehicle, waste, wastewater, agriculture, and high global warming potential greenhouse gases (High GWP GHG) sectors combined are responsible for only 14% of the County emissions, with the airport as an additional 3%.

**Table CC-2: 2005 Community Emissions by Sector**

<b>Sector</b>	<b>CO<sub>2</sub>e (metric tons)</b>	<b>Percent</b>
Residential	1,033,142	15.8
Commercial and Industrial	791,059	12.1
Industrial Specific	2,104	0.0
Transportation	3,610,937	55.1
Off-Road Vehicle Use	236,466	3.6
Waste	201,399	3.1
Wastewater Treatment	54,391	0.8
Agriculture	197,132	3.0
High GWP GHGs	228,768	3.5
Airport	200,404	3.1
<b>Total</b>	<b>6,555,802</b>	<b>100</b>

## EMISSIONS THRESHOLDS

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The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of carbon dioxide needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of greenhouse gases at 400 – 450 ppm carbon dioxide-equivalent concentration is required to keep global mean warming below 2°C, which in turn is assumed to be necessary to avoid dangerous climate change (IPCC 2007a). The California Climate Change Center (CCCC) at UC Berkeley has determined that an 11 percent reduction of greenhouse gases from present levels is required by year 2010, a 25 percent reduction is required by 2020, and an 80 reduction by 2050 in order to stabilize greenhouse gases at 400 – 450 ppm carbon dioxide-equivalent concentrations and avoid potentially dangerous climate change impacts (CCCC 2006). The California Legislature required these reduction levels by enacting Assembly Bill 32.

Though reduction rates were established in California law (AB 32), as of the writing of this document there are no established CEQA thresholds for greenhouse gases. AB 32

requires ARB to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020, as specified.

#### AB 1493 – GREENHOUSE GAS EMISSION STANDARDS FOR AUTOMOBILES

California Assembly Bill (AB) 1493 in 2002 required the California Air Resources Board (CARB) to develop and adopt the nation's first GHG emission standards for automobiles. The legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in the state. It cited several risks that California faces from climate change, including reduction in the state's water supply, increased air pollution creation by higher temperatures, harm to agriculture, and increase in wildfires, damage to the coastline, and economic losses caused by higher food, water energy, and insurance prices. Further the legislature stated that technological solutions to reduce GHG emissions would stimulate California economy and provide jobs.

The State of California in 2004 submitted a request for a waiver from federal clean air regulations (as the State is authorized to do under the Clean Air Act) to allow the State to require reduced tailpipe emissions of CO<sub>2</sub>. In late 2007, the EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against EPA related to this denial.

A recent CARB study (CARB 2008a) showed that in calendar year 2016, AB 1493 (also referred to as the Pavley standard or the Pavley rules) would reduce California's GHG annual emissions by 16.4 million metric tons (MMT) of carbon dioxide equivalents (CO<sub>2</sub>e). This is almost 50% more than the 11.1 MMT reduction produced by currently proposed federal fleet average standards for model years 2011 – 2015.

Further, by 2020, California is committed to implement revised, more stringent GHG emission limits, the Pavley Phase 2 rules (See discussion of scoping plan below). California's requirements would reduce California GHG emissions by 31.7 MMTCO<sub>2</sub>e in calendar year 2020, 45 percent more than the 21.9 MMTs reductions under the proposed federal rules in that year. Since the California rules are significantly more effective at reducing GHGs than the federal CAFE (fuel economy) program, they also result in better fuel efficiency – roughly 43 miles per gallon (mpg) in 2020 for the California vehicle fleet as compared to the new CAFE standard of 35 mpg.

#### EXECUTIVE ORDER S-3-05

Executive Order S-3-05 was the precursor to Assembly Bill 32 (AB 32 is described in the next section) and was signed by Governor Schwarzenegger in June 2005. This Executive Order was significant because of its clear declarative statements that climate change poses a threat to the State of California. The Executive Order states that California is "particularly vulnerable" to the impacts of climate change, and that climate change has the potential to reduce Sierra snowpack (a primary source of drinking water), exacerbate existing air quality problems, adversely impact human health,

threaten coastal real estate and habitat by causing sea level rise, and impact crop production. The Executive Order also states that “mitigation efforts will be necessary to reduce greenhouse gas emissions”.

To address the issues described above, the Executive Order established emission reduction targets for the state: reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020 and to 80% below 1990 levels by 2050. The Secretary of the California Environmental Protection Agency was named as coordinator for this effort, and the Executive Order required a progress report by January 2006 and biannually thereafter. As a result, the Climate Act Team was created by the California Environmental Protection Agency. The first report from the Climate Act Team was released in March of 2006, which proposed to meet the emissions targets through voluntary compliance and state incentive and regulatory programs.

Currently only the 2020 target has been adopted by the state through legislation (see Assembly Bill 32, below). As a result, all of the impact discussions, mitigation, and strategies are based on meeting the 2020 target, not the longer-term 2050 target. If the 2050 target is adopted during the life of the General Plan, amendments to the General Plan strategies outlined in the sections to follow will become necessary.

#### ASSEMBLY BILL 32

In September 2006, Assembly Bill (AB) 32 was signed by Governor Schwarzenegger of California. AB 32 requires that California GHG emissions be reduced to 1990 levels by the year 2020, just like Executive Order S-3-05. However, AB 32 is a comprehensive bill that requires the California Air Resources Board (ARB) to adopt regulations requiring the reporting and verification of statewide greenhouse gas emissions, and it establishes a schedule of action measures. AB 32 also requires that a list of emission reduction strategies be published to achieve emissions reduction goals.

As of this writing, the first six critical path items have occurred. AB 32 is in effect and the list of early action measures was adopted by the ARB on June 21, 2007 (Resolution 07-25), and many other measures were added at a hearing on October 25, 2007. The Scoping Plan was adopted on December 11, 2008. Regulations to implement various early action measures have been adopted (such as the Low Carbon Fuel Standard).

#### SENATE BILL 375

On September 30, 2008, Senate Bill (SB) 375 was signed by Governor Schwarzenegger of California. SB 375 combines regional transportation planning with sustainability strategies in order to reduce greenhouse gas emissions in California’s urbanized areas. Existing law requires each regional transportation planning agency, with in Sacramento County’s case is the Sacramento Area Council of Governments (SACOG), to adopt a Regional Transportation Plan. SB 375 requires that the Regional Transportation Plan must now include a “sustainable communities strategy”. To this end, the ARB must provide SACOG and other regions with GHG emissions reduction targets by June 30, 2010. The Regional Technical Advisory Committee formed to

generate recommendations published their final report on September 29, 2009. The report recommends that the Air Resources Board adopt a uniform statewide target expressed as a per capita reduction metric from 2005 levels.

#### SENATE BILL 97 CHAPTER 185, STATUTES OF 2007

Senate Bill 97 (SB 97) requires that Office of Planning and Research (OPR) to prepare guidelines to submit to the California Resources Agency regarding feasible mitigation of greenhouse gas emissions or the effects of GHG emissions as required by CEQA. The California Resources Agency is required to certify and adopt these revisions to the State CEQA Guidelines by January 1, 2010. The Natural Resources Agency adopted the amendments on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

#### ENDANGERMENT FINDING

On December 7, 2009, the U.S. EPA made an Endangerment Finding and a Cause or Contribute Finding related to greenhouse gases. The U.S. EPA Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) – in the atmosphere threaten the public health and welfare of current and future generations (endangerment). The Administrator also found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare (Cause or Contribute).

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#### STATE OF CALIFORNIA EMISSION REDUCTION/ADAPTATION STRATEGIES

Several strategies to reduce vehicle emissions have been identified by the California Environmental Protection Agency's Climate Action Team. These include, but are not limited to, the following:

#### VEHICLE CLIMATE CHANGE STANDARDS

With the passage of AB 1493, Pavley, Chapter 200, Statutes of 2002, California moved to the forefront of reducing vehicle climate change emissions. This bill required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004. The ARB analysis of this regulation indicates emissions savings of 1 million tons CO<sub>2</sub> equivalent (MMTCO<sub>2</sub>e) by 2010 and 30 million tons CO<sub>2</sub> equivalent by 2020.



## DIESEL ANTI-IDLING

Reduced idling times and the electrification of truck stops can reduce diesel use in trucks by about 4 percent, with major air quality benefits. In July 2004 the ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling. AB 32 analysis indicates that anti-idling measures could reduce climate change emissions by 1.2 MMTCO<sub>2e</sub> in 2020.

## OTHER NEW LIGHT DUTY VEHICLE TECHNOLOGY IMPROVEMENTS

In September 2004 the California Air Resources Board approved regulations to reduce climate change emissions from new motor vehicles. The regulations apply to new passenger vehicles and light duty trucks beginning with the 2009 model year. The standards adopted by the Board phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009 – 2012) standards will result in about a 22 percent reduction as compared to the 2002 fleet, and the mid-term (2013 – 2016) standards will result in about a 30 percent reduction.

New standards would be adopted to phase in beginning in the 2017 model year (following up on the existing mid-term standards that reach maximum stringency in 2016). Assuming that the new standards call for about a 50 percent reduction, phased in beginning in 2017, this measure would achieve about a 4 MMT reduction in 2020. The reduction achieved by this measure would significantly increase in subsequent years as clean new vehicles replace older vehicles in the fleet – staff estimates a 2030 reduction of about 27 MMT.

## EXECUTIVE ORDER S-01-07

This Executive Order was signed by Governor Schwarzenegger on January 18, 2007 and directed the Climate Action Team to determine whether the items in the Order could be established as an early action measure pursuant to AB 32 – which the Climate Action Team has now done. The Executive Order states that the State of California relies on petroleum-based fuels for 96% of its transportation needs, there were more than 24 million motor vehicles registered in California, and statewide gasoline consumption was almost 16 billion gallons in 2005. To address the carbon emitted by this use of fuel, the Executive Order states that a statewide goal must be established to reduce the “carbon intensity of California’s transportation fuels” by at least 10% by the year 2020 and that a Low Carbon Fuel Standard for transportation fuels be established. The Low Carbon Fuel Standard applies to all “refiners, blenders, producers or importers of transportation fuels in California”.

## CALIFORNIA CLIMATE ADAPTATION STRATEGY

In December 2009, the California Resources Agency, in coordination and partnership with multiple other state agencies, released their California Climate Adaptation Strategy. This document summarizes the best known science on climate change impacts in seven specific sectors, including: public health, biodiversity-habitat, ocean & coastal

resources, water management, agriculture, forestry, and transportation and energy infrastructure. The strategy provides recommendations on how to manage against threats to these sectors. The strategy is in direct response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events.

## SACRAMENTO COUNTY EMISSION REDUCTION EFFORTS

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### CLIMATE ACTION PLAN

In May of 2009 Sacramento County published a Phase I Draft Climate Action Plan (Phase I CAP). The Phase I CAP provides a framework and overall policy strategy for reducing greenhouse gas emissions and managing our resources in order to comply with AB 32. It also highlights actions already taken to become more efficient, and targets future mitigation and adaptation strategies. This document is available at <http://www.climatechange.saccounty.net/default.htm>. The draft Phase I CAP contains policies/goals related to agriculture, energy, transportation/land use, waste, and water.

Goals in the section on agriculture focus on promoting the consumption of locally-grown produce, protection of local farmlands, educating the community about the intersection of agriculture and climate change, educating the community about the importance of open space, pursuing sequestration opportunities, and promoting water conservation in agriculture. Actions related to these goals cover topics related to urban forest management, water conservation programs, open space planning, and sustainable agriculture programs.

Goals in the section on energy focus on increasing energy efficiency and increasing the usage of renewable sources. Actions include implementing green building ordinances and programs, community outreach, renewable energy policies, and partnerships with local energy producers.

Goals in the section on transportation/land use cover a wide range of topics but are principally related to reductions in vehicle miles traveled, usage of alternative fuel types, and increases in vehicle efficiency. Actions include programs to increase the efficiency of the County vehicle fleet, and an emphasis on mixed use and higher density development, implementation of technologies and planning strategies that improve non-vehicular mobility.

Goals in the section on waste include reductions in waste generation, maximizing waste diversion, and reducing methane emissions at Kiefer landfill. Actions include solid waste reduction and recycling programs, a regional composting facility, changes in the waste vehicle fleet to use non-petroleum fuels, carbon sequestration at the landfill, and methane capture at the landfill.

Goals in the section on water include reducing water consumption, emphasizing water efficiency, reducing uncertainties in water supply by increasing the flexibility of the water allocation/distribution system, and emphasizing the importance of floodplain and open space protection as a means of providing groundwater recharge. Actions include metering, water recycling programs, water use efficiency policy, water efficiency audits, greywater programs/policies, river-friendly landscape demonstration gardens, participation in the water forum, and many other related measures.

Publication of a Phase II CAP is anticipated to occur one year from the adoption of the 2030 Sacramento County General Plan. This Phase II CAP is intended to flesh out the strategies involved in the Phase I CAP, and will include economic analysis, intensive vetting with all internal departments, community outreach/information sharing, timelines, and detailed performance measures.

#### CHICAGO CLIMATE EXCHANGE

In February 2007, the County joined the Chicago Climate Exchange. The Chicago Climate Exchange is the world's first and North America's only voluntary, legally binding rules-based greenhouse gas (GHG) emission reduction and trading system. Chicago Climate Exchange Phase I members commit to reduce GHG emissions 1% per year over the years 2003 through 2006 relative to a 1998 through 2001 average baseline. Members agree to reduce GHG emissions by a total of 4% below the baseline by 2006. Chicago Climate Exchange Phase II members commit to reduce GHG emissions from 1¼% to ½% per year through the years 2007 through 2010 for grand total of 6% below the baseline.

#### ENERGY CONSERVATION/ENERGY EFFICIENCY PROGRAM

The Board of Supervisors approved an Energy Conservation/Energy Efficiency Program in 2001. The essence of the program is to reduce electrical energy usage during peak periods of the day. The program contains ten measures such as participating in Sacramento Municipal Utility Districts Voluntary Emergency Curtailment Program, setting building temperatures to 78° F to decrease cooling demand and dual switching of lights. The preliminary baseline for direct and indirect emissions for the County is 226,700 metric tons of CO<sub>2</sub>.

#### CALIFORNIA CLIMATE ACTION REGISTRY

The County joined the California Climate Action Registry (Registry) in December 2006. The Registry is non-profit public/private partnership that serves as a voluntary GHG registry to protect, encourage and promote early actions to reduce GHG emissions. Registry participants agree to calculate, certify and publicly report GHG emissions. The Registry provides a reporting tool, standards and protocol for reporting GHG emissions.

AB32 recognizes participation in the Registry in a number of ways. First, AB 32 requires the ARB to incorporate the standards and protocols developed by the Registry in the rulemaking process. Second, AB 32 provides that entities that join the Registry

prior to December 31, 2006 and report their emissions according to the Registry protocols will not be required to significantly alter their reporting program.

