



# La Paz Transportation Planning Study



## Final Report



June 2010

## ACKNOWLEDGMENTS

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The Honorable Walt Akin, Former Mayor, Town of Quartzsite  
Brian Babiars, Acting Director, Western AZ Council of Governments  
Donna Baker, NPG Cable  
Michele E. Beggs, Public Information Officer, Kingman District, ADOT  
Scott Bernhart, Community Development Manager, La Paz County  
Emmett Brinkerhoff, Public Works Director, Town of Quartzsite  
Ellen Carr, Logan Simpson Design  
Tanya L. Cecil, General Manager, Arizona & California Railroad  
Aaron Curtis, Yuma Field Office, US Bureau of Land Management  
James D. Downing, P.E., President, Harcuvar Company  
Rich Ench, Tribal Planner, Colorado River Indian Tribes  
Lee Eseman, Western Regional Manager, Arizona State Parks  
Justin Feek, Project Manager, ADOT  
Charlene FitzGerald, Former Project Manager, ADOT  
Robert Flanders, Quartzsite Maintenance, ADOT  
Gregory Fisher, Planner I - Interim TERO Director, CRIT  
Guy Gorman, Community Economic Director, Town of Parker  
Melanie Headstream, Planner III, Arizona State Land Department  
Sergeant Chad Hinderliter, Arizona Department of Public Safety  
Mark Hoffman, Transit Planner, ADOT  
Robert K. Holt, P.E., The Holt Group  
Tish Hunter, Environmental Planning Specialist, ADOT  
The Honorable Wes Huntley, Mayor, Town of Quartzsite  
Michael Jones, Assistant Yuma District Engineer, ADOT  
Joan-Marie King, Planner, La Paz County  
Bill Knowles, Arizona Game & Fish Department  
Barbara Martin, The Holt Group  
Paul Patane, Yuma District Engineer, ADOT  
Deanna Pflieger, Arizona Game & Fish Department  
Jerry Rather, Park Manager, Buckskin Mountain State Park  
Dennis Shrewsbury, Administrative Sergeant, Town of Parker Police Department  
Tom Simmons, Public Works Director, La Paz County  
Ted Swendra, Avi Suquilla Airport Manager, CRIT  
Ms. Alex Taft, Manager, Town of Quartzsite  
Gina Trafton, Lake Havasu Field Office, US Bureau of Land Management  
James Zumpf, Sr. Transportation Planner, ADOT

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# 1. INTRODUCTION

## PURPOSE

The La Paz Transportation Planning Study was conducted as part of the Planning Assistance for Rural Areas (PARA) program sponsored by the Arizona Department of Transportation (ADOT) Multimodal Planning Division. The PARA program provides federal funds to non-metropolitan communities for the purpose of conducting transportation planning studies. The La Paz Transportation Planning Study has been a joint effort of ADOT, La Paz County, Town of Parker, Town of Quartzsite, and the Colorado River Indian Tribes (CRIT). This Study developed 5, 10, and 20-year transportation plans, as well as an implementation program, to guide the County, Towns, and the CRIT in meeting transportation needs for the Study Area into the future. Figure 1-1 presents the Study area.

The Study identified roadway and multimodal improvements to meet the growing population and changing land uses to improve mobility and safety, and to encourage sensible and sustainable development. The feasibility of funding and implementing the needed improvements was assessed, and a long-range multimodal transportation plan is provided as well as practical tools for day-to-day programming and funding of transportation improvements.

While this Study includes roadway facilities owned and operated by ADOT within the planning area, it is important to recognize that improvements to the State Highway System can be made only after in-depth planning and engineering studies are conducted by ADOT, and upon approval of the State Transportation Board. All traffic interchange improvements must be approved by the Federal Highway Administration (FHWA). Any recommendations made by this Study for improvements on State facilities can serve only as suggestions for further study.

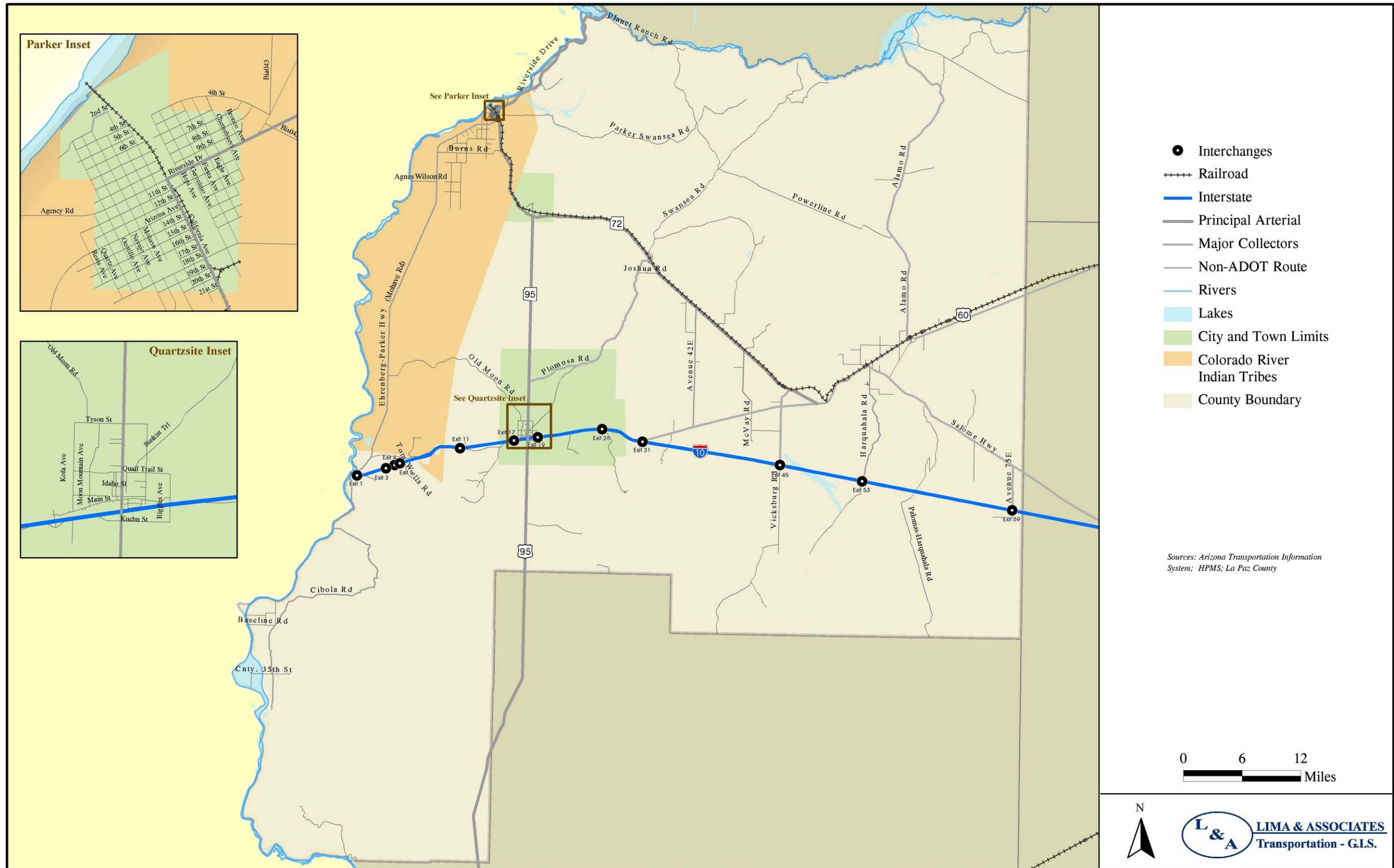
## BACKGROUND

The La Paz Transportation Planning Study Area is contiguous with La Paz County, which is located in Western Arizona and is bounded by the Colorado River (California State Line) on the west, Mohave County on the north, Maricopa County on the east, and Yuma County on the south. La Paz County was created from the Northern half of Yuma County in 1983.

For many years, the Study Area's developed land has been concentrated along the Colorado River and along SR 95, SR 72, and SR 60. The rugged terrain and dominance of Federal land (Bureau of Land Management (BLM) and military) has channeled recent growth to private lands adjacent to previous settlement. Development is in several communities, located on or north of I-10, and each with a population of fewer than 5,000 persons. I-10 carries considerable traffic—particularly freight trucks—through the County and the economies of Quartzsite and Ehrenberg, in particular, are linked to I-10 traffic.

With respect to year-round population, recent growth within the Study Area has been modest compared to that in the remainder of Arizona. Seasonal residents and tourists, however, have

FIGURE 1-1. STUDY AREA



flocked to the area. The many recreational activities and specific events that attract visitors are dispersed throughout the County. The few roadways have been strained to handle the traffic and are sometimes filled to capacity by seasonal flows and special events. Even when total traffic volume is less, many roadways have a mix of ordinary commuting, agricultural vehicles, recreational traffic, and freight-truck traffic sharing the road.

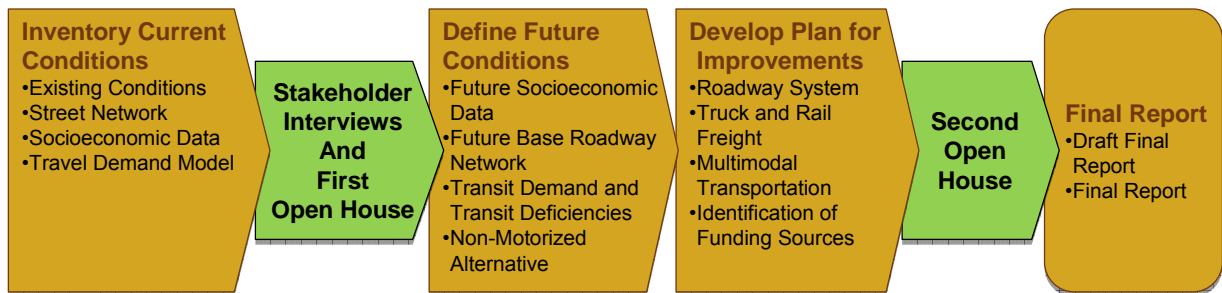
Most of the roadway network has only two lanes, while I-10 has four lanes, and a few miles of SR 95 in Parker/Parker Strip areas has a mix of three and four lanes. The mix of traffic on a largely two-lane network leads to safety problems, pavement deterioration, stopped traffic when incidents occur, and many other concerns.

While the existing roadway network—with improvements—will likely carry most of the future traffic, the participating agencies joined together to explore innovative solutions for freight, transit, and non-motorized travel.

## STUDY PROCESS

The planning process conducted for the La Paz PARA Study is illustrated in Figure 1-2.

**FIGURE 1-2. STUDY PROCESS**



This study produced a transportation plan with short-, mid- and long-range elements, as well as a Transportation Improvement Program (TIP) to guide La Paz County, the Towns of Parker and Quartzsite, and the CRIT in implementing improvements to ensure a safe and efficient transportation system. The consultant team worked closely with the Technical Advisory Committee (TAC), other stakeholders, and the public to develop a transportation plan that meets transportation needs within the community vision. Working papers were prepared documenting the existing and future socioeconomic and multimodal transportation conditions as well as previous and ongoing studies. In addition, a TransCAD travel demand model was developed and calibrated against available traffic counts as a tool to estimate future travel demand.

Public Involvement activities were coordinated with the public involvement firm, Logan Simpson Design under the guidance of the ADOT Communication and Community Partnerships Division. One-on-one meetings were held with individual stakeholders to obtain data, issues, and potential solutions.

Based on the future conditions, draft short-, mid-, and long-range transportation plans including roadway, freight and multimodal elements were developed in consultation with the TAC and evaluated against an agreed upon set of performance and feasibility measures. The draft plans were documented in a third working paper. A TIP was prepared identifying recommended projects, project priorities, responsibilities, schedule, and costs. The implementation plan outlines actions to implement multimodal projects, and strategies for transportation system management, access management, and travel demand management.

A draft final report was prepared and reviewed by the TAC and revised where necessary. This final report was then prepared and submitted to ADOT and La Paz County.

## **AGENCY COORDINATION AND PUBLIC INVOLVEMENT**

The La Paz Transportation Planning Study has been prepared through an extensive open process of coordination, cooperation, and communication among La Paz County, Town of Parker, Town of Quartzsite, CRIT, and ADOT. Table 1-1 lists the various coordination and advisory meetings and presentations conducted during the planning process.

**TABLE 1-1. COORDINATION, COOPERATION & COMMUNICATION ACTIVITIES**

<u>TAC Meetings/Teleconferences:</u>	<u>Public Open Houses First Round</u>
January 27, 2009, Parker	June 23, 2009
June 23, 2009, Quartzsite	Town of Quartzsite Council Chambers
March 4, 2010, ADOT Yuma District Conf Rm	June 24, 2009
March 23, 2010, Quartzsite	Town of Parker Council Chambers
May 20, 2010, ADOT Yuma District Conf Rm	
<u>Stakeholder Interviews</u>	<u>Public Open Houses Second Round</u>
April 7, 8, and 9, 2009	March 23, 2010
	Town of Quartzsite Council Chambers
	March 24, 2010
	Town of Parker Council Chambers

### **Technical Advisory Committee and Stakeholder Interviews**

A Technical Advisory Committee, as listed in Table 1-2, guided the conduct of the La Paz Transportation Planning Study, reviewed and commented on study documents, and participated in stakeholder interviews and Public Open Houses.

In addition to the guidance of the TAC, individual stakeholder interviews were conducted in April 2009. The purpose of the interviews was to identify major transportation related issues and to obtain ideas on possible ways to address potential deficiencies and needs. Table 1-3 lists the 20 interviewees and the dates of the interviews.

**TABLE 1-2. TECHNICAL ADVISORY COMMITTEE**

<b>Representation/Agency</b>	
<b>Arizona Department of Transportation</b>	<b>Colorado River Indian Tribes</b>
Paul Patane, Yuma District	Gregory Fisher, Planner I - Interim TERO Dir
Michel Jones, Yuma District	Richard Ench, Planning Consultant
Justin Feek, Multimodal Transportation Div	<b>Town of Quartzsite</b>
Michele Beggs, Communications and Community Partnerships	Emmett Brinkerhoff, Public Works Director
Mark Hoffman, Multimodal Transportation Div	<b>Town of Parker</b>
Tish Hunter, Environmental Planning Specialist	Guy Gorman, Community Development Dir
<b>La Paz County</b>	<b>Arizona Game &amp; Fish Department</b>
Tom Simmons, Public Works Director	Bill Knowles, Habitat Specialist
Scott Bernhardt, Community Development Dir	<b>Western Arizona Council of Governments</b>
<b>Bureau of Land Management</b>	Brian Babiars, Acting Director
Gina Trafton, Lake Havasu Field Office	<b>Lima &amp; Associates Consultant Team</b>
	Peter Lima, Ph.D., P.E., President
	Robert Bohannon, Sr Transportation Planner

**TABLE 1-3. STAKEHOLDER INTERVIEWEES**

<b>Stakeholder</b>	<b>Organization</b>
<b>April 7, 2009</b>	
Donna Baker	NPG Cable
Guy Gorman, Community Economic Director*	Town of Parker
Sergeant Chad Hinderliter	Department of Public Safety
<b>April 8, 2009</b>	
Tanya L. Cecil, General Manager	Arizona & California Railroad
Dennis Shrewsbury, Administrative Sergeant	Town of Parker Police Department
Rich Ench, Tribal Planner*	Colorado River Indian Tribes
Scott Bernhart, Community Development Mgr*	La Paz County
Joan-Marie King, Planner	La Paz County
Jerry Rather, Park Manager	Buckskin Mountain State Park
Lee Eseman, Western Regional Manager	Arizona State Parks
Ted Swendra, Airport Manager	Colorado River Indian Tribes
<b>April 9, 2009</b>	
Aaron Curtis, Yuma Field Office	Bureau of Land Management
Robert K. Holt, P.E.	The Holt Group
Barbara Martin	The Holt Group
Robert Flanders, Quartzsite Maintenance	Arizona Dept. of Transportation
Melanie Headstream, Planner III	Arizona State Land Department
The Hon. Walt Akin, Mayor	Town of Quartzsite
The Hon. Wes Huntley, Councilman	Town of Quartzsite
Ms. Alex Taft, Manager	Town of Quartzsite
James D. Downing, P.E., President	Harcuvar Company

\*Members of La Paz Transportation Planning Study TAC

## **Public Involvement**

Two rounds of Public Open Houses were held for the study. The format of the Open Houses consisted of a short PowerPoint presentation, followed by questions and answers from the attendees. In addition, display boards were available for review by the public and representatives of the study team were available to answer questions.

For the first round, public meetings were held in Quartzsite on June 23 and in Parker on June 24, 2009. The purpose of the first round of open houses was to introduce the study and schedule to the public, review existing socioeconomic and transportation conditions, and obtain feedback on conditions and transportation related issues. For the second round, public meetings were held in Quartzsite on March 23 and in Parker on March 24, 2010. The purpose of the second round of open houses was to present the draft transportation plan including 2020 and 2030 road plans, a multimodal element, and a freight element.

The *Summary Public Involvement Report*, under separate cover, presents additional details on the public involvement process including information material distributed and comments from the public.

## **ORGANIZATION OF REPORT**

Chapter 2 of this report presents a review of previous studies and current transportation programs. The next chapter describes the current socioeconomic and transportation conditions in La Paz County. Future socioeconomic and transportation conditions are then described in Chapter 4. Chapter 5 presents the analysis of alternative future roadway networks. The Multimodal Transportation Plan is presented in Chapter 6 including the Multimodal Element and Freight Element. The final chapter describes an implementation program including implementation strategies and funding sources.

The *Summary of Public Involvement Report*, under separate cover, describes the public involvement process and activities. Comments received from the public are included in the report.

A series of Working Papers was prepared during the study. Each working paper is posted on the project Website: [http://www.azdot.gov/mpd/systems\\_planning/lapaz.asp](http://www.azdot.gov/mpd/systems_planning/lapaz.asp). The first working paper *Working Paper 1: Current Conditions* presents an inventory and analysis of current socioeconomic transportation conditions and deficiencies in the Study Area. The second paper, *Working Paper 2: Future Conditions* describes the projection and analysis of future socioeconomic and transportation conditions within La Paz County. *Working Paper 3: Draft Transportation Plan* presents an analysis of alternative road networks and Draft 2020 and 2030 Road Plans as well as recommended Multimodal and Freight Elements.



## 2. PREVIOUS STUDIES AND PLANS

This chapter reviews studies, plans, and programs related to transportation in La Paz Study Area. The purpose of the review was to gain knowledge of the County and an understanding of the transportation conditions, issues, and transportation related studies within the Study Area.

### REVIEW OF PREVIOUS STUDIES AND PLANS

Table 2-1 briefly summarizes these studies and plans with findings and recommendations that may affect the future transportation characteristics of the Study Area. The documents are referenced throughout the report in regard to transportation conditions issues and proposed transportation projects in order to help shape the La Paz County Transportation Plan.

A detailed review is provided on Transportation Improvement Programs for ADOT and Western Arizona Association of Governments (WACOG) directly after Table 2-1, as they have a direct influence on the development of the transportation plan:

A more detailed summary of the following studies may be found in the La Paz Transportation Planning Study *Working Paper 1*, which is available online at:  
[http://mpd.azdot.gov/mpd/systems\\_planning/lapaz.asp](http://mpd.azdot.gov/mpd/systems_planning/lapaz.asp):

- La Paz County Comprehensive Plan
- Town of Quartzsite General Plan
- Town of Parker General Plan
- Western Regional Framework Study

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS**

Study	Description
<b>Federal Studies and Plans</b>	
Bureau of Land Management, Lake Havasu Field Office, Approved Resource Management Plan and Final Environmental Impact Statement, 2007.	Presents the analyses of five alternatives for management of 1.3 million acres of public land. The proposed plan provides for a balance between authorized resource use and the protection and long-term sustainability of sensitive resources. Major issues include the identification of lands to be made available for disposal, management of recreation and public access, designation, and management of Special Designations, management of wilderness characteristics, management of wild burros around Alamo Lake, and BLM’s role in the management of Lake Havasu. <a href="http://www.blm.gov/az/st/en/info/nepa/environmental_library/arizona_resource_management/LHFO_ROD_07.html">http://www.blm.gov/az/st/en/info/nepa/environmental_library/arizona_resource_management/LHFO_ROD_07.html</a>
Design Concept Report: US 95 MP 42- Cibola Lake Rd, ADOT Tracs #H7022 01L, 2009.	ADOT and the FHWA are conducting an engineering study and environmental analysis for improvements on US 95 between milepost 42 and milepost 82. Proposed improvements include constructing two new travel lanes, new bridges, and replacing existing bridges.

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
Yuma Field Office, Proposed Resource Management Plan and Final Environmental Impact Statement, April 2008.	The document analyzes alternatives to resolve management issues, determines management objectives and actions, and establishes monitoring methods to facilitate multiple use and sustained yield management for the entire planning area. <a href="http://www.blm.gov/az/st/en/prog/planning/yuma_plan/reports/prmp.html">http://www.blm.gov/az/st/en/prog/planning/yuma_plan/reports/prmp.html</a>
Community Wildfire Protection Plan La Paz County Bureau of Land Management Yuma and Lake Havasu Field Office, no date.	Provides analysis of the wildfire threat in La Paz County and a mitigation plan to lower the threat from wildfire to the identified communities. <a href="http://www.azsf.az.gov/UserFiles/PDF/LaPazDesertCWPP.pdf">http://www.azsf.az.gov/UserFiles/PDF/LaPazDesertCWPP.pdf</a>
<b>State Studies and Plans</b>	
Arizona Framework Studies, ADOT, On-going.	A consortium of State, regional, and local stakeholders is working on the planning process <i>Building a Quality Arizona</i> for State transportation infrastructure needs. As part of this process, Regional Framework Studies will feed into the Statewide Transportation Planning Framework. The Framework studies are long-range visionary plans focusing on transportation needs in the 2030-2050 timeframe. <a href="http://www.bqaz.gov/weaz.asp">http://www.bqaz.gov/weaz.asp</a>
Western Regional Framework Study. Working Paper: Existing and Future Conditions, ADOT, April 2008.	A consortium of State, regional, and local stakeholders is working on the planning process <i>Building a Quality Arizona</i> for State transportation infrastructure needs. As part of this process, Regional Framework Studies will feed into the Statewide Transportation Planning Framework. The Framework studies are long-range visionary plans focusing on transportation needs in the 2030-2050 timeframe.
The Western Arizona Framework Study is summarized in detail in the La Paz PARA Working Paper 1.	The Western Arizona Region includes Mohave, La Paz, and Yuma Counties. Products completed to date include: Working Paper 2: Existing Conditions, Community Workshops, Round 1, March/April 2008. Working Paper 2 compiles an inventory and analysis of the Existing and Future Conditions gathered from previous and current studies. Work has also been accomplished on population and employment forecasts and the development of a Statewide travel demand model.
2003 Arizona Climbing Lanes and Passing Lane Prioritization, ADOT, May 2004.	This study identifies and prioritizes climbing lane and passing lane projects to be considered on State highways for the ADOT Five-Year Transportation Facilities Construction Program.
I-10 National Freight Study, May 2003.	A joint effort by eight state Departments of Transportation including Arizona with the purpose to analyze current and projected freight movements and develop a strategy for improving freight flow along the Interstate 10 (I-10) Corridor.
Arizona Access Management Study, ADOT, On-going.	ADOT is conducting a Statewide Access Management study to develop an access management classification system for the State Highways, and to develop a comprehensive access management manual to guide access management on State highways. Access levels will be assigned to State highways throughout the State. <a href="http://mpd.azdot.gov/planning/accessmgt.php">http://mpd.azdot.gov/planning/accessmgt.php</a>
Arizona Statewide Bicycle and Pedestrian Plan, ADOT, August 2003.	The Arizona Statewide Bicycle and Pedestrian Plan provides a long-term plan for a Statewide system of interconnected bicycle facilities that will guide ADOT transportation decisions relating to bicycle and pedestrian travel, planning, and facility development.

