

PAR ENVIRONMENTAL SERVICES, INC.

Cultural Resource Management ■ Biology ■ Environmental Planning  
Sacramento, California



**PRELIMINARY ENVIRONMENTAL  
ANALYSIS REPORT  
RIO VISTA BRIDGE/ROUTE 12  
TRANSPORTATION PROJECT  
10-SAC-12 (PM 0.00/6.06) AND  
10-SOL-12 (PM 19.16/26.41)**

**FINAL REPORT**

*Submitted to*

**CENTENNIAL CIVIL ENGINEERS, INC.  
5000 Hopyard Road, Suite 100  
Pleasanton, California 94588**

*Submitted by*

**PAR ENVIRONMENTAL SERVICES, INC.  
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*November 1994*

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Route 12 Sacramento River  
Crossing at Rio Vista Preliminary  
Environmental Analysis Report  
BR 105.12.94.0

# ROUTE 12

## SACRAMENTO RIVER CROSSING AT RIO VISTA

# PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT



**Prepared For:**  
City of Rio Vista  
Rio Vista, California

Caltrans District 10  
Stockton, California

**Prepared by:**  
PAR Environmental Services, Inc.

**Date:**  
November 1994

## EXECUTIVE SUMMARY

The summary paragraphs provided below are prepared for inclusion in the Project Study Report (PSR). The complete Preliminary Environmental Analysis Report (PEAR) does not need to be attached to the PSR.

An Environmental Impact Report (EIR) and a combined Environmental Impact Statement (EIS) are the probable environmental documents that will be necessary for this project. This level of documentation would be required due to the likely findings of unavoidable, significant cumulative impacts associated with this project. The project schedule and design will be most affected by issues related to biological resources, water quality concerns, floodplain encroachment, and socioeconomic impacts resulting from the proposed acquisition of right-of-way, construction of the project, and changes in existing traffic patterns (e.g., changes in street access to State Route 12).

Agency responsibility for compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) has not been determined at this time. Federal agencies likely to be involved in the project will include the United States Coast Guard, the Federal Highway Administration (FHWA), and the Army Corps of Engineers (ACOE). Other agencies with varying responsibilities for compliance with NEPA/CEQA will include the California Department of Transportation (Caltrans), the City of Rio Vista, and the State Lands Commission, the agency responsible for management of the lands under the Sacramento River. Resolution of the federal and state agencies that will serve as lead agencies for NEPA and CEQA will be determined prior to the initiation of the EIR/EIS needed for the project.

If significant impacts to environmental resources presented in Table 1 are avoidable by the project or are not present on the project site, then the preparation time for an EIR/EIS would be about 30 months. The environmental process will require approximately another 10 to 12 months if significant environmental impacts are unavoidable. The timing of the natural resource surveys may also affect the length of time necessary to complete the environmental documents. Wetland delineations and sensitive species surveys need to be conducted during the months of February through May, as this is the critical time of year for identifying vernal pools and the presence of certain species. The discovery of any sensitive plant or animal species or habitats on or near the project site will add to the time required to complete the biological resource analysis.

Time should also be set aside to provide for intensive cultural resources surveys in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (1992) and the implementing regulations found in Title 36 CFR Part 800. Scheduling impacts

related to cultural resources issues are particularly critical if resources would be adversely affected, necessitating lengthy evaluation and/or mitigation work for the project. Floodplain encroachment studies, socioeconomic analyses, and clean-up and monitoring of hazardous waste sites found within the project impact area will need to be performed, as appropriate, and may cause additional delays if not scheduled early in the process.

It should be noted that although this document was not finalized until November of 1993, no additional data was gathered after the spring of 1993. The information presented below, therefore, may be somewhat out of date.

Tables 1 and 2 provide a summary of the relevant environmental issues that may need to be addressed in the environmental document to be prepared for this project, with Table 2 indicating resource issues as they relate to Alternative 2 versus Alternative 6.