### LOCAL GOVERNMENTS FOR SUSTAINABILITY (ICLEI)

The Local Governments for Sustainability is administered under the International Council for Local Environmental Initiatives (ICLEI), which the County joined in 2007. Cities for Climate Protection™ (CCP) is ICLEI's flagship campaign. The program is designed to educate and empower local governments worldwide to take action on climate change. CCP is a performance-oriented campaign that offers a framework for local governments to reduce greenhouse gas emissions and improve livability within their municipalities. This campaign would give Sacramento County a framework and tools to develop a plan for greenhouse emissions. The basic framework is called the 5 Milestones and consists of the following steps: completion of a baseline emissions inventory and forecast, adoption of an emissions reduction target, development of a Local Action Plan, implementation of policies and measures, and monitoring and verification of results.

The County has completed the emissions inventory and it is available on the Division of Environmental Review and Assessment website at [www.dera.saccounty.net](http://www.dera.saccounty.net) (see the home page under special studies).

### *GREEN FLEETS*

The City and County of Sacramento have adopted a heavy-duty low-emission vehicle (LEV) acquisition policy. The policy goal is to reduce oxides of nitrogen (NOx) emissions from heavy-duty fleet vehicles to meet the year 2005 standard for ozone in the Sacramento Federal Ozone Non-attainment area. The efforts will focus on the conversion of the on-road, heavy-duty equipment fleets to certified low-emission vehicles as these vehicles are replaced as part of regular systematic replacement programs. As of 2004 the County has committed to replace 50% off the fleet to low-emission vehicles.

### *COOL COUNTIES INITIATIVE*

On July 16, 2007 at the National Association of Counties Annual Conference in Richmond, Virginia, 12 pioneering counties representing 17 million people launched "Cool Counties." The Cool Counties initiative seeks to marshal the resources of all 3,066 counties across the nation to address the challenges climate change poses to our communities. On May 27, 2008 the Sacramento County Board of Supervisors approved a resolution to become a Cool County and participate in the initiative.

Participating counties commit to four smart actions:

1. reducing our own contributions to climate change through our internal operations;
2. demonstrating regional leadership to achieve climate stabilization and protect our communities;

3. helping our community become climate resilient;
4. urging the federal government to support our efforts.

These actions are consistent with the state requirements under Assembly Bill (AB) 32 and Executive Order S-3-05, including:

- Assessing local operations that impact greenhouse gas emissions;
- Working to reduce greenhouse gas emissions 80% below current levels by 2050;
- Identifying local vulnerabilities to climate change and creating a plan to address them;
- Working with counties nationally to urge the federal government to adopt legislation to reduce greenhouse gas emissions 80% below current levels by 2050.

## SIGNIFICANCE CRITERIA

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The California Office of Planning and Research, the agency responsible for development and updates to the CEQA Guidelines, has published a draft set of guidelines for climate change. The Natural Resources Agency adopted the amendments on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010. The draft guidelines do not include a numeric significance threshold. One could use the emissions reduction targets established through AB 32, but the measures listed in the published Scoping Plan do not clearly identify the reduction targets that will apply specifically to local government. The Scoping Plan states that local government should set the same ultimate targets as those set forth in AB 32, but does not provide the details necessary to understand how much of the target will be achieved through State actions (such as the low-carbon fuel standard) and how much will be achieved by local action. In the absence of a clear and established method of determining the significance of climate change impacts, Sacramento County has developed its own methodology.

As previously discussed, Sacramento County prepared a GHG emissions inventory for the County, and as an offshoot of that process has published a Draft Climate Action Plan. Sacramento County has also published the Draft Environmental Impact Report for the Sacramento County General Plan Update project (02-0105), which analyzes the potential greenhouse gas emissions resulting from buildout of the proposed General Plan. The General Plan EIR also recommends the adoption of significance thresholds. Though not yet adopted, the Climate Action Plan and the thresholds published in the General Plan EIR form the basis of the significance determinations in this EIR. The significance thresholds published in the General Plan EIR are in Table CC-3 below.

**Table CC-3: Sector Analysis (in MT CO<sub>2</sub>e) and Thresholds for Development**

Sector	2005 Baseline	Percent of Total	Total Minimum Reduction in CO <sub>2</sub> e	2020 Target	Thresholds (MT)
Residential Energy	1,033,142	15.80%	155,373	877,769	1.30 per capita
Commercial & Industrial Energy	793,163	12.10%	118,988	674,175	8.08 per Kft <sup>2</sup>
Wastewater	54,391	0.80%	7,867	46,524	--
Transportation Use	3,610,937	55.0%	540,854	3,070,083	4.56 per capita
Waste	201,399	3.10%	30,484	170,915	--
Agriculture	197,132	3.00%	29,501	167,631	--
High GWP	228,768	3.50%	34,418	194,350	--
Off-Road Vehicle Use	236,466	3.60%	35,401	201,065	--
Airport	200,404	3.10%	30,484	169,920	--
<b>Total</b>	<b>6,555,802</b>	<b>100%</b>	<b>983,370</b>	<b>5,572,432</b>	<b>--</b>

**NOTES:**

1. Population, commercial square footage, and industrial square footage data forecasts for the 2020 year provided by SACOG.
2. Baseline Year emissions from the County Inventory prepared by ICF Jones and Stokes
3. Table assumes that total County 2005 emissions must be reduced by 15%, consistent with the AB 32 Scoping Plan
4. The Total Minimum Reduction is based on the proportion that each sector contributes to emissions (e.g. Commercial/Industrial emissions are 12.1% of the total 2005 emissions, so that sector is also responsible for 12.1% of the total minimum reduction required: 12.1% x 983,370).
5. Development thresholds are not calculated for all sectors because:

*Wastewater* and *Waste* emissions will be reduced through government activities and implementation of the AB 32 Scoping Plan, not through development thresholds.

*Agriculture* and *Airport* emissions are not within the jurisdiction of the County, and must be reduced through State and Federal actions

*High Global Warming Potential* (High GWP) gases are not directly related to development (they come primarily from refrigerants), and must be reduced by State and Federal actions

*Off-Road Vehicle Use* includes construction equipment, rail, recreational watercraft and land craft, and other such combustion vehicles. Except for construction equipment, the County does not have jurisdiction over these uses. Development projects will be required to reduce emissions from construction equipment, but that will need to be determined on a per-project basis, depending on the size of the site and the number and type of equipment that will be used.

## METHODOLOGY

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To the extent possible, the project's GHG emissions have been quantified using URBEMIS, the same model and data used in the Air Quality chapter analysis. These emissions are compared, in the form of a percentage, to current ARB estimates of statewide emissions and 1990 emissions. Project emissions are also examined in light of existing statewide or County emissions reductions strategies, to determine whether the project would significantly offset anticipated reductions. Finally, there are published white papers and other documents (including a letter published by the Attorney General's office) that list potential means of reducing emissions. The project will be examined to determine whether any of these strategies have been incorporated, or need to be incorporated through mitigation. As much as possible, the amount these measures would reduce potential impacts will be quantified. However, the research on many measures is scanty, so it is not always clear how much of an emissions reduction could be expected. A menu of mitigation measures are offered that are reasonable, feasible and germane to the project.

## IMPACTS AND ANALYSIS

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The following section discloses the potential impacts of the proposed project on global climate change, and the potential impacts of global climate change on the proposed project. Mitigation measures have been identified where feasible.

### IMPACT: ADVERSE IMPACTS TO THE PROJECT FROM CLIMATE CHANGE

Global climate change is a complex phenomenon that is influenced by many environmental factors. There are also many different climate or hydrologic modeling tools available, each with strengths and weaknesses. While changes to the existing climate landscape can be demonstrated by looking at the historic record, it becomes challenging to predict future trends. The process must be simplified to some extent. Climatologists and others who model climate change must make certain assumptions, such as establishing a fixed rate of temperature change, in order to proceed with modeling. Therefore, scientists involved in these modeling efforts do not try to be absolutely predictive, but instead use different model types with different sets of assumptions to capture a range of possible scenarios. It is also necessary to update the model with the latest available data on a regular basis in order to sync the models with current conditions. There is no single, certain prediction related to the probability of environmental effects. Scenarios are rated as being very likely if many different models come up with very similar results, and as uncertain if many different models report very different results. The sections below rely on information from several different published sources and provide a qualitative analysis of potential impacts as they affect North America, California, Sacramento County, and the project area.

### *TEMPERATURE*

Significant increases in the frequency, intensity, and duration of summertime extreme heat days, defined as the 10% warmest days of summer, are projected due to climate change (Miller et. al., 2007). Temperature change is the driver for climate change, impacting environmental processes that will in turn impact human life. There is strong agreement that many of the most damaging effects of climate change will begin to occur after temperatures increase beyond 2 degrees Celsius into the 3 or 4 degree range. The IPCC Working Group III report determined that reductions of 50 to 80% would be needed by 2050 in order to stabilize temperature rise at no more than 2 degrees Celsius (IPCC, 2007c). The limits set forth in Executive Order S-3-05 and in AB 32 mirror this research.

For California as a whole, the total number of days of extreme heat is projected to *double* relative to historical mean of 12 days per summer, to an average of 23–24 days per summer by 2034. By 2064, this is projected to increase to 27 – 39 days. Aside from this global research, various research papers and technical studies have been produced that look specifically at impacts in California. One of these is a white paper titled “Climate Scenarios for California”, sponsored by the California Energy Commission, which used many of the same assumptions and scenarios as the IPCC reports, but scaled the modeling down to the California level. This paper postulates that the average temperature change from the 1961 – 1990 period to the 2070 – 2099 future will be more marked during the summer months than during the winter months (Cayan et. al., 2006a).

Higher temperatures would have direct effects on the health of many organisms, including humans. It is probable that rising temperatures will cause an increase in the number of humans who die or become ill due to heatwaves, may change the range (geographically or seasonally) of various infectious disease vectors (such as mosquitoes), and increase cardio-respiratory disease prevalence and mortality associated with ground-level ozone (IPCC, 2007b). Many individual plants may also die or become damaged during heatwaves, as even if there is ample water in the soil, water loss through the leaves will outpace the ability of the plant to draw water from the soil. Warmer winters would bring some benefits to some parts of California, where cold-related deaths and illnesses during the wintertime would be reduced. (Cayan et. al., 2006a) However, the greater Sacramento area does not typically experience extreme cold under current conditions, and in any case the stated negative effects would be expected to outweigh this positive effect.

### *WATER SUPPLY AND FLOODING*

Although current forecasts vary, the effects of global climate change on precipitation and temperature regimes in California could lead to significant challenges in securing an adequate water supply for a growing population and California’s agricultural industry. An increase in precipitation falling as rain rather than snow could also lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This



scenario would place more pressure on California's levee/flood control system. California also relies heavily on gradual snowmelt from the Sierra Nevada to supply water.

According to the Intergovernmental Panel on Climate Change (IPCC) 2007 report, the annual mean warming in North America is likely to exceed the global mean warming in most areas and snow season length and snow depth are very likely to decrease in most of North America (IPCC, 2007a). These trends have already been observed, as the snow pack in the Sierra Nevada and the Cascade Range has been declining over the last few decades of record, and the average temperature in California has increased one degree Fahrenheit over the past 50 years (Cayan et.al., 2006a). Although these general statements are made, it is recognized that although there is high model agreement on warming trends the agreement among precipitation and hydrologic trend models is not nearly so strong.

The Climate Scenarios for California white paper modeled changes in Snow Water Equivalent as of April 1, when the snow season begins to taper off. Snow Water Equivalent is the amount of water contained within the snowpack. It can be thought of as the depth of water that would theoretically result if you melted the entire snowpack instantaneously. The analysis results differ widely depending on which model and emissions scenario is used. As compared to the 1961 – 1990 period of record, the net change in Snow Water Equivalent ranges from +6% to -29% (for the 2005 – 2034 period), from -12% to -42% (for 2035 – 2064), and from -32% to -79% (for the 2070 – 2099 period). These results highlight the lack of agreement found amongst hydrologic models. The ranges of projected change vary widely, and in the near-term some modeling even predicts an *increase* in Snow Water Equivalent. However, in the long-term all of the models do agree that Snow Water Equivalent will be reduced, even though further refinement of the modeling will need to be completed to narrow down the range of reductions. (Cayan et. al., 2006a)

The modeling results indicate that snow losses have greatest impact in relatively warm low-middle and middle elevations between about 3280 feet and 6560 feet (losses of 60% to 93%) and between about 6560 feet and 9840 feet (losses of 25% to 79%). The central and northern portions of the Sierra Nevada contain large portions of this low-middle and middle elevations, and are subject to the heaviest reductions in snow accumulation. (Cayan et. al., 2006a).

The effect of climate change on future demand of water supply remains uncertain (DWR 2006), but changes in water supply are expected. The California Department of Water Resources (DWR) has sponsored or published a number of papers on the interaction between climate change and water supply, and has included a Climate Change Portal on the DWR website ([www.climatechange.water.ca.gov](http://www.climatechange.water.ca.gov)). Climate change is also addressed in the 2009 California Water Plan update (public review draft of Volumes 1, 2, and 3 released January 2009). Adaptation is the primary thrust of the strategies outlined in the public review draft, with a focus on reducing water demand, improvements in operational efficiency, and increasing water supply.

The American River and many other major and minor rivers within the County are largely fed by snowmelt within the low-middle and middle elevation range that is expected to suffer the greatest reductions in snowpack. It can be concluded that Sacramento County will see a significant reduction in snowmelt-driven water supply by the end of this century. In the shorter term, it is less clear whether there will be a significant reduction in snowpack. Modeling results indicate that snowpack may either increase by 6% or decrease by as much as 29% by the year 2034. Given this uncertainty, it would be speculative to attempt to provide a quantified analysis of the effects of climate change on current water sources within Sacramento County.

#### *SURFACE WATER QUALITY*

Water quality is affected by several variables, including the physical characteristics of the watershed, water temperature, and runoff rate and timing. A combination of a reduction in precipitation, and/or shifts in volume and timing of runoff flows, and the increased temperature in lakes and rivers could affect a number of natural processes that eliminate pollutants in water bodies. For example, although there may be more flood events, the overall stream flow decrease from a lack of summer snowpack could potentially concentrate pollutants and prevent the flushing of contaminants from point sources. The increased storm flows could tax urban water systems and cause greater flushing of pollutants to the Sacramento-San Joaquin Delta and coastal regions (Kiparsky and Gleick 2003). Still, considerable work remains to determine the potential effect of global climate change to water quality.

#### *GROUNDWATER*

A shift from snowfall to rainfall could reduce groundwater recharge, even if total precipitation remains constant. However, little work has been done on the effects of climate change on specific groundwater basins, groundwater quality or groundwater recharge characteristics (Kiparsky and Gleick 2003). Research has focused more heavily on solidifying precipitation and streamflow projections, which are both necessary elements to determining which of the many possible groundwater scenarios are most probable. Water recharge could be increased if winters are warmer and wetter, and more water can filter into the soil, or this benefit could be offset by greater rates of evaporation and shorter rainfall seasons. Until more research into groundwater effects is completed, climate change impacts to groundwater will remain highly uncertain.

