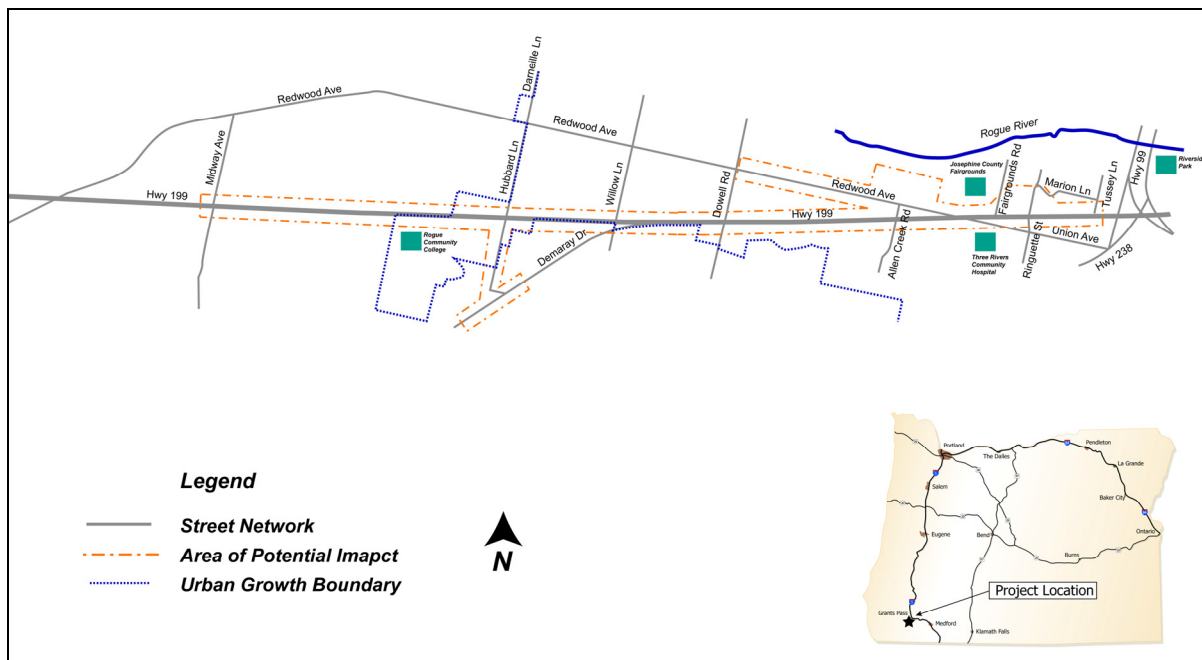


Executive Summary

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA), as implemented by Council on Environmental Quality (CEQ) and Federal Highway Administration (FHWA) regulations (40 CFR 1500 and 23 CFR 771). The EA discloses potential environmental effects of the Highway 199 Expressway Upgrade project in Grants Pass and Josephine County, Oregon (Exhibit 1) and serves as a key source of information for public and agency review and input into the project.

EXHIBIT 1. PROJECT LOCATION



Organization of the Document

Chapter 1 describes the purpose and need of the project and establishes the fundamental reasons for the project's development and evaluation. Chapter 1 also contains the goals and objectives of

Organization of the Environmental Assessment

Chapter 1 – Project Introduction

Chapter 2 – Project Alternatives

Chapter 3 – Affected Environment and Environmental Consequences

Chapter 4 – Mitigation and Conservation Measures

Chapter 5 – Project Coordination and Public Involvement

Chapter 6 – References

Chapter 7 – Glossary

Area of Potential Impact (API)

The API is the area that potential impacts from the project may occur. For this project, the API is generally bounded by Midway Avenue to the west and Tussey Lane to the east. The API extends 300 feet south and north of the Highway 199 centerline, with additional area extending south along Hubbard Lane to Demaray Drive, northwest along Redwood Avenue to Dowell Road, and 500 feet north along Ringuette Street.

Uncontrolled access

An access point that has no signage or signals to control vehicles entering or leaving a parcel.

the project that were created to assist with development of conceptual alternatives and to help determine which alternatives would best meet the needs of the community. Chapter 2 describes the alternatives from early conception through identification of the two build alternatives analyzed in this document. There is also a discussion of the alternatives that were withdrawn from consideration. Chapter 3 describes the baseline conditions and potential effects (direct, indirect, and cumulative) each of the alternatives could have on environmental resources in the area of potential impact (API). Chapter 4 provides a description of potential mitigation measures that could be implemented to reduce or eliminate effects in the API. Chapter 5 describes the public involvement and agency coordination that occurred during project scoping. Chapter 6 identifies references cited in the EA, and Chapter 7 is a glossary of terms.