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
Arizona Transit Needs Study, ADOT, May 2008.	ADOT worked with State, regional, and local stakeholders to identify rural transit needs and to develop regionally-based solutions to rural public transportation in Arizona. The Study establishes Arizona’s long-term strategic direction of rural transit service provision. <a href="http://mpd.azdot.gov/transit/ArizonaRuralTransitNeedsStudy.asp">http://mpd.azdot.gov/transit/ArizonaRuralTransitNeedsStudy.asp</a>
Arizona Rail Framework Study, ADOT, April 2008.	The Statewide Rail Framework Study will describe a rail development program and investment strategy for the State of Arizona to promote the development of an efficient, multimodal transportation system for people and goods. The Study will address rail transportation needs across Arizona considering existing conditions and estimated future needs for both freight rail and passenger rail. <a href="http://www.bqaz.gov/PDF/Rail_Framework_Summary.pdf">http://www.bqaz.gov/PDF/Rail_Framework_Summary.pdf</a>
Multimodal Freight Analysis Study, ADOT, November 2007.	Describes and evaluates Arizona’s existing freight infrastructure, including the highways and rail lines that traverse the La Paz area. The Study identifies unmet needs and recommends projects for improving the efficiency of the movement, collection, and distribution of freight. <a href="http://mpd.azdot.gov/planning/freightstudy.php">http://mpd.azdot.gov/planning/freightstudy.php</a>
Arizona Statewide Railroad Inventory and Assessment, ADOT, March 2007.	A comprehensive review of existing railroad fixed plant, facilities, and operations.
State Transportation Board Policies, ADOT, Rev. 2003.	Presents policies pertaining to the following areas; priority programs; establishing, altering or vacating highways; construction contracts, accelerated funding mechanisms; local government airport grants; and designating scenic or historic highways.
State of Arizona Rail Safety & Security Resource Guide, ADOT, November 2007.	This plan focuses on targeted areas of railroad safety with emphasis on specific needs identified by the “USDOT Highway-Rail Crossing Safety and Trespass Prevention Action Plan” developed by the United States Department of Transportation. The purpose of the plan is to establish and provide actions that continue to allow rail transportation, within and through Arizona, to be efficient, safe and secure. <a href="http://mpd.azdot.gov/transit/PDF/AzRailSafetySecurity_1107.pdf">http://mpd.azdot.gov/transit/PDF/AzRailSafetySecurity_1107.pdf</a>
Hazardous Materials Commodity Flow Study Report: I-10 Corridor from SR 85 to California, Arterial Highways and Railroads, Maricopa and La Paz Counties, Arizona, Arizona State Emergency Response Commission Arizona Division of Emergency Management, December 2008.	This study focused on the transportation of hazardous materials along Interstate 10 (I-10) from State Route (SR) 85 to the Arizona/California border, arterial highways, and two railroads. Arterials highways within the Study Area include SR 85, US Highway (US) 60, SR 72, and SR 95. The railroads along the corridor include the Arizona & California Railroad (ARZC) and the Union Pacific Railroad (UPRR).

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
<b>Local Studies and Plans</b>	
La Paz County Comprehensive Plan, May 2005.	The <i>La Paz County Comprehensive Plan</i> , May 2005 is the overall countywide plan for development in La Paz County. The plan includes three elements: land use, environment, and multimodal transportation. The Land Use Element provides the proposed general distribution, location, and extent of land for housing, business, industry, public facilities, and open space. The Environmental Element identifies environmental issues and provides strategies to preserve and enhance the natural environment. The Multimodal Transportation Element identifies the general location and extent of existing and proposed roadways as well as other forms of transportation including transit.
The La Paz County Comprehensive Plan is summarized in detail in the La Paz Transportation Planning Study Working Paper 1.	<p><b>Transportation Goals</b></p> <p><b>Goal 1:</b> Develop a system of County roads and State highways to safely and conveniently serve residents, businesses, and visitors.</p> <p><b>Goal 2:</b> Develop a multimodal transportation system</p> <p><b>Goal 3:</b> Develop La Paz County rail, trucking, and aviation facilities Multimodal Transportation Plan</p> <p>The Multimodal Transportation Element provides an efficient transportation system that moves people and goods throughout La Paz County and supports the current and projected land use in the General Plan. The Element outlines goals and policies guiding development of a comprehensive circulation system supporting findings of the Land Use Element.</p>
Town of Quartzsite General Plan, 2003.	<p>The Quartzsite General Plan is the long-range and visionary plan providing guidance to where Quartzsite wants to be in the future. The plan is comprised of the following elements:</p> <ul style="list-style-type: none"> <li>• Land Use</li> <li>• Open Space</li> <li>• Conservation and Environment Element</li> <li>• Circulation</li> <li>• Growth areas</li> <li>• Cost of Development Element</li> </ul>
The Town of Quartzsite General Plan is summarized in detail in the La Paz Transportation Planning Study Working Paper 1.	<p><b>Transportation Goals</b></p> <p><b>Goal:</b> Achieve a coordinated transportation program to provide a safe and efficient roadway system for transportation of personal and commercial vehicles in cooperation with the County and other governmental agencies.</p> <p><b>Goal:</b> Improve internal circulation through design and construction of a collector street and local street feeder system into the Town’s major arterials.</p> <p><b>Goal:</b> Coordinate Main Street corridor facility improvements into the Town’s land use pattern and, thereby, into the local economic development strategy.</p> <p><b>Goal:</b> Augment the vehicular network of roadways with facilities for visitor and resident convenience as well as for alternative modes of transportation for persons of all ages.</p>

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
<p>Traffic Impact Study, Truck Stop and Motel NWC I-10 and Vicksburg Road, March 2005.</p>	<p>Traffic impacts analysis of the proposed development of a truck stop and motel on an 11-acre site adjacent to the northwest corner of I-10 and Vicksburg Road.</p> <p><b>Major Findings:</b> The 2005 level of service for both the I-10 and Vicksburg Road intersection and for the site driveways indicated that the operation would be within acceptable ranges of level of service.</p> <p><b>Major Recommendations:</b> No major recommendations to improve the intersection or roadway.</p>
<p>Initial Traffic Impact Analysis, Terrible Herbst, SR 95/California Avenue, July 20, 2006.</p>	<p>Traffic Impact Analysis of a proposed gasoline service station located at the corner of Riverside Drive/California Avenue intersection.</p> <p><b>Major Findings:</b> The analysis determined that the site and intersection are anticipated to operate at an adequate level of service during the 2007 weekday peak hours with the project.</p> <p><b>Major Recommendations:</b> No roadway or intersection improvements were recommended.</p>
<p>The Arizona Travel Plaza Traffic Impact Study, La Paz County, July 2006.</p>	<p>Analyzes the traffic impacts of the proposed commercial development located on the northwest corner of Ehrenberg Poston Highway and North Frontage Road in Ehrenberg, Arizona. The proposed site will take access from the North Frontage Road south of the site, and Ehrenberg Parker Highway (Old Highway) west of the site. The main route to distribute traffic to the surround area is through Interstate 10.</p> <p><b>Major Recommendations:</b></p> <p><i>Year 2010, without construction of the Arizona Travel Plaza:</i></p> <ul style="list-style-type: none"> <li>- The westbound and eastbound off ramps are widened to provide separate right- and left-turn lanes.</li> </ul> <p><i>Year 2010, with full construction of the Arizona Travel Plaza:</i></p> <ul style="list-style-type: none"> <li>- The westbound and eastbound off ramps are widened to provide separate right and left turn lanes.</li> <li>- Widen North Frontage Road to four (4) lanes adjacent to the site.</li> <li>- Realign the North Frontage Road/Ehrenberg Poston Highway intersection so that the North Frontage Road is the through road and the Ehrenberg Poston Highway is the north leg of the “T” intersection. Northbound traffic from the interchange can continue through to northbound Ehrenberg Poston Highway by a channelized right turn movement. The second eastbound lane on North Frontage Road becomes an exclusive right-turn lane onto the westbound I-10 on-ramp.</li> </ul> <p><i>Year 2015 with or without the site development:</i></p> <ul style="list-style-type: none"> <li>- Widen the overpass over I-10 to include one through lane and one left turn lane in each direction (four lanes total).</li> <li>- Traffic signals at I-10 eastbound ramp junction.</li> </ul> <p><i>Year 2015, without the full development of the Arizona Travel Plaza:</i></p> <ul style="list-style-type: none"> <li>- Traffic signal at the I-10 westbound ramp junction. This is due to a different traffic pattern in the no-build case, requiring signaling both ramp junctions.</li> </ul> <p><i>Year 2020 with full development of the Arizona Travel Plaza:</i></p> <ul style="list-style-type: none"> <li>- A right turn deceleration lane on North Frontage Road westbound at the first driveway (Access A).</li> </ul>

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
Petro Shopping Centers, LP Development, Quartzsite, Arizona, December 2007.	<p>Traffic Impact Analysis Report to the proposed auto/truck travel center located southeast of the I-10/Quartzsite Blvd Interchange.</p> <p><b>Major Findings:</b> The study area will require mitigation to maintain level of service D or better at several study intersections.</p> <p><b>Major Recommendations:</b> Signalize the interchange intersections at the east and westbound ramps. Add a southbound right-turn lane at the Quartzsite Blvd/WB ramp. Add a right-turn lane on the westbound exist ramp at Quartzsite Blvd. Extend the right-turn-storage on the eastbound exit ramp. Widen Quartzsite Blvd between the eastbound ramps and frontage road (Dome Rock Road/Kuehn Street) to provide left-turn lane and a northbound right-turn lane. Add a westbound right-turn lane at the Quartzsite Blvd frontage road intersection. Widen Quartzsite Blvd south of the frontage road to provide a left-turn bay and two-way left-turn lane and a right-run lane. A center-turn lane should be provided the length of the site.</p>
<p>Town of Parker General Plan, January 2008.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>The Town of Parker General Plan is summarized in detail in the La Paz Transportation Planning Study Working Paper 1.</p> </div>	<p>The Town of Parker General Plan serves as a policy guide for future development in the Town of Parker. The Plan states that it is intended to be both long range and visionary and aims to provide guidance for desired future growth through the year 2025. The Plan is comprised of vision and themes, existing conditions, a land use element, a transportation element, and an implementation plan.</p> <p><b>Transportation Goals</b></p> <p><b>Goal 1:</b> Provide a safe and efficient transportation system within the Town of Parker.</p> <p><b>Goal 2:</b> Provide for and encourage the use of non-vehicular modes of circulation.</p>
<p>Traffic Impact Statement, Bella La Paz Residential Development, March 2008.</p>	<p>Analysis of traffic impacts of a proposed 500 unit single family residential development located adjacent to the southwest side of SR 72 south of 69th Street.</p> <p><b>Major Findings:</b> Traffic operating conditions in 2008 through 2016 with the project critical traffic movements will be within the acceptable ranges of level of service. No additional through traffic lanes are needed on SR 72 and no auxiliary right-turn lanes are needed at the intersection of SR 72 and 69th Street.</p> <p><b>Major Recommendations:</b> A left-turn lane on northwest bound SR 72 and 69th Street is warranted and should be constructed.</p>
<p>Wal-Mart Supercenter Parker, Arizona, Traffic Impact Analysis, February 2006. Addendum #1, April 17, 2006. Addendum #2, June 21, 2006.</p>	<p>Analyzes the traffic impacts of the proposed Wal-Mart Supercenter located at the southwest corner of Airport Road and SR 95 in Parker, Arizona.</p> <p><b>Major Findings:</b> All study intersections were projected to operate at level of service C or better for the 2007 and 2012 plus site conditions with minor mitigations.</p> <p><b>Major Recommendations:</b> All project driveways along SR 95 were recommended to be restricted for right-in/right-out traffic movements only. Dual left-turn lanes on the south leg and dual left-run lanes and an exclusive right turn lane on the north leg of SR 95 and Airport Road were recommended. An exclusive left-turn lane, one through travel and an exclusive right-turn lane were recommended on the west leg of SR 95/Airport Road intersection.</p>

**TABLE 2-1. SUMMARY OF STUDIES AND PLANS (Continued)**

Study	Description
<p>Quartzsite Park Place Travel Center Traffic Impact Analysis Report, November 2006.</p>	<p>Traffic Impact Analysis of a proposed gasoline service station and travel center located at the corner of Riggles Avenue/Mockingbird Street intersection.</p> <p><b>Major Findings:</b> The study determined that Riggles Avenue and Mockingbird Street intersection will operate at acceptable level of service under year 2008 project conditions.</p> <p><b>Major Recommendations:</b> The construction of a two-way center left-turn lane and stop signs at project driveways would enhance traffic safety and traffic flow. The project should build curb, gutter, and sidewalks along the project’s frontage area.</p>
<p>Bill’s Ghost Travel Center, Traffic Impact Analysis Report, May 2009.</p>	<p>Traffic Impact Analysis of a proposed gasoline service station located at the corner of West Main Street/Main Event Way intersection.</p> <p><b>Major Findings:</b> The study determined that the West Main Street and Main Event Way intersection will operate at acceptable level of service under year 2009 project conditions.</p> <p><b>Major Recommendations:</b> The construction of a two-way center left-turn lane and stop signs at project driveways would enhance traffic safety and traffic flow. The northbound lane at Quartzsite Boulevard and Main Street should be reconstructed to an exclusive left-turn and a shared right/through lane. The eastbound approach at Quartzsite Boulevard and Main Street should be reconstructed to an exclusive right-turn and a shared through/left left.</p>
<p>Interstate 10 Ehrenberg Area Traffic Impact Study, Revised August 14, 2007.</p>	<p>Analysis of traffic impacts of the proposed Arizona travel Plaza and several other proposed residential and commercial developments located near the I-10/Ehrenberg Poston Highway traffic interchange. New developments include: Arizona Travel Plaza, located on the North Frontage Road; Emerald Springs, located north of Comber Road and west of Sourdough Road; River Bend Estates, located south of Comber Rd, and west of Sourdough Rd.; and Rio Laguna, located north and south of Ehrenberg Road, at Ehrenberg Poston Highway.</p> <p><b>Major Recommendations:</b> <b>Year 2010 with Arizona Travel Plaza</b> - Reconstruct I-10 Poston Road traffic interchange to include a roundabout at the north ramp junction. Construct a WB right-turn lane on the North Frontage Road at Access B, the auto entry.</p> <p><b>Year 2010 with Development</b> – Reconstruct Parker Ehrenberg Highway/Poston Road intersection to be a roundabout.</p> <p><b>Year 2015 with Development</b> – Widen North Frontage Road to four lanes from Poston Road to Old Highway. Widen Poston Road to four lanes from I-10 North roundabout to the roundabout at Parker Ehrenberg Highway. Construct a roundabout on the south side of I-10 at the I-10 Ramp Junction and South Frontage Road. Widen Parker Ehrenberg Highway to four lanes with center median or turn lane from the roundabout at Poston Road to Sourdough Road. Widen Sourdough Road to four lanes from Parker Ehrenberg Highway to Comber Blvd. Construct a connection from Rio Laguna to Poston Road located about 500 feet south of the roundabout entrance at Parker Ehrenberg Highway. Install all way stop sign control at Sourdough Road/Comber Road.</p>

## **STATEWIDE, REGIONAL, LOCAL TRANSPORTATION PROGRAMS**

Transportation improvement programs were reviewed for State, regional, and local jurisdictions to identify programmed projects, project description and type, and project cost. Tables 2-2 through 2-7 present the following transportation improvement program committed projects:

- La Paz County Transportation Investment Strategy. A Statewide investment strategy was prepared by ADOT, COGS, local governments, and counties to identify preliminary 2030 State, regional, and local multimodal needs (Table 2-2).
- ADOT Five-Year Transportation Facilities Construction Program (Table 2-3).
- American Recovery and Reinvestment Act - The Arizona Transportation State Board approved highway projects in La Paz County as part of the American Recovery and Reinvestment (Table 2-4).
- Western Arizona Association of Governments (Table 2-5).
- ADOT YUMA District Projects and Studies (Table 2-6).
- ADOT Avi Suquilla Airport Projects (Table 2-7).



**TABLE 2-2. LA PAZ COUNTY TRANSPORTATION INVESTMENT STRATEGY**

<b>Project/ Program</b>	<b>Project/Program Description</b>	<b>Estimated Cost</b>
<b>Strategic Highway Projects</b>		
US 95 Improvements		
35	US 95: Widen to 4-lane from the County Line to the County Line	Transportation benefits accrue to Yuma County
<b>Strategic Highway Project Total</b>		<b>0</b>
<b>Strategic Rail and Transit Projects and Programs</b>		
Public Transit Projects and Programs		
66	Connecting communities bus transit program	\$10,000,000
67	Enhancing public transportation programs	\$3,264,772
68	Transit serving elderly, person with disabilities and tribal populations in rural areas	\$924,711
69	Statewide vanpool and rideshare programs	\$1,313,977
70	Transit/rail planning, marketing and other related programs	\$105,118
<b>Strategic Rail and Transit Projects and Program Total</b>		<b>\$15,608,578</b>
<b>Local Mobility Projects and Programs</b>		
La Paz County		\$48,267,129
Parker		\$13,731,386
Quartzsite		\$15,071,034
Colorado River Indian Tribes		\$7,541,727
<b>Local Mobility Projects and Program Totals</b>		<b>\$84,611,276</b>
<b>Transportation Enhancement and Walkable/Bikeable Communities</b>		
La Paz County		\$1,909,940
Parker		\$915,343
Quartzsite		\$1,004,644
Colorado River Indian Tribes		\$2,083,476
<b>Transportation Enhancement and Walkable/Bikable Communities Total</b>		<b>\$5,913,403</b>
<b>La Paz County Total</b>		<b>\$106,133,257</b>

Source: [www.AZDOT.GOV/Statewide Transportation Investment Strategy/pdf/LaPaz-61908.pdf](http://www.AZDOT.GOV/Statewide_Transportation_Investment_Strategy/pdf/LaPaz-61908.pdf)

**TABLE 2-3. ADOT FIVE-YEAR TRANSPORTATION FACILITIES CONSTRUCTION PROGRAM, LA PAZ COUNTY  
FY 2010 – FY 2014 (Dollars in Thousands)**

Route	BMP	Type of Work	FY 2010	FY 2011	FY 2012	FY 2013	Summary
60	0	State Parks Roads Construct Parking	\$0	\$800	0	0	\$800
10	3	Reconstruct Ehrenberg Port of Entry	\$11,000	0	0	0	\$11,000
		Statewide Pavement Preservation	\$1,000	0	0	0	1,000
<b>Total</b>			\$12,000	\$800	0	0	\$12,800

Source: *Arizona Five-Year Transportation Facilities Construction Program, FY 2009-FY 2013*

**TABLE 2-4. AMERICAN RECOVERY AND REINVESTMENT ACT PRIORITIZED LIST OF PROJECTS,  
LA PAZ COUNTY**

Priority	Route	BMP	EMP	Project Name	Type of Work	Programmed	Cost
6	95	63.0	80.0	Peligro-Clarks	Pavement Preservation Estimated Construction completion by 5/2010	No	\$8,600,000
27	95	128.93	131.3	Passing Lanes South of Bouse Wash	Construct Passing Lanes Construction complete as of 11/6/09	Yes	\$1,600,000

Source: Arizona State Transportation Board, March 13, 2009

Note: Includes re-lining along US 95 from Quartzsite south

**TABLE 2-5. WESTERN ARIZONA ASSOCIATION OF GOVERNMENTS TRANSPORTATION PROGRAM,  
LA PAZ COUNTY**

Year	Sponsor	Project Location	Length Miles	Type of Work	Functional Class	Lanes Before	Lanes After	Fed Aid Type	Federal Funds	Local Match	Total Cost
<b>5-Yr Local Construction Program</b>											
2013	La Paz	Alamo Road		Guard Rail Repl.	Major Collector	2	2	STP/HURF	\$162,500	\$16,250	\$178,750
<b>WACOG Bridge Replacement Program</b>											
2009	La Paz	Cibola Bridge B#10221	0.1	Reconstruction		2	2	Bridge	\$1,000,000		\$1,600,000

Source: *Arizona Statewide Transportation Improvement Program, FY 2010 - 2013*

**TABLE 2-6. ADOT YUMA DISTRICT PROJECTS AND STUDIES**

<b>Route</b>	<b>Project/Study</b>	<b>Anticipated Schedule</b>
<b>Construction</b>		
US 60	Re-surfacing from I-10 to Vicksburg Road	Under Construction
I-10	Spot Repair from MP 30 to MP 44	Waiting Award
<b>Under Design</b>		
SR 95	SR 95 replace Colorado River bridge at Parker	During FY 10
SR 95	Add center turn lane and drainage improvements on SR 95 at Holiday Harbour	During FY 10
US 95	Re-surfacing US 95 from MP 96 to MP 104	During FY 11
US 95	Intersection improvements (turning lanes) on US 95 at MP 82 and MP 89	During FY 11
SR 95	Shoulder widening along SR 95 between MP 131.7 and MP 142.	No later than FY 11
SR 95	Intersection improvements on SR 95 at MP 160.9	When funded by US Fish and Wildlife Service
I-10	Replace Oxbow bridge; new port of entry at Ehrenberg on I-10	During FY 10
I-10	Gateway signage in Quartzsite on I-10, US 95 and SR 95	During FY 11
US 60	Intersection improvement with roundabout on US 60 at Vicksburg Road	During FY 10
SR 72	Shoulder widening on SR 72 between MP 13 and MP 14	No later than FY 11
<b>Studies</b>		
US 95	US 95 from MP 42 to MP 80 to improve road to all-weather 4-lane road from MP 42 to MP 63 and pavement preservation (re-surfacing) MP 63 to MP 80	To be built next 20 years

Source: ADOT Yuma District

**TABLE 2-7. AVI SUQUILLA AIRPORT PROGRAMMED PROJECTS**

<b>FY</b>	<b>Project Component</b>	<b>Project Description</b>	<b>State Share</b>	<b>Local Share</b>	<b>Federal Share</b>	<b>Project Total</b>
2011	Apron: Rehabilitate Apron - Reconstruction	Reconstruct 5,000 sy of apron west and south of Maintenance Hangar and pavement preservation (seal cracks and seal or thin overlay of 57,000 sy GA Apron and T-Hangar Taxi lanes constructed in 2002 and the mid 90's.	\$15,000	\$15,000	\$570,000	\$600,000
2011	Other: < Construct/Improve/Repair > < Fuel Farm/Utilities > [MAP] - Other	Construct 5,000 lf fire line to provide ramp area fire protection. Construct sewer, storm drainage and other utilities, reconstruct 8,000 sy access road and 11,000 sy GA public parking.	\$52,500	\$52,500	\$1,995,000	\$2,100,000
2012	Taxiways: < Extend/Widen/Strengthen > Taxiway Standards	Completion of Rwy 1-19 parallel twy approximately 4,800' x 50' including MITL and Guidance Signs required to meet FAA Standards and allows Exit twy A2 to be reconfigured or eliminated.	\$51,250	\$51,250	\$1,947,500	\$2,050,000
2013	Apron:Expand Apron - Capacity	Reconstruction and new construction of about 28,000 sy of asphalt concrete paved GA apron area including storm drainage improvements.	\$45,000	\$45,000	\$1,710,000	\$1,800,000
2014	Ground Transportation construct/Expand/Improve/Modify/ Rehabilitate > Service Road - Other	Pave perimeter road with aggregate base and asphalt concrete pavement 16' wide, approximately 42,000 sy of pavement, extend culverts.	\$37,500	\$37,500	\$1,425,000	\$1,500,000
2015	Taxiways :Extend Taxiway - Capacity	Extend three taxi lanes approximately 400' x 75' each for T-Hangar or corporate hangar development.	\$15,000	\$15,000	\$570,000	\$600,000
		Airport Total	\$216,250	\$216,250	\$8,217,500	\$8,650,000
		County Total	\$216,250	\$216,250	\$8,217,500	\$8,650,000

Source: Arizona Department of Transportation Aeronautics Division, [www.azdot.gov/MPD/airport\\_development/PDF/ACIP\\_2011\\_2015\\_april.pdf](http://www.azdot.gov/MPD/airport_development/PDF/ACIP_2011_2015_april.pdf)

### 3. CURRENT CONDITIONS

This chapter presents an inventory and analysis of current socioeconomic and transportation conditions and deficiencies in the Study Area. First, the current socioeconomic conditions are summarized. A discussion of the physical and natural resources follows. Next, the current road conditions and current traffic and safety conditions are described. The final section describes the multimodal conditions including rail, transit, freight, and non-motorized modes.