#### *FISHERIES AND AQUATIC RESOURCES*

The health of river ecosystems is highly dependent on water temperatures and stream flows. The IPCC Working Group II report recites a litany of temperature and flow effects on fisheries that have already been observed: the sea-run<sub>3</sub> salmon stocks are in steep decline throughout much of North America (Gallagher and Wood, 2003), Pacific salmon have been appearing in Arctic rivers (Babaluk et al., 2000), and salmonid species have been affected by warming in U.S. streams (O'Neal, 2002). It is probable that increases in average temperatures in the state will cause corresponding increases in water

temperatures. Rates of fish-egg development and mortality increase with temperature rise within species-specific tolerance ranges (Kamler, 2002). Also, many fish species migrate into Sacramento County waterways during specific seasons to breed, and these fish rely on increased late-fall and early winter flows in order to complete the migration. If increased flows are delayed, possibly as a result of lessened groundwater recharge or shifts in the onset of the rainy season, this would be a barrier to migration. These potential effects could further endanger the sustainability of aquatic populations that are already listed through the Federal or California Endangered Species Acts, or could cause non-listed species to require listing under the Act.

### *SEA LEVELS*

The IPCC Working Group I report contains a thorough discussion of the current understanding of sea level rise and climate change. As global mean temperatures warm, the rate at which the sea level rises is expected to increase. While there is strong model agreement that sea levels will continue to rise and that the rate of rise will increase, the ultimate amount of rise is uncertain. (IPCC 2007a) A white paper entitled *Projecting Future Sea Level*, published by the California Climate Change Center, estimated a sea level rise from 4 – 35 inches every century (0.3 – 2.9 feet), depending on the model and assumptions used (Cayan et. al., 2006b).

Although Sacramento County contains no coastal land, the Delta region of Sacramento County is hydrologically connected to the San Francisco Bay and will be directly influenced by sea level rise. Among the more critical potential effects of sea level rise in Sacramento County are threats to flood protection and increased salinity in the Delta (Kiparsky and Gleick 2003). In recognition of this concern, California passed a bond measure intended to finance the process of stabilizing and improving California's levee systems. The California Department of Water Resources is also continuing to study the issue to determine what other system improvements may be necessary to adapt to changes in water surface elevations.

Water for the State Water Project and the federal Central Valley Project is taken from the south Delta. If salt water from the San Francisco Bay backs upward through the Delta system, freshwater supplies could be degraded. There are potential solutions to this problem, should it occur, that continue to be examined by the California Department of Water Resources. A purification process could be implemented, but extracting salt from water tends to be costly. A peripheral canal that would bypass the Delta is another option that was originally suggested in the early 1980's, but remains highly controversial.

### *WILDLAND FIRE RISK*

With climate change, the potential for wildland fires may change due to changes in fuel conditions (transitioning forests to chaparral/grasslands for example), precipitation (longer dry seasons, higher extreme temperatures), and wind (affecting potential spread), among other variables.

Westerling and Bryant (2006) estimated future statewide wildfire risk from a statistical model based on temperature, precipitation, and simulated hydrologic variables. These are conservative estimates because they do not include effects of extreme fire weather, but implications are nonetheless quite alarming. Projections made for the probabilities of “large fires” – defined as fires that exceed an arbitrary threshold of 200 hectares (approximately 500 acres) – indicate that the risk of large wildfires statewide would rise almost 35% by mid-century and 55% by the end of the century under a medium-high emissions scenario, almost twice that expected under lower emissions scenarios. Estimates of increased damage costs from the increases in fire season severity (Westerling and Bryant 2006) are on the order of 30% above current average annual damage costs.

A second study explored, through a case study in Amador and El Dorado Counties, the effects of projected climate change on fire behavior, fire suppression effort, and wildfire outcomes (California Climate Change Center 2006b). Climate and site-specific data were used in California Department of Forestry and Fire Protection (CDF) standard models to predict wildfire behavior attributes such as rate of spread and burning intensity. The study found an increase in the projected area burned (10%–20%) and number of escaped fires (10%–40%) by the end of century, under the drier climate scenarios. However, the less dry model showed little change.

#### *AGRICULTURE*

Agriculture, along with forestry, is the sector of the California economy that may be most be affected by a change in climate. Regional analyses of climate trends over agricultural regions of California suggest that climate change is already in motion. Over the period 1951 to 2000, the growing season has lengthened by about a day per decade, and warming temperatures have resulted in an increase of 30 to 70 growing degree days per decade, with much of the increase occurring in the spring. Climate change affects agriculture directly through increasing temperatures and rising CO<sub>2</sub> concentrations, and indirectly through changes in water availability and pests (California Climate Change Center 2006a).

Crop growth models show that a warming from a low to a higher temperature generally raises yield at first, but then becomes harmful. Possible effects of excessively high temperature include: decreased fruit size and quality for stone fruits, premature ripening and possible quality reduction for grapes, reduced fruit yield for tomatoes, increased incidence of tipburn for lettuce, and similar forms of burn for other crops. From a variety of studies in the literature, photosynthesis increases when a plant is exposed to a doubling of CO<sub>2</sub>. However, whether this translates into increased yield of economically valuable plant product is uncertain and highly variable. Also, elevated CO<sub>2</sub> levels are associated with decreased concentrations of mineral nutrients in plant tissues, especially a decrease in plant nitrogen, which plays a central role in plant metabolism. Some crops may benefit in quality from an increase in CO<sub>2</sub> while some crops are harmed by an increase in CO<sub>2</sub>. Growth rates of weeds, insect pests, and pathogens are also likely to increase with elevated temperatures, and their ranges may expand (California Climate Change Center 2006a).

Over time, new seed varieties could be developed that are better adapted to the changed climate and pest conditions, and entirely new crops may be found to meet pharmaceutical or energy supply needs. However, some of these adaptations may require publicly supported research and development if they are to materialize (California Climate Change Center 2006a).

#### *RAPID CLIMATE CHANGE*

Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. However, sudden and unexpected changes in climate could leave many of the agencies responsible for management of vulnerable sectors (water supply, levees, health, etc) unprepared, and in extreme situations would have significant implications for California and the health and safety of its denizens. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years (DWR 2006).

#### *CONCLUSION*

The effects of climatic changes on the Sacramento region are potentially significant, and can only be mitigated through both adaptation and reduction strategies. Sacramento County is requiring that this project, as well as other projects in the County, mitigate for their emissions. Adaptation strategies related to climate change may involve new water supply reservoirs or other storage options, changes to dam release schedules, changes to medical and social service programs, and other broad-level actions. Most of these strategies are within the auspices of the State of California, not local government. This is recognized within the AB 32 Scoping Plan that has been adopted by the State, as well as publications by agencies such as the California Department of Water Resources. Therefore, by requiring mitigation of projects that may result in significant greenhouse gas emissions, and by adopting County programs and changes in government operations (as described in the Sacramento County Emission Reduction Efforts section), the County is implementing all feasible strategies to reduce the effects of climate change on the region.

It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. Impacts are considered **significant and unavoidable**.

#### *MITIGATION MEASURES*

None available.

ESTIMATED PROJECT EMISSIONS

Project emissions were estimated using the URBEMIS model. However, this model is limited because it is not capable of calculating emissions resulting from energy usage in project buildings. Table CC-4 below shows the difference in CO<sub>2</sub> emissions when the proposed project is compared to the existing conditions. The year used in the URBEMIS modeling for the existing condition is 2011 in order to reflect current emissions standards while the year used for the proposed project is 2020 in order to reflect future emissions standards as well as the date emission reduction requirements related to AB 32 are to be met. The “Area” emissions below are emissions that result from sources such as woodburning stoves and lawnmowers, not from electricity or natural gas usage. The “Operational” CO<sub>2</sub> emissions are emissions that result from vehicular travel to and from the project. Although there are multiple calculators in existence that will give the emissions resulting from the energy output of a home or business, none of these can be applied to general projects – they are designed to calculate emissions for individual homeowners or business who know their specific internal procedures and annual energy usage.

The table below shows that the “Area” and “Operational” CO<sub>2</sub> emissions generated in the proposed project condition as they compare to those in the current condition.

**Table CC-4: URBEMIS Results for CO<sub>2</sub>**

Season	Area	Operational	Total
Summer	102,736.15 lbs/day	862,604.58 lbs/day	965,340.73 lbs/day
Winter	300,137.67 lbs/day	688,498.91 lbs/day	988,636.58 lbs/day
Annual Total	25,504.59 tons/year	146,833.89 tons/year	172,338.48 tons/year

**Table CC-5: Relative CO<sub>2</sub> Emissions (in CO<sub>2</sub> Equivalents)**

Source	CO <sub>2</sub>	% of State - 2004	% of State - 1990	% of Entire County	% of Unincorporated County
Project	.172 MMT/yr	.040%	.044%	1.22%	2.65%
Unincorporated County	6.5 MMT/yr	1.5%	1.7%	46%	
Entire County	14 MMT/yr	3.2%	3.6%		
State – 1990	389 MMT/yr				
State – 2004	427 MMT/yr				

MMT: Million Metric Tons

In order to quantify mitigation requirements, the difference in the results of the existing and proposed project runs is utilized. As shown in Table CC-4, above, the proposed Corridor would result in operational CO<sub>2</sub> emissions associated with full build-out of the Corridor. As discussed above in the “Significance Criteria” discussion and illustrated in Table CC-3 emissions need to be looked at on a sector-by-sector basis in order to meaningfully mitigate impacts associated with greenhouse gas emissions. The following tables, calculated by using URBEMIS, show the difference in CO<sub>2</sub> emissions for the proposed project as compared to what is generated in the existing condition. Table CC-6 shows the CO<sub>2</sub> resulting from the proposed residential uses while Table CC-7 shows the CO<sub>2</sub> from the proposed commercial uses.

**Table CC-6: URBEMIS Results of CO<sub>2</sub> for Residential Land Use Differences**

Season	Area	Operational	Total
Summer	87,806.52 lbs/day	441,679.88 lbs/day	529,486.40 lbs/day
Winter	285,210.85 lbs/day	353,785.86 lbs/day	638,996.71 lbs/day
Annual Total	22,780.20 tons/year	75,259.69 tons/year	98,039.89 tons/year

**Table CC-7: URBEMIS Results of CO<sub>2</sub> for Commercial Land Use Differences**

Season	Area	Operational	Total
Summer	14,929.62 lbs/day	420,910.37 lbs/day	435,839.99 lbs/day
Winter	14,926.82 lbs/day	335,115.69 lbs/day	350,042.51 lbs/day
Annual Total	2,724.39 tons/year	71,596.96 tons/year	74,321.35 tons/year

The following discussions detail project generated CO<sub>2</sub> emissions related to transportation sector emissions as well as residential and commercial energy sector emissions.

## IMPACTS OF THE PROJECT ON CLIMATE CHANGE

### *RESIDENTIAL LAND USE*

#### **RESIDENTIAL TRANSPORTATION SECTOR EMISSIONS**

The CO<sub>2</sub> emissions associated with the residential transportation sector were quantified utilizing URBEMIS. As discussed in the “Estimated Project Emissions” section above, the “Operational” emissions shown in Table CC-6 are emissions that result from vehicular travel to and from the project. Table CC-6 shows that the operational emissions associated with vehicular travel to and from new residential land uses will be 75,259.69 tons per year of CO<sub>2</sub>. The per capita calculations were figured as follows:

7,200 new residential units in the North Watt Avenue Corridor with 75,259.69 MT CO<sub>2</sub> emitted per year

7,200 homes x 2.7 people per home= 19,440 people

75,259.69 MT per year / 19,440 people = 3.87 MT

Project related Residential Transportation Sector Emissions equal 3.87 MT per capita and are below the 4.56 MT per capita threshold by 0.69 MT and are **less than significant**.

### **RESIDENTIAL ENERGY SECTOR EMISSIONS**

The precise emissions associated with residential energy use cannot be fully quantified or even modeled at this point due to the fact that energy use of new homes in the North Watt Corridor project area, over the planning horizon of 20 years, may vary dramatically. For the purposes of analysis and in order to provide meaningful mitigation, it is assumed that the residential energy use for future residential units associated with the Corridor will be consistent with, or at least equivalent to, the average residential energy emissions quantified for the County. Based on the County average, formulated from the 2005 County Emission Inventory, it is assumed that 1.84 MT of CO<sub>2</sub> will be emitted per capita for the residential energy use sector. According to the 2006 U.S. Census, the average household size in Sacramento County is 2.7 people per home. Thus, 4.97 MT (1.84 MT/per capita x 2.7 people per home) of CO<sub>2</sub> will be emitted from residential energy use per household. The thresholds stated above in Table CC-3, allows for up to 1.3 MT per capita or 3.51 MT per household to be emitted in order to be under thresholds. Utilizing the County average residential energy usage, the project would be 0.54 MT per capita or 1.46 MT per household over the threshold. Future applicants for residential projects in the North Watt Avenue Corridor area would be required to mitigate CO<sub>2</sub> emissions associated with residential energy use so that the per capita is at or below the 1.3 MT per capita or 3.51 MT per household (based on 2.7 people per home). This should be easily achievable since Title 24 (energy code) is becoming much more stringent compared to the older housing stock energy usage reported in the inventory. In addition, Sacramento County is working on a Green Building Code that should be in effect by 2011.

It is recognized that the above analysis is a conservative one due to the fact that residential energy use in new residential developments will likely be less than existing County residential stock. Discounts in emissions for future residential projects will be realized due to new, more efficient building materials and technologies that will likely become the standardized methods of construction in the building industry over the planning horizon. Mitigation, included below, requires a reduction in per capita emissions from the County average to the threshold of 1.3 MT per capita or below. A stipulation is added that a future project applicant can provide a “project specific” analysis that demonstrates a reduction in residential energy use over the County average, thereby possibly reducing the mitigation obligation compared to utilizing the County average per capita.



Methods for reducing emissions and reduction strategies already in place for the residential land uses are discussed further below.

