Summary

Project Location and Project Objectives

The proposed State Route (SR) 32 Widening Project is located on SR 32 between SR 99 to the west and Yosemite Drive to the east in the City of Chico, Butte County. SR 32 crosses SR 99 and is a two- to four-lane, east-west highway providing connections between Interstate 5 to the west and Chico and rural communities to the north and east of Chico.

The purpose of the proposed project is to provide additional capacity needed to accommodate approved and planned development on and near the SR 32 corridor between SR 99 and Yosemite Drive. The widening of SR 32 is consistent with the City's general plan and reflects the current Caltrans' transportation concept report.

Proposed Project

The proposed project would widen and improve approximately 2.6 miles of SR 32, beginning at SR 99 at the west end of the project corridor and extending east past Yosemite Drive. The project would widen the highway to include a median and four lanes, with most of the widening to the north within existing state right-of-way. As the project approaches Bruce Road, the widening would likely become more symmetrical around the centerline, with most of the widening to the north and some widening to the south. The project would extend four lanes past Yosemite Drive and would then taper back to two lanes east of Yosemite Drive.

The proposed project would increase the number of through travel lanes from four to six from SR 99 to Fir Street and from two to four east of Fir Street, and would shift the traveled way closer to existing residential uses on the north side of the corridor. Increased traffic volumes and realignment of the roadway are predicted to result in increased traffic noise levels. The project includes open-graded asphalt concrete (OGAC) and a 6-foot-tall sound barrier, measured from the ground elevation at the residential property lines. The proposed locations for the sound barrier include:

- on the north side of SR 32 from approximately 1,100 feet east of Fir Street to Forest Avenue;
- on the north side of SR 32 from approximately 700 feet east of Bruce Road to Yosemite Drive; and
- on the south side of SR 32 from approximately 2,200 feet west of Forest Avenue to Forest Avenue.

Three design options that involve different sound barrier materials and one design option that involves a higher sound barrier are evaluated in this report:

- **Design Option A1**: A 6-foot-high pre-cast concrete wall would be constructed within Caltrans right-of-way adjacent to the private property line.
- **Design Option A2**,: A 6-foot-high concrete block wall would be constructed within Caltrans right-of-way adjacent to the private property lines.
- **Design Option A3**: A 6-foot-high wooden fence would be constructed within the residential properties.
- **Design Option A4**: An 8-foot-high sound barrier would be constructed using one of the materials identified above.
- **Location Option B1**: The sound barrier (either 6 feet or 8 feet high in one of the materials identified above) would be extended east of Forest Avenue to El Monte Avenue on the north side of SR 32.
- **Location Option B2**: The sound barrier (either 6 feet or 8 feet high in one of the materials identified above) would be extended from Fir Street to approximately 1,100 feet to the east on the north side of SR 32.

Alternatives to the Proposed Project

This EIR evaluates two alternatives: the Timber Barrier Alternative and the No-Project Alternative. These alternatives are summarized below.

Timber Barrier Alternative

Caltrans approved consideration of an alternative for the construction of a timber barrier that would allow for large tree plantings within the median of SR 32. The median width would typically be 14 feet, widening to 20 feet at the proposed intersections to accommodate the timber barrier end treatments. Design details for the Timber Barrier Alternative are as follows:

- Construct timber barrier within proposed median from the park-and-ride lot to Bruce Road. The barrier will terminate at the intersections of Forest Avenue, El Monte Avenue, and Bruce Road. The barrier will not be placed on the Dead Horse Slough bridge.
- Widen median to 20 feet at the Forest Avenue and El Monte Avenue intersections.
- Include new tree plantings in irrigated median with no size restrictions.
- Clear all obstructions within 17-foot CRZ (per previously approved design exception; trees outside of these limits can remain).
- Process a design exception for 2-foot inside shoulders (adjacent to the timber railing).

Construction of this alternative would move the north and south edges of pavement approximately 3 feet farther to the north and south than the proposed project at the intersections of Forest Avenue and El Monte Avenue. Other aspects of the proposed improvements, such as the traffic signal locations, bridge widening, improvements east of Bruce Road, use of OGAC, construction of a sound barrier , and the sound barrier design and location options, would be identical to the proposed project.

No-Project Alternative

Under the No-Project Alternative, SR 32 would not be widened to meet the increased traffic needs associated with growth in the project area. SR 32 between SR 99 and Yosemite Avenue would remain unchanged.

Summary of Environmental Impacts and Mitigation Measures

In February 2007, the City prepared an Initial Study (IS) and determined that the project may result in a significant effect on the environment in the areas of aesthetics and noise (see Appendix A for a copy of the IS). Therefore, the City decided to prepare an environmental impact report (EIR) for the project that focused on those two issues.

The 2007 IS recommended the use of OGAC and the construction of sound barriers as *mitigation* for traffic noise impacts. However, based on public input and the noise impact assessment contained in Appendix E, the project has been modified to *include* OGAC and 6-foot-tall sound barriers. No other changes have been made to the proposed project that was evaluated in the 2007 IS.

Table S-1 summarizes the environmental impacts and the proposed mitigation measures described in the 2007 IS for all environmental topics with the exception of noise, air quality, biological resources, and visual resources (See Appendix A for the IS which contains a detailed discussion of each environmental topic.) Because, the IS explains why these impacts are less than significant or less than significant with mitigation, the checklist satisfies the requirements of CEQA Guidelines section 15128, which requires that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR" and CEQA Guidelines section 15143 that recommends attaching the IS to the EIR.

The analyses of noise, biological resources, and visual resource impacts have been revised in this EIR to account for the design and location options for the proposed sound barrier, as described above. In light of the expanded analyses, the mitigation measures described in this EIR for these impact topics take the place of those contained in the IS. This EIR also includes a revised evaluation of air quality impacts to address recent concerns over greenhouse gas emissions, as well as a biological resources chapter that summarizes project compliance with Section 404 of the federal Clean Water Act (CWA) and Section 7 of the federal Endangered Species Act (ESA). Table S-2 summarizes the impacts and proposed mitigation measures for noise, air quality, biological resources, and visual resources.