#### SOCIOECONOMIC ENVIRONMENT

A description of the current socioeconomic conditions in La Paz County including the current population of incorporated and non-incorporated areas and demographic characteristics of the population follows. In addition, current employment conditions are discussed including major employers, estimated employees by area, and estimated employees by job classification.

#### La Paz County

La Paz County is located on the western boundary of Arizona along the Colorado River between the rapidly growing metropolitan areas of Phoenix, Las Vegas, and southern California with rail and interstate highway access. The County is bordered by Maricopa County on the east, Yuma County to the south, and Mohave County to the north separated by the Bill Williams River, San Bernardino, Riverside, and Imperial counties are across the Colorado River to the west in the State of California.

The County is 4,518 square miles in area and is the third smallest County in Arizona with the lowest population density of slightly more than four persons per square mile. La Paz County has over 100 miles of frontage on the Colorado River with nearly half of that in the CRIT Reservation.

As noted in *the La Paz County Comprehensive Plan*, the County's land area is characterized by sandy beaches, rugged mountains, open desert, and vast agricultural lands. The Plan also notes that many of these areas are adjacent to each other with shear cliffs rising from the Colorado River channel and irrigated farmland abutting open desert.

The County's access to River recreation, wilderness areas, and wildlife refuges are an attraction to thousands of annual visitors placing tourism as the top industry. Agriculture is the next largest economic sector in the County.

Mining and prospecting for gold and other minerals along with hunting for gems are significant activities drawing people to La Paz County. Prospecting and searching for gems range from serious business endeavors to recreational hobbies. Residents and visitors use the State Highway, County, and local road system as well as off-highway trails to access remote areas for these activities.

The Town of Quartzsite and Town of Parker are the two primary communities in the County. Communities along the River include Ehrenberg, Cibola, and Parker Strip. Other communities in the County are Bouse, Brenda, Harcuvar, Hope, Poston, Quartzsite, Salome, Vicksburg, and Wenden.

The *La Paz County Comprehensive Plan* identified several “Growth Areas” that are anticipated for future development. These areas include:

- Quartzsite has the land base and a significant amount of privately-held land within its incorporated boundaries to support development. The Town has aggressively taken steps to develop its water and wastewater systems and other infrastructure to accommodate future development.
- Parker South is located just over 10 miles south of the original townsite. This area is considered within the Town of Parker’s municipal limits though separated by the CRIT Reservation. The Town of Parker has invested significant infrastructure development resources in anticipation of and to encourage a full range of land uses.
- The Salome-Wenden area, Cibola, Brenda, and the Parker Strip are also anticipated to grow as privately-held land is abundant in these areas.
- Ehrenberg also has growth potential based on its strategic location on the California border and excellent transportation access. Lack of privately-held land in Ehrenberg could hinder growth, but there are significant holdings of State highway lands in the vicinity that could accommodate new development should the market warrant.
- Bouse is also an area where growth can be expected. The community consists of mostly privately-held land with several miles of frontage along SR 72. The area is anticipated to continue to attract residential and neighborhood-type commercial development.

## **Town of Parker**

The Town of Parker is located along the east bank of the Colorado River in the northern corner of the Colorado River Indian Community. Situated on a Mesa, the Town is at an elevation of approximately 450 feet above sea level and is within the Sonora Desert. East of the community are the Gibraltar Mountains and the Whipple and Riverside Mountains are north and southwest of the Town, respectively. The Town is a one square mile area and includes an annexed area of 13,000 acres of non-contiguous land ten miles south, known as Parker South. In total, the Parker “Area” includes the following:

- Town of Parker
- Parker South
- Parker Valley
- Parker Strip
- Communities of Earp, Parker Dam, and Big River on the California side of the river

The Town was laid out as a grid street system with a railroad through center of town to serve as a depot and watering station and shipping station. As the County Seat for La Paz County, the Town is the prime location of government employees and services. More recently, the Parker area economy has transitioned from one based on agriculture and mining industries to a more service-oriented economy catering to tourists and visitors seeking hunting, fishing, and water recreation opportunities.

### **Parker Strip**

The 16-mile Parker Strip Area in the northwest portion of the La Paz County resembles a “beach town.” The popularity of the Parker Strip is due to its location along the Colorado River and the fact that the land is mostly privately-held between Federal, State, and local agencies. As a result of this popularity, the Parker Strip has developed at higher densities than communities in the County’s unincorporated areas.

The Strip is a mix of full time residences, vacation homes, small commercial businesses, eating and drinking establishments, and boating and recreational related industrial operations. Currently, some redevelopment is occurring on various properties. Construction includes some large higher priced single family homes.

Considerable tourism activities are frequent along the Parker Strip with the number of visitors and recreational users increasing significantly on summer weekends.

### **Town of Quartzsite**

The Town of Quartzsite is located in the Sonoran Desert approximately 31 miles from the Colorado River along Interstate 10 and US 95. Approximately 3,354 persons were full time residents as measured by the 2000 Census.’

The major contributor to Quartzsite’s economy is tourism. Travelers stop in the area for food, lodging, fueling, and shopping. In the winter months, the Town provides retail and other services to visitors residing at the many mobile home parks in the vicinity. Over one million and a half people are attracted annually to the major gem, mineral, and general swap-meeting shows representing thousands of vendors.

### **Colorado River Indian Tribes**

The CRIT is composed of about 3,500 members from four Tribes: Mohave, Chemehuevi, Hopi, and Navajo. The 270,000 acre CRIT Reservation traverses both the Arizona and California sides of the Colorado River. The Town of Parker is the primary community in the CRIT Reservation. The Town is located on a combination of Tribal land—leased land that is owned by CRIT, and land owned by non-Native Americans.

The Reservation includes other communities such as Poston, located 10 miles south of Parker. Poston was the site in World War II of one of the United States' largest Japanese internment camps now home to the Poston Monument, a monument to the Japanese internees.

The primary economic activity on the CRIT Reservation is agriculture including growing cotton, alfalfa, and sorghum. However, the Tribal economy has grown and diversified and includes the following:

- Sand and gravel operations
- Real estate development and retail stores
- The Blue Water Resort and Casino in Parker attracting both cultural and recreational tourists to the area

Attractions within the CRIT include the Ahakhav Preserve and CRIT Museum.

## POPULATION

Table 3-1 presents demographic data from the US 2000 Census for incorporated towns, Civil Designated Places (CDPs), and other unincorporated areas. Table 3-2 shows the estimated changes in population from the year 2000 as reported by the US census to 2007 as reported by the Arizona Department of Economic Security (DES). Table 3-3 presents a demographic summary as reported by the US 2000 Census.

**TABLE 3-1. YEAR 2000 POPULATION AND DWELLING UNITS**

Area	Population	Dwelling Units	Occupied Dwelling Units
Arizona	5,130,632	2,189,189	1,901,327
La Paz County	19,715	15,133	8,362
Parker Strip CDP	3,302	4,925	1,589
Bluewater CDP	730	537	337
Parker Town	3,140	1,157	1,064
Salome CDP	1,690	1,176	780
Wenden CDP	556	309	207
Bouse CDP	615	562	320
Poston CDP	389	110	101
Quartzsite Town	3,354	3,186	1,850
Ehrenberg CDP	1,357	824	545
Cibola CDP	172	161	65
Municipality Totals	15,305	12,947	6,858
Estimated La Paz Non Municipality Totals	4,410	2,186	1,504

Source: US Census 2000

CDP – Civil Designated Place



**TABLE 3-2. CHANGES IN POPULATION**

<b>Area</b>	<b>DES Estimate July 1, 2007</b>	<b>US Census 4/1/2000</b>	<b>Change</b>	<b>Percent Change</b>
Arizona	6,500,194	5,130,632	1,369,592	26.7%
La Paz County	21,529	19,715	1,814	9.20%
Parker Town	3,401	3,140	261	8.31%
Quartzsite Town	3,671	3,354	317	9.45%
Unincorporated Areas	14,457	13,221	1,236	9.35%

Source: Arizona Department of Economic Security, US Census 2000

**TABLE 3-3. DEMOGRAPHIC SUMMARY**

<b>Area</b>	<b>Total Population</b>	<b>Aged 65 and Over</b>	<b>Minority</b>	<b>Below Poverty</b>	<b>Mobility Limited</b>
Arizona	5,130,632	653,778	1,856,374	698,669	902,252
La Paz County	19,715	5,088	7,142	3,798	3,058
Town of Parker	3,140	296	1,713	460	678
Town of Quartzsite	3,354	1,843	185	457	356

Source: US Census 2000, Lima & Associates

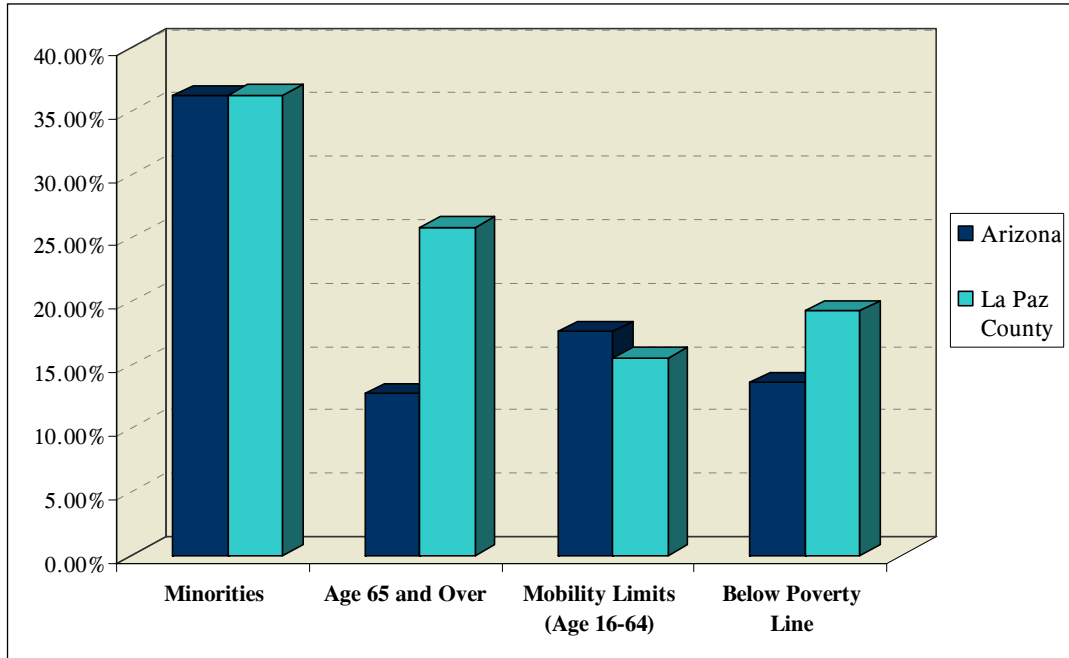
### **Environmental Justice (Title VI) Populations**

Environmental justice was established as a federal government priority in 1994 with the issuance of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. In addition, to minority and low income populations, this Study addresses both elderly (Aged 65 and older), and mobility-limited populations. Environmental justice issues related to transportation in La Paz County have been addressed through this Study in the following manner.

- This section presents US Census data that describes the population living within geographic areas that could be affected by proposed transportation improvements.
- The draft transportation plan includes an analysis of whether the recommended projects may differentially affect Environmental Justice Populations. This Study examines potential effects, both positive and negative, that these projects may have on minority, low-income populations, mobility-limited, and elderly populations. If any of the potential projects place a disproportionate burden on minority or low-income populations, the Study explains the considerations that dictated this recommendation over alternative actions.
- The public involvement activities made a concerted effort to reach minority and low-income populations when conducting the Study’s public meetings.

Figure 3-1 compares the percentages of Title VI populations in the Study Area with those Statewide.

**FIGURE 3-1. COMPARISON OF PERCENTAGES OF TITLE VI POPULATIONS**



## EMPLOYMENT

Employment information was obtained from a comprehensive commercial database provided by InfoUSA that includes 14 Million U.S. Businesses. The number of employees by area within the County is presented in Table 3-4.

**TABLE 3-4. 2008 EMPLOYEES BY AREA, LA PAZ COUNTY**

Area	Total Employees
Bouse CDP	123
Cibola CDP	26
Ehrenberg CDP	534
Parker Area	6,270
Poston CDP	70
Quartzsite Town	2017
Salome CDP	627
Wenden CDP	131
<b>Total</b>	<b>9,798</b>

Source: InfoUSA Employment Database, February 2009  
 CDP – Census Designated Place

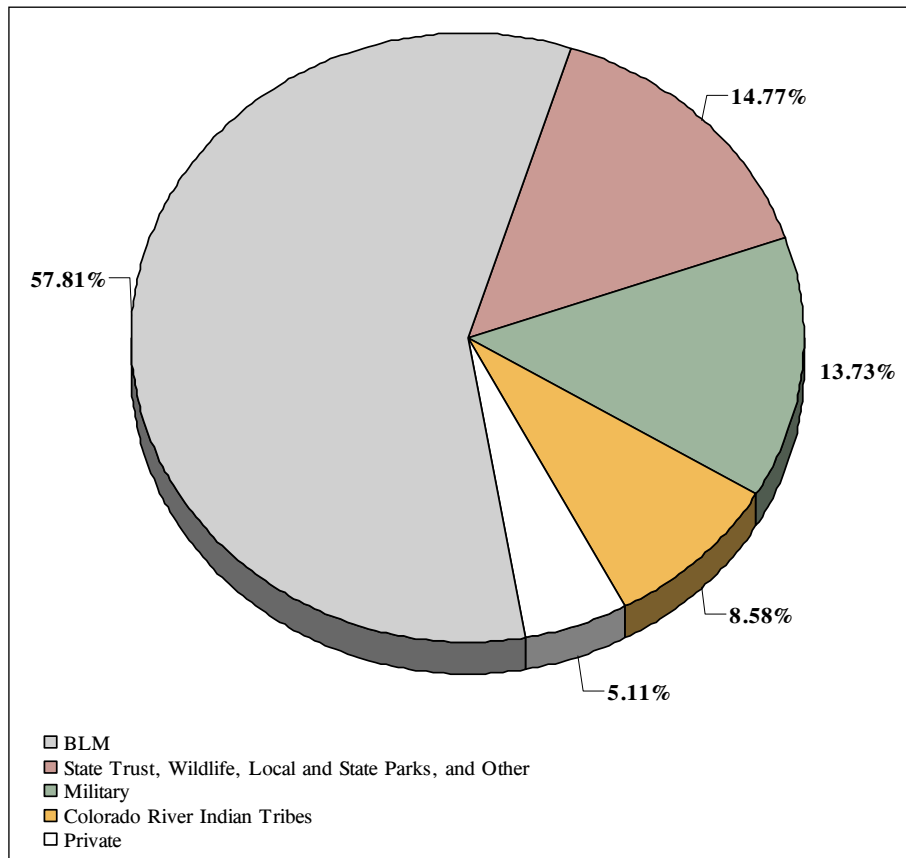
Approximately 9,800 people are employed in La Paz County. Major employers in the Study Area include the Blue Water Resort and Casino, and Safeway and Bashas' grocery stores in the Parker area, Quartzsite Senior Citizens and Tri-State Care Flight in Quartzsite, and the Flying J Travel Plaza in Ehrenberg. Area schools and government agencies are also significant employers. The Parker area has the highest number of employees, approximately 6,300 and includes the three largest employers. The service industry employs the highest percentage of employees.

## LAND USE

The allocation of land ownership in the County is graphically summarized in Figure 3-2 and illustrated in Figure 3-3. Only about five percent of the land in the County is privately owned and approximately 86 percent is owned by federal, State agencies, and local agencies. The Bureau of Land Management is the largest land owner in the County, owning and managing approximately 58 percent of the land in the County. The CRIT owns approximately 9 percent of the land.

General land use in the Study Area is shown in Figure 3-4 and major activity centers throughout the Area are shown in Figure 3-5.