Purpose and Need for the Project

The purpose of the project is to address vehicular and pedestrian safety, and current and future congestion and operational deficiencies along Highway 199 between Midway Avenue and Tussey Lane. The need for the project is based on the crash history, congestion, access, growth of surrounding area, and system efficiency of Highway 199.

Summary of Alternatives**No Build Alternative**

Highway 199 in the API has two travel lanes in each direction, with signalized intersections at Dowell Road, Allen Creek Road, Redwood Avenue, Fairgrounds Road, and Ringuette Street. Unsignalized intersections include: Midway Avenue, Rogue Community College, Hubbard Lane, Willow Lane, Henderson Lane, and Tussey Lane. In addition, Arbor Ridge Drive, Dawn Drive, and many private driveways currently have direct and uncontrolled access onto Highway 199.

From Midway Avenue to Willow Lane, the wide paved median does not restrict vehicular movements across travel lanes. At the intersection of Highway 199 and Willow Lane there is a raised curb median, which provides westbound traffic on Highway 199 with one left-turn-only lane onto southbound Willow Lane, prohibits

eastbound Highway 199 traffic from turning left onto Willow Lane, and prohibits traffic on Willow Lane from crossing Highway 199.

On Highway 199 between Willow Lane and Redwood Avenue, a continuous left-turn pocket and no physical barrier separate westbound and eastbound traffic. Between Redwood Avenue and Ringuette Street, the westbound and eastbound travel lanes on Highway 199 are separated by a depressed median. From Ringuette Street to Tussey Lane, a raised curb median on Highway 199 separates westbound and eastbound traffic.

There are limited and unconnected dedicated bicycle and pedestrian facilities in the API. There is an existing bicycle and pedestrian shared use path along the south side of Highway 199, beginning at the Rogue Community College (RCC) entrance and continuing east until Nebraska Avenue. Along Redwood Avenue and most of Hubbard Lane, pedestrians and bicyclists use paved shoulders. A small section of sidewalk exists along the west side of Hubbard Lane just south of Highway 199.

The No Build Alternative also assumes that other programmed and funded projects in and adjacent to the API will occur, regardless of whether this project is constructed.

Alternative A

Alternative A would be constructed in two phases. Phase 1 would include improvements on Highway 199 from Midway Avenue to Tussey Lane and a realignment of the Allen Creek Road intersection with Redwood Avenue. Phase 2 could include additional improvements north of Highway 199 from Pansy Lane to Tussey Lane.

Alternative A – Phase 1

Exhibit 2 shows the general alignment of Alternative A Phase 1 with the area where this alternative differs in design from Alternative C Phase 1.

Alternative A Phase 1 would add a median barrier (Midway Avenue to Rogue Community College) and then a raised curb median (Rogue Community College to Tussey Lane) to separate four travel lanes from Midway Avenue to Dowell Road and six travel lanes from Dowell Road to Tussey Lane. Improvements would occur at several Highway 199 intersections, including: Midway Avenue, Arbor Ridge

Other programmed and funded projects that would occur under the No Build Alternative

- Construct eastbound passing lane on Highway 199 about 6 miles west of the project API
 - Repave and construct bicycle and pedestrian facilities on OR 99 and OR 238
 - Redwood Avenue improvements from Redwood Circle to Dowell Road
 - Improve Redwood Avenue at Dowell Road intersection and install traffic signal
-

Design plan sheets showing Alternative A can be found in Appendix A. Access plan sheets for this alternative can be found in Appendix B.

Drive, Dawn Drive, Rogue Community College entrance, Hubbard Lane, Allen Creek Road, Redwood Avenue, Fairgrounds Road, and Ringuette Street. Allen Creek Road would be extended north to a new four-legged intersection with Redwood Avenue, a new access road, and a realigned Highway 199 slip ramp. The new access road would extend to Pansy Lane, which would provide access to the Young Men's Christian Association (YMCA) and fairgrounds.