### **RESIDENTIAL USE REDUCTION STRATEGIES**

Future residential projects will be required to mitigate for emissions associated with residential energy use emissions, which equates to at least 0.54 MT per capita in order to meet the 1.3 MT per capita energy sector emissions threshold. The associated per household mitigation obligation, based on 2.7 people per home, is 1.46 MT. To achieve this level of mitigation some reduction strategies are outlined below.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) has developed interim guidelines for GHG emissions reductions, similar to the guidelines for Air Quality Management Plans (AQMPs). In the guidelines, one point is equivalent to a 1% reduction. There are a total of 48.825 points provided for commercial projects, 58.825 points for mixed use developments, and 61.475 for residential projects. The Sacramento Community Planning and Development Department, Planning Division has submitted an AQMP which details 13 measures that reduce project related air quality impacts (refer to Appendix H). All of the measures are directly applicable to future residential projects within the Corridor and the reduction of associated CO<sub>2</sub> emissions. Utilizing the SMAQMD interim guidelines for GHG emissions reductions, the applied measures would reduce residential CO<sub>2</sub> emissions by 15.75 percent utilizing the following measures:

1. Proximity to Bike Path/Bike Lanes
2. Pedestrian Network
3. Pedestrian Barriers Minimized
4. Bus Shelter for Existing Transit Service
5. Traffic Calming
6. Pedestrian Pathway Through Parking
7. Street Grid
8. Suburban Mixed-Use
9. Bike Parking
10. Parking Reduction Plan
11. Shared Parking
12. Curb-Side Parking
13. Off-Street Parking

The above measures are included as measures in the AQMP, which was endorsed by SMAQMD on July 16, 2010. Future projects will be required to adhere to the endorsed AQMP, and will effectively reduce GHG emissions impacts related to residential projects. Incorporation of the above measures into future project designs reduces residential CO<sub>2</sub> emissions noted as the county average by 15.75 percent. This reduction would effectively reduce the assumed emissions volume from 1.84 MT to 1.55 MT and reduces the per capita mitigation requirement from 0.54 MT to 0.25 MT per capita.

To mitigate 0.25 MT CO<sub>2</sub> per capita for residential projects, there are a number of quantifiable measures that have been developed that can be feasibly implemented by future project applicants. Table CC-8 outlines the quantifiable measures for reduction in CO<sub>2</sub>. It should be noted that the measures listed in Table CC-8 represent those measures that are available at this time and additional quantifiable measures are expected in the near future. Project proponents may implement other quantifiable measures as long as an appropriate description and quantifiable data accompanies such a request.

Additionally, there are a number of other measures that are currently un-quantifiable or qualitative that would result in reduction of CO<sub>2</sub> emissions. Table CC-9 provides a list of un-quantifiable/qualitative measures (or currently un-quantifiable), of which a certain percentage reduction could be negotiated depending on specific details associated with how they are implemented into the site design.

**Table CC-8: Quantifiable CO<sub>2</sub> Emissions Reductions**

ENERGY-SAVING ITEM	WITHOUT* (LBS CO <sub>2</sub> EQUIVALENT/YEAR)	WITH (LBS CO <sub>2</sub> EQUIVALENT/YEAR)
REPLACEMENT OF STANDARD BULBS WITH CFLS (15/HOME)	15,882.1	3,021.7
SOLAR PANELS (PER 1 KW)	5,965.3	4,850.0
TANKLESS NATURAL GAS WATER HEATER	1,724.6	1,465.9
COOL ROOF	5,135.3	3,420.3
ENERGY STAR DOUBLE-GLAZED WINDOW, LOW-E, VINYL FRAME		
ENERGY STAR HVAC	669.6	522.2
ENERGY STAR CLOTHES WASHER (ELECTRIC)	717.2	478.5
ENERGY STAR CLOTHES WASHER (NATURAL GAS)	468.1	313.4
ENERGY STAR DISHWASHER	382.0	270.5
ENERGY STAR REFRIGERATOR	428.7	364.2
SOLAR WATER HEATING SYSTEM		
DROUGHT-TOLERANT LANDSCAPING	343.0	223.0
LOW-FLOW TOILETS (3.61 GAL/FLUSH TO 1.25 GAL/FLUSH)	79.9	27.7

SOURCE: RESEARCH INFORMATION PROVIDED BY JSA ASSOCIATES, AND AVAILABLE FOR REVIEW AT 827 7<sup>TH</sup> STREET, ROOM 220, SACRAMENTO, CA.

\*Instead of the high-efficiency option, the home will have the item or equipment typical of an older home (e.g. single-glazed windows, 7-year old water heater, etc).

**Table CC-9: Qualitative (or Currently Un-Quantified) CO<sub>2</sub> Emissions Reductions**

ENERGY SAVING ITEM	NOTES
PARKING LOT SHADING BEYOND CODE	
SMART LIGHTS	OFF-STREET
LEED CERTIFICATION OR	NON-RESIDENTIAL

ENERGY SAVING ITEM	NOTES
ELEMENTS OF LEED DESIGN	
BUILD IT GREEN (BIG)	RESIDENTIAL
SOLAR WATER HEATING	
CONSTRUCTION WASTE RECYCLING	50% OR MORE
TREE PLANTING	AT LEAST ONE ON EACH LOT (2 WHERE FEASIBLE). ONE MUST BE PLACED IN THE FRONT YARD AND ORIENTED TO SHADE THE SIDEWALK. THE SECOND MAY BE PLACED ANYWHERE ON THE LOT TO SHADE THE HOME FROM AFTERNOON SUN.
PURPLE PIPE	
SOLAR FOR POOLS	
EXCEED TITLE 24	
LOW IMPACT DEVELOPMENT IRRIGATION/STORM WATER	EXAMPLES OF LOW IMPACT DEVELOPMENT:
	INCREASE PERVIOUS SURFACE
	PRESERVING OR CREATING VEGETATED AREAS
	DIVERT FLOWS FROM IMPERVIOUS SURFACES AWAY FROM DRAINS AND INTO VEGETATION
	INTERCEPTING RAIN USING TREES
	BIO-RETENTION OR STORMWATER PLANTER
	<a href="http://WWW.LOWIMPACTDEVELOPMENT.ORG/">WWW.LOWIMPACTDEVELOPMENT.ORG/</a>
STATE OF THE ART WIRING TECHNOLOGIES	FIBER OPTIC, OR CONDUIT FOR FIBER INSTALLED TO FACILITATE TELECOMMUTING OR PREWIRING FOR T-1 SERVICE
NATURAL GAS LINES OR ELECTRICAL OUTLETS TO BACK YARDS FOR BBQ, ELECTRIC LANDSCAPING EQUIPMENT	
BICYCLE STORAGE	AT APARTMENTS AND OTHER COMMERCIAL SITES (BEYOND ZONING CODE)
LOW NITROGEN OXIDE (NOx) EMITTING AND/OR HIGH EFFICIENCY FURNACES	WITH AN ENERGY FACTOR OF AT LEAST 0.80
OZONE DESTRUCTION CATALYST INSTALLED	ON RESIDENTIAL OR NON-RESIDENTIAL AIR CONDITIONERS TO REDUCE THE AMOUNT OF OZONE RELEASED INTO THE AIR.
COMPLIMENTARY BICYCLE	FOR EACH HOME
COMMUNITY BIODIESEL FUELING STATIONS	
LOW FLOW SHOWERHEADS	2.5 GALLONS PER MINUTE MAXIMUM
UPGRADE ATTIC INSULATION	R-19 OR LESS INCREASE TO R-38
PRIORITIZED PARKING FOR HYBRID VEHICLES	
REDUCE PARKING LOTS AREA	PARKING MAY BE WITHIN THE BUILDING'S FOOT PRINT (E.G. UNDERGROUND, 1 <sup>ST</sup> FLOOR, OR ROOF PARKING WITHIN THE BUILDING). THE REDUCED PARKING

ENERGY SAVING ITEM	NOTES
	AREA COULD BE USED FOR LANDSCAPING AND RETAINING TREES FOR CARBON RETENTION, OR FOR HIGHER DENSITIES OF BUILDINGS REDUCING SPRAWL.

The reduction measures listed in Table CC-8 and Table CC-9 are not intended to be exhaustive; however, they illustrate that there is a wide variety of mitigation options, of which future project proponents can choose to incorporate a mixture of measures into their project design in order to mitigate the 0.25 MT CO<sub>2</sub> per capita.

### **CONCLUSION: RESIDENTIAL IMPACTS**

Given that the proposed Corridor will lead to additional development that will ultimately aggravate an existing climate change problem, the additional development would have a potentially significant impact on climate change. With the application of the mitigation listed below, impacts to climate change from residential projects would be reduced to **less than significant**.

### *COMMERCIAL LAND USE*

#### **COMMERCIAL TRANSPORTATION SECTOR EMISSIONS**

The CO<sub>2</sub> emissions associated with the commercial transportation sector were quantified utilizing URBEMIS. As discussed in the “Estimated Project Emissions” section above, the “Operational” emissions shown in Table CC-7 are emissions that hypothetically result from vehicular travel to and from the commercial businesses within the Project area. Table CC-7 shows that the operational emissions associated with vehicular travel to and from new commercial land uses will be 71,596.96 tons per year of CO<sub>2</sub>.

Although the emissions are shown to be generated by commercial businesses, the commercial businesses that would be within the Project area are not seen as creating new trips that would not exist without the project, rather they are seen as only accommodating trips that would already be generated but going elsewhere.

Additionally, it is assumed that most of the vehicular travel to and from commercial projects within the North Watt Avenue Corridor project area will be from trips made by residents located within the Corridor or within the community immediately adjacent to it. Thus, in an effort to avoid “double-counting” emissions, typically commercial projects would not be required to also mitigate the transportation impacts associated from trips related to the residents in the community. Essentially, by basing mitigation requirements on the residential transportation emissions, the true sources of emissions are captured and the truly “new” emissions generated in the County are identified. The one exception would be in the instance that a large regional commercial complex was proposed such as a regional mall where people would be traveling greater distances from in and outside of the County. Such a development could potentially occur within the Corridor area, specifically within the Triangle District; however, this type of

development would not be allowed without additional project-specific review, including environmental review. At that time, the environmental review would include an analysis of project specific climate change impacts.

It should be noted that revitalizing the Corridor with new commercial establishments will allow for the provision of goods or services within an existing community and nearer to existing homes which may actually reduce the distances traveled of those who would otherwise have to travel outside of the community for said goods and services. The reduced distances traveled would in turn lead to a reduced amount of vehicular emissions.

Project related Commercial Transportation Sector Emissions are **less than significant**.

### **COMMERCIAL ENERGY SECTOR**

As with residential projects, the precise emissions associated with future commercial energy use cannot be fully quantified or even modeled at this point due to the fact that energy use of new commercial projects in the North Watt Corridor project area, over the planning horizon of 20 years, may vary dramatically. For the purposes of analysis and in order to provide meaningful mitigation, it is assumed that the commercial energy use for future commercial buildings associated with the Corridor will be consistent with, or at least equivalent to, the average commercial energy emissions quantified for the County. Based on the County average, formulated from the 2005 County Emission Inventory, it is assumed that 11.67 MT of CO<sub>2</sub> will be emitted per Kft<sup>2</sup> for the commercial energy use sector.

The thresholds stated above in Table CC-3, allow for up to 8.08 MT per Kft<sup>2</sup> to be emitted in order to be under thresholds. Utilizing the County average for commercial energy usage, the project would be 3.59 MT per Kft<sup>2</sup> over the threshold. Future applicants for new commercial projects in the North Watt Corridor Plan area would be required to mitigate CO<sub>2</sub> emissions associated with commercial energy use so that project emissions are at or below the 8.08 MT per Kft<sup>2</sup> threshold.

As with the residential energy use assumptions discussed above, it is recognized that the above analysis is a conservative one due to the fact that commercial energy use in new developments will likely be an improvement over the existing County commercial stock. Discounts in emissions for future commercial projects will be realized due to new, more efficient building materials and technologies that will likely become the standardized methods of construction in the building industry over the planning horizon. Mitigation, included below, requires a reduction in per Kft<sup>2</sup> emissions from the County average to the threshold of 8.08 MT per Kft<sup>2</sup> or below. A stipulation is added that a future project applicant can provide a “project specific” analysis that demonstrates a reduction in commercial energy use over the County average, thereby possibly reducing the mitigation obligation compared to utilizing average emissions.

Methods for reducing emissions and reduction strategies already in place for the commercial land uses are discussed further below.

### **COMMERCIAL USE REDUCTION STRATEGIES**

Future commercial projects will be required to mitigate for emissions associated with commercial energy use, which equates to at least 3.59 MT per Kft<sup>2</sup> in order to meet the 8.08 MT per Kft<sup>2</sup> threshold. To achieve this level of mitigation some reduction strategies are outlined below.

As discussed previously, SMAQMD has developed interim guidelines for GHG emissions reductions, similar to the guidelines for Air Quality Management Plans (AQMPs). In the guidelines, one point is equivalent to a 1% reduction. The Sacramento Community Planning and Development Department, Planning Division has submitted AQMP which details 13 measures that reduce project related air quality impacts. All 13 measures are directly applicable to future commercial projects within the Corridor and the reduction of associated CO<sub>2</sub> emissions. Utilizing the SMAQMD interim guidelines for GHG emissions reductions, the applied measures would reduce commercial CO<sub>2</sub> emissions by 15.75 percent utilizing the following measures:

1. Proximity to Bike Path/Bike Lanes
2. Pedestrian Network
3. Pedestrian Barriers Minimized
4. Bus Shelter for Existing Transit Service
5. Traffic Calming
6. Pedestrian Pathway Through Parking
7. Street Grid
8. Suburban Mixed-Use
9. Bike Parking
10. Parking Reduction Plan
11. Shared Parking
12. Curb-Side Parking
13. Off-Street Parking

The above measures are included as measures in the AQMP, which was endorsed by SMAQMD on July 16, 2010. Future projects will be required to adhere to the endorsed AQMP, and will effectively reduce GHG emissions impacts related to commercial projects. Incorporation of the above measures into future project designs reduces commercial CO<sub>2</sub> emissions noted as the county average by 15.75 percent. This reduction would effectively reduce the assumed emissions volume from 11.67 MT to 9.83 MT and reduces the per Kft<sup>2</sup> mitigation requirement from 3.59 MT to 1.75 MT per Kft<sup>2</sup>.

Quantifiable and un-quantifiable mitigation applicable to commercial projects, listed above in the "Reduction Strategies for Residential Projects" section may be utilized to offset the 1.75 MT per Kft<sup>2</sup> for future commercial projects within the Corridor Pan. Mitigation to that effect is listed below.

### **CONCLUSION: COMMERCIAL IMPACTS**

As with residential development, the additional commercial development that could occur under the Corridor will aggravate an existing climate change problem. The additional commercial development would have a potentially significant impact on climate change. With the application of the mitigation listed below, impacts to climate change from commercial projects would be reduced to **less than significant**.

### *MITIGATION MEASURES*

#### **CC-1: RESIDENTIAL ENERGY SECTOR EMISSION REDUCTIONS**

Add a policy to the North Watt Corridor Plan requiring that future applicants for residential projects reduce residential emissions by 0.25 MT CO<sub>2</sub> per capita. In consultation with the Division of Environmental Review and Assessment and Sacramento Metropolitan Air Quality Management District, applicants shall submit a plan detailing a set of quantitative and/or qualitative measures that achieve the reduction in CO<sub>2</sub> emissions per capita, prior to the issuance of building permits or prior to obtaining any discretionary entitlements. This mitigation may be modified to conform with current Sacramento County climate change standards, including but not limited to a Green Building Program and Climate Action Plan. Additionally, applicants may choose to submit revised, project-specific, residential energy-use emissions factors; however, the applicant will be required to provide adequate data to support the revised emission factor.