Table S-1. Summary of Proposed Project Impacts and Mitigation Measures Identified in the State Route 32 Widening Project Initial Study (February 2007)[a]

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Cultural Resources				
Cause a substantial adverse change in the significance of a historical or archeological resource as defined in Public Resources Code Section 15064.5.	No adverse changes to known historic resources within the project area. Potential for adverse effect to potentially significant but as of yet unidentified cultural/historical resources through excavation and earthmoving activities associated with the proposed project (Significant—Less than significant)	If buried resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, the contractor will stop work in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City, Caltrans and other appropriate agencies. Further mitigation and/or construction shall be consistent with the recommendations of the archaeologist. Any cultural resources found during construction will be recorded or described in a professional report and submitted to the Northeast Information Center at CSU Chico. The City will be responsible for preparing the report. If human remains are discovered during project construction, the contractor shall stop all work at the discovery location and any nearby area reasonably suspected to overlie adjacent human remains (Public Resources Code, Section 7050.5). The County Coroner shall be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it shall be necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of Native American Heritage Commission (NAHC) (Public Resource Code, Section 5097). The coroner shall contact Native American Heritage Commission. The	Same impact and mitigation measures as proposed project	No project-related impact

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
		descendents or most likely descendents of the deceased shall be contacted. Work shall not resume until the descendents have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resource Code, Section 5097.98. Work may resume if the NAHC is unable to identify a descendant or the descendant fails to make a recommendation. If human remains are found, the City and Caltrans will work with the NAHC as described on the NAHC web page regarding the treatment of human remains: http://nahc.ca.gov/profguide.html.		
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	No direct or indirect impacts to unique paleontological resources or sites or unique geologic features (No impact)	None required	Same impact and mitigation measures as proposed project	No project-related impact
Disturb any human remains including those interred outside of formal cemeteries.	Potential to disturb as of yet unidentified human remains, including those interred outside of formal cemeteries (Significant—Less than significant)	If human remains are discovered during project construction, the contractor shall stop all work at the discovery location and any nearby area reasonably suspected to overlie adjacent human remains (Public Resources Code, Section 7050.5). The County Coroner shall be contacted to determine if the cause of death must be investigated.	Same impact and mitigation measures as proposed project	No project-related impact

Table S-1. Summary of Proposed Project Impacts and Mitigation Measures Identified in the State Route 32 Widening Project Initial Study (February 2007)[a]

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Geology and Soils				
Expose people or structures to potential adverse effects involving seismic-related liquefaction.	Potential for saturated alluvial soils in the vicinity of Dead Horse Slough to become subject to moderate liquefaction risk during seismic events (Significant—Less than significant)	The project will be designed to conform to the conclusions and recommendations of the final foundation investigation as it related to the design and construction of Dead Horse Slough bridge.	Same impact and mitigation measures as proposed project	No project-related impact
Expose people or structures to potential adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, or landslides; result in substantial soil erosion or the loss of topsoil; be located on a geologic unit or soil that is unstable and potentially result in subsidence or be liquefaction; or be located on expansive soils.	Potential to expose people or structures to risks of loss, injury, or death related to earthquakes, seismic ground shaking, seismic-related ground failure, landslides, or expansive soils or to result in substantial soil erosion (Significant—Less than significant)	The project will be designed to conform to the conclusions and recommendations of the final geotechnical report as they relate to structural sections, earthwork, sound walls and drainage to mitigate potential geologic and soil constraints. The contractor shall submit and obtain approval of an erosion control plan from the City of Chico. The erosion control plan will be designed to limit the effects of soil erosion and water degradation during construction. This plan will be prepared in accordance with City requirements. Construction plans and specifications for all elements of the project shall include provisions for erosion control in the event of non-seasonal or early seasonal rainfall during construction, as well as for disturbed area that remain unvegetated during the rainy season. In addition, rainy season control measures shall be in place and operational before October 15th of each year.	Same impact and mitigation measures as proposed project	No project-related impact

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Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Hazards and Hazardous Materials				
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.	Potential for construction workers to be exposed to hazardous materials in the area of South Fork Dead Horse Slough within at least 100 feet to the south of SR 32 and on the east side of Bruce Road within 400 feet south of SR 32 (Significant—Less than significant)	A focused site characterization report will be prepared and submitted to Regional Board describing sampling and analysis activities within the SR 32 right-of-way along the South Branch Dead Horse Slough. Based on the findings of this report, a remedial design and implementation plan will be prepared and submitted to the Regional Board. Any soil found to contain hazardous material concentrations above any federal or state remediation action levels would be classified in accordance with Title 22 of the California Code of Regulations, and removed to a suitable off-site facility. Excavation activities would be conducted in accordance with the approval from Regional Board, the Streambed Alteration Agreement from DFG, and an Authority to Construct permit from the Butte County Air Quality Management District (BCAQMD). If testing indicates that the concentrations are below regulatory action levels, the soil may be used on-site or disposed of at a Class II or Class III landfill. The contractor will develop and implement a spill prevention and control program to minimize the potential for, and effects from spills of hazardous, toxic or petroleum substances during construction of the project. The program would be a component of the Storm Water Pollution Prevention Plan. If a spill is reportable under federal, state, or local regulations, the contractor will notify the City of Chico, Butte County Environmental Health and California Department of Toxic Substances Control, which has spill response and cleanup ordinances to govern emergency spill response.	Same impact and mitigation measures as proposed project	No project-related impact

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
		A written description of reportable releases will be submitted to the Regional Water Quality Control Board (RWQCB). This submittal would include a description of the release, including the type of material and an estimate of the amount spilled; the date of the release; an explanation of why the spill occurred; and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form		
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.	Potential exposure of hazardous material present in the yellow traffic striping during project construction (Significant—Less than significant)	Yellow traffic striping will be removed and disposed of in a manner consistent with the handling of solids containing hazardous levels of metals	Same impact and mitigation measures as proposed project	No project-related impact
	No potential exposure of construction workers to soils containing hazardous levels of aerially deposited lead based on the 2006 aerially deposited lead study conducted along project alignment. Study included 160 samples that were tested for total lead concentration, soluble lead, and pH. The four highest total lead samples were analyzed using the toxicity characteristic leaching procedure. Based on this assessment, the soil to be excavated can be classified as non-hazardous and can be reused or disposed of without restriction with respect to lead. (Less than significant—Less than significant)	None required	Same impact and mitigation measures as proposed project	No project-related impact