**FIGURE 3-2. PERCENT OF TOTAL LAND BY OWNER**



**FIGURE 3-3. LAND OWNERSHIP**

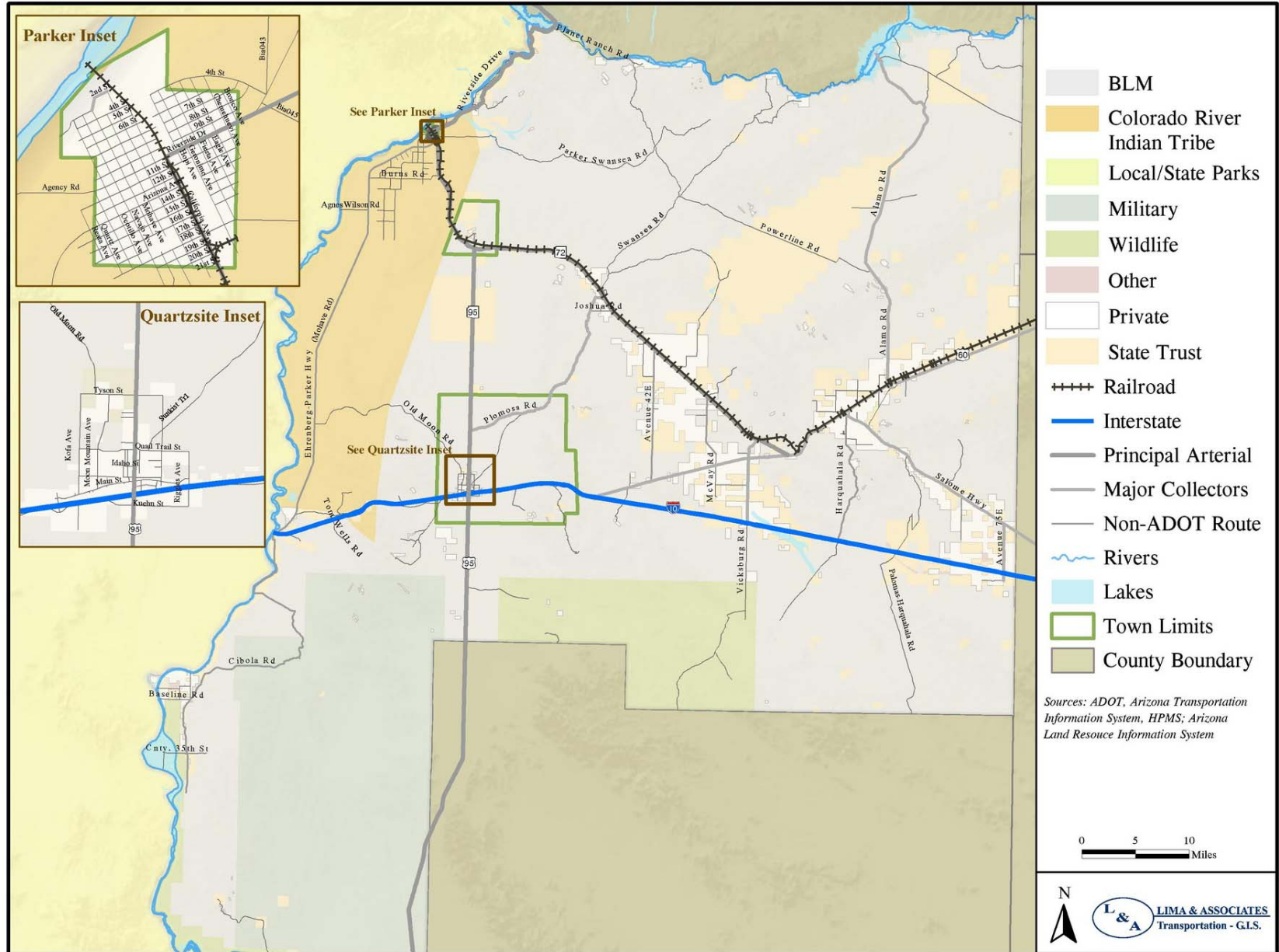


FIGURE 3-4. LAND USE

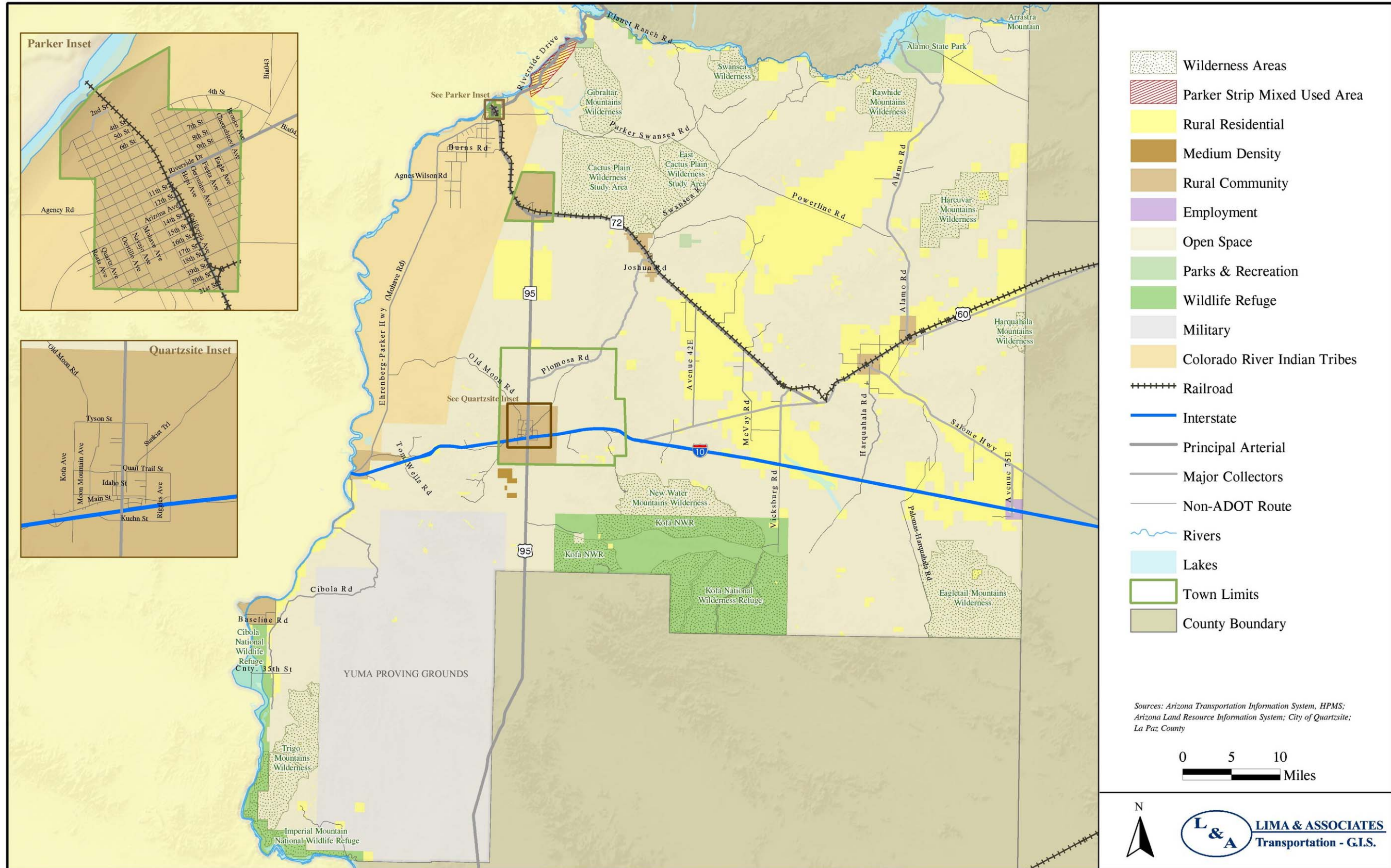
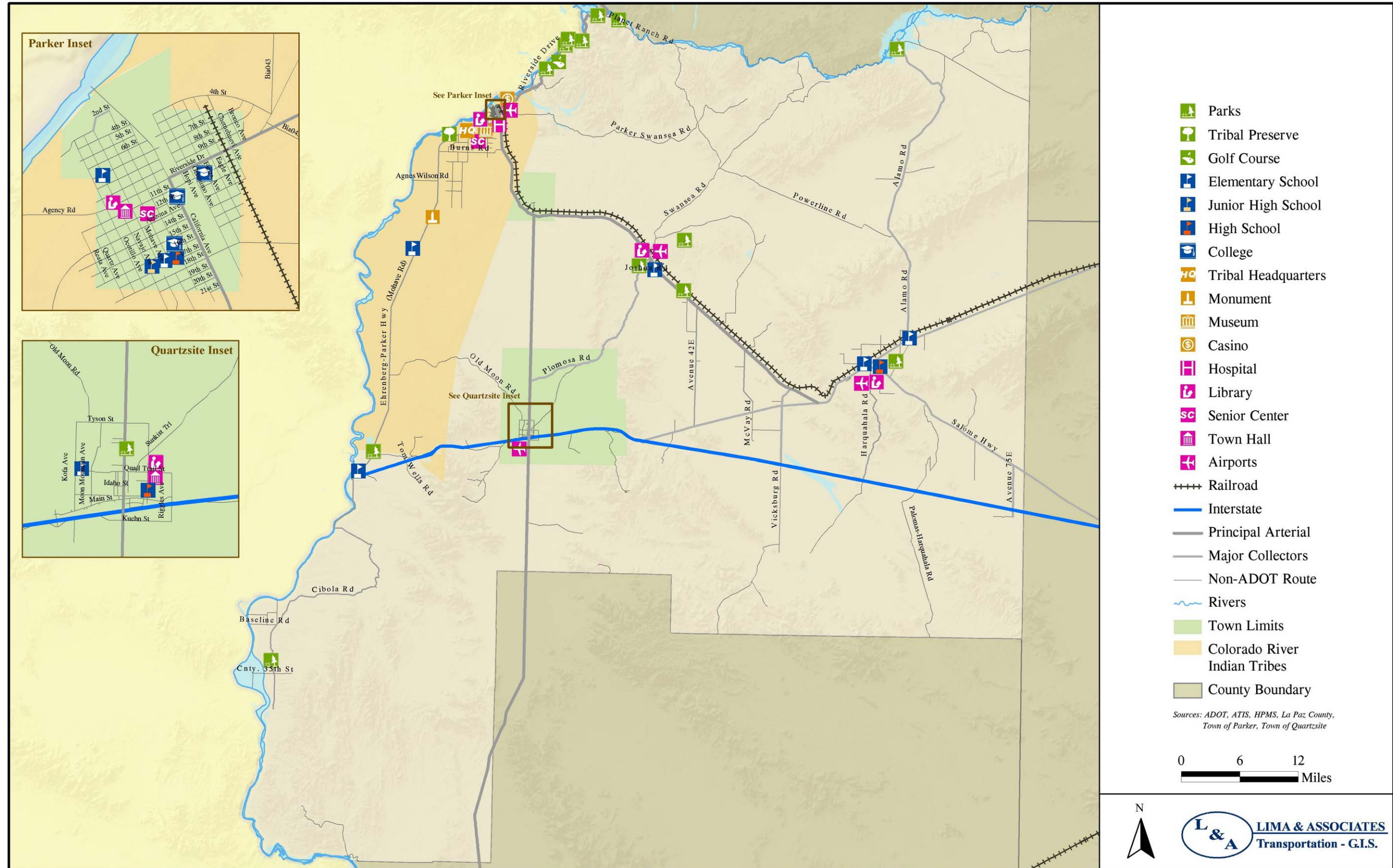


FIGURE 3-5. ACTIVITY CENTERS



## La Paz County Parks

La Paz County's system of parks includes the following (*La Paz County Comprehensive Plan*):

- La Paz County Park is located north of Parker on the west side of SR 95. The park has camping facilities, boat access to the Colorado River, one-mile of River Frontage. The park is adjacent to County-owned Emerald Canyon Golf Course, which is open to the public.
- Bouse Community Park is located south of SR 72 in Bouse on Plomosa Road, sometimes referred to as Quartzsite Scenic Route. The park includes 25 dry camping sites and 15 with water available. Day use facilities are also available.
- Ehrenberg Community Park is located in Ehrenberg on Parker/Poston Road. The park is a partnership between La Paz County and the Ehrenberg Improvement Association. The park offers day use facilities.
- Cibola Historic Park is located on Baseline Road of Highway 78 south of Cibola and adjacent to the Cibola National Wildlife Refuge. The park offers day use facilities.
- Patria Flats Park is located adjacent to the Parker Strip on the Colorado River. The park offers day use facilities including boating amenities.
- Centennial Community Park is located just off US 60 between Salome and Wenden. The park contains 26 dry camp sites and day use and recreational facilities.

## Arizona State Parks

*Alamo Lake State Park* is located in the northeast portion of the County along the northern border of the County. Alamo Lake is located on the Bill Williams River where the Big Sandy River and Santa Maria River come together. The Lake was created with the completion of Alamo Dam in 1968. The environment around the lake consists of desert and mountainous landscape. The Park is popular for outdoor fun and is known for premier bass fishing and a variety of wild flowers and wildlife including bald and golden eagles, waterfowl, foxes, coyotes, and mule deer. Wild burros also roam the area.

*Buckskin Mountain State Park* is located between the Colorado River and SR 95 approximately 12 miles northeast of the Town of Parker. The Park offers scenic views of the River and Mountains along the Parker Strip. Park amenities include a campground, cabanas, boat ramp, picnic area, basketball and volleyball court, playground, restaurant, camp store, arcade, gas dock, and ranger station. The Park has 68 RV sites with water and electric. River Island State Park a few miles north on SR 95—has 37 sites.

## PHYSICAL, NATURAL, AND CULTURAL RESOURCES

La Paz County is in the north-central portion of the Sonoran Desert with characteristics ranging from very arid to lush desert. This chapter discusses the County's rich natural and

cultural resources. Transportation planning for the County must recognize the importance of preserving these resources as well as provide access to them where needed.

Figure 3-6 presents an environmental overview of the County showing rivers and streams, lakes, wilderness areas, and mountain ranges. Mountain ranges include the Gibraltar Mountains, Rawhide Mountains, Arrastra Mountains, Harcuvar Mountains, Harquahala Mountains, Eagletail Mountains, New Water Mountains, and Trigo Mountains. Elevations in the County range from 5,691 feet at Harquahala Peak on the far eastern edge of the County to just a few hundred feet above sea level at the Colorado River. The County includes fourteen designated Wilderness Areas and Wildlife Refuges. In addition, the southwestern part of the County includes the northern portion of the Yuma Proving Grounds owned and operated by the United States Military.

## **Wildlife**

Wildlife is abundant in La Paz County. The warm climate, water resources, and topography provide a unique habitat for wildlife. Big game species include desert bighorn sheep, mule deer and javelina. Desert bighorn sheep are found in the mountainous areas. However, mining, habitat encroachment, disease, and road construction have depleted much of the bighorn sheep populations in the area. The most commonly sighted of the big game species are Mule deer that inhabit the densely vegetated desert washes, bajadas, and foothills. Bajadas are shallow slopes that accumulate material from the weathering of rocks, retaining water and supporting vegetation. A small population of javelina inhabits the Plomosa Mountains.

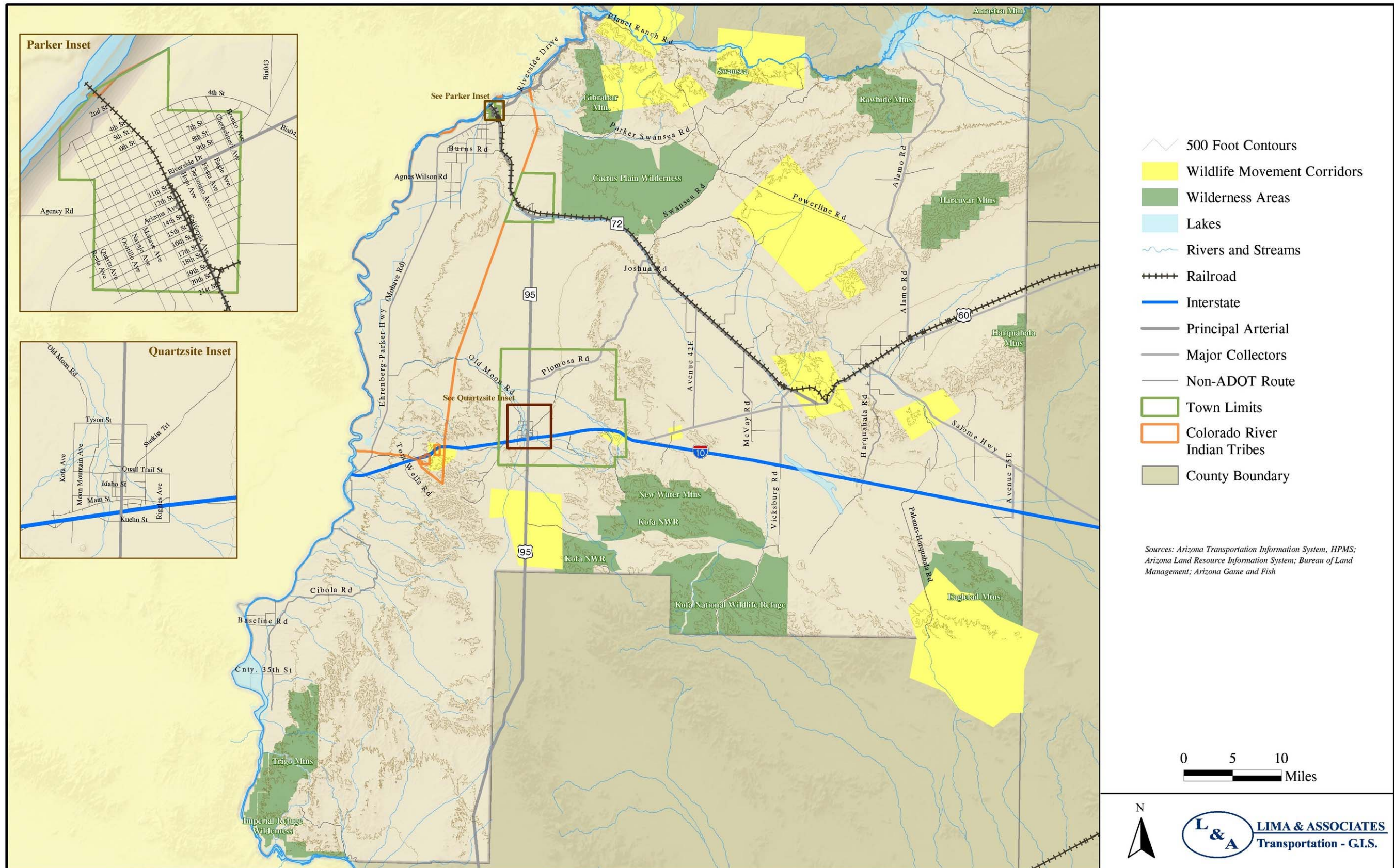
Small game species found throughout the area include Gambel's quail, white-winged dove, mourning dove, and desert cotton-tail rabbit. Furbearers include bobcat, ring-tailed cat, kit fox, and coyote. Other wildlife species found in the County include Merriam's kangaroo rat, several species of pocket mouse, white-throated woodrat, black-tailed jackrabbit, and Harris' antelope squirrel. Common bird species are black-throated sparrow, cactus wren, greater roadrunner, Gila woodpecker, verdin, loggerhead shrike, and black-tailed gnatcatcher. Reptiles and amphibians include the sidewinder, western diamondback rattlesnake, Sonoran gopher snake, western whiptail, desert iguana, zebra-tailed lizard, side-blotched lizard, red-spotted toad, and Great Plains toad.

Wild Burros roam in areas in the County having been first introduced into the Desert Southwest by Spaniards in the 1500s. Although Wild Burros are not technically classified as Wildlife, the BLM manages Wild Burros to assure the herd's free-roaming character, health, and self-sustaining ability. Figure 3-6 also illustrates Wilderness Areas and Wildlife corridors. The following wildlife is listed as "Special Status" species in the Study Area:

- Bald eagle
- Bonytail chub
- California Brown Pelican
- Razorback sucker
- Southwestern willow flycatcher
- Yuma clapper rail
- Yellow-billed cuckoo
- American peregrine falcon



FIGURE 3-6. ENVIRONMENTAL OVERVIEW



The Bonytail Chub is an endangered freshwater fish native to parts of Arizona, California, Colorado, Nevada, and Utah. Critical habitat for this fish is along the Colorado River. The California Brown Pelican is proposed to be “delisted” and the Yellow-billed Cuckoo is listed as a “candidate”. Also, the BLM is attempting to have the Sonoran Desert Tortoise placed on the Endangered Species list. Such a designation could have a significant impact on area roadway planning and construction.

### **Federally Designated Wildlife Refuges and Wilderness Areas**

La Paz County has fourteen designated refuges and wilderness areas preserved from development. These are listed in Table 3-5 below and depicted in Figure 3-6.

**TABLE 3-5. STUDY AREA ACREAGE OF WILDLIFE REFUGES AND WILDERNESS AREAS**

<b>Refuge</b>	<b>Acreage within Study Area</b>
Imperial National Wildlife Refuge	9,216
Trigo Mountains Wilderness	30,300
Kofa National Wildlife Refuge	97,826
Cibola National Wildlife Refuge	16,600
Eagletail Mountains Wilderness Area	89,000
East Cactus Plain Wilderness Area	14,630
Swansea Wilderness Area	15,755
Cactus Plain Wilderness Study Area	58,904
Gibraltar Mountain Wilderness Area	18,805
Rawhide Mountains Wilderness Area	41,600
Bill Williams River Area	6,105
Harquahala Mountains Wilderness Area	4,584
Harcuvar Mountains Wilderness Area	3,500
New Water Mountains Wilderness Area	24,644

Source: La Paz County Comprehensive Plan, adopted may 2, 2005,

### **Wildlife Corridors**

To promote wildlife movement, agencies that manage wildlife have identified wildlife corridors that connect areas of relatively undisturbed land (see Figure 3-6). Wildlife corridors are important for seasonal migration and to maintain genetic diversity. La Paz County has multiple wildlife corridors, with most located south of I-10 and in the eastern portion of the County. Recommended transportation improvements in the La Paz transportation plan must recognize these corridors.

## **Biotic Communities**

Vegetation in La Paz County ranges from the Lower Colorado River Sonoran Desertscrub to Upland Sonoran Desertscrub and Interior Chaparral in the higher elevations. Desertscrub habitats typically are open, scattered assemblages of broadleaved evergreen or deciduous shrubs such as the Creosotebush. Interior Chaparral shrubs are dwarf evergreen oaks typically growing at elevations of 4,000 to 5,500 feet. The shrubs are deep-rooted, broad-leaved, and leathery leaved.

Desert drainages with mixed riparian scrub are located throughout the County and support stands of desert ironwood, blue palo verde, honey mesquite, smoke tree, and various other shrubs and grasses. In addition, the sand dunes north of Quartzsite are stabilized and support endemic species of plants unique to the area.

## **'Ahakhav Tribal Preserve**

The 'Ahakhav Tribal Preserve in the CRIT Reservation is a 1,253 acres wilderness area and a 3.5 acre park. A reconstructed Colorado River backwater offers fishing, canoeing, birding, and swimming. A 4.6 mile fitness trail is maintained in the preserve. The park includes a playground and picnic facilities. The preserve offers recreational and learning opportunities to the surrounding community and visitors. In addition, the preserve is a revegetation area for endangered and threatened plants and animals native to the Lower Colorado River Basin.

## **Bureau of Land Management**

Land owned by the BLM in La Paz County is managed by Yuma and Lake Havasu Field Offices. The Lake Havasu Field Office oversees the largest portion of the BLM lands in La Paz County, nearly 1.3 million acres of public land encompassing more than 140 miles of the lower Colorado River. The field office boundaries include portions of Arizona's La Paz and Mohave counties, and California's San Bernardino County. This area includes five wilderness areas and one wilderness study area. Additionally, the field office manages one Area of Critical Environmental Concern, one National Scenic Area, and one river segment suitable for Wild and Scenic River Designation.

The Yuma Field Office manages 1.2 million acres of southwestern Arizona and southeastern California including 155 miles of the lower Colorado River. The field office oversees four wilderness areas, along with significant archeological and historic sites. It is home to Juan Bautista de Anza National Historic Trail, one Area of Critical Environmental Concern, five properties listed on the National Register of Historic Places, and Betty's Kitchen National Recreation Trail.

The lands managed by the Lake Havasu and Yuma Field Offices provide recreation for the area's 10 million annual visitors enjoying water sports, hiking, biking, camping, rockhounding, wildlife viewing, hunting, fishing, and off-highway vehicle adventures. During

winter, the desert becomes a small city as long-term campers escape the northern winter. The river and desert provide habitat for desert bighorn sheep, and other wildlife, as well as wild burros and horses.

## **Resource Management Plans**

The BLM has prepared an *Approved Lake Havasu District Resource Management Plan* and a *Proposed Yuma District Resource Management Plan and Final Environmental Impact Statement for the Yuma District*. The plans focus on the following areas:

- Biological Resources Management
  - Soil, Water, Air (Watershed)
  - Vegetation
  - Riparian
  - Special Status Species
  - Wildlife and Fisheries
- Cultural Resource Management
- Fire Management
- Lands and Realty Program
- Mineral Resources
- Paleontological Resource Management
- Recreation Management
  - Area of Critical Environmental Concern
  - Wilderness
  - Special Designations
  - Back County Byway
  - Wild and Scenic Rivers
- Rangeland Management/Grazing
- Travel Management
- Visual Resource Management
- Wild Burro Management
- Wilderness Characteristics

Two BLM facilities have recently opened in the Parker Strip Recreation Area – located south of Parker Dam, on the California side of the Colorado River. The Rockhouse Visitor Center and Boat Ramp provides visitors with recreation and other information, scenic views overlooking the river, and restrooms. Boat launching is free to the public. Also in the Parker Strip area, the Empire Landing Campground is open. This beach front facility has expanded and improved the amenities to include 40 RV sites, 16 tent sites, shade ramadas, picnic tables, BBQ grills, drinking water, hot showers, restrooms, and RV dump station.

The BLM also has prepared the *Community Wildfire Protection Plan, La Paz County*, January 2008. The plan provides an analysis of the wildfire threat in La Paz County and a mitigation plan to lower the threat from wildfire to the identified communities. Additionally, the BLM has developed the *La Paz Travel Management Plan and Environmental Assessment* that officially designated 1,700 miles of inventoried roads, trails, and drivable desert washes.

## **Archaeological and Historical Resources**

Archaeological evidence of aboriginal inhabitants is found throughout the County. Sites include campsites, lithic quarries, lithic scatters, ceramic scatters, sleeping circles, rock alignments, and trails. Site types include geoglyphs ceremonial sites, roasting pits, hunting

blinds, pictographs, cremation sites, and historic wagon roads. Lithic refers to stone or rock materials or tools. Geoglyphs are earth figures or intaglios—large figures, designs, and pathways drawn into the desert pavement.

Table 3-6 lists cultural sites that are in and around the Town of Quartzsite managed by the BLM. Table 3-7 presents sites that are on the National Register of Historical Places. Other places of historic interest include:

- Bradshaw Ferry
- Tyson's Well Stage Station Museum
- Poston Memorial, CRIT
- Parker Railroad Station
- Camp Bouse
- Petermans Station
- Grave of Hi Jolly
- Parker Dam
- Bouse Assay Office
- 9<sup>th</sup> Tank Group Memorial

### **Environmental Concerns**

Potential concerns within the Study Area include impacts of waste management and treatment facilities, leaking underground storage tanks, and mines. Mine locations also pose a safety concern. Abandoned mine shafts continue to be an area hazard, and there has been one recent fatality. No inventory of abandoned mines exists.

According to information on the Arizona Department of Environmental Quality (ADEQ) web site, La Paz County and local communities are in attainment of air quality standards.

### **CURRENT ROAD CONDITIONS**

This section presents the current road conditions in La Paz County. Road conditions discussed include current roadway characteristics, roadway infrastructure conditions, traffic volume counts, and level of service. Multimodal conditions are discussed in the next chapter including transit and rail characteristics and characteristics of non-motorized facilities.

#### **Current Roadway Characteristics**

This section presents characteristics of the roads in La Paz County including functional classification, number of lanes, and speed limits.