The median barrier, raised curb median, and other access control measures would restrict turning movements to and from Highway 199 at multiple intersections and driveways. Pedestrian and bicycle improvements would include a shared use path separated from Highway 199, bicycle lanes on Highway 199, and sidewalks along Highway 199 and Hubbard Lane separated from the travel lanes by a landscape strip. Two types of bicycle facilities would be provided to accommodate various bicycling experiences. Bicycle lanes on the highway would likely be used by experienced bicyclists who seek faster routes for commuting or biking long distances; the shared use path would likely be used by less experienced bicyclists or those pursuing slower paced recreation. New or improved connections to other existing and proposed pedestrian and bicycle facilities would also be constructed.

Alternative A – Phase 2

Phase 2 could extend the access road east to Tussey Lane, which could create a full access road connection between Allen Creek Road and Tussey Lane. This access road would be north and parallel to Highway 199. At this stage in the Highway 199 Expressway Upgrade project, Phase 2 is considered preliminary and impacts resulting from Phase 2 are generally discussed in this environmental assessment.

Phase 2 will be studied in more detail during the South Y Interchange Planning Study, which is scheduled to begin in 2007. The South Y Interchange Planning Study will develop and consider a range of alternatives that address congestion affecting traffic operations at the interchange. Construction of the Highway 199 Expressway Upgrade Phase 2, and the actual alignment, would not be set unless this access road concept is found to be part of the overall solution for the South Y Interchange Planning Study.

Alternative C

Alternative C would also be constructed in two phases. Phase 1 would include improvements on Highway 199 from Midway Avenue to Tussey Lane and a realignment of the Allen Creek Road intersection with Redwood Avenue. Phase 2 could include additional improvements north of Highway 199 from Pansy Lane to Tussey Lane.

Alternative C – Phase 1

Exhibit 2 shows the general alignment of Alternative C Phase 1 with the area where this alternative differs in design from Alternative A Phase 1.

Alternative C Phase 1 would add a median barrier (Midway Avenue to Rogue Community College) and then a raised curb median (Rogue Community College to Tussey Lane) to separate four travel lanes from Midway Avenue to Dowell Road and six travel lanes from Dowell Road to Tussey Lane. Improvements would occur at several Highway 199 intersections, including: Midway Avenue, Arbor Ridge Drive, Dawn Drive, Rogue Community College entrance, Hubbard Lane, Allen Creek Road, Redwood Avenue, Fairgrounds Road, and Ringuette Street. Allen Creek Road would be curved to connect at a new three-legged intersection with Redwood Avenue and a new access road. The new access road would extend to Pansy Lane, which would provide access to the YMCA and fairgrounds.

The median barrier, raised curb median, and other access control measures would restrict turning movements to and from Highway 199 at multiple intersections and driveways. Pedestrian and bicycle improvements would include a shared use path separated from Highway 199, bicycle lanes on Highway 199, and sidewalks along Highway 199 and Hubbard Lane separated from the travel lanes by a landscape strip. New or improved connections to other existing and proposed pedestrian and bicycle facilities would also be constructed.

Alternative C – Phase 2

Phase 2 could extend the access road east to Tussey Lane, which could create a full access road connection between Allen Creek Road and Tussey Lane. This access road would be north and parallel to Highway 199. At this stage in the Highway 199 Expressway Upgrade project, Phase 2 is considered preliminary and impacts

Design plan sheets showing Alternative C can be found in Appendix A. Access plan sheets for this alternative can be found in Appendix B.

resulting from Phase 2 are generally discussed in this environmental assessment.

Phase 2 will be studied in more detail during the South Y Interchange Planning Study, which is scheduled to begin in 2007. The South Y Interchange Planning Study will develop and consider a range of alternatives that address congestion affecting traffic operations at the interchange. Construction of the Highway 199 Expressway Upgrade Phase 2, and the actual alignment, would not be set unless this access road concept is found to be part of the overall solution for the South Y Interchange Planning Study.

Summary of Potential Long-Term Effects and Mitigation Measures

The potential long-term effects to resources analyzed for Phase 1 of the project are summarized in Exhibit 3. Potential effects for Phase 2 of the project are generally discussed in Chapter 3. The exhibit also summarizes mitigation measures for construction plans and specifications and select general mitigation measures that could be implemented to minimize effects on resources.

Effects and mitigation are differentiated by alternative if an alternative has distinct effects. Otherwise, a common description of effects and mitigation is provided in Exhibit 3.