#### **CC-2: COMMERCIAL ENERGY SECTOR EMISSION REDUCTIONS**

Add a policy to the North Watt Corridor Plan requiring that future applicants for commercial projects reduce commercial emissions by 1.75 MT CO<sub>2</sub> per Kft<sup>2</sup>. In consultation with the Division of Environmental Review and Assessment and Sacramento Metropolitan Air Quality Management District, applicants shall submit a plan detailing a set of quantitative and/or qualitative measures that achieve the reduction in CO<sub>2</sub> emissions per Kft<sup>2</sup>, prior to the issuance of building permits or prior to obtaining any discretionary entitlements. This mitigation may be modified to conform with current Sacramento County climate change standards, including but not limited to a Green Building Program and Climate Action Plan. Additionally, applicants may choose to submit revised, project-specific, commercial energy-use emissions factors; however, the applicant will be required to provide adequate data to support the revised emission factor.

# 15 SUMMARY OF IMPACTS AND THEIR DISPOSITION

## SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED

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### AIRPORT COMPATIBILITY

#### *AIRPORT SAFETY ZONES*

##### **APPROACH/DEPARTURE ZONE**

The project area is partially located within the approach/departure zone of McClellan Airport. Many of the uses and densities of the proposed project are not allowed within this zone due to the fact that any uses within the approach/departure zone that may result in even a moderate concentration of people, is considered a substantial safety issue that could result from aircraft crashes or emergency landings.

Although the airport policy can be overridden through Board discretion, the safety impact would still occur. Given the substantial safety issue, this impact is considered significant. No feasible mitigation can be applied to the Corridor Plan which would reduce the potential impact of siting nonconforming uses in this zone to a less than significant level. Thus, impacts related to airport safety and policy are considered significant and unavoidable.

##### **CLEAR ZONE**

A small corner of the Clear Zone is located within Subdistrict 3 of the Triangle Gateway District. Ideally the Clear Zone should be completely void of all structures and objects. Any deviation from this is considered a safety impact.

Although the airport policy can be overridden through Board discretion, the safety impact would still occur. Given the substantial safety issue, this impact is considered significant. No feasible mitigation can be applied to the Corridor Plan which would reduce the potential impact of siting nonconforming uses in this zone to a less than significant level. Thus, impacts related to airport safety and policy are considered significant and unavoidable.



## TRAFFIC AND CIRCULATION IMPACTS

### *EXISTING PLUS PROJECT*

In the Existing Plus Project condition four study intersections, eight study roadway segments and one impacted freeway facility would exceed volume thresholds and operate at unacceptable levels of service.

There is no feasible mitigation for six of the impacted roadway segments. Additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.

Although the Corridor Plan implements some of the corridor mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”, there is no feasible mitigation for the impacted freeway segment that will directly improve the freeway facility. This impact is considered significant and unavoidable.

### *CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN*

In the Cumulative Plus Project Plus Existing General Plan condition nine study intersections, five study roadway segments and three impacted freeway facilities would exceed volume thresholds and operate at unacceptable levels of service.

There is no feasible mitigation for four of the impacted roadway segments. Additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.

Although the Corridor Plan implements some of the corridor mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”, there is no feasible mitigation for the three impacted freeway facilities that will directly improve the freeway facility. These impacts are considered significant and unavoidable.

### *CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN*

In the Cumulative Plus Project Plus proposed General Plan condition six study intersections, six study roadway segments and three impacted freeway facilities would exceed volume thresholds and operate at unacceptable levels of service.

There is no feasible mitigation for five of the impacted roadway segments. Additional widening on these impacted roadway segments is infeasible because they are already built to the maximum of 6 lanes (3 lanes in each direction) allowed for County roadways. Impacts at these roadways are considered significant and unavoidable.

Although the Corridor Plan implements some of the corridor mobility strategies identified within the Caltrans “SR-51 Corridor System Management Plan (CSPM) (May 2009)”,

there is no feasible mitigation for the three impacted freeway facilities that will directly improve the freeway facility. These impacts are considered significant and unavoidable.

## AIR QUALITY

### *CONSTRUCTION*

The SMAQMD *Guide to Air Quality Assessment in Sacramento County* includes a list of Basic Construction Emissions Control Practices that should be implemented on all projects, regardless of size. Dust abatement practices are required pursuant to SMAQMD Rule 403 and California Code of Regulations, Title 13, sections 2449(d)(3) and 2485; the SMAQMD Guide simply lays out the basic practices needed to comply. Since these are already required by existing rules and regulations, it is not necessary to include them as mitigation.

Because the proposed project covers a large area in which construction could occur on multiple sites at any given time the amount of construction activity on any given day within the project area cannot be predicted and could be greater than 15 acres. Therefore, even with Rule 403 which would reduce project fugitive particulate matter impacts, impacts to air quality from fugitive dust emissions would be considered a short-term significant and unavoidable impact.

### *OPERATIONAL*

The modeling results indicate that the project's mass emissions of ROG, and NO<sub>x</sub> exceed the SMAQMD threshold of 65 lbs/day in the summer and winter. These emissions would be considered significant.

Under proposed General Plan policy, developments which meet or exceed thresholds of significance for ozone precursor pollutants shall be deemed to have a significant environmental impact and an Air Quality Management Plan shall be provided. The goal of the review is to achieve a 15 percent reduction of emissions from the base-case level. A plan has been prepared for this project.

Even with a 15% reduction in operational emissions, the estimated ROG and NO<sub>x</sub> levels would exceed the operational threshold of 65 lbs/day and result in a significant and unavoidable impact.

## NOISE

### *TRAFFIC NOISE IMPACTS TO RESIDENTIAL USES: EXTERIOR*

While it is encouraged that outdoor living areas are shielded to the extent possible to reduce impacts due to excessive noise levels, it is foreseeable that in some instances it may be infeasible to reduce impacts to a less than significant level consistent with General Plan policy.

*TRAFFIC NOISE IMPACTS TO NON-RESIDENTIAL USES: EXTERIOR*

Although it is encouraged to provide some shielding through site design for non-residential uses (i.e. churches, office buildings, schools, and industrial uses), there are foreseeable noise impacts that can not be mitigated to less than significant levels without compromising the proposed plan.

CULTURAL RESOURCES

*IMPACTS TO HISTORIC ARCHITECTURAL RESOURCES*

**EVALUATED HISTORICAL ARCHITECTURAL RESOURCES**

Three properties older than 50 years of age appear to meet criteria of the California Register and are considered historical resources for the purposes of CEQA. At present there are no plans to impact the three eligible properties. If future projects propose impacts to these significant properties, impacts would be considered significant.

**UNEVALUATED HISTORICAL ARCHITECTURAL RESOURCES**

The Corridor contains several potential resources that have not been subject to a prior review. Given the sensitivity of the area for historical structures there is a potential for additional resources to be located within the plan area that have not been previously evaluated. Loss of any significant resources is a significant impact.

SIGNIFICANT EFFECTS WHICH COULD BE AVOIDED  
WITH IMPLEMENTATION OF MITIGATION MEASURES

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LAND USE

*LAND USE COMPATIBILITY: NORTH AREA RECOVERY STATION*

The Department of Waste Management & Recycling (DWMR) has expressed concern over siting incompatible uses adjacent to the NARS facility. In particular residential uses and other sensitive land uses would conflict with operations at NARS. DWMR has requested a 1,000 foot land use buffer around the NARS facility. Specific details of the land use buffer will be coordinated between DWMR and the Community Planning and Development Department's Planning Division.

## PUBLIC SERVICES

### *WATER SUPPLY*

The proposed project area is currently provided water and has existing infrastructure supporting the site. Sacramento Suburban Water District has indicated that water supply is adequate to serve existing zoning; however may need future supplies for final build out of the proposed project. Additionally, the water infrastructure study indicated that some upgrades to water infrastructure will be required to serve the Corridor Plan.

To ensure that adequate water facility improvements are identified prior to the initiation of development, a phasing plan is suggested. Additionally, mitigation is added to secure water supply needs when water thresholds, identified in the phasing plan, are met. With mitigation the water supply is expected to be adequate to serve the proposed project at full build out. Impacts related to water service and supply will be less than significant.

### *SEWER SERVICE*

The Sacramento Area Sewer District (SASD) prepared a level 2 sewer study for the Corridor Plan. Existing public sewer service is limited to the Triangle Gateway District. Large portions of the project area north of the Triangle are currently on private septic systems. The sewer study indicated that existing sewer services are constrained and identified necessary system upgrades in order to serve the proposed Corridor. These upgrades would provide relief to capacity constrained facilities in the project area. SASD characterizes the necessary improvements required to serve the entire Corridor at proposed land use densities as major infrastructure projects.

To ensure that adequate sewer facility upgrades are identified prior to the initiation of development, a phasing plan is suggested. With mitigation project related impacts to sewer service are less than significant.

## AIR QUALITY

### *AIR QUALITY RESULTING FROM OZONE PRECURSOR EMISSIONS AND DIESEL PARTICULATE CAUSED BY CONSTRUCTION ACTIVITIES FOR REDEVELOPMENT.*

Implementation of the proposed project could include construction activities on numerous sites on any given day. Therefore, calculating the daily emissions is not possible. However, given the size of the project area, exceedance of SMAQMD standards is possible. As a result, ozone precursor emissions and diesel particulate matter emissions associated with implementation of the proposed project would have a potentially significant impact on air quality. Mitigation is recommended to reduce these impacts to less than significant.

*CANCER RISK ASSOCIATED WITH HIGH-TRAFFIC ROADWAYS AND UP RAILROAD*

**HIGH-TRAFFIC ROADWAYS**

Vehicles and Trucks associated with Interstate 80 are a source of several toxic air contaminants including but not limited to: nitrogen oxides, diesel particulate matter, and carbon monoxide. Impacts to air quality and health of adjacent land uses are considered potentially significant when sensitive land uses (i.e. residential, etc.) are located within 500 feet of a high-traffic roadway. Mitigation will reduce this impact to less than significant.

**UP RAILROAD**

Locomotives associated with the UP rail line are a source of several toxic air contaminants including but not limited to: nitrogen oxides, diesel particulate matter, and carbon monoxide. Impacts to air quality and health of adjacent land uses are considered potentially significant when sensitive land uses (i.e. residential, etc.) are located within 500 feet of the rail line. Mitigation will reduce this impact to less than significant.

NOISE

*TRAFFIC NOISE IMPACTS TO RESIDENTIAL USES: INTERIOR*

Indoor residential areas at the 70 dB contour and farther away are considered to be in compliance with the 45 dB indoor General Plan requirement because at least a 25 dB reduction in noise is provided by standard construction methods. Because interior noise levels can be mitigated without the use of exterior noise barriers that may be inconsistent with the intent of the Corridor Plan, and due to the fact that interior noise levels are considered paramount to individuals sleep patterns, health and overall well-being, mitigation is provided to reduce potential impacts.

*TRAFFIC NOISE IMPACTS TO NON-RESIDENTIAL USES: INTERIOR*

Depending on the particular use, noise levels could be in excess of applicable standards. Interior noise levels can be mitigated without the use of exterior noise barriers in ways that are consistent with the intent of the Corridor Plan.

*RAILROAD NOISE*

The Corridor is subject to noise from the Union Pacific Railroad. In particular, the Triangle Gateway district would be impacted by rail noise. Mitigation will reduce this impact to less than significant.

*COMMUNITY GENERATED NOISE*

Community generated noise will inevitably be produced by the myriad of activities in the Corridor; and the associated noises will be perceived differently by individuals. Since it is the intent of the Corridor Plan to mix uses within the plan area in a cohesive way, policy should be in place within the Corridor which would protect the Plan Area receptors as well as immediately adjacent residential properties from excessive noise generators or provide provisions to mitigate such noises.

Thus, mitigation is suggested that requires the addition of a Corridor Plan policy that addresses community noise.

BIOLOGICAL RESOURCES

*NATIVE TREES*

There are a number of oaks and other large native and non-native trees in the vicinity of Watt Avenue and throughout the project area. Many of these trees are located within private property and an evaluation of the species and size is not currently possible. These trees may be subject to impacts related to future project related activities.

The degree of impacts to native trees that will result from development and redevelopment associated with the Corridor is uncertain at this time. However, the project area is highly developed and the oak trees in the area do not represent significant habitat value. Although the project area is largely developed, mitigation is recommended to ensure impacts to native oak trees are less than significant.

*STREAMS, WETLANDS AND OTHER SURFACE WATERS*

The potential wetland features on the project site could be removed, rerouted, or be subject to indirect impacts due to construction-related activities in accordance with the proposed Corridor Plan. Consultation with the U.S. Army Corps of Engineers would be required if wetland features in the Corridor Plan area are impacted as a result of development or redevelopment. At that time, through consultation, a determination will be made as to whether the particular impacted wetlands are Waters of the United States, or isolated wetlands. Regardless of this determination, if any wetlands within the Corridor are impacted, compensation will be required per General Plan Policy CO-71, the County's no net loss of wetland acreage policy. With mitigation impacts to wetlands are expected to be less than significant.

*RIPARIAN HABITAT*

Riparian habitat, which coincides with the one of the non-concrete-lined watercourses in the plan area, will be re-designated in the proposed Corridor. This designation change does not in itself impact the riparian habitat; however, future development in accordance with the Corridor Plan could impact this resource. Mitigation is recommended to ensure impacts to riparian habitat are less than significant.

*SPECIAL STATUS SPECIES*

Although there are no known special status species within the project area and no raptor nests were observed during site surveys, there are a number of large trees on the project site which may provide suitable nesting habitat for protected raptor species that may be disturbed by project development and redevelopment.

Construction activities during the nesting period could result in the removal active nests and in the take of members of protected raptor species. Also, noise generated by project related construction activities could lead to other direct impacts such as nest abandonment.

In order minimize impacts to protected raptors preconstruction surveys are recommended to avoid disturbance to nesting sites. Implementation of recommended mitigation will ensure that impacts to nesting raptors are less than significant.

## CLIMATE CHANGE

*RESIDENTIAL ENERGY SECTOR EMISSIONS*

The proposed Corridor Plan will lead to additional residential development that will ultimately aggravate an existing climate change problem. Using URBEMIS modeling and standard residential energy use estimates, it was determined that GHG emissions were 0.54 MT per capita over the 1.30 MT per capita standard as determined by Sacramento County. With a reduction due to implementation of the Air Quality Management Plan the per capita reduction required for future residential projects is 0.25 MT CO<sub>2</sub> per capita. With mitigation, impacts are less than significant.

*COMMERCIAL ENERGY SECTOR EMISSIONS*

The proposed Corridor Plan will lead to additional commercial development that will ultimately aggravate an existing climate change problem. Using URBEMIS modeling, it was determined that GHG emissions were 3.59 MT per Kft<sup>2</sup> over the 8.08 MT per Kft<sup>2</sup> standard. With a reduction due to implementation of the Air Quality Management Plan the per Kft<sup>2</sup> reduction required for future commercial projects is 1.75 MT CO<sub>2</sub> per Kft<sup>2</sup>. With mitigation, impacts are less than significant.