**TABLE 3-6. BLM MANAGED CULTURAL RESOURCE SITES  
IN AND AROUND QUARTZSITE**

<b>Name</b>	<b>Description</b>	<b>Significance</b>
Fisherman Intaglio	Human-shape figure holding a large spear with a white quartz point	Popular, Sociocultural
Big Arrow Site	Complex geoglyph with two human figures, a huge arrow, and several other features	Popular; Sociocultural
Bouse geoglyph	Large human-shaped earth figure	Scientific
White Cross	Small cross and circle made of white quartz	Scientific
Circle and Arrow	Small rock alignment in the form of an arrow emerging from a circle	Scientific
Tyson Wash Site	A complex with many petroglyphs, a water tank in the wash, and mortar holes in the rocks	Popular; Sociocultural
Dripping Springs	Complex petroglyph site and historic mining developments at an active seep	Popular; Sociocultural
Tule Springs	Site includes petroglyphs and evidence of mining activity	Scientific; Popular
Lazarus Tanks	Group of red pictographs	Scientific
North Kofa Site	Large site with petroglyphs	Scientific; Popular
Black Mesa Southwest	Small complex of petroglyphs	Scientific
Kegley/Lynch #1	Small complex of petroglyphs	Scientific
Bear Hills Site	Small petroglyph site with several rock rigs	Scientific; Popular
Rock Ring "Town"	Complex of very large rock rings	Scientific; Popular
The Community Center	"Big House" area with several huge cleared areas	Scientific
The Quartzsite Rock Alignment	Military rock alignment of a large arrow pointing to Quartzsite	Sociocultural
Military Campsites	Training or maneuver sites related to General Patton's World War II or 1964 Desert Strike activities	Scientific; Popular
Quartzsite Milling Site	A huge milling site on the side of a hill	Popular; Sociocultural
Granite Mountain Cabin	A small stone mining cabin	Scientific; Popular
Spanish Wall	A stone wall built to create a drywash ramp for mining purposes	Popular; Sociocultural
Erdman Mine	A unique mining operation	Scientific; Popular

Source: Town of Quartzsite General Plan

**TABLE 3-7. NATIONAL REGISTER OF HISTORIC PLACES**

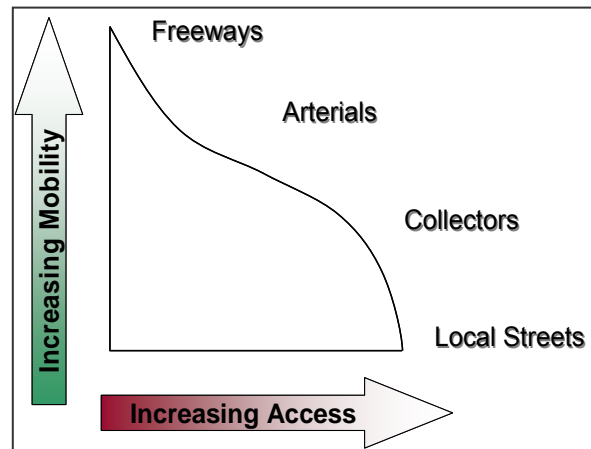
Site	Area of Significance	Cultural Affiliation	Period of Significance	Owner
Eagletail Petroglyph Site, Hyder	Prehistoric	Late Archaic, Patayan, Hohokam	1500-1999 BC, 1000-1499 BC, 500-999 BC, 499-0 BC, 499-0 AD, 1000-500 AD, 1499-1000 AD	Federal
Harquahala Mountain Smithsonian Solar Observatory Historic District, Harquahala Mountain	Science		1900-1924, 1925-1949	Federal
Harquahala Peak Observatory, E of Wenden	Science		1900-1924	Federal
Old La Paz, Ehrenberg (Laguna de La Paz)	Transportation, Education, Historic - Aboriginal	American, rural, Mojave, Chemehuevi	1850-1874	Private
Old Presbyterian Church, SW of Parker	Religion, Historic-Aboriginal	Mojave	1900-1924	Private
Parker Jail, N side of Agency Rd. Parker	Politics /Government		1900-1924	Private
Ripley Intaglios	Prehistoric, Historic-Aboriginal	Yuman	1500-1599, 1600-1649, 1650-1699, 1700-1749, 1750-1799, 1800-1824, 1825-1849, 1850-1874	Federal

Source: National Register of Historic Places  
<http://www.nationalregisterofhistoricplaces.com/az/La+Paz/state.html>

**Functional Classification**

A functional classification groups roads by mobility and access. Mobility represents the movement of people and freight from place to place and access represents the connection between roadways and properties along the roadways. Roads are generally classified into freeways, arterials, collectors, and local roads. Figure 3-7 illustrates the relationship of mobility and access to the road classification. A freeway, for example, provides mobility over long distances with minimal access to adjoining properties. Arterials provide a high level of mobility

**FIGURE 3-7. FUNCTIONAL CLASSIFICATION MOBILITY VERSUS ACCESS**



servicing longer distance trips and provide access to adjacent property. A collector road, on the other hand, provides both mobility between neighborhoods and commercial areas and access to these areas from arterials. Local streets provide access to individual homes and businesses within neighborhoods and commercial areas.

Roadway functional classifications were developed to reflect both urban and rural areas in the Study Area. Figure 3-8 displays the functional class of each roadway in the Study Area.

**Freeways** provide high mobility and limit access through traffic interchanges at selected locations. Adjacent properties do not have access to freeways. Interstate 10 (I-10) is an east-west freeway through the Study Area which has limited access and carries a large volume of traffic at high speeds. The interstate facilitates interregional and interstate traffic movements through the region and facilitates access to the region.

**Arterials** serve or bypass the primary centers of activity, carry relatively high traffic volumes, and carry the primary portion of trips entering and leaving the area. Some arterials have full or partially controlled access to improve mobility. Arterials in the Study Area include SR 95, SR 72, and US 60.

The **collector** road system distributes trips from the arterials to the local streets. Collector streets also provide traffic circulation within residential neighborhoods and low density areas, and direct access to adjacent property. Collector streets that have been identified for this Study include:

- Ehrenberg Parker Highway
- McVay Road
- Salome Road
- Plamosa Road
- Avenue 42 E
- Vicksburg Road
- Alamo Road

**Local** streets provide the highest level of access by providing direct access to residential and commercial properties. Specific local streets are not included as part of the Study.

### **Number of Lanes**

Figure 3-9 illustrates the number of lanes on roads within the County. Two lane roadways are the predominate roadways in La Paz County. Interstate 10 is a four-lane divided roadway and segments of SR 95 are four to five lanes.

### **Speed Limits**

Figure 3-10 illustrates the posted speed limits on roads in La Paz County. Interstate 10 has the highest speed limits at 75 mph. Portions of State highways are posted as 65 mph.



**FIGURE 3-8. ROAD NETWORK AND FUNCTIONAL CLASSIFICATION**

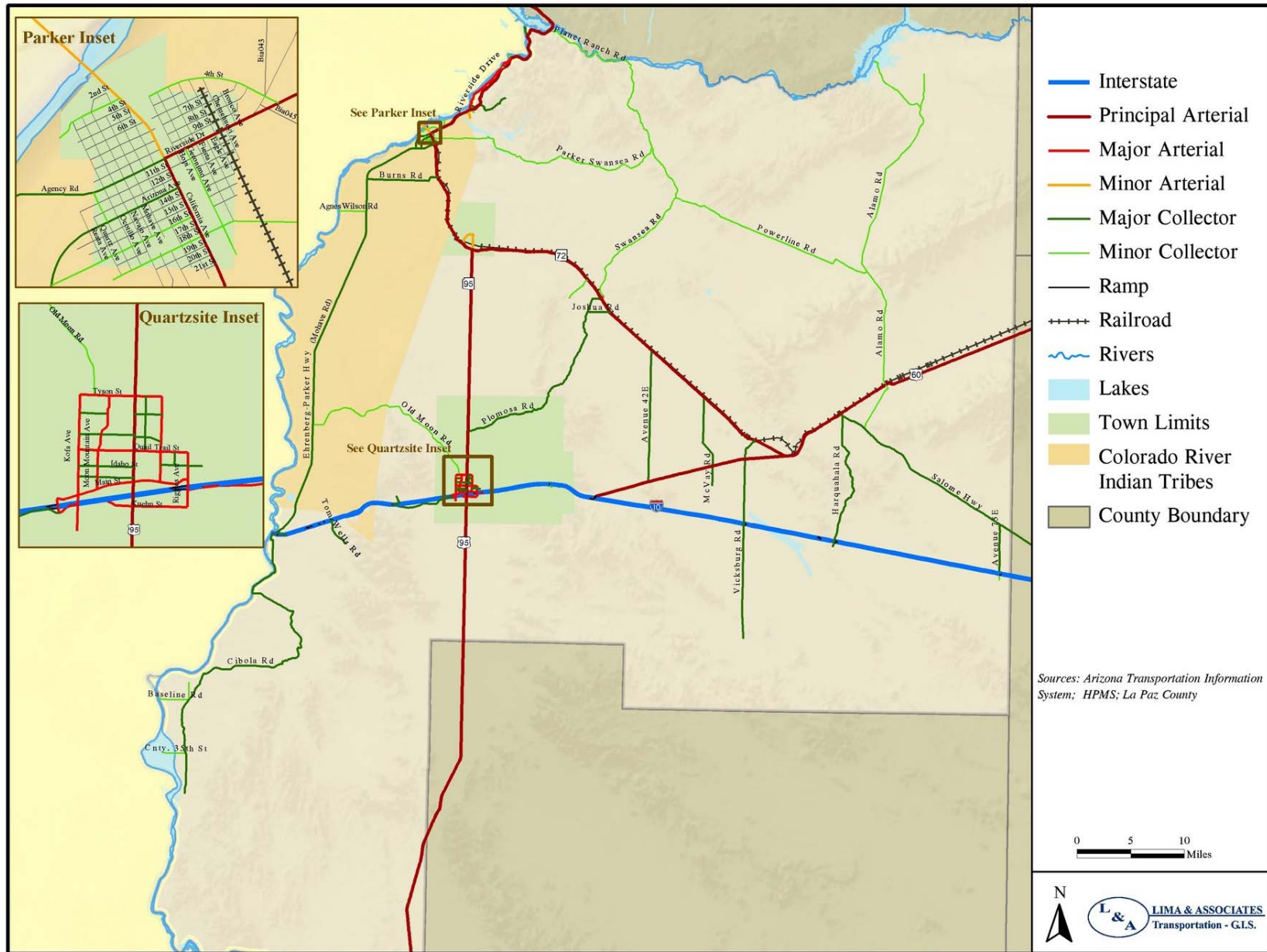


FIGURE 3-9. NUMBER OF LANES

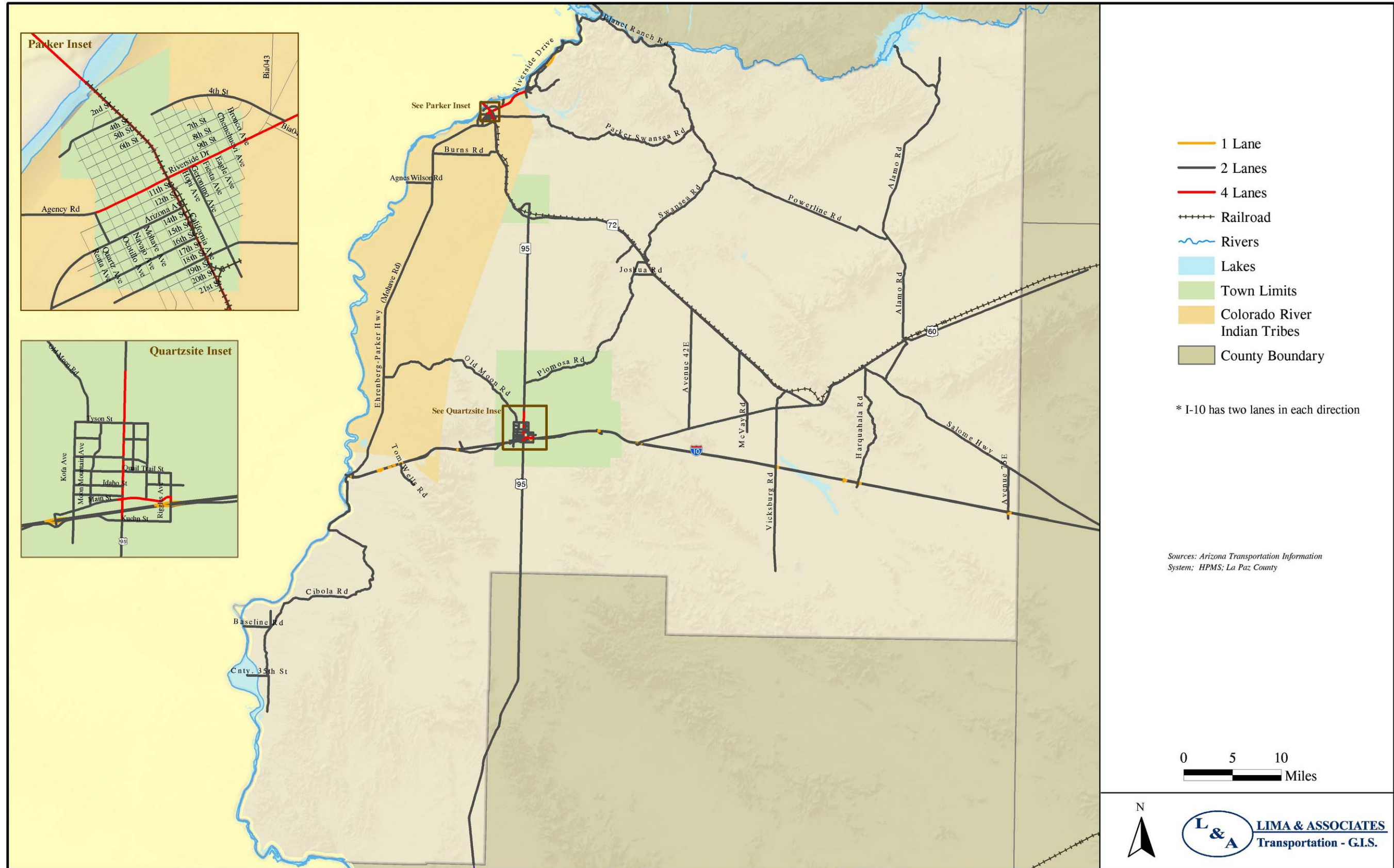
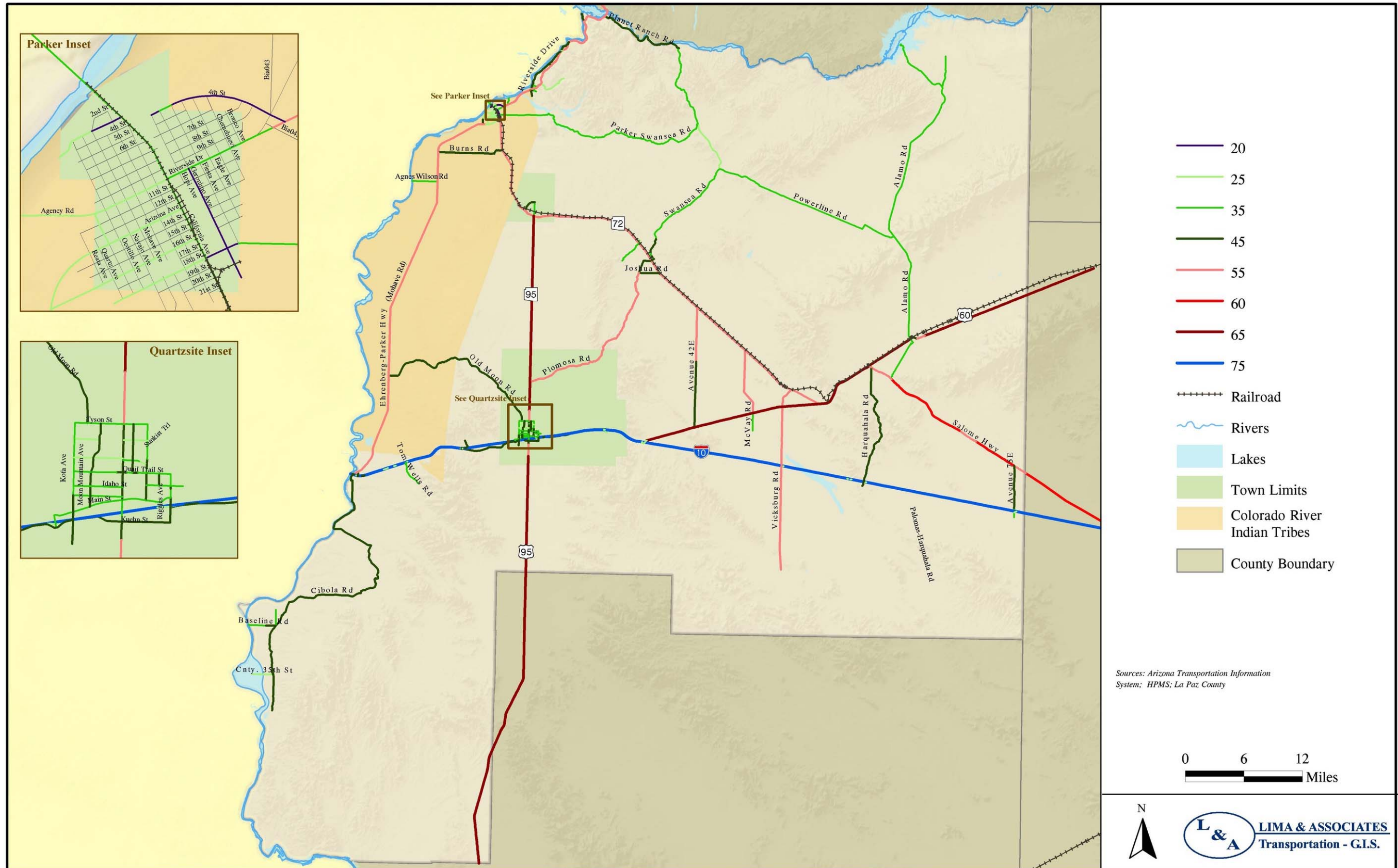


FIGURE 3-10. SPEED LIMITS



Sources: Arizona Transportation Information System; HPMS; La Paz County

0 6 12 Miles



## **CURRENT INFRASTRUCTURE CONDITIONS**

### **Surface Type**

Paved and unpaved roads within the Study are shown in Figure 3-11. Of the 780 miles of road in the County, approximately 166 miles are unpaved.

### **Pavement Conditions – State Highways**

Pavement conditions reported for State highways were obtained from ADOT. Pavement conditions for road sections in the Study Area appear on Figure 3-12. Pavement conditions are rated on a Present Serviceability Rating (PSR) scale ranging from superior (4.0 to 5.0) to very poor (0.0 to 1.0). The PSR is assigned based upon the collective judgment of selected road users who assess the smoothness of the ride and the visible signs of pavement distress. ADOT considers road segments for pavement rehabilitation if their PSR is below a threshold value, set at between 3.55 and 3.75 depending on the type and local climate of the roadway. Table 3-8 summarizes the miles of State highways that are within each PSR category.

### **Pavement Conditions – La Paz County Routes**

La Paz County employs a rating system for pavement condition called the Remaining Service Life (RSL) based on pavement condition, as well as the number of years before it will require reconstruction or rehabilitation. Table 3-9 summarizes the mileage with RSL rating categories for pavements on La Paz County Roads. Working Paper 1 presents the detail on pavement segments for County Roads.

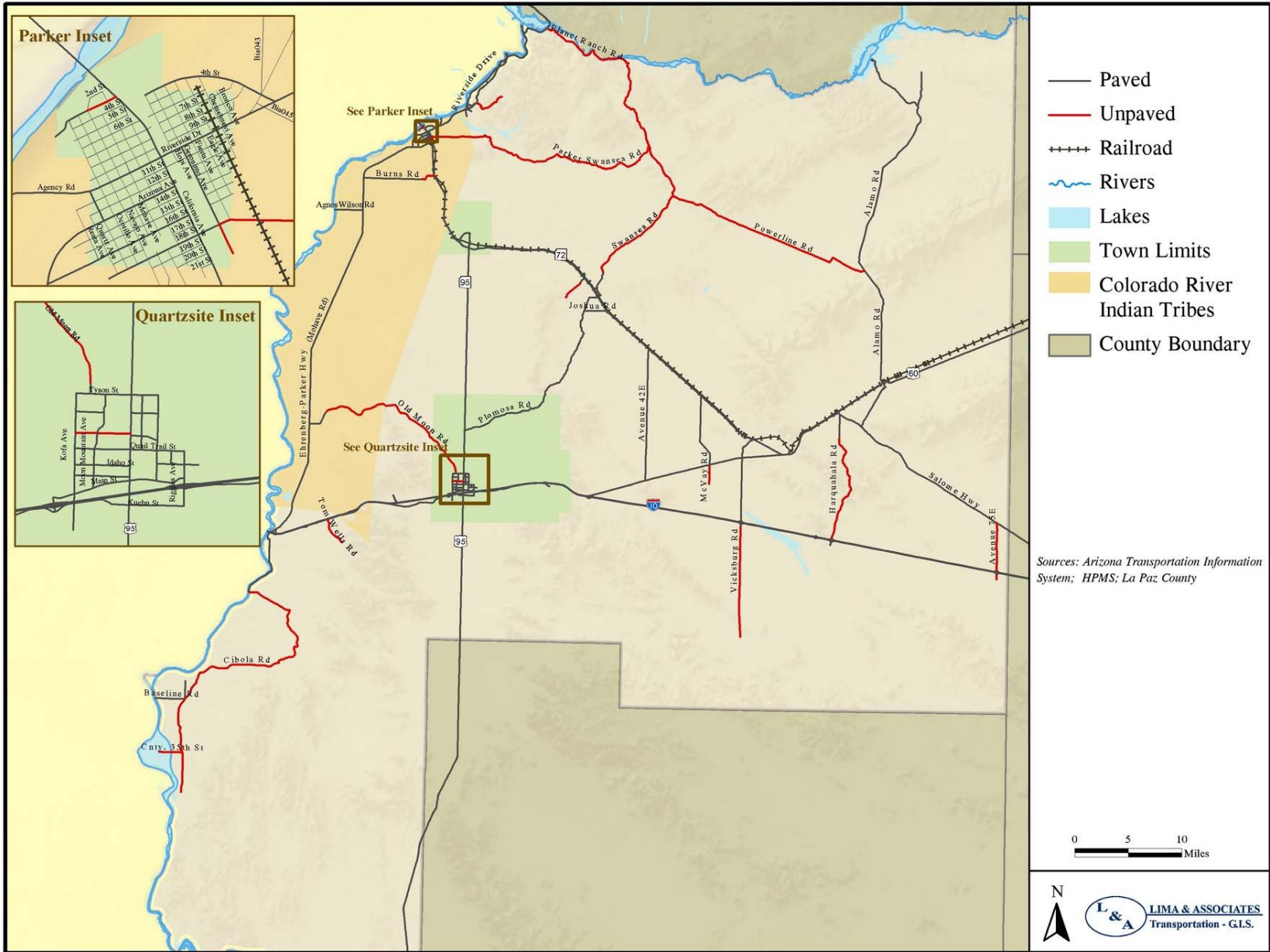
### **Bridge Conditions**

Bridge conditions were obtained from ADOT. Bridges in the County were evaluated for sufficiency rating, functionally obsolete status, and structurally deficient status.