EXHIBIT 2. ALTERNATIVE A AND ALTERNATIVE C

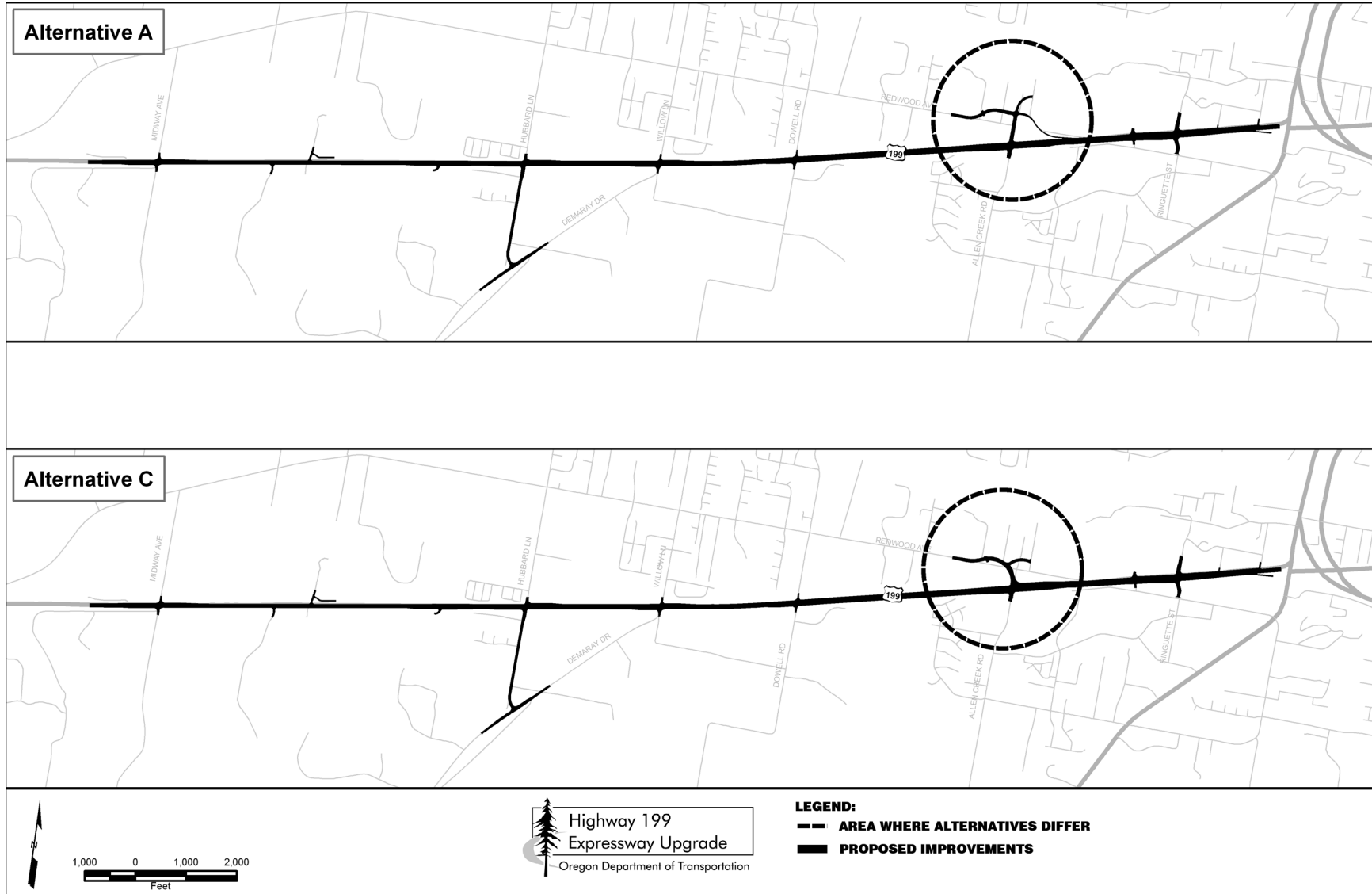


EXHIBIT 3. SUMMARY OF POTENTIAL LONG-TERM EFFECTS AND MITIGATION MEASURES

Resource Element	No Build Alternative	Alternative A	Alternative C
Air Quality			
Potential Effects	<ul style="list-style-type: none"> Increased congestion, causing air pollution 	<ul style="list-style-type: none"> Regional conformity with the State Implementation Plan has not been established at this time; regional conformity shall be established prior to the FHWA's NEPA decision. It is the responsibility of the Rogue Valley Council of Governments to complete the regional conformity determination. Project would not cause or contribute to a new violation of the PM₁₀ (particulate matter less than 10 microns in diameter) National Ambient Air Quality Standards, or increase the frequency or severity of violation 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> None required 	<ul style="list-style-type: none"> None required
Archaeology			
Potential Effects	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> There would be no long-term adverse effects to archaeological resources since there are no significant resources in the area of potential effect (APE) 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Should previously unidentified archaeological resources or human remains be encountered, work should immediately cease in the vicinity of the discovery to avoid further damages to the resource. Oregon Department of Transportation (ODOT), Federal Highway Administration (FHWA), State Historic Preservation Office (SHPO), and the Oregon State Museum of Anthropology would be notified so the significance of the discovery can be evaluated and the appropriate course of action implemented 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Biology			
Potential Effects	<ul style="list-style-type: none"> No effects 	<p><i>Fisheries Resources/Water Quality</i></p> <ul style="list-style-type: none"> No effect to water quality or geomorphology from net increase of impervious surface area <p><i>Wildlife Resources</i></p> <ul style="list-style-type: none"> Wildlife passage restricted by median barrier Wildlife-vehicle incidents may increase Tree removal may result in slight decrease in habitat for Migratory Bird Treaty Act (MBTA) protected nesting birds <p><i>Botanical Resources</i></p> <ul style="list-style-type: none"> Minimal effects to non-Endangered Species Act (ESA) botanical species No effects to ESA protected plant species Trees would be removed 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Implement a Pollution Control Plan (PCP) Prepare an Erosion and Sediment Control Plan (ESCP) Construct stormwater treatment facilities, including water quality swales and detention ponds Remove trees outside bird nesting season (March 1 – September 1) Fully span the active channel width of the Sand Creek and avoid in-water work during construction of the pedestrian bridge Develop and implement a riparian planting plan Comply with all permit conditions of approval and/or mitigation measures Follow the requirements of the applicable federal, state, and local regulations 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Hazardous Materials			
Potential Effects	<ul style="list-style-type: none"> No negative effects or positive benefits would be realized 	<ul style="list-style-type: none"> 28 sites (12 identified and 16 possible) have recognized and potential environmental conditions Public health hazards from possible changes in the amount of hazardous materials located above and below ground Increased effects to the environment through exposure of hazardous materials Increased project costs Knowing where hazardous materials may exist could be a positive benefit to public health and safety Removal of hazardous materials would be a positive benefit to public health and safety 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Investigate recognized and potential environmental conditions sites (i.e. subsurface sampling) to eliminate or minimize effects that sites could have on project activities and vice versa Prepare Level 2 Preliminary Site Investigation report document the presence or absence of potential contamination identified in the Hazardous Materials Corridor Study for the project. 	