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Hydrology and Water Quality				
Violate any water quality standards or waste discharge requirements.	Increase in impervious surfaces contributing to additional water runoff and the potential to violate discharge requirements (Significant—Less than significant)	The project will be designed to conform to the conclusions and recommendations of the Final Location Hydraulic Study Report, Final Bridge Design Hydraulic Study, and Storm Water Data Report. The contractor will avoid and minimize potential construction-related water quality impacts through compliance with the Regional Board by preparing and submitting the following water quality permits and plans. ■ Enrollment into the National Pollutant Discharge Elimination System (NPDES) Statewide Construction General Permit by submission of a Notice of Intent. ■ Preparation of a Storm Water Pollution Prevention Plan (SWPPP) for minimizing and avoiding impacts to water quality during construction activities. The contractor will be responsible for understanding and following the guidelines set forth in the Caltrans Storm Water Quality Handbook, Construction Best Management Practices (BMPs) Manual, March 2003 or latest edition. Measures consistent with the current Caltrans Construction Site BMPs Manual, including the SWPPP and Water Pollution Control Program (WPCP) Manuals, will be implemented to ~~minimize effects to listed species during construction~~include an integrated approach that addresses the stormwater quality activities of various functional units, including construction. The contractor will prepare a site-specific SWPPP for the project to protect receiving	Same impact and mitigation measures as proposed project	No project-related impact

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
		waters from pollution. The SWPPP will include standard sediment and erosion control measures which will include limiting soil disturbances during the winter rainfall season. Given the site-specific conditions of the project area, the SWPPP for this project will generally include limiting soil disturbances during the winter rainfall season of October 15 through April 15 and fully stabilizing disturbed areas prior to December 1. Standard sediment erosion control measures, such as silt fencing, straw bale barriers, sediment traps, or other measures could also directly reduce the offsite transport of sediment from disturbed slopes. Existing vegetation that can be preserved will be identified and flagged or fenced to avoid disturbance. Erosion in disturbed areas will be controlled through the use of grading operations that eliminate direct routes for conveying runoff to drainage channels and use of soil stabilization BMPs, such as mulching, erosion control fabrics, and/or reseeding with grass or other plants where necessary. Standard staging area practices for sediment tracking reduction also will be identified where necessary including vehicle washing and street sweeping. Temporary concentrated flow conveyance systems also will be considered, such as berms, ditches, and outlet flow-velocity dissipation devices to reduce erosion from newly disturbed slopes. The contractor will regularly inspect and maintain the BMPs in good working order. The City will incorporate permanent post-construction BMPs in the project design to avoid or minimize long-term water quality impacts, pursuant to the NPDES storm water permit.		

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
		Appropriate BMPs for the project site could include stabilization measures such as preservation of existing vegetation, concentrated flow conveyance systems (ditches, berms, drains, flared culvert end sections, outlet protection, and flow-velocity dissipation), and slope roughening or terracing for new cut-and-fill slopes as deemed necessary by the project engineer. Slope protection measures will be implemented to control erosion such as reducing the length of disturbed slopes, reducing the gradient of slopes, and preventing concentrated flow over slope soils. The City will be responsible for long-term inspection and maintenance of the permanent BMPs to ensure that they are maintained in good working order.		
Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site.	Potential to increase likelihood of flooding following project construction (Significant—Less Than Significant)	All above listed mitigation measures specified under "Hydrology and Water Quality"	Same impact and mitigation measures as proposed project	No project-related impact
Substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site.	Potential to create or contribute to water runoff in exceedance of existing stormwater drain capacity or otherwise degrade water quality; bridge to be constructed during summer months when the channel is dry. In the unlikely event that there is water in the channel when construction occurs, dewatering would be required when the concrete is poured for the piles. (Significant—Less than significant)	All above listed mitigation measures specified under "Hydrology and Water Quality"	Same impact and mitigation measures as proposed project	No project-related impact

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Land Use and Planning				
Be inconsistent with General Plan or Specific Plan policies or zoning regulations.	Consistent with existing City of Chico General Plan which identifies the project extent of SR 32 as a four-lane major arterial (Less than significant)	None required	Same impact and mitigation measures as proposed project	Inconsistent with City of Chico General Plan
Result in substantial conflict with the established character, aesthetics or functioning of the surrounding community.	Potential for conflict with established character and aesthetics of the surrounding neighborhood (see Chapter _, "Visual Resources")	See Chapter 6, "Visual Resources"	See Chapter 6, "Visual Resources"	No project-related impact
Open Space and Recreation				
Affect land preserved under an open space contract or easement or an existing or potential community recreation area.	No effect on land preserved under an open space contract or an existing or potential community recreation area or park (No impact)	None required	Same impact and mitigation measures as proposed project	No project-related impact
Population and Housing				
Induce substantial population growth in an area either directly or indirectly.	Project is intended to provide additional capacity needed as result of approved and planned development on and near SR 32 between SR 99 and Yosemite Drive. No installation or extension of utilities outside of the SR 32 right-of-way, and therefore, no project-related inducement of unplanned population growth. No displacement of existing housing units or creation of the need for new housing in the future (No impact)	None required	Same impact and mitigation measures as proposed project	No project-related impact

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Public Services				
Affect fire protection, police protection, maintenance of public facilities, or other government services.	Temporary impacts to emergency services such as fire protection, police protection, schools, and other government services during project construction due to construction-related delays (Significant—Less than significant)	The contractor will prepare and implement a coordinated Transportation Management Plan (TMP) for the project that addresses local and Caltrans concerns. The TMP shall be submitted to the City, Caltrans, Butte Regional Transit, California Highway Patrol, and Chico Unified School District 30 days prior to commencement of construction. The TMP shall be consistent with City and Caltrans policies and procedures. ■ The local aspect of the TMP will identify the locations of any temporary detours and signage to facilitate local traffic patterns and through-traffic requirements. ■ The Caltrans aspect of the TMP will identify TMP strategies that will be considered for the project include Construction Zone Enhanced Enforcement Patrol, lane closure, and maintaining traffic. Most of the construction along State Route 32 will take place behind temporary K-railing with traffic attenuators placed as necessary. the design of the project and the TMP, especially staging and traffic control systems, will be coordinated closely with the Caltrans District 3 TMP coordinator. ■ The TMP will include measures to facilitate coordination with Butte Regional Transit to ensure that B-line bus routes are not adversely affected during project construction. ■ The TMP will include measures to facilitate coordination with the California Highway Patrol to ensure that operations out of its office at 995 Fir Street will not be adversely affected during project construction. The contractor will provide 10 days notice to	Same impact and mitigation measures as proposed project	No project-related impact