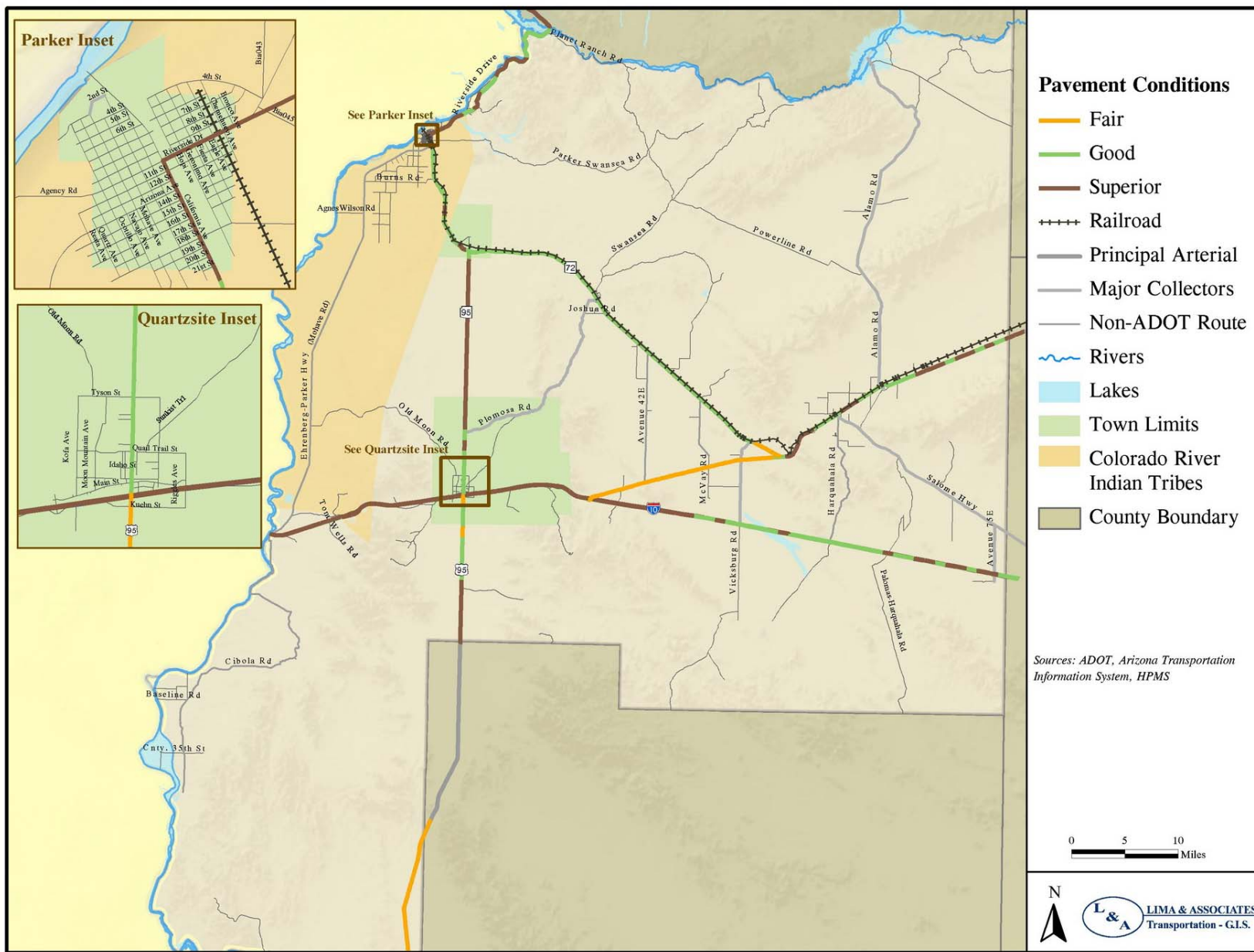
**Bridge Sufficiency Rating (BSR)** is an indication of bridge sufficiency to remain in service. A 100 percent BSR indicates an entirely sufficient bridge and zero percent represents an entirely insufficient or deficient bridge. A low BSR may be due to structural defects, narrow lanes, low vertical clearance, or any of many possible issues.

**Functionally Obsolete** describes a bridge that is no longer *by design* functionally adequate for its task. Such a bridge may be perfectly safe and structurally sound, but may cause traffic jams or may not have adequate clearance for an oversized vehicle.

**FIGURE 3-11. PAVEMENT TYPE**



**FIGURE 3-12. PAVEMENT CONDITIONS – STATE HIGHWAYS**



**TABLE 3-8. SUMMARY OF PAVEMENT CONDITIONS ON STATE HIGHWAYS,  
LA PAZ COUNTY**

<b>Condition</b>	<b>Mileage</b>	<b>Percent</b>
Fair	37.00	12%
Good	124.00	39%
Superior	154.00	49%
<b>Total</b>	<b>315.00</b>	<b>100%</b>

Source: ADOT Pavement Management System, 2009

**TABLE 3-9. PAVEMENT REMAINING SERVICE LIFE,  
LA PAZ COUNTY ROADS**

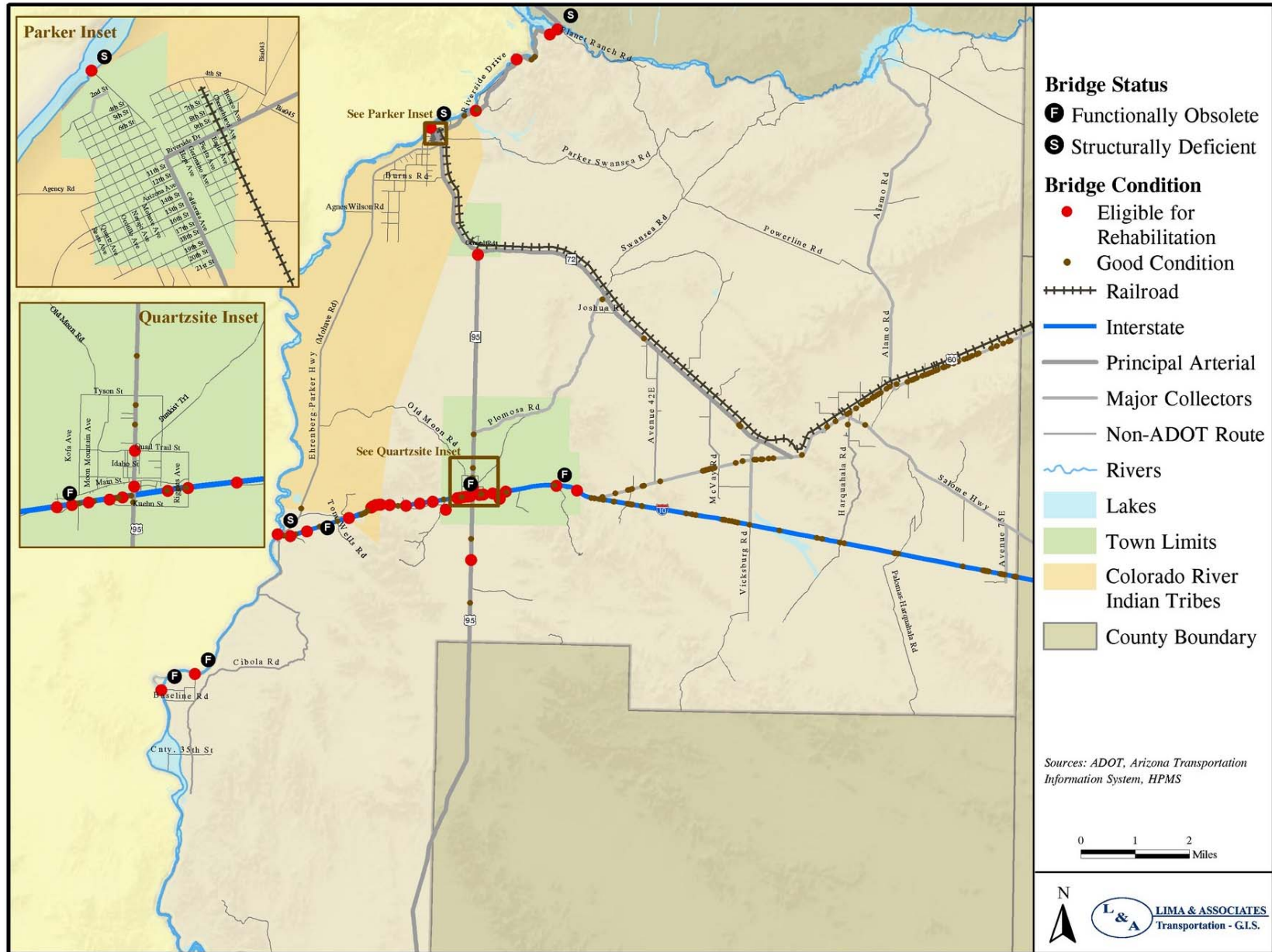
<b>RSL Category</b>	<b>Remaining Service Life</b>	<b>Total Road Mileage</b>	<b>Percent Mileage</b>
I	0-2 years	17.53	7.93
II	3-7 years	161.26	72.99
III	8-12 years	40.63	18.39
IV	13-17 years	0.00	0.00
V	18-22 years and	1.52	0.69
VI	23- 25 years	0.00	0.00
	<b>Total</b>	<b>220.94</b>	<b>100.00</b>

Source: La Paz County Public Works. October 2008 through March 2009

**Structurally Deficient** describes a bridge with one or more structural defects that require attention. This status does not indicate the severity of the defect but rather that a defect is present.

Bridge conditions are displayed on Figure 3-13. A BSR less than 80 indicates that the bridge is eligible for rehabilitation and a rating greater than 80 indicate that the bridge is in good condition. Twenty-three bridges have a BSR that render them eligible for rehabilitation. As shown in Table 3-10, eight bridges are categorized as either functionally obsolete or structurally obsolete. While not structurally obsolete, bridges on Mohave Road often have traffic that meet or exceed weight restrictions.

**FIGURE 3-13. BRIDGE CONDITIONS**





**TABLE 3-10. FUNCTIONALLY AND STRUCTURALLY OBSOLETE BRIDGES,  
LA PAZ COUNTY**

Agency	Route	MP	Name	Length	Deficiency	Sufficiency Rating
La Paz Co			Oxbow Bridge	567	F	66.94
La Paz Co			Farmer's Bridge	400	F	75.66
ADOT	I-10	17.50	West Quartzsite TI UP	249	F	75.35
ADOT	I-10	5.84	Tom Wells Rd TI UP	247	F	86.23
ADOT	I-10	26.65	Gold Nugget TI UP	250	F	92.88
ADOT	SR 95 S	144.83	Colorado River Bridge	656	S	6.00
ADOT	SR 95	161.73	Bill Williams River Bridge	1126	S	47.86
ADOT	I-10	0.01	Ehrenberg Bridge	1113	S	67.72

Source: ADOT Bridge Management System, 2009

### La Paz County Road Needs

*Arizona Association of County Engineers (AACE) 2008 Roadway Needs Study Update* documents road needs for each County in Arizona. The total road needs in La Paz County for the period 2009 to 2018 was approximately \$153.6 million excluding right-of-way cost of approximately \$9.1 million. Table 3-11 summarizes the estimated road needs by maintenance and construction costs. Chapter 4 summarizes transportation needs and deficiencies identified by stakeholders.

**TABLE 3-11. 2009-2018 NEEDED EXPENDITURES FOR LA PAZ COUNTY  
(Amounts Shown in Thousands)**

Period	Maintenance & Operations	Existing Bridges	New Bridges on Existing Roads	Upgrade Existing Roads	New Road	Safety	Total
2009-2013	\$36,796	\$1,442	\$0	\$63,083	\$0	\$10,132	\$111,453
2014-2018	\$36,796	\$1,442	\$0	\$89	\$0	\$3,833	\$42,160
<b>Total</b>	<b>\$73,593</b>	<b>\$2,883</b>	<b>\$0</b>	<b>\$63,172</b>	<b>\$0</b>	<b>\$13,965</b>	<b>\$153,613</b>

Source: AACE 2008 Roadway Needs Study  
Excludes right-of-way

## **Ports-Of-Entry**

Two of Arizona's 22 ports-of-entry are situated in La Paz County: one in Ehrenberg serving interstate traffic and one in Parker. These ports monitor and screen all commercial traffic entering the State for registration, tax, size, and weight restrictions, commercial driver's license requirements, and insurance requirements. Vehicles are checked to ensure that they are properly maintained and operated safely.

## **CURRENT TRAFFIC AND SAFETY CONDITIONS**

This section presents data on current traffic and safety conditions in the County.

### **Traffic Volume Data Sources**

Data for traffic volumes were obtained from the following sources:

**2009 Study Data** - Traffic count data for this Study was collected on various roads during the weeks of February 3, 2009 through February 26, 2009, in order to count traffic volumes during the peak winter season. The data collected included 48-hour Average Daily Traffic (ADT), hourly turning movement counts, and vehicle classification counts. Figure 3-14 illustrates the locations of traffic count data and type of traffic counts taken. Detailed traffic count data is documented in Working Paper 1.

**ADOT Automated Traffic Recorder (ATR)** - Automated Traffic Recorder sites maintained by ADOT continuously collects traffic data at selected locations on State highways. For this Study, the traffic count data was obtained from the following locations on State highways within or near La Paz County:

#### **La Paz County**

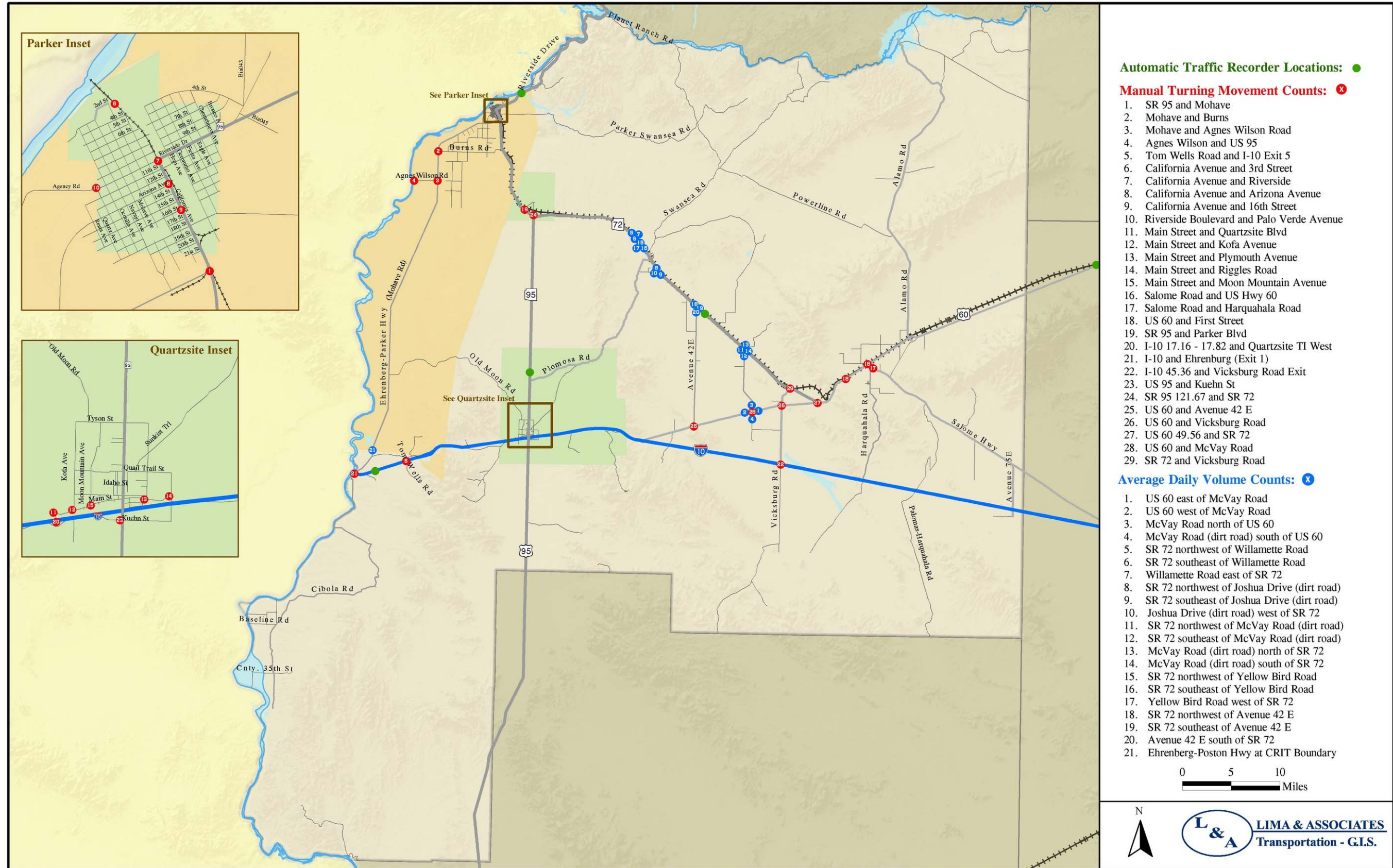
Ehrenberg: I-10 at MP 2.48  
Utting: SR 72 at MP 35.00  
Quartzite: SR 95 and MP 115.40  
Parker: SR 95 at MP 147.10

#### **Maricopa County**

Aquila: US 60 at MP 82.57

ATR data includes hourly traffic volumes and vehicle classification counts continuously taken throughout the year. The ATR traffic volume data is tabulated by day and month to represent the daily and seasonal traffic volume fluctuation at the ATR station. The Average Annual Daily Traffic (AADT) is then computed for each ATR station by dividing the total volume of vehicles by 365 days. Daily and seasonal adjustment factors are developed by ADOT to convert a traffic count taken at a location on any given day and month to an AADT. ADOT periodically conducts daily traffic counts at specified locations on State highways and converts the counts to AADTs and prepares an annual traffic count report. ADOT also maintains historical AADTs at these locations.

FIGURE 3-14. 2009 TRAFFIC COUNT LOCATIONS



**Local Traffic Data** - Available daily traffic data provided by La Paz County, Town of Parker, and Town of Quartzite.

### Daily Traffic Volume

Average Annual Daily Traffic volumes are shown in Figure 3-15 for State highways, County roads, and local roads in the County. Working Paper 1 explains how this information was derived.

The highest daily traffic volumes occur on I-10, ranging between 16,025 vehicles per day on the east end of the County to 22,104 vehicles per day on the west end. Traffic volumes on the State highways vary from 1,591 vehicles per day on US 60 to 2,091 on the rural portions of US 95. The daily traffic volumes on US 95 in the Town of Parker range between 10,270 vehicles per day and 16,048 vehicles per day. The intersection of California Avenue and Riverside Boulevard in Parker is the highest traffic volume intersection in the Study Area.

### Comparison of 2007 and 2008 Daily Traffic Volumes

Table 3-12 compares 2007 and 2008 AADTs at each of the ATR sites. Traffic volumes on State highways in La Paz County have decreased from 2007 to 2008 between 6.4 and 9.1 percent. This type of reduction in traffic volumes has occurred throughout the State as well as the nation. The Federal Highway Administration Office of Highway Policy Information reported that the annual vehicle miles traveled decreased 3.7 percent from 2007 to 2008. Table 3-13 presents peak-hour volumes at the intersection of California Avenue and Riverside Boulevard in Parker—the Study Area’s busiest intersection.

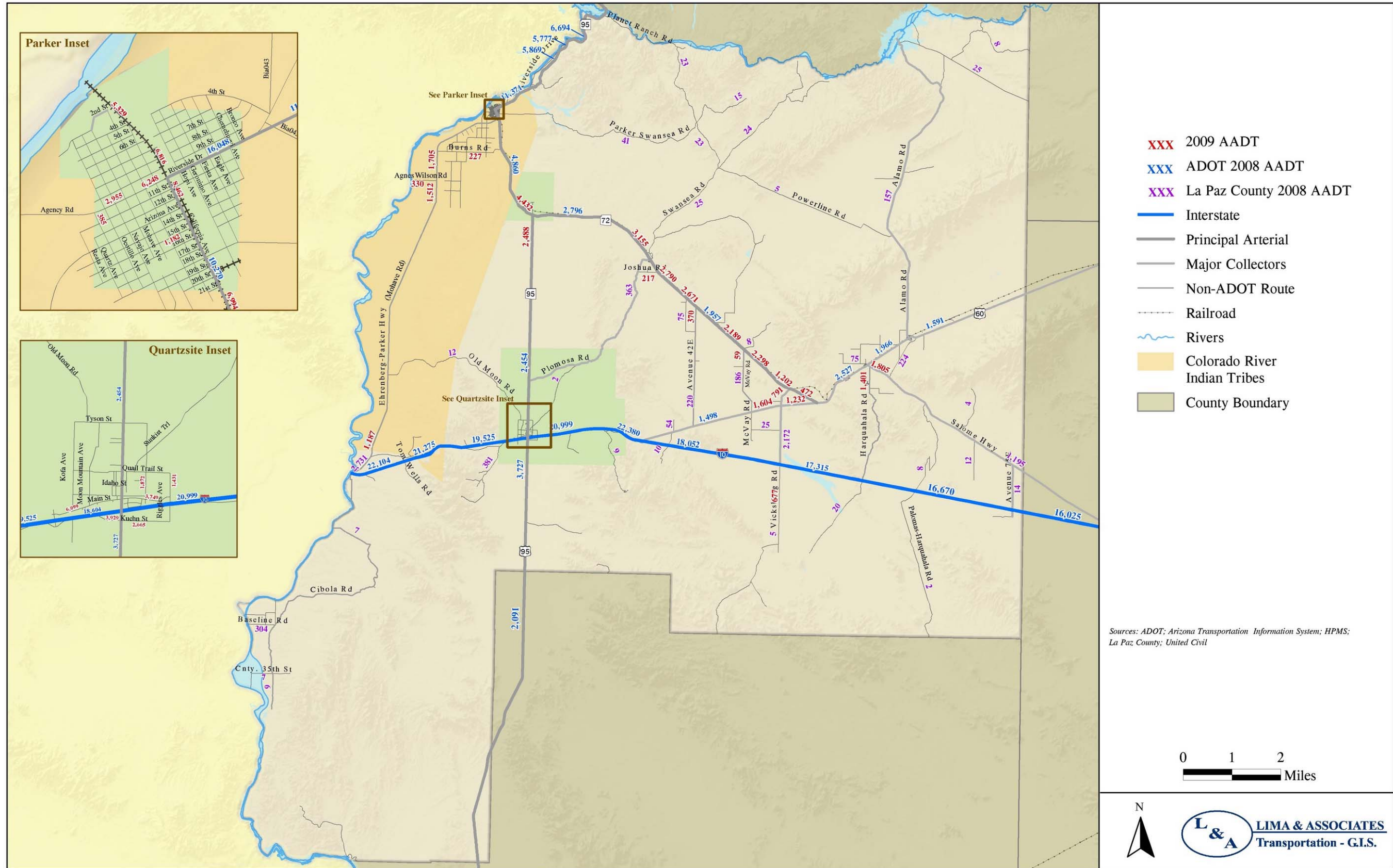
**TABLE 3-12. COMPARISON OF 2007 AND 2008 TRAFFIC VOLUMES**