Historic Resources			
Potential Effects	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> No long-term effects to any significant historic-period buildings 3 canals (Main, South Main, and South Highline) are historic resources eligible for listing on the National Register of Historic Places Effects to the 3 historically significant canals would involve placing sections of the waterways in culverts No adverse effect on canals which are part of an eligible historic resource 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Mitigation and conservation measures could be necessary if project design plans change and project effects to the three canals would be greater than stated in the Final Historic Resources Technical Report 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Land Use			
Potential Effects	<ul style="list-style-type: none"> Increased congestion and difficult access may deter new development and make retaining existing development more difficult Noncompliance: Oregon Statewide Planning Goal 12, City of Grants Pass Master Transportation Plan (MTP), Josephine County's Rural Transportation System Plan (TSP) 	<ul style="list-style-type: none"> 120 parcels affected by acquisition Acquisitions: 2 full, 118 partial No land use plan amendments of zone changes Type II Land Use Permit/Approval from the City of Grants Pass Ministerial Land Use Review and Permit from Josephine County would be required Compliance: Oregon Bicycle and Pedestrian Plan, ORS 366.514, Oregon's Statewide Planning Goal 12, the City of Grants Pass Master Transportation Plan (MTP), and the Josephine County Rural Transportation Systems Plan (TSP) 	<ul style="list-style-type: none"> 116 parcels affected by acquisition Acquisitions: 2 full, 114 partial No land use plan amendments of zone changes Type II Land Use Permit/Approval from the City of Grants Pass Ministerial Land Use Review and Permit from Josephine County would be required Compliance: Oregon Bicycle and Pedestrian Plan, ORS 366.514, Oregon's Statewide Planning Goal 12, the City of Grants Pass MTP, and the Josephine County Rural TSP
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Work with property and business owners in the API to minimize conflicts and inconveniences from construction-related activities Provide property and business owners in the API with advanced notice of potential access or utility disruptions resulting from construction activities Schedule the most disruptive construction activities during off-peak hours to minimize the effect to traffic Comply with all permit conditions of approval and/or mitigation measures Follow the requirements of the applicable federal, state, and local land use and zoning regulations 	
Noise			
Potential Effects	<ul style="list-style-type: none"> 54 residences, 10 commercial sites, and the YMCA outdoor basketball courts would experience noise levels that approach or exceed the noise abatement criteria 	<ul style="list-style-type: none"> 51 residences, seven commercial sites, and the YMCA outdoor basketball courts would experience noise levels that approach or exceed the noise abatement criteria 	<ul style="list-style-type: none"> 58 residences, six commercial sites, and the outdoor basketball courts at the YMCA would experience noise levels that approach or exceed the noise abatement criteria
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> None proposed 	<ul style="list-style-type: none"> None proposed