**Table 1. Environmental Issues**

<u>Environmental Issues</u>	<u>Executive Orders/ Guide-lines/ Laws Applicable</u>	<u>Documentation</u>
Biological Resources	Federal Endangered Species Act of 1973; California Endangered Species Act of 1973; Executive Order 11990 of 1977 (Wetlands Protection); Executive Order 11988 of 1977 (Floodplain Management).	Natural Environment Study Report (NESR)
Noise Analysis	Federal Aid Highway Act of 1970; Federal-Aid Highway Program Manual 7-7-3 and the guidelines of the FHWA Technical Advisory Manual T6640.8A; Caltrans Highway Design Manual, Chapter 1100.	Noise Impact Report
Hazardous Waste	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA).	Initial Site Assessment (ISA) - provided as Attachment A to this report.
Cultural Resources	National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470 et seq) and the Section 106 process.	Historic Property Survey Report (HPSR); Archaeological Survey Report (ASR); Historic Architectural Survey Report (HASR)

**Table 1. Environmental Issues (concluded)**

<u>Environmental Issues</u>	<u>Executive Orders/ Guide-lines/ Laws Applicable</u>	<u>Documentation</u>
Air Quality	United States Clean Air Act of 1970, as amended in 1990 (42 USC 7401 et seq) and the Inter-modal Surface Transportation Efficiency Act of 1991 (23 USC 109(j), 134(l), 135, 149).	Air Quality Impact Analysis
Water Quality	United States Clean Water Act of 1987, as amended (33 USC 1300 et seq.) and the Porter-Cologne Water Quality Control Act of 1969, as amended in 1991 (California Water Code Sections 1300 et seq.).	Water Quality Report
Visual Resources	Federal Highway Administration (FHWA).	Visual Impact Assessment for Highway Projects

**Permits**

Army Corps of Engineers, Section 404

California Department of Fish and Game, Sections 1601 and 1603

Coast Guard Bridge Permit

State Lands Commission Permit

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PAR ENVIRONMENTAL SERVICES, INC.

Final Report, Rio Vista Bridge/Route 12 PEAR (PAR Ref. No. 91-89)

Table 2. Summary of Resources Issues by Alternative

Resource Issue	Alternative 2 (Parallel)	Alternative 6 (Southern)
Air Quality Issues	<p>The project is within an area that is designated as non-attainment for ozone and PM<sub>10</sub>. Conformity to the State Transportation Improvement Program (STIP), local Clean Air Plans, and the Federal Clean Air Act cannot be determined until the project is funded. A determination of conformity will be an important aspect of the environmental process. Nine isolated residences adjacent to the proposed project (6873, 7121, 7187, 7189, 7400, 7630, 7828, 7989, and 8199 Highway 12), as well as a complex of residences in Rio Vista (on south side of Hwy. 12 across from Gardiner Way) can be considered sensitive receptors for changes in air quality. Air quality impacts to the Westwind Mobile Home Park in Rio Vista may also need to be assessed.</p>	<p>The project is within an area that is designated as non-attainment for ozone and PM<sub>10</sub>. Conformity to the State Transportation Improvement Program (STIP), local Clean Air Plans, and the Federal Clean Air Act cannot be determined until the project is funded. The determination of conformity will be an important aspect of the environmental process. Ten isolated residences adjacent to the proposed project (6873, 7121, 7187, 7189, and 7400 Highway 12, 2911 Azevedo Road, 2685 Amerada Road, 7936 and 7940 Emigh Road, and 8192 Montezuma Hills Road) can be considered sensitive receptors for changes in air quality. Potential air quality impacts to the Sandy Beach County Park should also be assessed.</p>
Archaeological Resources	<p>Only small portions of the project area have been surveyed for archaeological resources: no prehistoric or historic-era sites have been recorded within the proposed project corridor. The State Lands Commission and the North Central Information Center provided data on three historic shipwrecks in the area: <i>Alert</i>; <i>Grace Barton</i>; and <i>S.N. Bentley</i>. None of these shipwrecks is mapped within 1.0 miles of the proposed river crossing. An intensive archaeological survey that includes an inventory for prehistoric and historic-era resources will be necessary as part of the environmental planning phase. The project schedule could be extended by several months to more than one year if evaluations of significance and/or determinations of effect are necessary. Compliance with Section 106 of the National Historic Preservation Act (1966) and adherence to current Caltrans guidelines will be necessary.</p>	<p>Only small portions of the project area have been surveyed for archaeological resources: no prehistoric or historic-era sites have been recorded within the proposed project corridor. The State Lands Commission and the North Central Information Center provided data on three historic shipwrecks in the area: <i>Alert</i>; <i>Grace Barton</i>; and <i>S.N. Bentley</i>. None of these shipwrecks is mapped within 1.5 miles of the proposed river crossing. An intensive archaeological survey that includes an inventory for prehistoric and historic-era resources will be necessary as part of the environmental planning phase. The project schedule could be extended by several months to more than one year if evaluations of significance and/or determinations of effect are necessary. Compliance with Section 106 of the National Historic Preservation Act (1966) and adherence to current Caltrans guidelines will be necessary.</p>