<b>ATR</b>	<b>2007 AADT</b>	<b>2008 AADT</b>	<b>Percent Change</b>
Ehrenberg	24,013	22,121	-7.90
Aguila	1,739	1,627	-6.40
Utting	2,144	1,997	-6.80
Quartzsite	2,735	2,485	-9.10
Parker	12,426	11,390	-8.30

Source: ADOT Traffic Count Database System, 2009

AADT – Average Annual Daily Traffic, two-way vehicles per day

FIGURE 3-15. ANNUAL AVERAGE DAILY TRAFFIC (AADT)



**TABLE 3-13. TRAFFIC VOLUME AT CALIFORNIA AVE  
AND RIVERSIDE BLVD INTERSECTION**

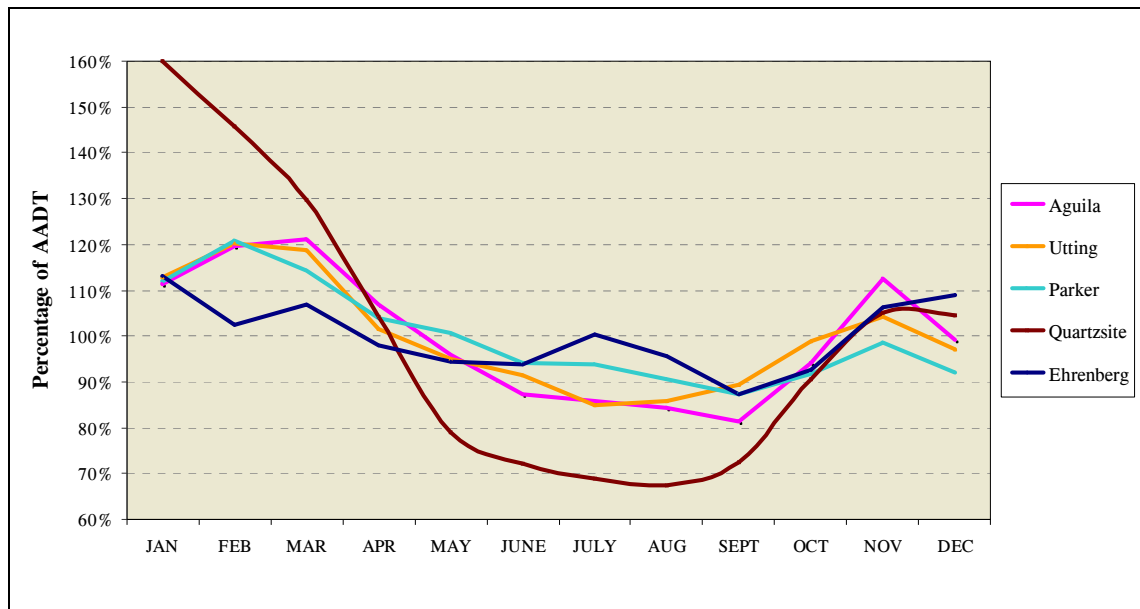
<b>Period</b>	<b>Time</b>	<b>Total Approach Volumes</b>
AM Peak Hour	7:30 a.m. - 8:30 a.m.	1,540 vehicles per hour
Mid Day Peak Hour	12:00 p.m. - 1:00 p.m.	2,318 vehicles per hour
PM Peak Hour	4:15 p.m. - 5:15 p.m.	1,888 vehicles per hour

**Seasonal and Daily Traffic Variations**

Figure 3-16 illustrates the monthly variation of the traffic recorded at each ATR site. The peak traffic season on State highways in La Paz County falls between October and May. The highest traffic volumes are expected in the January through March period. The ATR site on SR 95 in Quartzsite recorded the highest variation in peak-season traffic.

ADOT has developed factors from the ATR data for converting an ADT taken at any day and month to an AADT. Working Paper 1 includes the conversion factors for the ATR locations in La Paz County.

**FIGURE 3-16. SEASONAL TRAFFIC VARIATIONS ON STATE HIGHWAYS,  
LA PAZ COUNTY**



Source: ADOT Traffic Count Database System, 2009

## Vehicle Classification Data

Vehicle classification data is data collected for the type of vehicle such as automobiles, pick up trucks, light-weight trucks, medium trucks, and heavy trucks. Classification data was obtained from two sources; 1) the ADOT ATR sites; and 2) vehicle classification counts taken for this Study. Table 3-14 presents the vehicle classification data from the ADOT ATR sites grouped into three categories: 1) motorcycles, cars and light trucks; 2) Medium trucks and buses; and 3) large buses. Table 3-14 presents classification data for the average percent of daily traffic of the entire year of 2008. Working Paper 1 presents the classification data for February and June 2008, representing the peak and off-peak traffic season.

**TABLE 3-14. VEHICLE CLASSIFICATION  
AVERAGE PERCENT OF DAILY TRAFFIC (January 2008 – December 2008)**

<b>ATR/Route</b>	<b>Average Daily Traffic Volume</b>	<b>Motorcycles, Cars and Light Trucks</b>	<b>Recreational Vehicles, Medium Trucks and Buses</b>	<b>Large Trucks</b>
Ehrenberg/I-10	22,133	60%	7%	33%
Aguila/US 60	1,637	85%	10%	5%
Utting/SR 72	2,004	63%	3%	34%
Quartzsite/SR 95	2,488	75%	11%	14%
Parker/SR 95	11,400	91%	6%	3%

Source: ADOT Traffic Count Database System, 2009

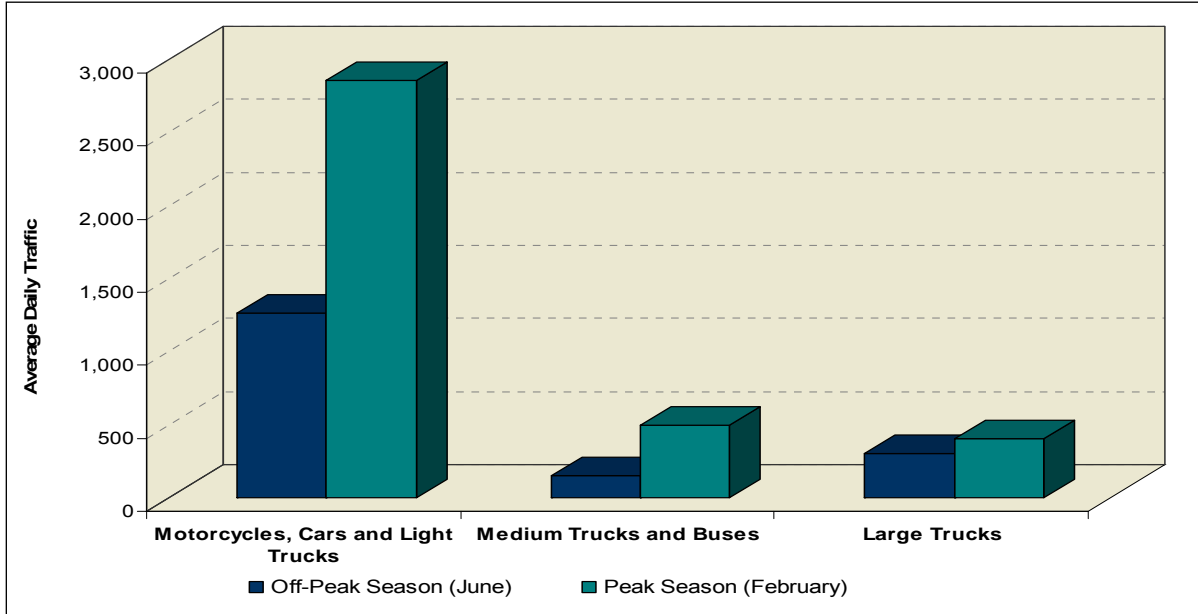
ATR – Automated Traffic Recorder

Vehicle classification in the Study Area varies by season. The Town of Quartzite experiences the highest changes in types of vehicles during the peak season than other locations in the County. Figure 3-17 compares the vehicle classes recorded at the Quartzsite ATR for the off-peak and peak seasons. The volume of cars, motorcycles, and light trucks in the peak season is double the volume in the off-peak season. Similarly, the volume of recreational vehicles, medium trucks and buses in the peak seasons is double the volume in the off-peak season.

## Vehicle Classification Data – 2009 La Paz Transportation Study

Vehicle classification data was collected during February 2009 for this Study and is presented in Working Paper 1. State Route 72 has the highest percentage of trucks ranging from 36 percent to 40 percent. This may primarily be due to trucks diverting from SR 72 to I-10 via Vicksburg Rd.

**FIGURE 3-17. VEHICLE CLASSIFICATION BY SEASON,  
QUARTZSITE/SR 95 ATR**



Source: ADOT Traffic Count Database System, 2009

### Current Level of Service

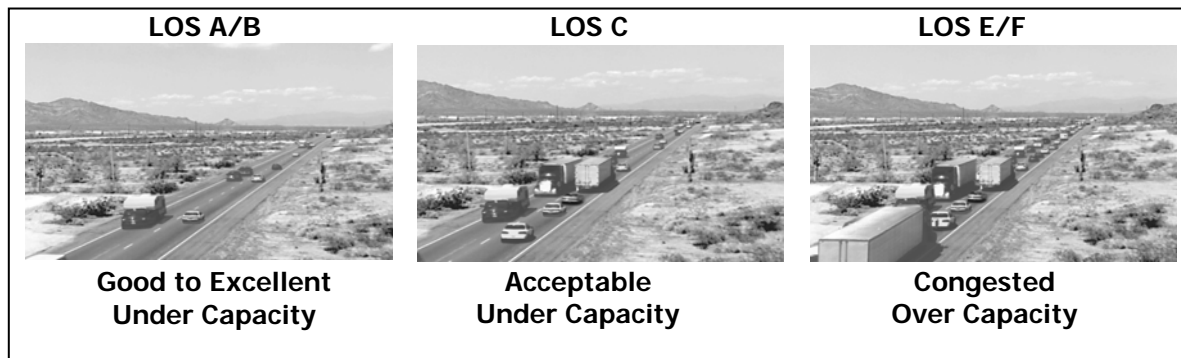
Level of Service (LOS) is a qualitative measure that characterizes how well traffic is flowing and the perception of traffic conditions by motorists and passengers. Levels of service range from LOS A to LOS F where LOS A represents the free flow of traffic with minimum interruptions and delay, and LOS F represents high congestion with significant delay and occasional blockage of intersections stopping traffic on particular road segments. Methods documented in the *Highway Capacity Manual 2000 (HCM)* were applied in evaluating existing road level of service conditions. Levels of service were estimated for road segments (between major intersections), unsignalized intersections, and signalized intersections.

### Road Segment Levels of Service

Figure 3-18 presents photographs represents various levels of service and Table 3-15 gives the levels of service for ranges of volume-to-capacity (v/c) ratios on road segment. Based on the AADTs and estimated daily capacities, all of the roads in La Paz County are at a LOS A or B, except for Riverside Drive from SR 95 to Buckskin Mountain Park, which is a LOS C, and Rio Vista Drive, which is a LOS D.



**FIGURE 3-18. PHOTOGRAPHIC ILLUSTRATIONS OF LEVELS OF SERVICE**



**TABLE 3-15. ROAD SEGMENT LEVEL OF SERVICE THRESHOLDS AND DESCRIPTIONS**

LOS	V/C Ratio	Capacity Level	Range Description
A	0.0 to 0.29	Under Capacity	Free flow, low volumes and densities, high speeds. Drivers can maintain their desired speeds with little or no delay and are unaffected by other vehicles.
B	0.30 to 0.47	Under Capacity	Reasonably free flow. Traffic is noticeable, but drivers have reasonable freedom to select their speeds and lanes.
C	0.48 to 0.68	Under Capacity	Speeds remain near free flow, but freedom to maneuver is restricted.
D	0.69 to 0.88	Near Capacity	Speed begins to decline with increasing volume and drivers have limited maneuverability.
E	0.89 to 1.00	At Capacity	Unstable flow with volume at or near capacity. Freedom to maneuver is extremely limited.
F	Greater than 1.00	Over Capacity	Gridlock conditions with speeds dropping to zero at times.

Source: Highway Capacity Manual, 2000, Exhibit 21-2, p. 21-3.

### Unsignalized Intersection Levels of Service

Both two-way and all-way unsignalized intersections were evaluated for AM, mid-day, and PM peak-hour periods in February 2009. Table 3-16 displays LOS criteria for stop sign controlled intersections. For two-way controlled unsignalized intersections, the performance criteria are the levels of service estimated on the minor street approaches and left-turn lanes on major street approaches. The levels of service at all-way intersections are estimated for all the traffic movements.

**TABLE 3-16. UNSIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA**

<b>Level of Service</b>	<b>Average Control Delay (seconds/vehicle)</b>
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

Source: Highway Capacity Manual, 2000

Table 3-17 presents the turning movements with a LOS greater than C for unsignalized intersections. Working Paper 1 presents the level of service for all the turning movements for the intersections approaches where traffic counts were taken.

**TABLE 3-17. UNSIGNALIZED INTERSECTION LEVEL OF SERVICE C OR LOWER**

<b>Intersection</b>	<b>Time Period</b>	<b>Direction</b>	<b>Turning Movement</b>	<b>LOS</b>
California Ave and 16th St	11-1 p.m.	Eastbound	Left-Right	C
California Ave and 16th St	4-6 p.m.	Eastbound	Left-Right	C
California Ave and Mohave Rd	11-1 p.m.	Eastbound	Left-Through-Right	C
California Ave and Mohave Rd	4-6 p.m.	Eastbound	Left-Through-Right	C
I-10 and Ehrenberg Westbound	11-1 p.m.	Westbound	Left-Through-Right	C
I-10 and Quartzsite Ave Eastbound	11-1 p.m.	Eastbound	Left-Through	D
I-10 and Quartzsite Ave Eastbound	4-6 p.m.	Eastbound	Left-Through	C
I-10 and Quartzsite Ave Westbound	11-1 p.m.	Westbound	Left-Through-Right	C
Main St and Kofa	11-1 p.m.	Southbound	Left-Right	C
Main St and Moon Mountain Ave	11-1 p.m.	Southbound	Left	D
Main St and Moon Mountain Ave	4-6 p.m.	Southbound	Left	C
Main St and Riggles Ave	11-1 p.m.	Eastbound	Left	C
Main St and Riggles Ave	4-6 p.m.	Eastbound	Left	C
Main St and Quartzsite Blvd	11-1 p.m.	Westbound	Left	C
Main St and Quartzsite Blvd	11-1 p.m.	Northbound	Right	C

## Signalized Intersection Level of Service

Signalized intersections in the Study Area were evaluated for AM, mid-day, and PM peak-hour periods. Table 3-18 displays LOS criteria for signal controlled intersections as published in the HCM manual.

**TABLE 3-18. SIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA**

Level of Service	Control Delay (seconds/vehicle)
A	0-10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

Source: Highway Capacity Manual, 2000

Table 3-19 presents the levels of service for the traffic movements at signalized intersections. Working Paper 1 presents the level of service for all the turning movements for the intersections approaches where traffic counts were taken. Working Paper 1 includes the traffic count timing for the signalized intersections.

**TABLE 3-19. SIGNALIZED INTERSECTION LEVEL OF SERVICE**

	California Ave and Arizona Ave			California and Riverside Blvd			Melton St and Kuehn St		
	7-9	11-1	4-6	7-9	11-1	4-6	7-9	11-1	4-6
<b>Eastbound</b>									
LT	B	-	B	B	D	D	B	B	B
TH	B	B	B	B	C	D	C	C	B
RT	B	B	B	-	-	-	-	-	-
<b>Westbound</b>									
LT	-	-	-	B	D	D	B	B	B
TH	B	B	B	B	D	D	C	C	C
RT	-	-	-	-	-	-	-	-	-
<b>Northbound</b>									
LT	A	A	A	C	C	C	A	B	B
TH	A	A	A	C	C	C	B	C	B
RT	-	-	-	C	E	C	-	-	-
<b>Southbound</b>									
LT	A	A	A	B	D	C	A	B	B
TH	A	A	A	C	C	C	B	C	C
RT	-	-	-	C	C	C	-	-	-

Note: Levels of service based on optimized condition using ADOT traffic signal timing.

## Crash Analysis

Crashes were analyzed for all public roads within La Paz County for the five-year period of January 2003 through December 2007 using data provided by the ADOT Accident Location Identification Surveillance System (ALISS). Figure 3-19 illustrates the location of all the crashes in the five-year period, Figure 3-20 shows the location of vehicle/pedestrian crashes and vehicle/pedalcyclist crashes, Figure 3-21 illustrates the location of fatal crashes, and Figure 3-22 displays the accidents rates for State Highways, Salome Highway, and Vicksburg Road.

The following findings summarize the crash analysis:

- A total of 2,586 crashes occurred during the five-year period of January 2003 through December 2007, an annual average of 517 crashes per year.
- US 95 in Parker experienced the highest crash rates over the five-year period with rates of 1.7 crashes per million vehicle miles and over.
- US 95 in Quartzsite and Vicksburg Road between US 60 and I-10 experienced crash rates of 1.0 crashes per million vehicle miles and over.
- Of the 2,586 crashes, 1,572 crashes or 60.8 percent were non-injury crashes.
- Almost five percent of the total crashes or 126 crashes were fatal crashes. The roads with the highest number of fatal crashes include I-10 and SR 95. Twelve fatal crashes during the five-year period occurred on reservation roads.
- Almost 17 percent, 432 crashes were intersection related crashes. The intersections with the highest number of crashes include: California Avenue/Riverside Drive, California Avenue/11<sup>th</sup> Street, and SR 72/SR 95.
- Colliding with other motor vehicles accounted for 1,146 crashes or approximately 44 percent. Approximately 18 percent crashes resulted from vehicles colliding with fixed objects.
- Vehicles colliding with pedestrians and pedalcyclist accounted for 28 crashes, approximately one percent of the total crashes.
- Of the 2,586 crashes, a total of 844 crashes, almost one-third of the crashes were either rear-end, side-swipe, or angle crashes, typically associated with intersection and driveway crashes.