Resource Element	No Build Alternative	Alternative A	Alternative C
Right of Way Acquisition and Relocation			
Potential Effects	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • 120 parcels affected • Estimated total area required (not including temporary easements): 12.4 acres • 5 residential relocations • 8 commercial relocations • 2 full acquisitions • Cost: \$15.2 million 	<ul style="list-style-type: none"> • 116 parcels affected • Estimated total area required (not including temporary easements): 11.5 acres • 3 residential relocations • 9 commercial relocations • 2 full acquisitions • Cost: \$15.4 million
Mitigation Measures	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • Implement provisions as required under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, for all residential and commercial displacements and real property acquisitions. All property owners would be compensated at fair market value and relocation assistance would be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 	
Section 4(f) and 6(f)			
Potential Effects	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • Sections of canals placed in culverts • Canals: <i>de minimis</i> use • Recreation field at RCC: Access changes to RCC but no impacts to the recreation field, and no use of Section 4(f) resource • Picnic area, playground, and equestrian arena at fairgrounds: Access changes to fairgrounds, but no impacts to picnic area, playground, or equestrian area, and no use of Section 4(f) resource 	
Mitigation Measures	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • Provide advanced public notice of planned temporary road closures and detours, and changes in access routes that would affect Section 4(f) resources and the River City Trail • Implement dust and noise mitigation during work hours 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Socioeconomics and Environmental Justice			
Potential Effects	<ul style="list-style-type: none"> Continued unsafe, and potentially worsened, conditions for motorists, bicyclists, and pedestrians 	<ul style="list-style-type: none"> 5 residential relocations 8 commercial relocations BMX course relocated Conversion of private parcels to public: parcels paid \$2,638 in taxes (2005) Improved safety and decreased congestion Access more limited along Highway 199 Some access changes from full access to right in/right out only No disproportionate or adverse effects to EJ populations 	<ul style="list-style-type: none"> 3 residential relocations 9 commercial relocations BMX course relocated Relocation of health retailer (medical supplies) Conversion of private parcels to public: parcels paid \$554 in taxes (2005) Improved safety and decreased congestion Access more limited along Highway 199 Some access changes from full access to right in/right out only No disproportionate or adverse effects to EJ populations
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Provide notices of planned construction activities, planned temporary road closures and detours, and changes in other access routes Provide advance notice for major utility shut-offs and schedule during low use times Distribute periodic press releases, newsletters, or notices to residents in the API to advise them of changes in pedestrian, bicycle, or transit routes during construction. These should be prepared in English and for languages that meet or exceed the U.S. Department of Justice's 5 percent threshold Implement dust and noise mitigation during work hours Plan construction activities to allow reasonable access to private residential and commercial properties, and community and social services 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Traffic and Transportation			
Potential Effects	<ul style="list-style-type: none"> • 10 intersections on Highway 199 and Highway 238 fail to meet the volume to capacity (v/c) ratio mobility standards in year 2025 • 3 local street intersections fail to meet mobility standards in year 2025 • Safety on Highway 199 would not improve; 108 conflict points would exist between Allen Creek Road and Tussey Lane • Wide paved median on west end of Highway 199 would be a safety concern • Depressed unpaved median on east end of Highway 199 would be a safety concern • Decrease in crash rates would not be expected • Fails to minimize traffic flow interruptions • Fails to provide safe, convenient bicycle and pedestrian travel • Fails to improve bicycle and pedestrian facilities connectivity • Fails to reduce conflicts between vehicle traffic and bicycle and pedestrian users • Causes major queuing along Highway 199 at Redwood Avenue, Fairgrounds Road, Ringuette Street, and South Y Interchange • All measures of effectiveness, except vehicle miles traveled, would be worse than Alternatives A and C 	<ul style="list-style-type: none"> • 5 intersections on Highway 199 and Highway 238 fail to meet mobility standards in year 2025; however, 4 of the 5 improve the v/c ratio and 1 has no change to the v/c ratio as compared to the No Build Alternative • 2 local street intersections fail to meet mobility standards in year 2025 • Safety on Highway 199 would improve; 65 conflict points would exist between Allen Creek Road and Tussey Lane • Median barrier and raised curb median on west end of Highway 199 would be a safety benefit • Raised curb median on east end of Highway 199 would be a safety benefit • Decrease in crash rates would be expected • Reduces traffic flow interruptions • Provides safe, convenient bicycle and pedestrian travel • Improves bicycle and pedestrian facilities connectivity • Reduces conflicts between vehicle traffic and bicycle and pedestrian users • Decreases overall travel time by 4.9 and 3.0 minutes (eastbound and westbound) and travel delay by 4.8 and 1.1 minutes (eastbound and westbound) along Highway 199 • Increases average speed by 5 mph and 9 mph (eastbound and westbound) along Highway 199 • Eliminates major queuing along Highway 199 except at the South Y Interchange 	<ul style="list-style-type: none"> • 5 intersections on Highway 199 and Highway 238 fail to meet mobility standards in year 2025; however, 4 of the 5 improve the v/c ratio and 1 has no change to the v/c ratio as compared to the No Build Alternative • 2 local street intersections fail to meet mobility standards in year 2025 • Safety on Highway 199 would improve; 64 conflict points would exist between Allen Creek Road and Tussey Lane • Median barrier and raised curb median on west end of Highway 199 would be a safety benefit • Raised curb median on east end of Highway 199 would be a safety benefit • Decrease in crash rates would be expected • Reduces traffic flow interruptions • Provides safe, convenient bicycle and pedestrian travel • Improves bicycle and pedestrian facilities connectivity • Reduces conflicts between vehicle traffic and bicycle and pedestrian users • Decreases overall travel time by 4.7 and 3.0 minutes (eastbound and westbound) and travel delay by 5.2 and 1.4 minutes (eastbound and westbound) along Highway 199 • Increases average speed by 5 mph and 11 mph (eastbound and westbound) along Highway 199 • Eliminates major queuing along Highway 199 except at the South Y Interchange