Proposed Project with Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]			Timber Structure Barrier Alternative with Proposed Sound Barrier (Options A1, A2, A3, A4, B1, and B2)[c]	No-Project Alternative[c]
Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
		emergency service providers (i.e., law enforcement, fire protection, ~~and~~ ambulance service, and the California Highway Patrol), Butte Regional Transit, and the Chico Unified School District of any construction activity that would hinder emergency vehicle response time, bus travel routes, or access to or from the school. The contractor will provide 10 days notice to residents, businesses and the school to minimize construction conflicts. Construction activities will be coordinated to avoid blocking or limiting access to homes, business, and properties to the maximum extent possible. Residents and businesses will be advised about potential access or parking effects before construction activities begin. The contractor shall provide a parking plan ~~to~~ that identifies sites at which ~~accommodate~~ construction equipment storage/staging and parking for construction workers can occur at the same locations. For each construction phase, the parking plan will identify sites for construction staging/equipment/worker parking to avoid effects on local residents and businesses. The contractor will also include measures in the TMP to ensure provision of safe travel for pedestrians and bicyclists during construction. The TMP will also ensure that all affected roadway facilities remain compliant with the American Disabilities Act during construction.		

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Affect fire protection, police protection, maintenance of public facilities, or other government services.	No impacts on emergency response related to changing Fir Street from a two-way to a one-way northbound-only street based on input from the City of Chico Police Department and the California Highway Patrol (Less than significant)	None required	Same impact and mitigation measures as proposed project	No project-related impact
Transportation and Circulation Factors				
Affect traffic volumes which exceed established LOS standards on roadway segments or at intersections, or which do not meet applicable General Plan standards.	Short-term construction-related impacts (Significant—Less than significant)	The contractor shall prepare a Transportation Management Plan (TMP) for the project. Consistent with Caltrans policy and procedures, the design of the project and the TMP, especially staging and traffic control systems, will be coordinated closely with the Caltrans District 3 TMP coordinator. TMP strategies that will be considered for the project include Construction Zone Enhanced Enforcement Patrol, lane closure, and maintaining traffic. Most of the construction will take place behind temporary K-railing with traffic attenuators placed as necessary	Same impact and mitigation measures as proposed project	No project-related impact
Affect traffic volumes which exceed established LOS standards on roadway segments or at intersections, or which do not meet applicable General Plan standards.	All evaluated intersections would have levels of service (LOS) C or better in 2010 and LOS D or better in 2030 thereby achieving the City of Chico's minimum LOS D for intersections (Less than significant)	None required	Same impact and mitigation measures as proposed project	Unacceptable levels of service at a number of intersections in 2010 (see Table 16 in the project Initial Study contained in Appendix A) and 2030 (see Table 17 in the project IS)

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Result in the absence of bikeway facilities in the general locations identified in the applicable General Plan or Chico Urban Area Bicycle Plan; be inconsistent with applicable policies or design requirements and safety standards; or be inconsistent with travel characteristics which are not consistent with standards in the Butte County Congestion Management Plan, or other General Plan Transportation Systems Management policies.	Project consistent with the City of Chico General Plan including policies related to Transportation System Management, Chico Urban Area Bicycle Plan, and the Butte County Congestion Management Plan (Less than significant)	None required	Same impact and mitigation measures as proposed project	Inconsistent with City of Chico General Plan
Utilities and Service Systems				
Affect or result in the need for new systems or substantial alterations to facilities related to water for domestic uses; fire protection; natural gas, electricity, telephone, or other communications; or storm drainage.	Potential impacts to utility lines that cross SR 32 including water and wastewater pipes, electrical lines and a Western Area Power Administration 230 kV transmission line just east of the Yosemite Drive intersection (Significant—Less than significant)	During project construction, construction of utility crossings at intersections along SR 32 will be constructed on an as-needed basis for various utilities (such as water, wastewater, drainage, electrical, communications, telephone, gas, etc.), as determined to be needed in coordination with the various service providers. These utility crossings would "stub out' within the project limits on the north and south sides of SR 32.	Same impact and mitigation measures as proposed project	No project-related impact

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Significance Threshold A project impact is considered significant if it has the potential to:	**Impact[b]**	**Mitigation Measures**		
Affect or result in the need for new systems or substantial alterations to facilities related to water for domestic uses; fire protection; natural gas, electricity, telephone, or other communications; or storm drainage.	Minor impacts to existing drainage system with post-project roadway drainage sheet flowing to adjacent roadside ditches. Drainage improvements will be constructed in the vicinity of Forest Avenue, El Monte Avenue, and Bruce Road connecting the existing roadside drainage system Dead Horse Slough. (Less than significant)	None required	Same impact and mitigation measures as proposed project	No project-related impact
Affect or result in the need for new systems or substantial alterations to facilities related to water for domestic uses; fire protection; natural gas, electricity, telephone, or other communications; or storm drainage.	Avoid necessity of requiring new entitlements for water supplies and services, new landfill services, and complying with federal, state, and local statutes and other solid waste regulations (No impact)	None required	Same impact and mitigation measures as proposed project	No project-related impact

[a] This table does not include the impacts and mitigation measures related to aesthetics, air quality, biological resources, or noise since these topics are covered in this EIR. Mitigation measures that show omitted and added text were included in the project Initial Study and have been clarified in this table.

[b] Significance conclusions based on the identified significance thresholds: (Significance conclusion before mitigation—significance conclusion after mitigation)

[c] The project IS does not include analysis of these alternatives. The impacts associated with these alternatives were determined based on comparing the project impacts, as identified in the IS, with the characteristics of the alternatives.