Resource Issue	Alternative 2 (Parallel)	Alternative 6 (Southern)
Architectural Resources	<p>Nine isolated residences or residential complexes occur adjacent to the proposed project (6873, 7121, 7187, 7189, 7400, 7630, 7828, 7989, and 8199 Highway 12). Five of these (6873, 7400, 7828, 7989, and 8199 Highway 12) appear to be more than 50 years old. In compliance with Caltrans standards, all structures, including a complex of residences in Rio Vista (on south side of Hwy. 12 across from Gardiner Way) and numerous commercial establishments in Rio Vista must be inventoried and evaluated. The existing Rio Vista bridge, constructed in 1944, is listed for National Register of Historic Places eligibility evaluation in 1994. Both direct and indirect impacts to NRHP-eligible structures must be addressed during the environmental planning phase.</p>	<p>Ten isolated residences or ranch complexes occur adjacent to the proposed project (6873, 7121, 7187, 7189, and 7400 Highway 12, 2911 Azevedo Road, 2685 Amerada Road, 7936 and 7940 Emigh Road, and 8192 Montezuma Hills Road). Six of these (6873 and 7400 Highway 12, 2911 Azevedo Road, 2685 Amerada Road, 7936 Emigh Road, and 8192 Montezuma Hills Road) appear to be more than 50 years old, and several are clearly about 100 years old. In compliance with Caltrans standards, all structures must be inventoried and evaluated. Both direct and indirect impacts to NRHP-eligible structures must be addressed during the environmental planning phase.</p>
Biological Resources	<p>Habitats within the project area (including sensitive habitats such as Northern Claypan Vernal Pool and Valley Needle Grassland) support a wide range of special-status species. In addition to the Sacramento River and other major water features, there are a number of smaller stream courses and other hydrographic elements that may be delineated as wetlands or other waters of the U.S. that are subject to Corps of Engineers permitting. Focused, intensive surveys (performed during the appropriate time of year) will be needed to identify specific impacts to special-status species and wetlands, and to identify feasible mitigation measures to avoid or reduce significant adverse impacts. Management of the Delta smelt and winter-run chinook salmon fisheries in the Sacramento River may adversely affect construction activities within the river channel. Clarification of biological issues through agency contacts (e.g., National Marine Fisheries Service) and impacts at an early date will be essential to the successful completion of the environmental planning stage.</p>	<p>Habitats within the project area (including sensitive habitats such as Northern Claypan Vernal Pool and Valley Needle Grassland) support a wide range of special-status species. In addition to the Sacramento River and other major water features, there are a number of smaller stream courses and other hydrographic elements that may be delineated as wetlands or other waters of the U.S. that are subject to Corps of Engineers permitting. Focused, intensive surveys (performed during the appropriate time of year) will be needed to identify specific impacts to special-status species and wetlands, and to identify feasible mitigation measures to avoid or reduce significant adverse impacts. Management of the Delta smelt and winter-run chinook salmon fisheries in the Sacramento River may adversely affect construction activities within the river channel. Clarification of biological issues and impacts at an early date through agency contacts (e.g., National Marine Fisheries Service) will be essential to the successful completion of the environmental planning stage.</p>
Floodplain Issues	<p>The construction of a new bridge crossing may involve encroachment upon 100-year floodplains associated with the Sacramento River and other waterways in the project area. A Location Hydraulic Study must be performed to delineate floodplain issues; proper design and construction methods should lead to the avoidance of a "significant encroachment," as defined by the FHWA.</p>	<p>The construction of a new bridge crossing may involve encroachment upon 100-year floodplains associated with the Sacramento River and other waterways in the project area. A Location Hydraulic Study must be performed to delineate floodplain issues; proper design and construction methods should lead to the avoidance of a "significant encroachment," as defined by the FHWA.</p>