Resource Element	No Build Alternative	Alternative A	Alternative C
Traffic and Transportation continued			
Potential Effects continued		<ul style="list-style-type: none"> Decreases travel time and travel delay by 604 and 663 vehicle hours respectively in the transportation study area Travel distance in the transportation study area increases by 1,479 vehicle miles traveled Positive benefits would be realized under all measures of effectiveness, except vehicle miles traveled, over the No Build Alternative Slightly less positive benefits than Alternative C In comparison to the No Build Alternative, Alternative A results in overall improvements to Highway 199 and transportation system 	<ul style="list-style-type: none"> Decreases travel time and travel delay by 579 and 665 vehicle hours respectively in the transportation study area Travel distance in the transportation study area increases by 2,343 vehicle miles traveled Positive benefits would be realized under all measures of effectiveness, except vehicle miles traveled, over the No Build Alternative Slightly more positive benefits than Alternative A In comparison to the No Build Alternative, Alternative C results in overall improvements to Highway 199 and transportation system
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Implement a Mobility Plan and Traffic Control Plan Implement a Transportation Management Plan 	<ul style="list-style-type: none"> Implement a Mobility Plan and Traffic Control Plan Implement a Transportation Management Plan
Visual			
Potential Effects	<ul style="list-style-type: none"> Visually distracting traffic congestion in the API would worsen over time Increased light and glare from cars and trucks Increased visual disorder 	<ul style="list-style-type: none"> Some vegetation removal, minor terrain modification, and increased pavement for widened and new roads Decreased congestion and a more visually ordered roadway Visual quality would remain the same between Midway Avenue and Fairgrounds Road, and would improve slightly between Fairgrounds Road and Tussey Lane 	
Mitigation Measures	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Restore construction staging areas that are not needed once the project is completed to pre-project existing conditions to the extent practicable Minimize to the extent practicable the amount of vegetation removal in clear and grub areas Shield and/or focus construction lighting on work areas to minimize ambient spillover of light into adjacent areas Implement a boulevard treatment (landscaping, decorative lighting, etc) along Highway 199 between Allen Creek Road and Tussey Lane to improve visual quality Use colored concrete and/or stamped patterns for barrier and median areas to blend into the natural environment 	