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Noise									
Impact NZ-1: Exposure of Noise Sensitive Land Uses to Increased Traffic Noise (Less than Significant—Less than Significant)	None required	2030 with project noise levels meets City noise standards and results in less than cumulatively considerable noise impacts	Same as Option A1	Same as Option A1	Reduces noise levels by as much as 4 dB (nearly imperceptible)	6-foot barrier: Reduces 2030 with project noise levels by 1–2 dB as compared with having no barrier at this location 8-foot barrier: Reduces 2030 with project noise levels by 1–5 dB as compared with having no barrier at this location	6-foot barrier: Reduces 2030 with project noise levels by 4–7 dB as compared with having no barrier at this location 8-foot barrier: Reduces 2030 with project noise levels by 6–9 dB as compared with having no barrier at this location	Same as proposed project	No project-related noise impacts; 2030 noise levels without project would be 2–4 dB higher than under existing conditions
Impact NZ-2: Exposure of Noise Sensitive Land Uses to Construction Noise (Potentially Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure NZ-2a: Employ Noise-Reduction Construction Measures ■ Noise shall not exceed, at any point outside of the property plane, 70 dBA between the hours of 7:00 a.m. and 9:00 p.m. or 60 dBA between the hours of 9:00 p.m. and 7:00 a.m. on any residential property. Where construction is required during nighttime hours, construction activity shall be staged so that it does not occur over an extended period of time (i.e., more than 14 days at a time). Noise due to construction is exempt from the City's noise ordinance, provided that construction occurs between the hours of 7:00 a.m. and 9:00 p.m., Monday through Saturday, and between 10:00 a.m. and 6:00 p.m., Sundays and holidays, and does not exceed 83 dBA 7.6 meters (25 feet) from the source or 86 dBA at any point outside of the property plane of the project. ■ See other specific measures identified in Chapter 3, "Noise"	Noise impacts during construction would be short-term and intermittent and would comply with Caltrans specifications; there may be instances in which construction activity could be in excess of City's construction noise limits without mitigation	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impacts

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Air Quality									
Impact AIR-1: PM10 Dust Impacts Would Exceed BCAQMD's Significance Threshold (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure AIR-1a: Implement Measures from Butte County Air Quality Management District's (BCAQMD) CEQA Air Quality Handbook	Reactive organic gases (ROG) and nitrogen oxides (NO_x) emissions would exceed BCAQMD's Level B (potentially significant impact) threshold, but would be less than Level C (significant impact) threshold; PM10 emissions would exceed Level C threshold	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impacts
Impact AIR-2: No Emissions of Naturally Occurring Asbestos (NOA) (Less than Significant—Less than Significant)	None required	NOA is not expected to occur in project area	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impacts
Impact AIR-3: Release of Asbestos during Demolition (Less than Significant—Less than Significant)	None required	Project Initial Site Assessment indicates that no asbestos-containing materials observed on Dead Horse Slough Diversion Channel Bridge	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impacts
Impact AIR-4: Increase in NO_x, PM10, and CO Emissions; No Change in Reactive Organic Gases (ROG) (Less than Significant—Less than Significant)	None required	2010 and 2030 with project emissions would be less than BCAQMD's significance thresholds	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	2010 without project ROG emissions similar to with project and slightly higher for NO_x and CO, as compared to with project; 2030 without project slightly higher for all three pollutants as compared to with project

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Impact AIR-5: Increase in Carbon Monoxide (CO) Concentrations (Less than Significant—Less than Significant)	None required	CO emissions less than ambient standards	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Since SR 32 would be slightly closer to sensitive receptors, slightly higher CO concentrations for receptors north of each intersection and slight decrease for receptors south of SR 32	2010 and 2030 without project CO emissions less than ambient standards
Impact AIR- 6: Increase in Mobile Source Air Toxic (MSAT) Emissions (Less than Significant—Less than Significant)	None required	Based on federal criteria, low potential for significant MSAT effects	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	Since lower VMT for 2010 and 2030 without project, lower MSAT emissions as compared to proposed project
Impact AIR-7: Increase in PM10/PM2.5 Hot Spots (Less than Significant—Less than Significant)	None required	Based on federal criteria, project is not a Project of Air Quality Concern relative to PM10/2.5	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	Since lower VMT for 2010 and 2030 without project, lower PM10//2.5 emissions as compared to proposed project
Impact AIR-8: Increase in GHG Emissions (Less than Significant—Less than Significant)	None required	Reduction in carbon dioxide emissions in 2030 as compared to 2030 without project	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	In 2010, slightly lower greenhouse gas emissions as compared to with project condition; in 2030, minor increase in GHG emissions as compared to no-project
Impact AIR-9: Project Meets Regional and Project-Specific Conformity Requirements (Less than Significant—Less than Significant)	None required	Project is in a conforming plan	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	Not applicable