## CULTURAL RESOURCES

*PREHISTORIC AND HISTORIC ARCHAEOLOGICAL RESOURCES*

Based on the historical understanding of Native American and historical settlement patterns in the project area, prior results of archaeological surveys within the project area and communication with the North Central Information Center, the project area is considered unlikely (low-to-moderate) to contain significant prehistoric archaeological

resources. In addition, farming practices and historic-era development in the project area would have disturbed most near surface deposits.

However, the ethnographic record shows that the project area has a history of Native American habitation. Native people would have hunted and gathered in the project area, and may have established temporary camps along area creeks or other nearby drainages. Additionally, historic use of the project area is well documented. As a result, the potential exists for grading and excavation associated with buildout of the Corridor to unearth subsurface prehistoric and historic archaeological resources. With mitigation, environmental impacts to potentially sensitive cultural resources are considered less than significant.

#### *HUMAN REMAINS*

Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification.

In the event that a burial is discovered during implementation of the Corridor Plan project, strict adherence to mitigation would reduce impacts to less than significant levels.

#### HAZARDOUS MATERIALS

##### *CONTAMINATION SITES*

According to the State GeoTracker and Envirostor databases, there are known toxic sites within the plan area. Of those sites, some are still actively monitored by the appropriate jurisdiction and are in various degrees of assessment.

With redevelopment, there is potential for residential uses to be located on these sites. However, since specific parcel redevelopment and development plans are not part of the proposed Corridor Plan, impacts associated with the toxic sites can not be determined at this time. Due to the uncertainty of impacts to human health and environment, development on known toxic sites is considered a potentially significant impact. Mitigation is included to require consultation with the Environmental Management Department prior to any development or redevelopment on any parcels known to contain toxic sites.



## EFFECTS FOUND NOT TO BE SIGNIFICANT

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### LAND USE

#### *SACRAMENTO AREA COUNCIL OF GOVERNMENT (SACOG) "BLUEPRINT"*

The proposed project is consistent with the land use assumptions of the Blueprint preferred scenario and no substantial conflicts with the preferred scenario have been identified. The only notable deviation from the preferred scenario occurs within the Triangle Gateway District, where industrial is the major land use envisioned in the preferred scenario within the Triangle District. This deviation is considered minor given that the uses proposed for the Triangle District will support the overall mixed use corridor that is envisioned along Watt Avenue in the preferred scenario.

#### *GENERAL PLAN*

The proposed Corridor Plan is consistent with General Plan land use designations for the project area. The proposed Corridor is also consistent with the goals and policies of the General Plan, including policies associated with Transit Oriented Developments and smart growth principles.

#### *SMART GROWTH STREET*

The North Watt Corridor Plan meets the objectives related to the Smart Growth Street policy.

#### *ZONING CODE*

Although the proposed Corridor Plan will rezone the properties in the plan area it meets the zoning code requirements to create an Corridor Plan and does not conflict with the Sacramento County Zoning Code.

#### *MCCLELLAN AFB/WATT AVENUE REDEVELOPMENT PLAN*

The North Watt Avenue Corridor Plan would compliment the redevelopment plan, which is mainly a taxation and funding plan for revitalization projects. The proposed Corridor Plan functions as an implementation mechanism for the redevelopment plan.

#### *NORTH WATT AVENUE BEAUTIFICATION MASTER PLAN*

The Beautification Plan was written with the intent that a Corridor Plan would occur on Watt Avenue. The differences in beautification techniques is trumped by the fact that both Plans are intended to redevelop and enhance the Corridor; as such, the Plans do not conflict.

## AIRPORT COMPATIBILITY

### *AIRPORT NOISE*

As shown on the Board-adopted noise contours for McClellan Field, the project site is located outside of the 60 dB CNEL noise contours. The proposed project is not expected to expose people residing or working in the project area to aircraft noise levels in excess of applicable standards. Impacts related to airport noise are less than significant.

### *NAVIGABLE AIRSPACE*

Based on the most restrictive height allowed for aircraft safety within the Corridor, or 150 feet, and the highest building allowed within the Corridor, the Corridor Plan does not propose building heights that exceed building height requirements of the FAA; thus the project is not expected to impact navigable airspace.

### *AIRPORT SAFETY ZONES*

#### **OVERFLIGHT ZONE**

According to the General Plan's "Land Use Compatibility for Airport Safety" table, the proposed uses of the Corridor appear to be compatible within the overflight zone. Some of the uses would be subject to special conditions as listed within the safety table. No significant land use related environmental impacts are noted in regards to the overflight zone.

## DRAINAGE, HYDROLOGY AND WATER QUALITY

### *DRAINAGE AND FLOODPLAINS*

Pursuant to the County of Sacramento Improvement Standards and Floodplain Management Ordinance, all infill projects require an analysis of how their grading impacts the surrounding area in which they are located, including identification and preservation of floodplain storage, and determination of minimum construction elevations necessary to protect the new development. Any proposed loss of floodplain storage will be analyzed to determine if there are impacts to water surface elevations on any adjacent properties. In addition, larger infill projects will be required to broaden their study approach to determine any impacts on a regional basis. With conformance with applicable standards, future development associated with the Corridor will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity.

*DRAINAGE AND INFRASTRUCTURE*

Individual drainage plans would be needed to identify site-specific or very localized constraints, rather than Plan-wide facility needs, these studies can be completed at improvement plan stage. The Sacramento County Department of Water Resources reviews improvement plans for consistency with adopted Ordinances, and will require a focused drainage plan at that time, if necessary. Improvements will all take place in existing developed areas or areas that will already be developed for other purposes. With conformance with applicable standards, future development associated with the Corridor will not substantially increase the rate or amount of surface runoff in a manner that causes flooding or that exceeds stormwater system capacity.

*WATER QUALITY*

Future projects will be required to adhere to all applicable stormwater quality standards. Conformance with applicable standards and regulations will ensure that future development/redevelopment projects do not significantly impact stormwater quality.

PUBLIC SERVICES AND UTILITIES

Project related impacts to the provision of fire protection, public safety, solid waste facilities, local school resources, local park service, natural gas service, electrical power service, and public transit are less than significant.

TRAFFIC AND CIRCULATION

*EXISTING PLUS PROJECT*

Under the Existing Plus Project scenario, 17 of the 25 study roadway segments would operate at LOS E or better and project impacts to these segments will be less than significant. Under the Existing Plus Project scenario, 16 of the 20 study intersections would operate at LOS E or better and project impacts to these intersections will be less than significant.

*CUMULATIVE PLUS PROJECT PLUS EXISTING GENERAL PLAN*

Under the Cumulative Plus Project Plus Existing General Plan scenario, 20 of the 25 study roadway segments would operate at LOS E or better and project impacts to these segments will be less than significant. Under the Cumulative Plus Project Plus Existing General Plan scenario, 11 of the 20 study intersections would operate at LOS E or better and project impacts to these intersections will be less than significant.

*CUMULATIVE PLUS PROJECT PLUS PROPOSED GENERAL PLAN*

Under the Cumulative Plus Project Plus Proposed General Plan scenario, 19 of the 25 study roadway segments would operate at LOS E or better and project impacts to these

segments will be less than significant. Under the Cumulative Plus Project Plus Proposed General Plan scenario, 14 of the 20 study intersections would operate at LOS E or better and project impacts to these intersections will be less than significant.

## NOISE

### *CONSTRUCTION NOISE*

The Sacramento County Noise Ordinance specifically exempts construction-related noise under certain circumstances. The Noise Ordinance states the following:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of eight p.m. and six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and each Sunday after the hour of eight p.m. Provided however, when an unforeseen or unavoidable condition occurs during a construction project, and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner. [Sacramento County Code, Section 6.68.090 (e)]

Construction noise impacts associated with the build out of the proposed Corridor Plan project falls under this exemption. Construction noise is considered as a nuisance rather than an environmental impact and construction noise impacts are less than significant.

## CLIMATE CHANGE

### *RESIDENTIAL TRANSPORTATION SECTOR EMISSIONS*

Project related Residential Transportation Sector Emissions equal 3.87 MT per capita and are below the 4.56 MT per capita threshold by 0.69 MT and are less than significant.

### *COMMERCIAL TRANSPORTATION SECTOR EMISSIONS*

Although emissions are shown to be generated by commercial businesses, the commercial businesses that would be within the Project area are not seen as creating new trips that would not exist without the project, rather they are seen as only accommodating trips that would already be generated but going elsewhere.

Additionally, it is assumed that most of the vehicular travel to and from commercial projects within the Corridor Plan area will be internal trips made by residents located within the Corridor or within the community immediately adjacent to it. Thus, in an effort to avoid “double-counting” emissions, commercial projects will not be required to mitigate the transportation impacts associated from trips related to the residents in the community to their sites.

## HAZARDOUS MATERIALS

### *EXPOSURE TO ASBESTOS THROUGH RENOVATION OR DEMOLITION OF EXISTING STRUCTURES THAT CONTAIN ASBESTOS*

The renovation or demolition of existing structures constructed prior to 1989 can pose an exposure risk to workers from asbestos-containing material if the material is chipped away and then accidentally ingested, or if it becomes airborne and is inhaled. When an individual applies for a demolition or renovation permit through the County, the applicant will be required to get a permit from the Sacramento Municipal Air Quality Management District. As part of the permit process, the applicant will need to show compliance with federal regulations and Air District Rule 902, which require a survey for asbestos prior to demolition. Any asbestos found would require abatement. Given that there is already a process requiring the applicant to survey for and abate any asbestos, impacts related to asbestos exposure are less than significant.

### *EXPOSURE TO LEAD THROUGH RENOVATION OR DEMOLITION OF EXISTING STRUCTURES THAT CONTAIN LEAD-BASED PAINT*

The renovation or demolition of existing structures constructed prior to 1978 can pose an exposure risk of workers to lead-based paint if the paint were chipped away and then accidentally ingested, or if the paint became an airborne dust and was inhaled. Also, lead can deposit on exposed soil, which can then be tracked into the home, and ingested by children and adults. As with asbestos in older homes, there are existing rules and regulations to ensure that workers are apprised of the risk of lead exposure before renovation or demolition can begin, and are given protocols to avoid exposure.

## IRREVERSIBLE ENVIRONMENTAL CHANGES

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The CEQA Guidelines, Section 15126.2(c), require that this EIR consider significant irreversible environmental changes which would be caused by the proposed project should it be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Development of any of the project would involve a large commitment of nonrenewable resources;

- The primary and secondary impacts of development would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project would result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in or contribute to the following irreversible environmental changes:

- Irreversible consumption of energy and natural resources to build the infrastructure and buildings associated with buildout of the Corridor Plan area; and
- Irreversible consumption of energy, goods and services associated with the future residents, employees, and shoppers.

## CUMULATIVE IMPACTS

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An EIR must discuss the “cumulative impacts” of a project when its incremental effect will be cumulatively considerable. This means that the incremental effects of the individual project would be considerable when viewed in connection with the effects of other current projects, and the effects of probable future projects (Section 15065(c)).

*CEQA Guidelines* Section 15355 defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” This Section further states that “Individual effects may be changes resulting from a single project or a number of separate projects.” Additionally, “The cumulative impact from several projects is [defined as] the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

Section 15130(a)(3) states also that an EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Finally, Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, that it should reflect the severity

of the impacts and their likelihood of occurrence, and that it should be focused, practical, and reasonable.

To be adequate, a discussion of cumulative effects must include the following elements:

Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency's control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130(c)).

As used above, the phrase "past, present and probable future projects" includes existing approved, planned, or budgeted projects; projects which are currently under construction; and projects requiring an agency approval for an application which has been received at the time of NOP release. (Section 15130(b)(1)(B)(2)).

The cumulative analysis for this EIR is based on the anticipated development in Rancho Cordova, Elk Grove, the City of Sacramento, unincorporated Sacramento County, and the Sacramento Area Council of Governments Blueprint projections.

### **Impacts**

Implementation of the North Watt Avenue Corridor Plan would substantially increase the intensity of the land uses within the project area. In addition, Sacramento County and the greater Sacramento region are in the midst of significant increases in the intensity of land use. However, the proposed project occurs primarily within areas that have previously been designated for urban development. Additionally, the proposed project is consistent with the SACOG Blueprint. In all, while the proposed project is intensifying some land uses in the area over existing uses, the proposed project does not substantially change what could be built out under existing zoning. Cumulative impacts related to land use are considered less than significant.

With the intensification of uses, public services would effectively be impacted. However, as mentioned above, the intensification proposed in the Corridor is not substantially different from what could occur under existing zoning without the proposed project. Therefore, with any new development in the area improvements to infrastructure will be required. Cumulative impacts to service providers are not considered significant.

The proposed project would result in impacts related to traffic and circulation, air quality and climate change, which by their very nature are cumulative impacts. Despite the EIR conclusions of substantial impacts to traffic, air quality and climate change, the project is expected to have local and regional benefits in these areas, in that locally beneficial

mitigation has been added to reduce these impacts. However, in the case of air quality and traffic and circulation, there is no available mitigation that would feasibly reduce impacts to less than significant in all cases. Thus, the proposed project would result in significant cumulative impacts for traffic and air quality issues. Given that climate change impacts can be reduced effectively with proposed mitigation, cumulative impacts are considered less than significant.

Implementation of the Corridor project has the potential to impact biological resources; however, impacts to resources would be mitigated to less than significant levels on a project-by-project level. The project area also has a substantial amount of development and there are no pristine wildlife corridors or habitat in the area, given that development has already impacted most of the area. Thus, cumulative impacts related to biological resources would be considered less than significant.

Implementation of the proposed project will also result in significant impacts to architectural resources. Since these kinds of resources are non-renewable, and because they have been so heavily impacted both on the local and national scale, impacts are considered cumulative impacts. The proposed project has the potential to impact several historical resources. If resources are impacted, cumulative impacts associated with cultural resources would be considered significant.

## GROWTH INDUCING IMPACTS

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An EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the vicinity of the project, and how that growth will, in turn, affect the surrounding environment (see CEQA Guidelines Section 15126.2(d)). Growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity within the region. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

A number of issues must be considered when assessing the growth-inducing effects of development plans such as the proposed project. These include the following:

**Elimination of Obstacles to Growth:** The extent to which infrastructure capacity provided to accommodate the proposed project would allow additional development in surrounding areas; and

**Economic Effects:** The extent to which development of the proposed project could cause increased activity in the local or regional economy.

Although the project could include the development of up to 300 residential units, 792,336 square feet of commercial/retail uses and 427,332 square feet of office uses and portions of the project area are currently vacant or underutilized; the site is



substantially built-out with a mix of commercial, retail, and residential uses. Thus, the proposed project represents opportunities to streamline redevelopment projects in the urban core. Essentially, projects like this encourage infill within an area entirely served with existing urban level public services and discourage Greenfield development which could be considered growth inducing. The project does represent some intensification of uses within the Plan area; however, similar uses would likely be allowed in some form in the project area under existing entitlements. The proposed project will not result in significant growth inducing impacts, either directly or indirectly.