Resource Element	No Build Alternative	Alternative A	Alternative C
Water			
Potential Effects	<ul style="list-style-type: none"> • With a gradual but steady increase in traffic volumes over time, there would be a potential that highway runoff pollution would exceed the levels currently generated • Increases in sediment, suspended solids, and petroleum contaminants, primarily in Allen Creek, and to a lesser extent in Sand Creek • Negative effects on water quality would be greater than Alternatives A and C since water quality treatment facilities would not be constructed 	<ul style="list-style-type: none"> • 15 acres of new right of way, with 5.5 acres associated with expanding the Highway 199 and 9.5 acres associated with the modifications to the local street network • 7.0 acres of net new impervious for the Highway 199 and 4.2 acres of net new impervious for the local street network. The total amount of net new impervious is 11.2 acres • Mitigation provided by the stormwater treatment facilities would ensure that the 3-year, in-stream concentrations of copper and zinc remain below acute water quality criteria • Mitigation provided by the stormwater treatment components would decrease the pollutant loads to levels less than baseline conditions 	<ul style="list-style-type: none"> • 13 acres of new right of way, with 6 acres associated with expanding the Highway 199 and 7 acres associated with the modifications to the local street network • 7.8 acres of net new impervious for the Highway 199 and 2.7 acres of net new impervious for the local street network. The total amount of net new impervious is 10.5 acres • Mitigation provided by the stormwater treatment facilities would ensure that the 3-year, in-stream concentrations of copper and zinc remain below acute water quality criteria • Mitigation provided by the stormwater treatment components would decrease the pollutant loads to levels less than baseline conditions
Mitigation Measures	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • Route runoff from 10.3 acres of impervious surface through new stormwater treatment facilities 	<ul style="list-style-type: none"> • Route runoff from 10.7 acres of impervious surface through new stormwater treatment facilities

Resource Element	No Build Alternative	Alternative A	Alternative C
Wetlands			
Potential Effects	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • 0.55 acres of effect to palustrine forested wetlands • No effects to palustrine scrub-shrub • 0.63 acres of effect to palustrine emergent wetlands • 0.68 acres of effect to Sand Creek critical habitat • 0.01 acres of effect to riverine, upper perennial, aquatic bed • 0.07 acres of effect to palustrine open water/aquatic bed 	<ul style="list-style-type: none"> • 0.55 acres of effect to palustrine forested wetlands • 0.03 acres of effect to palustrine scrub-shrub • 0.63 acres of effect to palustrine emergent wetlands • 0.68 acres of effect to Sand Creek critical habitat • 0.01 acres of effect to riverine, upper perennial, aquatic bed • 0.07 acres of effect to palustrine open water/aquatic bed
Mitigation Measures	<ul style="list-style-type: none"> • None identified 	<ul style="list-style-type: none"> • Identify wetlands and waters as “no work zones” or “restricted work zones” on plans and in the field • Implement best management practices • Prepare an erosion and sedimentation control plan and a pollution control plan • Develop and implement a wetland restoration plan and site restoration plans • Add guardrail to the design where appropriate to avoid effects to wetlands by increasing roadway fill slope steepness • Construct the pedestrian bridge over Sand Creek to fully span the ordinary high water mark (OHWM) • Develop stormwater management plans to avoid direct effects to wetlands to the extent practicable • Develop a compensatory wetland mitigation plan to replace functions lost as a result of permanent effects to wetlands 	