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Biological Resources									
Impact BIO-1: Loss of Riparian Vegetation and Wetland (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-1a: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions Mitigation Measure BIO-1b: Install Construction Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Construction Zone Mitigation Measure BIO-1c: Retain a Biological Monitor Mitigation Measure BIO-1d: Minimize Loss of Trees Mitigation Measure BIO-1e: Compensate for Loss of Riparian Habitat	Direct impacts on 0.202 acre of wetland riparian habitat due to roadway and bridge widening	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	No project-related impact
Impact BIO-2: Loss of Fresh Emergent Wetland (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-2a: Compensate for Loss of Fresh Emergent Wetland	Direct loss of 0.011 acre of fresh emergent wetland in South Fork Dead Horse Slough due to roadway widening and extension or replacement of bridge culvert	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-3: Loss of Vernal Pool, Vernal Swale, and Seasonal Wetland (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-3a: Compensate for Loss of Vernal Pool, Vernal Swale, and Seasonal Wetland	Direct loss of 0.265 acre and indirect impacts on 0.906 acre of vernal pool, vernal swale, and seasonal wetland habitat due to widening of SR 32 east of El Monte Avenue	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-4: Loss of Seasonal Drainage (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-4a: Compensate for Temporary and Permanent Loss of Seasonal Drainage	Direct impacts on 0.013 acre and 0.010 acre of temporary impacts on seasonal drainage habitat due to bridge widening and extension or replacement of culvert at bridge	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Impact BIO-5: Loss of Butte County Meadowfoam (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-5a: Compensate for Loss of Butte County Meadowfoam (BCM) and Its Habitat	Direct loss of 0.001 acre and indirect impacts on 0.183 acre of BCM habitat due to roadway widening east of El Monte Avenue	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-6: Potential Mortality and Loss or Degradation of Habitat for Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-1a: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions Mitigation Measure BIO-1c: Retain a Biological Monitor Mitigation Measure BIO-6a: Fence Habitat for Vernal Pool Branchiopods and Implement Erosion Control Measures Mitigation Measure BIO-6b: Implement Erosion Control Measures Mitigation Measure BIO-6c: Avoid Changes in Hydrology and Avoid or Minimize Long-Term Water Quality Impacts Mitigation Measure BIO-6d: Compensate for Direct and Indirect Impacts to Vernal Pool Branchiopod Habitat	Direct loss or disturbance of 0.265 acre of suitable habitat for listed vernal pool branchiopods due to roadway widening; indirect effect to 0.904 acre of suitable habitat located within 250 feet of construction area	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-7: Potential Mortality and Loss of Habitat for Valley Elderberry Longhorn Beetle (No impact OR Significant—Less than Significant with Mitigation Incorporated, depending on sound barrier option)	Mitigation Measure BIO-7a: Compensate for Impacts to Valley Elderberry Longhorn Beetle and its Habitat	No impact	No impact	No impact	No impact	Removal and/or disturbance within 20 feet of an elderberry cluster located between Forest Avenue and Dead Horse Slough	No impact	Same as Options A1, A2, A3, A4, B1, and B2	No project-related impact
Impact BIO-8: Potential Mortality of Western Spadefoot Toads and Loss or Degradation of Suitable Habitat (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-1a: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions Mitigation Measure BIO-1c: Retain a Biological Monitor Mitigation Measure BIO-6a: Fence Habitat for Vernal Pool Branchiopods and Implement Erosion Control Measures Mitigation Measure BIO-6b: Implement Erosion Control Measures Mitigation Measure BIO-6c: Avoid Changes in Hydrology and Avoid or Minimize Long-Term Water Quality Impacts	Loss or disturbance to suitable habitat for western spadefoot toads due to impacts on vernal pool habitat due to bridge widening and extension or replacement of bridge culvert	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
	Mitigation Measure BIO-6d: Compensate for Direct and Indirect Impacts to Vernal Pool Branchiopod Habitat								
Impact BIO-9: Potential Mortality of Western Pond Turtles and Loss or Disturbance of Suitable Habitat (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-9a: Conduct Work in Creeks Only During the Dry Season or Conduct a Preconstruction Survey for Western Pond Turtles Mitigation Measure BIO-9b: Conduct Preconstruction Surveys for Western Pond Turtle and Giant Garter Snake	Permanent impacts on 0.093 acre and temporary impacts on 0.227 acre of suitable aquatic habitat for western pond turtle; 1.519 acres of suitable upland habitat directly affected due to bridge widening and extension or replacement of bridge culvert	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-10: Potential Mortality of Giant Garter Snakes and Loss or Disturbance of Suitable Habitat (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-1a: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions Mitigation Measure BIO-9b: Conduct Preconstruction Surveys for Western Pond Turtle and Giant Garter Snake Mitigation Measure BIO-10a: Conduct Construction Activities during the Active Period of Giant Garter Snakes Mitigation Measure BIO-10b: Monitor Construction Activities in Giant Garter Snake Habitat Mitigation Measure BIO-10c: Restore and Compensate for Direct and Indirect Impacts to Giant Garter Snake Habitat	Permanent impacts on 0.093 acre and temporary impacts on 0.227 acre of suitable aquatic habitat for giant garter snake; 1.519 acres of suitable upland habitat directly affected due to bridge widening and extension or replacement of bridge culvert							
Impact BIO-11: Potential Disturbance of Nesting Swainson's Hawks, White-Tailed Kites, Loggerhead Shrikes, and Non-Special-Status (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-11a: Avoid Construction during the Nesting Season of Migratory Birds or Conduct Preconstruction Survey for Nesting Birds Mitigation Measure BIO-11b: Avoid Bridge Work during the Swallow Nesting Period or Implement Measures to Exclude Swallows from the Bridge	Potential for removal of nests or suitable nesting habitat and disturbance during breeding during project construction	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-12: Loss of Swainson's Hawk Foraging Habitat (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-12a: Compensate for the Loss of Swainson's Hawk Foraging Habitat	Loss of foraging habitat within 10 miles of an active nest	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Impact BIO-13: Potential Injury or Mortality of and Disturbance or Loss of Suitable Roosting Habitat for Special-Status Bats (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-13a: Conduct Preconstruction Surveys for Roosting Bats	Potential for removal or trimming of trees that provide suitable roosting habitat	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-14: Potential Disturbance of Wildlife Movement and Increased Mortality of Special-Status and Common Wildlife Species (Less than Significant—Less than Significant)	None required	Widened roadway could impact wildlife movement across SR 32, but wildlife movement under the widened roadway via Dead Horse Slough and South Fork Dead Horse Slough would not be impacted	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact BIO-15: Loss of Protected Trees (Significant and Unavoidable in the short-term and Less than Significant with Mitigation Incorporated in the long-term)	Mitigation Measure BIO-15a: Compensate for Loss of Protected Trees	Removal of 59 trees greater than 6 inches in diameter at breast height (dbh) for roadway widening and vegetation removal in the Clear Recovery Zone (CRZ) Removal of additional 52 trees 6 inches dbh for sound barrier construction	Tree removal for roadway widening and CRZ same as Option A1 Removal of additional 76 trees 6 inches dbh for sound barrier construction	Tree removal for roadway widening and CRZ same as Option A1 Removal of additional 39 trees 6 inches dbh for sound barrier construction	Tree removal for roadway widening and CRZ same as Option A1 Impacts related to sound barrier construction same as Options A1–A3	**Pre-cast concrete:** Removal of additional 2 trees 6 inches dbh **Concrete block:** Removal of additional 11 trees 6 inches dbh **Wooden fence:** Removal of no additional trees 6 inches dbh	**Pre-cast concrete:** Removal of no additional trees 6 inches dbh **Concrete block:** Removal of 6 additional trees 6 inches dbh **Wooden fence:** Removal of no additional trees 6 inches dbh	Same as proposed project	No project-related impact
Impact BIO-16: Potential Introduction of New Invasive Plant Species or Spread of Existing Invasive Plant Species (Potentially Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure BIO-16a: Avoid the Introduction of New Invasive Plant Species or the Spread of Existing Invasive Plant Species	Potential for spread of invasive species	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Visual Resources									
Impact VIS-1: Temporary Visual Impacts Caused by Construction Activities (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure VIS-1a: Apply Minimum Lighting Standards if Nighttime Construction is Required	Temporary change in views; construction easement needed on private residential properties for 2–3 days	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as Option A1	Same as proposed project	No project-related impact
Impact VIS-2: Adversely Affect a Scenic Vista (No Impact)	None required	No impact	No impact	No impact	No impact	No impact	No impact	No impact	No impact
Impact VIS-3: Damage Scenic Resources Along a Scenic Roadway (No Impact)	None required	No impact	No impact	No impact	No impact	No impact	No impact	No impact	No impact
Impact VIS-4: Degrade the Existing Visual Character or Quality of the Site and Its Surroundings (Significant and Unavoidable)	Mitigation Measure VIS-4: Implement Sound Barrier Aesthetics Mitigation Measure BIO-15a: Compensate for Loss of Protected Trees	Existing vegetation removed for roadway widening and sound barrier construction changing visual character from one that is more rural to more suburban; 115 trees (all sizes dbh) removed and 42 trees pruned for roadway widening and CRZ Sound barrier lighter in color than surroundings; 71 additional trees removed and 35 additional trees pruned	Tree removal and pruning related to roadway widening and CRZ same as Option A1 Greatest impact of barrier design options due to more substantial structure; 118 additional trees removed and 31 additional trees pruned	Tree removal and pruning related to roadway widening and CRZ same as Option A1 Sound barrier would blend best with surroundings due to use of natural materials and less substantial structure; 59 additional trees removed and 66 additional trees pruned	Tree removal and pruning related to roadway widening and CRZ same as Option A1 Impacts related to sound barrier construction same as Options A1–A3	**Pre-cast concrete:** Additional 3 trees removed and 18 trees pruned **Concrete block:** Additional 2 trees removed and 5 trees pruned **Wooden fence:** Additional 1 tree removed and 20 trees pruned	**Pre-cast concrete:** Additional 2 trees removed and 5 trees pruned **Concrete block:** Additional 9 trees removed and 4 trees pruned **Wooden fence:** No additional trees removed and additional 9 trees pruned	Vegetated median would be beneficial to aesthetic appearance of roadway and soften widened roadway; tree removal and pruning impacts same as proposed project	No project-related impact
Impact VIS-5: Create a New Source of Light or Glare (Significant—Less than Significant with Mitigation Incorporated)	Mitigation Measure VIS-5a: Apply Minimum Lighting Standards Mitigation Measure VIS-5b: Construct Walls with Low-sheen and Non-reflective Surface Materials for Concrete Sound Barrier Design Option	Increase in amount of reflective surface with widened roadway and sound barrier construction; more glare from concrete barrier than wooden fence	Same as Option A1	Increase in amount of reflective surface with widened roadway and sound barrier construction; less glare from wooden fence than concrete barrier	Similar to Options A1–A3	Similar to Options A1–A3	Similar to Options A1-A3	Trees planted in median would likely reduce amount of glare reflecting off roadway	No project-related impact