## 16 RESPONSE TO COMMENTS

The Draft Environmental Impact Report (EIR) for North Watt Avenue Corridor Plan (2008-GPB-CZB-ZOB-00153) was released on September 9, 2011. The written comment period ended on October 24, 2011. Three written comment letters were received.

Comment letters were received from the following individuals and/or agencies:

- Letter 1**      Genevieve Sparks, California Regional Water Quality Control Board, Central Valley Region, October 12, 2011
  
- Letter 2**      Eric Fredericks, California Department of Transportation, District 3 – Sacramento Area Office, October 31, 2011
  
- Letter 3**      Lauren Prichard, Aborn Powers Real Estate, March 19, 2012

The text that follows introduces each reviewer and presents their comments in either as stated or paraphrased form. Responses to those comments immediately follow. Written comments received in full letter format are found at the end of this chapter.

## LETTER 1: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

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Genevieve Sparks, California Regional Water Quality Control Board, Central Valley Region, October 12, 2011

### LETTER SUMMARY

*The comment letter provides guidance on the regulatory and permitting requirements for future projects in the Corridor Plan area pertaining to surface and groundwater quality. Specifically, the following permits, certifications and requirements are outlined: (1) Construction Storm Water General Permit; (2) Phase I and II Municipal Separate Storm Sewer System (MS4) Permits; (3) Industrial Storm Water General Permit; (4) Clean Water Act Section 404 Permit; (5) Clean Water Act Section 401 Permit – Water Quality Certification; and (6) Waste Discharge Requirements.*

### LETTER RESPONSE:

The comments provided by the California Regional Water Quality Control Board are informational in nature and are not comments on the adequacy of the environmental document. As noted in the EIR, all future projects within the Corridor Plan area will conform to applicable stormwater and ground water quality standards and regulations in effect at the time of the development.

## LETTER 2: CALIFORNIA DEPARTMENT OF TRANSPORTATION

---

Eric Fredericks, California Department of Transportation, District 3 – Sacramento Area Office, October 31, 2011

### LETTER COMMENT 2.1:

*Pages 8-17 & 18: With respect to Significance Criteria, the standard for Caltrans facilities is not correct. In particular, item #1 states:*

*“...a project will cause significant impacts if it causes a facility operating at an acceptable LOS to deteriorate to an unacceptable LOS. For facilities with concept LOS F this criteria does not apply.*

*The operating LOS of facilities now is based upon the Corridor System Management Plans (CSMP) and is no longer based on the TCR. In addition, for facilities with concept*

*LOS F that are already operating at an unacceptable level (LOS F in urban area), per our Traffic Impact Study Guide, if an existing facility is operating at less than the appropriate target LOS, the existing Measures of Effectiveness (MOE) should be maintained. Therefore, the project proponent must mitigate the impacts to bring the facility back to the existing (pre-project) operating condition.*

LETTER RESPONSE 2.1:

Comment noted. Although the significance criteria states that the facility's level of acceptability is based on the TCR, the dialogue immediately preceding the stated criteria notes that the assigned LOS utilized for the purposes of traffic modeling and assessing impacts is based on the I-80 and State Route 51 CSMP. Specifically, the EIR states that the CSMP defines I-80 and State Route 51 as having a Concept LOS F in the study area.

The remainder of the comment is directed towards how mitigation should be applied to facilities that are already operating at unacceptable LOS. This is not relevant to the significance criteria section.

LETTER COMMENT 2.2:

*Page 8-18 last paragraph: In the Impacts and Analysis/Existing Conditions section, the DEIR states that the traffic counts were taken from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. This is an inadequate analysis in that peak periods are generally from 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM. Specifically, the peak hour from I-80 between Madison and Watt is 6:00 AM. Therefore the heaviest hour of the AM peak period was not captured thus rendering the AM counts underrepresented.*

LETTER RESPONSE 2.2:

Methodology for the preparation of the traffic study, including the assigned peak hours was determined in consultation with certified traffic engineers at Fehr & Peers. It is the opinion of the preparers of the EIR that the peak hour period utilized for traffic counts accurately represents the peak hour at I-80 between Madison and Watt, and that the AM counts are not underrepresented.

LETTER COMMENT 2.3:

*Page 8-28, regarding State facilities it is stated under Existing Plus Project Conditions that the weave section, on Northbound (NB) State Route (SR) 51 from the Watt Ave. slip on-ramp to the Auburn Boulevard (Blvd) slip off-ramp is significantly impacted by the*

*project in the PM peak hour. It is also significantly impacted in the Cumulative Plus Project Condition on page 8-59. The Corridor Plan states that the impacts to the facility remain “Significant and unavoidable” (page 8-59) for both the Existing and Cumulative plus project conditions because the May 2009 I-80/SR 51 CSMP stated that widening the freeway mainline was not feasible. However, the impacts can still be mitigated by encouraging drivers to use the Auburn Ave. off-ramp to the west of the weave section. This can be done by improving signal timing and coordination along Auburn Blvd. By reducing the use of weave section, impacts may be reduced. In addition, metering rates can be lowered on the Watt Ave slip ramp to NB SR 51 to allow fewer vehicles entering onto SR 51.*

#### LETTER RESPONSE 2.3:

CEQA requires that mitigation be meaningful so that it will “substantially lessen” or “avoid” significant impacts on the environment. As stated, changing signal timing on Auburn Boulevard and metering rates on the Watt Avenue slip ramp to NB SR 51 “may” reduce impacts; however, this assumes that drivers would indeed modify their travel routes based on changes to signal timing. Additionally, changing signal timing enough to completely avoid impacts would result in new impacts to local roadways. For example, lowering metering rates on the Watt Avenue slip ramp would result in more vehicles waiting in queue on Watt Avenue, thereby impacting circulation and safety on Watt Avenue. It should be noted that signal timing on local roadways is monitored by Sacramento County Department of Transportation, and is already timed for optimal operations. Since the significant impact on the affected freeway facility would not be substantially lessened or avoided and additional impacts could occur, the significant and unavoidable determination is appropriate.

#### LETTER COMMENT 2.4:

*The project will result in significant impacts to the weave section from Eastbound (EB) I-80 from Longview Dr. slip on-ramp to the Watt Ave. slip off-ramp and on the NB SR 51 from Fulton Avenue slip on-ramp to Watt Avenue slip off-ramp in the Cumulative Plus Project scenario. Regarding these two locations, auxiliary lanes exist on NB SR 51 from Fulton Ave to Watt Ave. and on I-80 from Longview to Watt Ave. Also, both Fulton Ave. and Watt Ave. are metered. It may be possible to reduce traffic in the weave sections by lowering the metering rate on Fulton and Watt to allow fewer vehicles onto the freeway in the peak hours. District 3 Traffic Operations will review and implement all appropriate ramp metering recommendations.*

## LETTER RESPONSE 2.4:

See Letter Response 2.3 above. Modifying metering rates on local roadways may result in new impacts to local roadways due backing up the freeway queue onto the local roadway. Additionally, as stated above, even with modified metering, the traffic on the affected facility may not be substantially decreased. Since the significant impact on the affected freeway facility would not be substantially lessened or avoided and additional impacts could occur, the significant and unavoidable determination is appropriate.

## LETTER COMMENT 2.5:

*Given the conditions of SR 51 and proposed development in its vicinity, Caltrans is in the process of creating a SR 51 Development Plan in collaboration with local agencies. This plan will identify a feasible and prioritized list of State Highway System needs based on current and future corridor conditions. We encourage the County to work collaboratively with us to address the needs identified in the plan.*

## LETTER RESPONSE 2.5:

Comment noted. Sacramento County was involved with Caltrans in the development of the Corridor System Management Plan and will work collaboratively with Caltrans in the creation of the SR 51 Development Plan.

LETTER 3: LAUREN PRICHARD

---

Lauren Prichard, Aborn Powers Real Estate, March 19, 2012

## LETTER COMMENT 3.1:

*We have received your notice about the North Watt Avenue Corridor Plan and the changes requested by the Planning department. Unfortunately the proposed zoning change for the above referenced property could render it unusable.*

*This property has been used for various types of automotive repair and other heavier industrial uses since it was built in 1989. The proposed zoning is Residential Mixed Use-1, which allows such uses as computer sales, doctor's offices, and beauty shops. If you look at the property, it is obviously not set up to be used for any of those purposes. This zoning does provide for minor auto repair with a conditional use permit, but the Plan does state under "Non-conforming use in an existing building," that "the use/business can continue to operate indefinitely, or the same type of use/business may*

*reoccupy the premises, as long as the vacancy period does not exceed 12 months for properties located in the Main Street District.” Vacancies in this building often last for over 12 months and in the current economy we have had vacancies over two years, so this clause could mean the end of this type of use unless we spend large amounts of money and time to continuously reapply for conditional use permits.*

*Please consider zoning our property Commercial Mixed Use, which would help to eliminate this issue. Under this zoning, minor automotive service and repair would be allowed and would not require a conditional use permit. That is the zoning that best describes how this property is and has been used and it will eliminate future problems for us and for the planning department when the units may be vacant for extended periods of time.*

LETTER RESPONSE 3.1:

Comment noted. The above comments are not comments on the adequacy of the environmental document. They are forwarded via this EIR to the Planning Division and the Board of Supervisors for consideration.

Letter 1



Matthew Rodriguez  
Secretary for  
Environmental Protection

California Regional Water Quality Control Board  
Central Valley Region  
Katherine Hart, Chair

11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6100  
(916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>



CAT



Edmund G. Brown Jr.  
Governor

12 October 2011

Catherine Hack  
Sacramento County  
827 7<sup>th</sup> Street  
Sacramento, CA 95814

CERTIFIED MAIL  
7010 3090 0000 5045 1326

**COMMENTS TO DRAFT ENVIRONMENTAL IMPACT REPORT, NORTH WATT AVENUE  
CORRIDOR PLAN PROJECT, SCH NO. 2009092067, SACRAMENTO COUNTY**

Pursuant to the State Clearinghouse's 9 September 2011 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Draft Environmental Impact Report* for the North Watt Avenue Corridor Plan Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

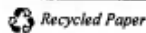
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml)

**Phase I and II Municipal Separate Storm Sewer System (MS4) Permits<sup>1</sup>**

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the

<sup>1</sup> Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

***California Environmental Protection Agency***





North Watt Avenue Corridor Plan Project  
SCH No. 2009092067  
Sacramento County

-2-

12 October 2011

maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/storm\\_water/municipal\\_permits/](http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/)

#### **Industrial Storm Water General Permit**

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/storm\\_water/industrial\\_general\\_permits/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml).

#### **Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed for the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916)557-5250.

#### **Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACOE permit, or any other federal permit, is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. Water Quality Certification must be obtained prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

#### **Waste Discharge Requirements**

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

North Watt Avenue Corridor Plan Project  
SCH No. 2009092067  
Sacramento County

-3-

12 October 2011

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:  
[http://www.waterboards.ca.gov/centralvalley/water\\_issues/water\\_quality\\_certification/](http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/)

If you have questions regarding these comments, please contact me at (916) 464-4745 or [gsparks@waterboards.ca.gov](mailto:gsparks@waterboards.ca.gov).



Genevieve (Gen) Sparks  
Environmental Scientist  
401 Water Quality Certification Program

cc: State Clearinghouse Unit, Governor's Office of Planning and Research, Sacramento



## Letter 2

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

EDMUND G. BROWN Jr., Governor

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3—SACRAMENTO AREA OFFICE

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October 31, 2011

03-2011-0049

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North Watt Avenue Corridor Plan

Draft Environmental Impact Report

Ms. Catherine Hack,  
Environmental Coordinator  
County of Sacramento  
Division of Environmental Review and Assessment  
827 7th Street, Room 220  
Sacramento, California 95814

Dear Ms. Hack:

Thank you for the opportunity to review and comment on the North Watt Avenue (Ave.) Corridor Plan Draft Environmental Impact Report (DEIR).

The North Watt Ave. Corridor Plan (Corridor Plan) area consists of approximately 750 acres positioned along a 4-mile segment of Watt Ave. north of Interstate 80 (I-80) to Antelope Road/U Street within the unincorporated Sacramento County. The plan area is situated entirely within the community of North Highlands adjacent to the former McClellan Air Force Base (now the McClellan Business Park). The Corridor Plan is a land use plan that is intended to guide infill growth and public improvements within the plan area within a planning horizon of 20 years. In all, the Corridor Plan could result in the addition of up to 7,200 additional residential units, 1,170,000 square feet of new retail, and 714,700 square feet of new office uses.

Our comments are as follows:

- Pages 8-17- & 18: With respect to Significance Criteria, the standard for Caltrans facilities is not correct. In particular, item # 1 states:

“...a project will cause significant impacts if it causes a facility operating at an acceptable LOS to deteriorate to an unacceptable LOS. For facilities with concept LOS F this criteria does not apply.”

The operating LOS of facilities now is based upon the Corridor System Management Plans (CSMP) and is no longer based on the TCR. In addition, for facilities with concept LOS F that are already operating at an unacceptable level (LOS F in urban areas), per our

*“Caltrans improves mobility across California”*

Ms. Catherine Hack,  
 October 31, 2011  
 Page 2

Traffic Impact Study Guide, if an existing facility is operating at less than the appropriate target LOS, the existing Measures of Effectiveness (MOE) should be maintained. Therefore, the project proponent must mitigate the impacts to bring the facility back to the existing (pre-project) operating condition.

- Page 8-18-last paragraph: In the Impacts and Analysis/Existing Conditions section, the DEIR states that the traffic counts were taken from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. This is an inadequate analysis in that peak periods are generally from 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM. Specifically, the peak hour for I-80 between Madison and Watt is 6:00 AM. Therefore the heaviest hour of the AM peak period was not captured thus rendering the AM counts underrepresented.
- Page 8-28, regarding State facilities it is stated under Existing Plus Project Conditions that the weave section, on Northbound (NB) State Route (SR) 51 from the Watt Ave. slip on-ramp to the Auburn Boulevard (Blvd.) slip off-ramp is significantly impacted by the project in the PM peak hour. It is also significantly impacted in the Cumulative Plus Project Condition on page 8-59. The Corridor Plan states that the impacts to the facility remain "significant and unavoidable" (page 8-59) for both the Existing and Cumulative plus project conditions because the May 2009 I-80/SR 51 CSMP stated that widening the freeway mainline was not feasible. However, the impacts can still be mitigated by encouraging drivers to use the Auburn Ave. off-ramp to the west of the weave section. This can be done by improving signal timing and coordination along Auburn Blvd. By reducing the use of the weave section, impacts may be reduced. In addition, metering rates can be lowered on the Watt Ave. slip ramp to NB SR 51 to allow fewer vehicles entering onto SR 51.
- The project will result in significant impacts to the weave section from Eastbound (EB) I-80 from Longview Dr. slip on-ramp to the Watt Ave. slip off-ramp and the on NB SR51 from Fulton Ave slip on-ramp to Watt Ave. slip off-ramp in the Cumulative Plus Project scenario. Regarding these two locations, auxiliary lanes exist on NB SR 51 from Fulton Ave. to Watt Ave. and on I-80 from Longview to Watt Ave. Also, both Fulton Ave. and Watt Ave. are metered. It may be possible to reduce traffic in the weave sections by lowering the metering rate on Fulton and Watt to allow fewer vehicles onto the freeway in the peak hours. District 3 Traffic Operations will review and implement all appropriate ramp metering recommendations.
- Given the conditions on SR 51 and proposed development in its vicinity, Caltrans is in the process of creating a SR 51 Development Plan in collaboration with local agencies. This plan will identify a feasible and prioritized list of State Highway System needs based on current and future corridor conditions. We encourage the County to work collaboratively with us to address the needs identified in the plan.