Resource Issue	Alternative 2 (Parallel)	Alternative 6 (Southern)
Hazardous Waste/ Materials Issues	<p>The Limited Level I Preliminary Site Assessment revealed that 18 properties within or adjacent to the proposed right-of-way for this alternative contain (or have contained) hazardous materials. Leaking storage tanks or hazardous spills were documented at five of these sites; two (including the Caltrans maintenance yard) are currently involved in monitoring and clean-up programs. Underground gas pipelines operated by PG&amp;E are also known to occur in the area. The acquisition of properties involving hazardous contamination may involve demolition, tank removal, and remediation tasks. A Phase II investigation may be needed to ascertain the nature and location of possible undocumented, underground contamination associated with adjacent ownerships where signs of surface staining and other factors suggest contamination may exist.</p>	<p>The Limited Level I Preliminary Site Assessment revealed that 1 property (an Amerada Hess Corporation maintenance facility) that is within or adjacent to the proposed right-of-way for this alternative may contain (or have contained) hazardous materials. Capped natural gas wells and underground gas pipelines are also known to occur in the area, although there is no indication that these controlled features represent sources of contamination. Undocumented hazardous materials may also occur at historic ranch properties along this alignment, although no evidence of this problem has been encountered to-date. The acquisition of any property involving hazardous contamination may involve demolition, tank removal, and remediation tasks. A Phase II investigation may be needed to ascertain the nature and location of possible undocumented, underground contamination associated with adjacent ownerships where signs of surface staining and other factors suggest contamination may exist.</p>
Noise Receptors	<p>Nine isolated residences adjacent to the proposed project (6873, 7121, 7187, 7189, 7400, 7630, 7828, 7989, and 8199 Highway 12), as well as a complex of residences in Rio Vista (on south side of Hwy. 12 across from Gardiner Way) can be considered sensitive receptors for changes in the noise environment. The noise impacts to the Vista Motel (640 Highway 12), the Rio Sands Lodge (205 Highway 12), and the Westwind Mobile Home Park (50 River Road) in Rio Vista should also be assessed. Sound barriers may be necessitated at certain locations in order to mitigate significant increases in traffic noise resulting from project construction.</p>	<p>Ten isolated residences adjacent to the proposed project (6873, 7121, 7183, 7187, and 7400 Highway 12, 2911 Azevedo Road, 2685 Amerada Road, 7936 and 7940 Emigh Road, and 8192 Montezuma Hills Road) can be considered sensitive receptors for changes in the noise environment. Potential noise impacts to the Sandy Beach County Park on the west side of the Sacramento River (south of Rio Vista) should also be assessed. Sound barriers may be necessitated at certain locations in order to mitigate significant increases in traffic noise resulting from project construction.</p>
Socioeconomic Issues	<p>Potential socioeconomic impacts associated with this proposed alternative include the acquisition of private property and/or commercial establishments for future right-of-way needs, restrictions on existing highway access, modifications to existing traffic flow patterns in downtown Rio Vista (including possible access impacts to the Westwind Mobile Home Park), conformity to the local General Plan and other planning documents, and the potential for growth inducement. These issues should be addressed during the environmental planning phase by significant public involvement efforts and a technical socioeconomic impacts assessment.</p>	<p>Potential socioeconomic impacts associated with this proposed alternative include the acquisition of private property for future right-of-way needs, restrictions on existing highway access, ramifications to existing business enterprises in Rio Vista that could result from the re-routing of through traffic to a location outside of the city, farmland impacts, the potential for growth inducement, and conformity to the local General Plan and other planning documents. These issues should be addressed during the environmental planning phase by significant public involvement efforts and a technical socioeconomic impacts assessment.</p>