Proposed Project with Sound Barrier								Timber Structure Barrier Alternative with (Options A1, A2, A3, A4, B1, and B2)	No-Project Alternative
		Sound Barrier Options							
Impacts[a]	**Mitigation Measures**	**A1: 6-Foot High Pre-Cast Concrete Wall**	**A2: 6-Foot High Concrete Block Wall**	**A3: 6-Foot High Wooden Fence**	**A4: 8-Foot High Barrier**	**B1: Extend Barrier East of Forest Ave to El Monte Avenue on North Side of SR 32**	**B2: Extend Barrier East of Fir Street on North Side of SR 32**		
Impact VIS-6: Permanent Changes to Views in Landscape Unit 1 – SR 32 between SR 99 and El Monte Avenue (Significant and Unavoidable)	Mitigation Measure VIS-4: Implement Sound Barrier Aesthetics Mitigation Measure VIS-5a: Apply Minimum Lighting Standards Mitigation Measure VIS-5b: Construct Walls with Low-sheen and Non-reflective Surface Materials for Concrete Sound Barrier Design Option Mitigation Measure BIO-15a: Compensate for Loss of Protected Trees	SR 32 drivers would view cleared right-of-way for widened roadway and sound barrier rather than existing vegetation; sound barrier lighter in color than surroundings	Greatest impact of barrier design options due to more substantial structure	Sound barrier would blend best with surroundings due to use of natural materials and less substantial structure	Impacts related to sound barrier construction same as Options A1–A3	Similar to Options A1–A3	Similar to Options A1-A3	Vegetated median would be beneficial to aesthetic appearance of roadway and soften widened roadway	No project-related impact
Impact VIS-7: Permanent Changes to Views in Landscape Unit 2 – SR 32 between El Monte Avenue and Yosemite Drive (Significant and Unavoidable)	Mitigation Measure VIS-4: Implement Sound Barrier Aesthetics Mitigation Measure VIS-5a: Apply Minimum Lighting Standards Mitigation Measure VIS-5b: Construct Walls with Low-sheen and Non-reflective Surface Materials for Concrete Sound Barrier Design Option Mitigation Measure BIO-15a: Compensate for Loss of Protected Trees	Views change from open space within existing right-of-way to a paved road; sound barrier between Sierra Sunrise Village development and Yosemite Drive; sound barrier lighter in color than surroundings	Greatest impact of barrier design options due to more substantial structure	Sound barrier would blend best with surroundings due to use of natural materials and less substantial structure	Impacts related to sound barrier construction same as Options A1–A3	Not applicable	Not applicable	Vegetated median between El Monte Avenue and Bruce Road would soften appearance of widened roadway	No project-related impacts

[a] Significance conclusions for proposed project based on the identified significance thresholds: (Significance conclusion before mitigation—significance conclusion after mitigation).