*"Caltrans improves mobility across California"*

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Ms. Catherine Hack,  
October 31, 2011  
Page 3

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If you have any questions, comments or require further information, please contact Larry Brohman, Sacramento County Intergovernmental Review Coordinator, at (916) 274-0627 or [larry\\_brohman@dot.ca.gov](mailto:larry_brohman@dot.ca.gov)

Sincerely,



Eric Fredericks, Chief  
Office of Transportation Planning – South

*"Caltrans improves mobility across California"*

Letter 3



Aborn Powers, Inc.

*COPC Meeting 3-26-12  
Item 6*

COUNTY OF SACRAMENTO  
BOARD OF SUPERVISORS

12 MAR 22 PM 1:14

March 19, 2012

Kevin Romo  
c/o County Supervisors  
700 H. Street, Room 2450  
Sacramento, CA 95814-1298

Re: 6303-6315 Watt Ave., N. Highlands

Dear Kevin,

We have received your notice about the North Watt Avenue Corridor Plan and the changes requested by the Planning Department. Unfortunately the proposed zoning change for the above referenced property could render it unusable.

This property has been used for various types of automotive repair and other heavier industrial uses since it was built in 1989. The proposed zoning is Residential Mixed Use -1, which allows such uses as computer sales, doctor's offices, and beauty shops. If you look at the property, it is obviously not set up to be used for any of those purposes. This zoning does provide for minor auto repair with a conditional use permit, but the Plan does state under "Non-conforming use in an existing building," that "the use/business can continue to operate indefinitely, or the same type of use/business may reoccupy the premises, as long as the vacancy period does not exceed 12 months for properties located in the Main Street District." Vacancies in this building often last for over 12 months and in the current economy we have had vacancies over two years, so this clause could mean the end of this type of use unless we spend large amounts of money and time to continuously reapply for conditional use permits.

Please consider zoning our property Commercial Mixed Use, which would help to eliminate this issue. Under this zoning, minor automotive service and repair would be allowed and would not require a conditional use permit. That is the zoning that best describes how this property is and has been used and it will eliminate future problems for us and for the planning department when the units may be vacant for extended periods of time.

3181 Cameron Park Drive, Suite 105 • Cameron Park, CA 95682-7980 • (530) 677-2945 • FAX (530) 677-3528



SACRAMENTO COUNTY  
COMMUNITY PLANNING AND DEVELOPMENT DEPARTMENT  
DIVISION OF ENVIRONMENTAL REVIEW AND ASSESSMENT  
827 SEVENTH STREET, ROOM 220 SACRAMENTO, CALIFORNIA 95814  
TELEPHONE: (916) 874-7914 FAX: (916) 874-8343  
[WWW.DERA.SACCOUNTY.NET](http://WWW.DERA.SACCOUNTY.NET)

## 17 INITIAL STUDY CHECKLIST

FOR NORTH WATT AVENUE CORRIDOR PLAN

CONTROL NUMBER: 2008-GPB-CZB-ZOB-00153

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. The words "significant" and "significance" used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act.

## INITIAL STUDY CHECKLIST

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>1. LAND USE</b> - Would the project:				
a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	X			The project includes an amendment to the County General Plan, a Community Plan amendment and corresponding rezone. Further analysis required regarding potential Land Use impacts.
b. Physically disrupt or divide an established community?			X	The project will not create physical barriers that substantially limit movement within or through the community. The site is urban and located inside the Urban Services Boundary.
<b>2. POPULATION/HOUSING</b> - Would the project:				
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?	X			The proposed project is a comprehensive planning effort that is intended to address buildout of the Corridor Plan area. This area is currently designated for a mix of urban uses; the proposed Corridor Plan would intensify urban uses, and populations, within the area. Further evaluation is warranted.
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?			X	Buildout of the Corridor Plan could displace individual residences that currently exist. However, the proposed plan, as implemented, could result in the construction of up to 7,200 residential units, which more than replaces any residential removals in the plan area. Therefore, any displacement that occurs would not necessitate construction of replacement housing elsewhere.
<b>3. AGRICULTURAL RESOURCES</b> - Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?			X	The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance nor does it contain prime soils. The site is currently open space and a parking lot.



	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
b. Conflict with any existing Williamson Act contract?			X	No Williamson Act contracts apply to the project site.
c. Introduce incompatible uses in the vicinity of existing agricultural uses?			X	The project area is made up of a mix of urban uses. Some minor agricultural-residential properties are adjacent to the plan area; however, these operations are very small scale animal husbandry or hobby farms, which are located adjacent to urban uses along Watt Avenue. Thus the proposed Corridor Plan would not introduce incompatible uses in the vicinity of existing agricultural uses.
<b>4. AESTHETICS - Would the project:</b>				
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?			X	The project does not occur in the vicinity of any scenic highways, corridors, or vistas.
b. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	Given the urbanized environment in which the project is proposed, the project would not substantially alter the visual character or quality of the project site or vicinity. However, it is acknowledged that aesthetic impacts are subjective and may be perceived differently by various affected individuals.
c. Create a new source of substantial light, glare or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?			X	New sources of light, including street lights associated with future projects, would be introduced as a result of the project. Compliance with development and lighting standards contained in the Sacramento Zoning Code should insure impacts are less than significant.
<b>5. AIRPORTS - Would the project:</b>				
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?	X			The project is located within the safety zone of McClellan airport. Refer to the "Airport Compatibility" chapter of the Environmental Impact Report.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?			X	The project is located adjacent to McClellan airport. Refer to the "Airport Compatibility" chapter of the Environmental Impact Report.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?		X		The project is located adjacent to McClellan airport. Refer to the "Airport Compatibility" chapter of the Environmental Impact Report.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
d. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?			X	The project does not involve or affect air traffic movement.
<b>6. PUBLIC SERVICES - Would the project:</b>				
a. Have an adequate water supply for full buildout of the project?	X			The project site has existing water supplies and water supply facilities; Additional infrastructure and water supply may be required. Additional analysis can be reviewed in the "Public Services & Utilities" chapter of this EIR.
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?	X			The project site has access to an existing waste water treatment plant facility; however, the project would increase service requirements. Further analysis is warranted.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	The Keifer Landfill has capacity to accommodate solid waste until the year 2030.
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?	X			The analysis of water and sewer service improvements/capacity for the Corridor has indicated that extension of water/sewer lines would be necessary. See "Public Services & Utilities" chapter for additional information.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?			X	Construction of on- and/or off-site drainage facilities may be required. No substantial adverse physical impacts are anticipated.
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?			X	The project would increase the demand for electric and/or gas services within the FVGCP area.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?			X	Project would incrementally increase demand for emergency services.
h. Result in substantial adverse physical impacts associated with the provision of public school services?	X			Buildout of the Corridor project would result in increases to student population.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?			X	The project would incrementally increase the need for park and recreation services; however, project impacts will not result in substantial adverse physical impacts.
<b>7. TRANSPORTATION/TRAFFIC</b> - Would the project:				
a. Result in a substantial increase in peak hour vehicle trip-ends that could exceed, either individually or cumulatively, a level of service standard established by the County?	X			The projected increase in peak hour vehicle trip-ends attributed to the project may exceed, either individually or cumulatively, a level of service standard established by Sacramento County significance criteria..
b. Result in a substantial adverse impact to access and/or circulation?	X			The proposed project would substantially affect access and circulation within the area.
c. Result in substantial adverse impact due to inadequate parking capacity?			X	The SPA has special provisions associated with parking which will adequately supply parking needs. The project will result in a substantial shortfall of parking. No substantial adverse impact has been identified.
d. Result in a substantial adverse impact to public safety on area roadways?			X	Future projects will be required to comply with applicable access and circulation requirements of the County Improvement Standards and the Uniform Fire Code.
e. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	No conflicts with adopted policies, plans, or programs supporting alternative transportation have been identified.
<b>8. AIR QUALITY</b> - Would the project:				
a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	X			The project may result in a cumulatively considerable net increase of criteria pollutant for which the project region is in non-attainment. See the Air Quality chapter.
b. Expose sensitive receptors to pollutant concentrations in excess of standards?	X			The project could expose sensitive receptors (i.e., schools, nursing homes, hospitals, daycare centers, etc.) to pollutant concentrations in excess of standards.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
c. Create objectionable odors affecting a substantial number of people?			X	The buildout of the proposed project plan is not expected to create any objectionable odors. Furthermore, County standards regarding setbacks and the placement of specific uses would reduce the potential for odor conflicts. Therefore, objectionable odors affecting a substantial number of people would not be expected to occur.
<b>9. NOISE - Would the project:</b>				
a. Result in exposure of persons to, or generation of, noise levels in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?	X			The project may result in exposure of person to, or generation of, noise levels in excess of applicable standards. Refer to the Noise chapter of the EIR.
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?			X	Project construction associated with build-out of the Corridor will result in a temporary increase in ambient noise levels in the project vicinity. This impact is considered less than significant due to the temporary nature of these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code).
<b>10. HYDROLOGY AND WATER QUALITY - Would the project:</b>				
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?			X	The project is not expected to deplete groundwater supplies and will not substantially interfere with groundwater recharge. See the Public Services & Utilities Chapter of the EIR.
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	X			Construction of on- and/or off-site drainage facilities would be required for the project. Further analysis is warranted.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?	X			Portions of the project site are within a 100-year floodplain and/or local floodplain. Refer to the Drainage chapter of the EIR.
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?			X	Improvements associated with future build-out of the Corridor are not expected to impede or redirect flows within the 100-year floodplain. Refer to the Drainage chapter of the EIR.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
e. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	The project will not expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
f. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?	X			Adequate on- and/or off-site drainage improvements will be required pursuant to the Sacramento County Drainage Ordinance and Improvement Standards. Further analysis is warranted.
g. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?			X	The project site could create adverse impacts to water quality from erosion and sedimentation due to construction. Sacramento County requires all development to incorporate Best Management Practices in order to prevent, or reduce the impacts.
<b>11. GEOLOGY AND SOILS - Would the project:</b>				
a. Expose people or structures to substantial risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			X	Sacramento County is not within an Alquist-Priolo Earthquake Fault Zone. Although there are no known active earthquake faults in the project area, the site could be subject to some ground shaking from regional faults. The Uniform Building Code contains applicable construction regulations for earthquake safety that will assure less than significant impacts.
b. Result in substantial soil erosion, siltation or loss of topsoil?			X	Compliance with the County's Land Grading and Erosion Control Ordinance will reduce the amount of construction site erosion and minimize water quality degradation by providing stabilization and protection of disturbed areas, and by controlling the runoff of sediment and other pollutants during the course of construction.
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, soil expansion, liquefaction or collapse?			X	The project is not located on an unstable geologic or soil unit. Pursuant to Title 16 of the Sacramento County Code Uniform Building Code a soils report will be required prior to building construction. If the soils report indicates than soils may be unstable for building construction then site specific measures (e.g., special engineering design or soil replacement) must be incorporated to assure that soil conditions will be satisfactory for the proposed construction.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?			X	A public sewer system is available to serve the project. Connection to the public sewer system will be required.
e. Result in a substantial loss of an important mineral resource?			X	The project is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram, nor are any important mineral resources known to be located on the project site.
f. Directly or indirectly destroy a unique paleontological resource or site?			X	No known paleontological resources (e.g. fossil remains) or sites occur at the project location.
<b>12. BIOLOGICAL RESOURCES - Would the project:</b>				
a. Have a substantial adverse effect on any special status species?	X			Special status species may occur within the Corridor. Further analysis is warranted.
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community?	X			Sensitive natural communities and riparian habitat occurs on the project site. Further analysis is warranted.
c. Have a substantial adverse effect on wetlands designated as jurisdictional waters of the United States as defined by Section 404 of the Clean Water Act?	X			Jurisdictional wetlands have been identified on the subject properties. Grading and construction activities in the plan area could have a significantly adverse effect on wetlands and water features. Further analysis is warranted.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?			X	The project site is already partially developed. Resident and/or migratory wildlife may be displaced by future project construction; however, no major wildlife corridors would be affected.
e. Adversely affect or result in the removal of native or landmark trees?	X			Native oak trees occur on the project site. Further analysis will be conducted in the EIR.
f. Conflict with any local policies or ordinances protecting biological resources?			X	The project is consistent with local policies/ordinances protecting biological resources.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?			X	There are no known conflicts with any approved plan for the conservation of habitat.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>13. CULTURAL RESOURCES - Would the project:</b>				
a. Cause a substantial adverse change in the significance of an historical resource?	X			The potential exists that properties within the Corridor could contain resources that meet the criteria for listing in the California Register of Historical Resources.
b. Have a substantial adverse effect on an archaeological resource?	X			Archaeological resources have not been known to occur on-site. However, an adverse effect would occur if archaeological artifacts were found within the Corridor Plan area.
c. Disturb any human remains, including those interred outside of formal cemeteries?	X			The project area has a history of Native American habitation. As a result, the potential exists for grading and excavation associated with buildout of the Corridor Plan area to unearth subsurface resources.
<b>14. HAZARDS AND HAZARDOUS MATERIALS - Would the project:</b>				
a. Create a substantial hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?			X	The potential exists for projects within the Corridor Plan area to involve the transport, use, and/or disposal of hazardous materials, however, compliance with federal, state, and local laws would ensure a less-than-significant impact.
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?	X			Project sites may contain on-site hazardous materials. Further analysis is warranted.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	X			See the Hazardous Materials chapter of the EIR
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?	X			The project area has known hazardous materials sites. See the Hazardous Materials chapter of the EIR.
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?			X	The project would not interfere with any known emergency response or evacuation plan.

SUPPLEMENTAL INFORMATION

LAND USE CONSISTENCY	Current Land Use Designation	Consistent	Not Consistent	Comments
General Plan	Low Density Residential, Medium Density Residential, Commercial and Office, and Industrial	X		Consistent with General Plan amendment
Community Plan	Various	X		Consistent with Community Plan amendment
Land Use Zone	Various	X		Consistent with Rezone

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- <sup>i</sup> **Potentially Significant** indicates there is substantial evidence that an effect MAY be significant. If there are one or more “Potentially Significant” entries and Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.
  - <sup>ii</sup> **Less than Significant with Mitigation** applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.
  - <sup>iii</sup> **Less than Significant or No Impact** indicates that either a project will have an impact but the impact is considered minor or that a project does not impact the particular resource.



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