Resource Issue	Alternative 2 (Parallel)	Alternative 6 (Southern)
Visual Receptors	<p>Nine isolated residences adjacent to the proposed project (6873, 7121, 7187, 7189, 7400, 7630, 7828, 7989, and 8199 Highway 12), as well as a complex of residences in Rio Vista (on south side of Hwy. 12 across from Gardiner Way) can be considered sensitive receptors for changes in the visual environment. An assessment of the project viewshed (including locations with a view of the proposed bridge) should be compiled to assist in the determination of all project-related visual impacts in the vicinity of Rio Vista. Landscaping and/or the placement of aesthetically pleasing barriers related to noise impacts may be necessitated at certain locations in order to mitigate significant adverse impacts to the existing visual environment that could result from project construction.</p>	<p>Ten isolated residences adjacent to the proposed project (6873, 7121, 7187, 7189, and 7400 Highway 12, 2911 Azevedo Road, 2685 Amerada Road, 7936 and 7940 Emigh Road, and 8192 Montezuma Hills Road) can be considered sensitive receptors for changes in the visual environment. Potential impacts to the visual environment at Sandy Beach County Park should also be assessed. An assessment of the project viewshed (including locations with a view of the proposed high-level bridge) should be compiled to assist in the determination of all project-related visual impacts in the vicinity of Rio Vista. Landscaping and/or the placement of aesthetically pleasing barriers related to noise impacts may be necessitated at certain locations in order to mitigate significant adverse impacts to the existing visual environment that could result from project construction.</p>
Water Quality Issues	<p>Water quality impacts resulting from construction activities and operational usage of the proposed alternative could be significant. Erosion control practices (including revegetation) and standard project design for handling roadway runoff will be needed to mitigate potential impacts. Water quality issues associated with work in the Sacramento River and other waterways may necessitate coordination with agencies such as the Regional Water Quality Control Board, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Game.</p>	<p>Water quality impacts resulting from construction activities and operational usage of the proposed alternative could be significant. Erosion control practices (including revegetation) and standard project design for handling roadway runoff will be needed to mitigate potential impacts. Water quality issues associated with work in the Sacramento River and other waterways may necessitate coordination with agencies such as the Regional Water Quality Control Board, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Game.</p>

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	ii
<b>INTRODUCTION AND PROJECT DESCRIPTION</b> .....	1
<b>METHODS AND FINDINGS</b> .....	3
Biological Resources .....	3
Floodplain Encroachment .....	6
Socioeconomic .....	6
Water Quality .....	7
Noise, Air and Energy .....	7
Hazardous Waste .....	10
Cultural Resources .....	11
<b>RECOMMENDATIONS</b> .....	14
<b>CONCLUSIONS</b> .....	16
<b>LITERATURE CITED</b> .....	17
<b>TABLES</b>	
Table 1. Environmental Issues .....	iv
Table 2. Summary of Resource Issues by Alternative .....	vi
Table 3. Sensitive Air and Noise Receptors in the Project Area .....	9
<b>APPENDICES</b>	
Appendix A. Correspondence	
Appendix B. Potential Special-status Plants Within Area of Project Alternatives	
Appendix C. Potential Special-status Wildlife Species Within Area of Project Alternatives	
<b>ATTACHMENTS</b>	
Attachment A. Limited Level I Initial Site Assessment	
<b>EXHIBITS</b>	
Exhibit A. Project Maps	