Terminology Used in this Environmental Impact Report

Under CEQA, the following terms denote the significance of environmental impacts:

- a less-than-significant impact would cause no substantial adverse effect on the environment and would not require mitigation.
- a significant impact would cause a substantial adverse effect on the environment; Appendix G of the State CEQA Guidelines provides a list of environmental effects that would normally be considered a significant impact. Each impact chapter of this report (Chapters 4–7) identifies the significance thresholds that were used to judge the significance of impacts. Appendix G, together with professional standards, were used to judge significance for this project.
- a significant and unavoidable impact is one that would cause a substantial adverse effect on the environment and for which no mitigation is available to reduce the impact to a less-than-significant level.

Known Areas of Controversy

The following major issues have been raised during the project's public involvement process and are potential areas of controversy:

- Increased noise levels for residents along SR 32
- Tree and vegetation removal associated with project construction
- Need for sound walls, including their location, height, and aesthetic treatment, to provide noise reduction and increased safety
- Implementation of traffic-calming measures on SR 32, such as raised curbs, landscaped medians, and reduced traffic speed limits to slow traffic and improve safety

Environmentally Preferred Alternative

CEQA requires that an environmentally preferred alternative be identified in EIRs. This chapter provides a comparative summary of the impacts of each alternative and design option. Although the No-Project Alternative would not result in any construction-related impacts, it does not provide additional capacity needed to accommodate approved and planned development in the SR 32 corridor, results in unacceptable levels of

service at a number of intersections in 2010 and 2030, and would not be consistent with the City of Chico's General Plan.

The Timber Barrier Alternative with sound barrier Design Option A3 (wooden fence) would generally result in fewer environmental impacts than the proposed project and the other sound barrier design options for the following reasons:

- As compared to the proposed project, the Timber Barrier Alternative would be beneficial to the aesthetic appearance of SR 32. It would reduce and soften the appearance of the widened roadway surface and provide a visually pleasing travel corridor. A vegetated median would also reduce the amount of glare reflecting off of the widened roadway surface. A vegetated median may also act as a traffic calming measure.
- Construction of a wooden fence sound barrier would involve the removal of the fewest trees protected by the City's Tree Preservation Ordinance (trees over 6 inches diameter at breast height [dbh]). Thirty-nine protected trees (37 oak trees and two trees of other species) would be removed due to construction of a wooden fence (this count does not include tree removal associated with roadway construction or tree removal related to the Clear Recovery Zone [CRZ]), as compared to 52 trees (49 oak trees and three trees of other species) with a pre-cast wall or 76 trees (73 oak trees and three trees of other species) with a concrete block wall. Since more trees would be preserved with construction of a wooden fence, this option would result in greater pruning and root zone impacts than would construction of concrete walls.
- A wooden fence would blend best with the existing environment in the project area. The use of natural material (wood versus concrete) would soften the appearance of the barrier. Its darker color would also enable it to recess back into the view.
- A 6-foot-high wooden fence provides identical noise attenuation benefits to the 6-foot-high concrete wall sound barrier options. An 8-foot-high fence or concrete wall (Design Option A4) provides as much as 4dB of additional attenuation; this decrease in noise levels would be almost imperceptible.

Although construction of a wooden fence at Location Options B1 (extend sound barrier east of Forest Avenue to El Monte Avenue on the north side of SR 32) and B2 (extend barrier east of Fir Street for approximately 1,100 feet) is not needed to achieve less-than-significant project-related and cumulative noise impacts, construction of a sound barrier at these locations is addressed in this report since adjacent residents have expressed their desire for a sound barrier at these locations. Construction of a wooden fence for Location Options B1 and B2 would not result in the

removal of additional protected trees. (However, with a pre-cast concrete wall at Location Option B1, two additional trees would be removed; 11 additional trees would be removed with a concrete block wall. With a pre-cast concrete wall at Location Option B2, no additional trees would be removed; with a concrete block wall at Location Option B2, six additional protected trees would be removed.) Option B1 would provide up to 5 dB (barely perceptible) of noise attenuation as compared to having no sound barrier at this location, and Option B2 would provide up to 7 dB (perceptible) of noise attenuation. Therefore, if Location Options are considered, the Timber Barrier Alternative with sound barrier Design Option A3 (wooden fence) and Location Options B1 and B2 would be the environmentally preferred alternative.

Construction of a 6-foot wooden fence would not address the residents' desire for a higher barrier and one that is made of concrete. Concrete walls are easier to maintain than wooden fences and last longer. Furthermore, the residents would be required to maintain a wooden fence sound barrier, whereas the City or Caltrans would maintain the concrete walls.

Preferred Alternative

The City of Chico staff will recommend that the Chico City Council adopt the Timber Barrier Alternative with Design Options A1 and A4 (8-foot pre-cast concrete wall) and Location Options B1 (extend sound barrier between Forest and El Monte Avenues on the north side of SR 32) and B2 (extend sound barrier east of Fir Avenue north of SR 32). This design meets the following objectives:

- The timber barrier median addresses the public desire for a vegetated median that may act as a traffic calming measure and improves the aesthetics of the corridor.
- An 8-foot-high sound barrier more than meets the City of Chico noise standards and results in less-than-significant cumulative noise impacts. An 8-foot sound barrier also addresses the desire of the residents along SR 32 for a barrier that is higher than 6 feet to provide increased safety and a perceived difference in noise levels (An 8-foot wall reduces future noise levels by as much as 4 dB, as compared to a 6-foot sound barrier, a nearly imperceptible noise level difference.).
- The pre-cast concrete wall responds to public concerns that tree and vegetation removal be minimized in the project corridor. This wall comes in the form of modular panels and would require the removal of fewer trees than the concrete block wall sound barrier. The pre-cast concrete wall also addresses the desire of the residents along SR 32

that a concrete wall rather than a wooden fence be constructed since concrete walls have a longer life. Furthermore, the residents desire a concrete wall since they would not be expected to maintain a concrete wall but they would be expected to maintain a wooden fence. A concrete wall would be maintained by the City or Caltrans.

- Extension of the proposed sound barrier, although not required to meet City noise standards or less-than-significant cumulative noise impacts, responds to the concerns of the residences of the Vista Verde Apartments and Stansbury Court that a sound barrier be provided behind their residences.