FIGURE 3-19. NUMBER OF CRASHES AT SITE

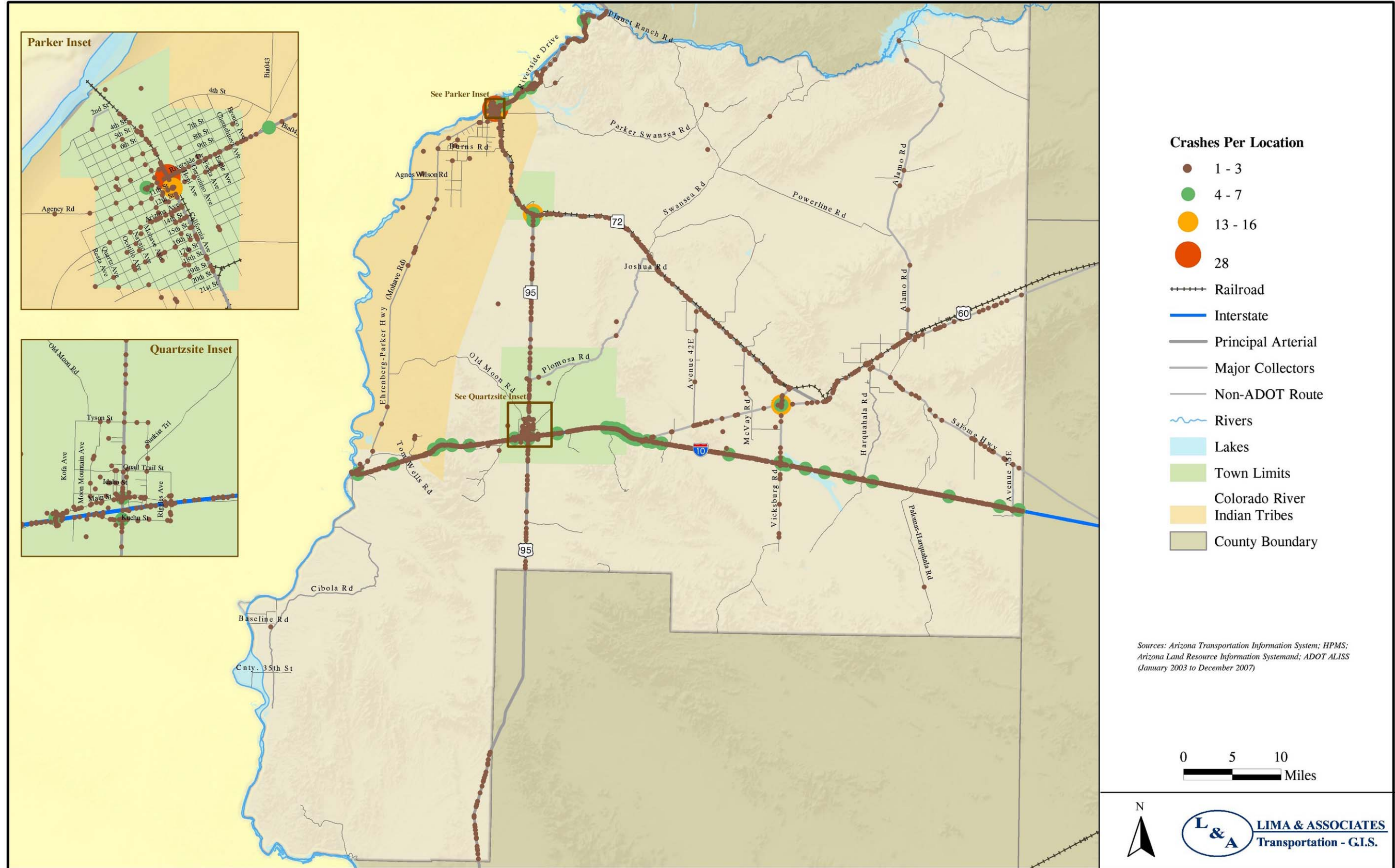


FIGURE 3-20. COLLISIONS WITH PEDESTRIANS AND PEDALCYCLISTS

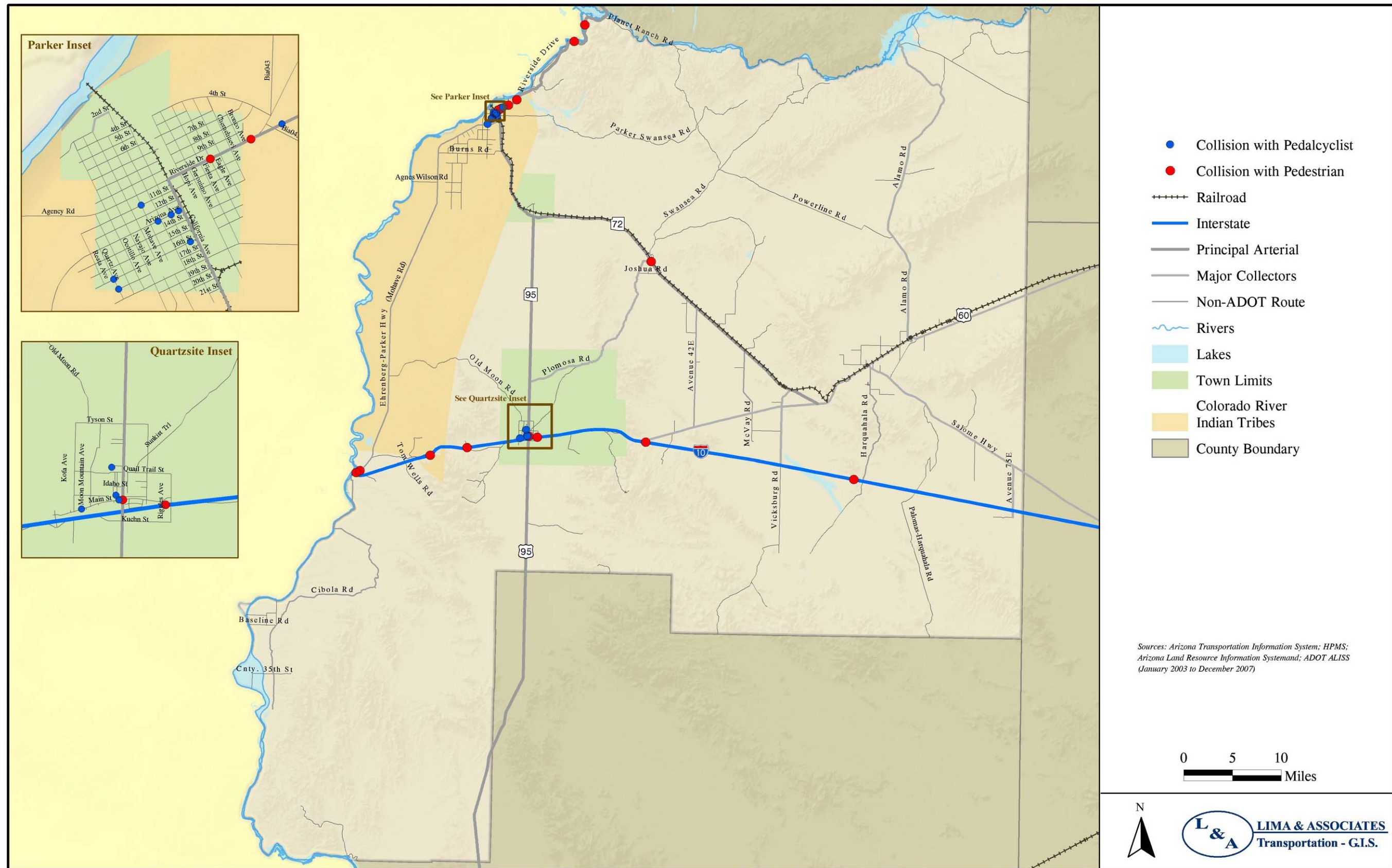


FIGURE 3-21. FATAL CRASH LOCATIONS

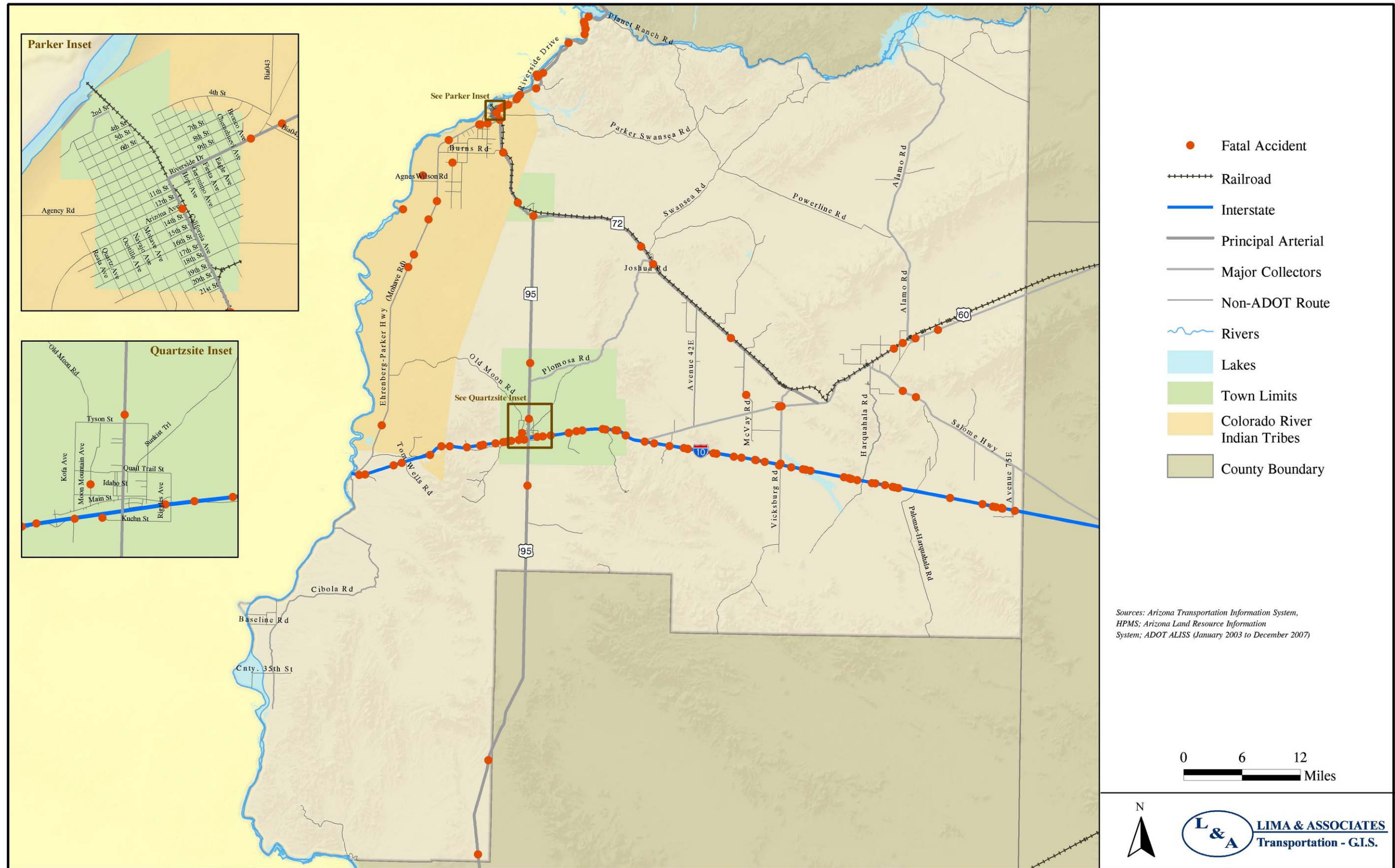
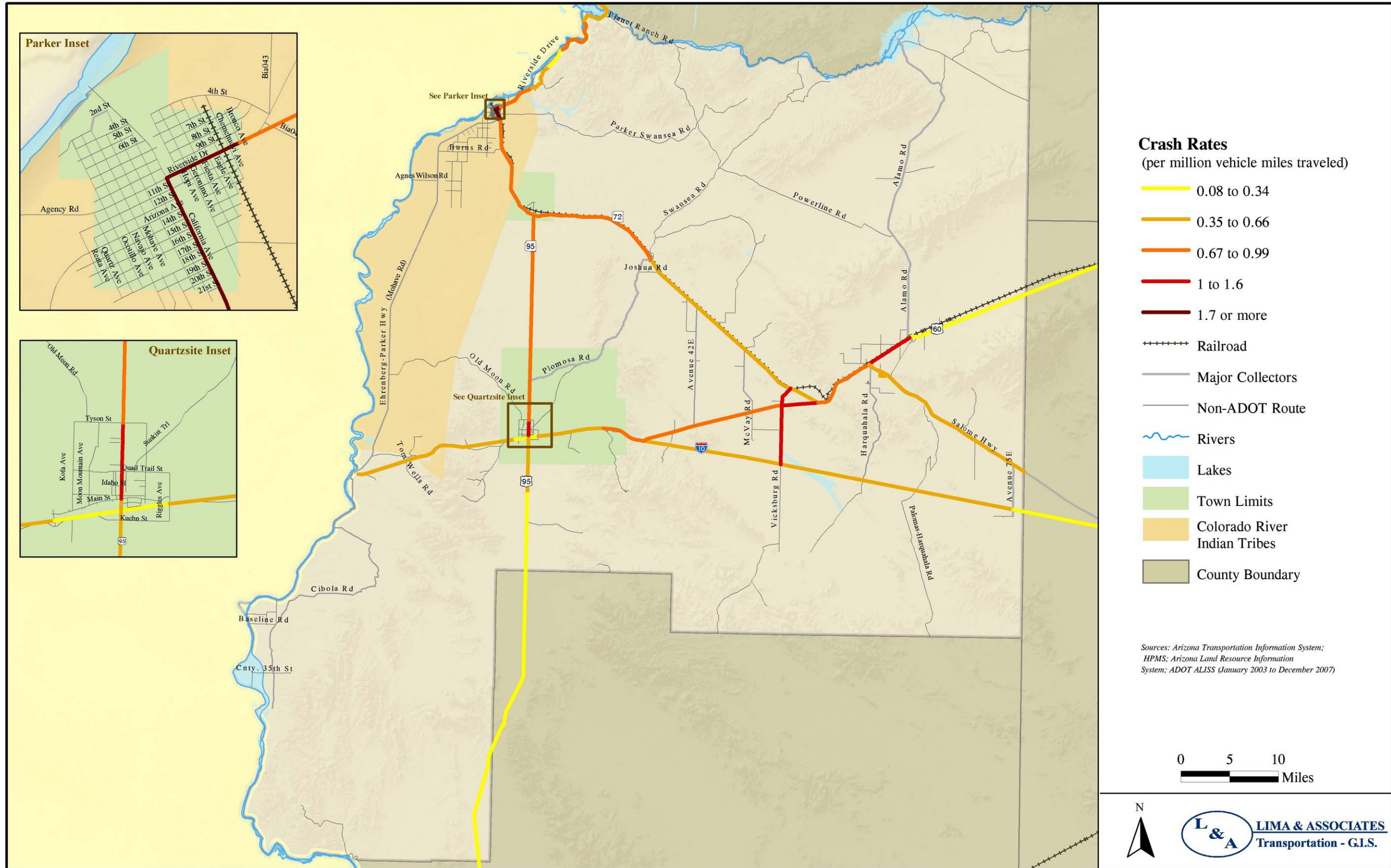


FIGURE 3-22. CRASH RATES





## **CURRENT MULTIMODAL CONDITIONS**

This section discusses the current multimodal transportation conditions in the County including rail passenger, truck freight service, transit, and pedestrian, bicycle, and trail facilities.

### **Rail Service**

In 1908, the Santa Fe Railway completed an alternate main line in an east-west direction across what is now La Paz County under the auspices of its subsidiary, the Arizona & California Railroad. The railroad parallels US 60 from the eastern County line to Hope, where it turns northwest and follows SR 72 and SR 95 through Bouse to Parker.

In 1991, the trackage was leased to the Arizona & California Railroad (ARZC) for operation as an independent short line headquartered in Parker. The lease includes 190 miles of mainline track between Cadiz, California, which is located between Barstow and Needles on the BNSF “Transcon” mainline; and Matthie, Arizona, 5 miles north of Wickenburg. Also included in the transaction, are a 50-mile branch from Rice, California to Blythe, and 57 miles of trackage rights between Matthie and Phoenix. The railroad does not typically operate trains all the way to Phoenix, but exchanges rail freight traffic with the Burlington Northern Santa Fe Railway (BNSF) at Castle Hot Springs, a rail siding in the community of Morristown adjacent to US 60 between Wickenburg and Phoenix. The railroad is now part of Rail America, a nationwide short line railroad conglomerate.

The ARZC handles BNSF traffic from Los Angeles that is destined for Phoenix and currently operates the following rail freight services:

- One round trip between Parker and Cadiz, California, 5 days per week
- One round trip between Parker and Castle Hot Springs, 5 days per week
- One cement train from Cadiz to Matthie through Parker each week. This train carries product from California to Phoenix for use in construction.
- Three repositioning trains through Parker each week, which return empty cars to the West that carried automobiles, containerized freight, and other commodities to Phoenix.

The railroad also services two intermodal facilities. Matlock Projects is a chemical distribution facility that receives about five rail tank car loads a week, and is located near the railroad depot in Parker. La Paz Products is a fuel distribution center located approximately one mile northeast of the Junction of SR 95 and SR 72. Other Parker-area freight customers are Superior Bulk Logistics, in Parker Central, and Titan Energy, in Parker South.

The railroad handled 18,922 carloads of freight in 2007; however, traffic declined after the onset of the recession and the railroad handled approximately 12,000 carloads in 2008. Maximum operating speed on the non-signalized system is 49 mph.

Stearlite plastic pellets are off-loaded at Parker and trucked to Lake Havasu City. Plastic pellet consignees in Phoenix and Las Vegas are served from sidings in Maricopa County and California, respectively. Two carloads of low-grade hazardous material are delivered in Parker each month and off-loaded to trucks for disposal. The railroad stores liquefied petroleum gas in rail tank cars in Parker for Exxon Petroleum. Exxon leases tracks from the railroad for this purpose. No regularly scheduled rail passenger service is operated.

Approximately 9,000 crossties and between 1 and 2 track-miles of rail are replaced annually. Twenty-nine employees work for the railroad. Many live in Lake Havasu City and commute.

### **TRANSIT AND INTERCITY BUS SERVICES**

Quartzsite Transit Services (QTS) provides priority service to town residents for medical, social, and recreational needs. Services are provided to Blythe, California and Parker, Arizona once a week and to Lake Havasu City once a month. The van schedule and suggested donations are shown in Table 3-20.

**TABLE 3-20. QUARTZSITE TRANSIT VAN SCHEDULE AND SUGGESTED DONATIONS FOR SERVICE (ROUND TRIP)**

Monday	Quartzsite	\$2.00
Tuesday	Blythe	\$5.00
Wednesday (1st & 3rd)	Yuma/Algodones	\$10.00
Every Wednesday	Quartzsite	\$2.00
Thursday	Parker	\$7.00
Friday	Quartzsite	\$2.00

Source: <http://www.ci.quartzsite.az.us/about/transit/>

The Quartzsite Transit Services Website list the following additional services area:

- 1st & 3rd Wednesdays the van will make a trip to Yuma/Algodones for people needing medications and other shopping needs. A minimum of 5 passengers are needed in order for QTS to make the trip. A rider must make a reservation no more than 48 hours in advance of the day of the trip. Pick-up will begin at 8:00 am with an anticipated return of 5:00 pm. Remaining Wednesdays will be local runs.
- Lake Havasu City trip will be the 2nd Wednesday of each month, for shopping and medical appointments. Suggested donation is \$10.00 for round trip travel. Reservations must be made 48 hours in advance.

The La Paz County Health Department provides free transit services to the entire County. The Department coordinates services with Quartzsite Transit Services. Table 3-21 shows the schedule for the service.

**TABLE 3-21. LA PAZ COUNTY TRANSIT SERVICE**

---

**Parker (Town)**

**Monday thru Friday - 8 AM to 3 PM**

Parker Dam Route M-F

First Pick-up at 8:30AM upriver then leaves Town at 10:30AM, 1PM & 2:30PM

---

**Salome/Wenden Route**

**Monday and Friday — to Parker**

**Tuesday—to Wickenburg — Except one Tuesday a month to Surprise.**

Salome/Wenden runs must have at least 4 riders for a trip over 20 miles. Due to this rule, Schedules are subject to change at any time. Destinations and schedules will try to be flexible according to riders needs. Once a month to Surprise, Goodyear, and/or Blythe and local runs are possible if enough riders need the trip.

---

**Ehrenberg/Bouse Route**

**Monday—Parker to Ehrenberg**

Makes various stops in Blythe.

**Tuesday and Friday—Parker to Bouse**

Local stops in Bouse then local stops in Parker.

**Wednesday- Parker to Ehrenberg**

Makes various stops in Blythe.

Brings riders to Parker, makes various stops in Parker and returns to Ehrenberg.

**Thursday— Lake Havasu City**

Pickups in Bouse and Parker.

---

Source: <http://www.co.la-paz.az.us/Main Pages/Dept Health/schedule.htm>

The Department is supported with a grant from Western Arizona Council of Governments Area Agency on Aging/DES and the top priority is to serve people over 60, the second priority is to serve disabled people. However, the general public is also encouraged to ride with almost a third of riders under 60 and not disabled. Rides are usually scheduled to medical appointments, grocery stores, post office, bank, food bank, Library, Senior Center, and other businesses.

Greyhound Corporation provides bus service between Quartzsite and major cities in Arizona and other states offering two trips daily in each direction along I-10.

## **AVIATION**

The Avi Suquilla Airport, an enterprise of the Colorado River Indian Tribes, is located on a 240-acre site at the eastern edge of Parker, approximately one mile from the center of town. Avi Suquilla is a general aviation facility, and no scheduled commercial air service is provided. Scheduled commercial air service is available at both Yuma and Lake Havasu City. Fuel for piston engine aircraft is available for purchase at Avi Suquilla, and major repairs to both power plants and airframes can be performed at the facility. The airport has no control tower, but dusk-to-dawn medium intensity runway lighting is provided. The airport is staffed between 8:00 am and 10:00 pm. Runway 01/19 is 4,780 feet in length, 75 feet in width, and paved with asphalt. Tie-downs for transient aircraft are available.

Arriving and departing aircraft are warned that the minimum altitude for crossing the Colorado River is 1,500 feet. Exposed concrete bases for the medium-intensity lighting exist along both sides of the runway. In addition, a drainage ditch traverses the safety area 130 feet from the end of the runway.

A total of 27 piston engine aircraft are based at Avi Suquilla, including 20 single-engine planes and 7 multi-engine plans. In addition, two helicopters are based at Avi Suquilla. For the 12 months ended May 1, 2007, a total of 10,200 operations took place at the airport, including 9,000 local operations and 1,200 itinerant operations. The CRIT plans to improve the facility, with federal and State matching funds administered by the Aeronautics Division of ADOT.

Two private airparks are in the Salome area. Indian Hills Airpark has a one-half mile paved runway that belongs to the 96 lot owners. Western Sky Airpark, northwest of Salome, has a fixed base operator and allows transient aircraft.

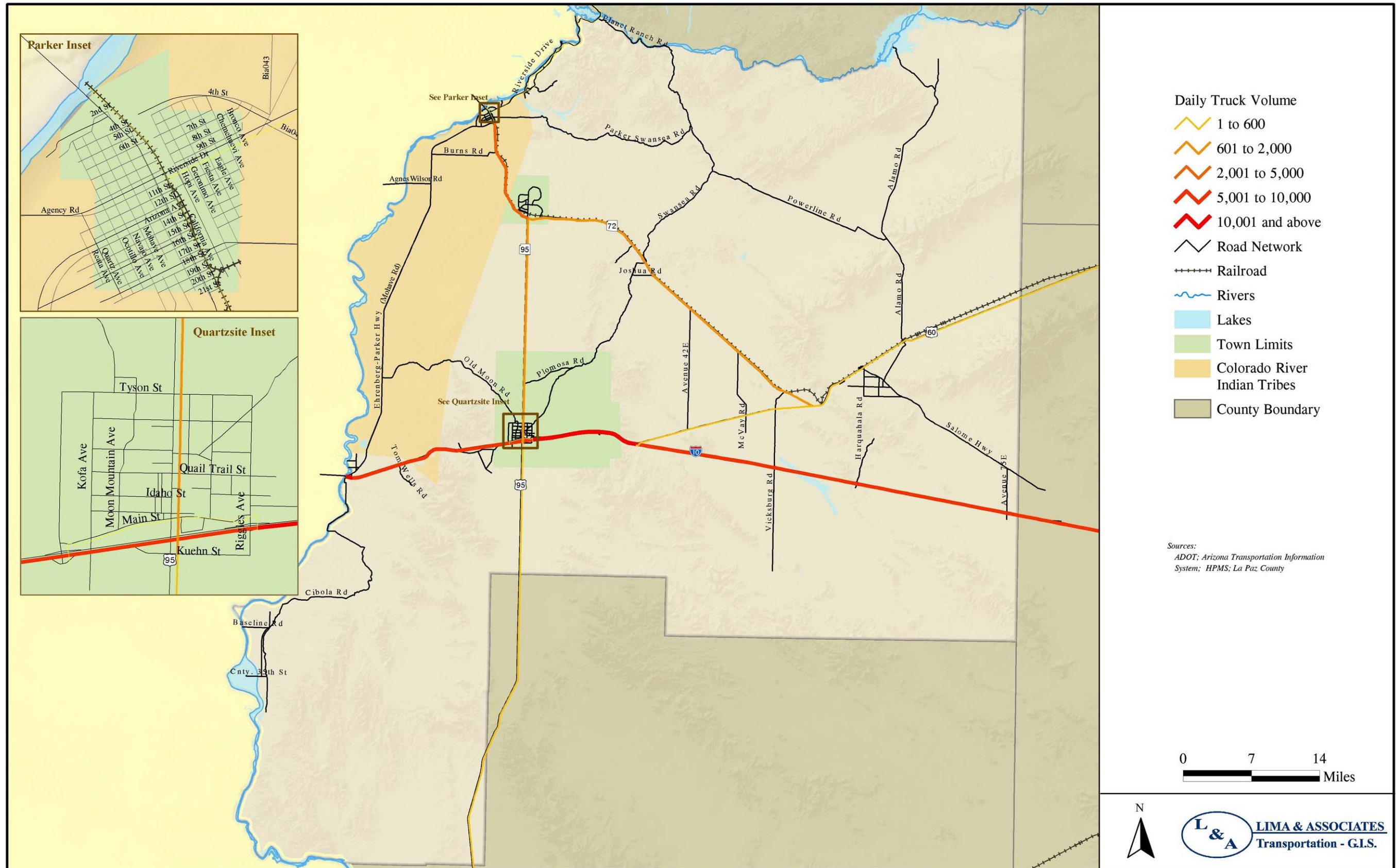
## **TRUCK FREIGHT**

I-10 carries considerable traffic—particularly freight trucks—through the County. In addition, SR 72 carries significant truck traffic. Figure 3-23 illustrates the truck volume on the State Highways.

## **BICYCLE FACILITIES**

The Arizona Statewide Bicycle/Pedestrian Plan, August 2003 provides a long-term plan for a system of shared roadways and bicycle and pedestrian facilities for the ADOT State Highway System. The Statewide Bicycle Network includes the ADOT State Highways that are described plus the regionally significant non-ADOT bicycle facilities from the existing plans. The following information was considered for inclusion on ADOT State Highways:

FIGURE 3-23. STATE HIGHWAY TRUCK VOLUMES



- Traffic volume
- Percent grade
- Right shoulder width
- Roadway speed limit
- Rumble strip location
- Shoulder pavement condition

Currently no continuous system of pedestrian or bicycle facilities exists within La Paz County or cities located in the County. La Paz County's 2005 Comprehensive Plan expressed the goal of developing an equestrian trail system, developing bike paths and a bicycle trail system in the Parker Strip and Parker South areas, and creation of a regional bicycle network that ties the County's towns together.

### ***Town of Quartzsite's 2003 General Plan***

The Town of Quartzsite's 2003 General Plan proposed a system of walking paths, equestrian trails, and bicycle routes to reduce vehicles on local roads and improve resident's quality of life. At the time of Quartzsite's 2003 General Plan the Town had no bicycle facilities and only offered bicycle racks at the Elementary School and Town Hall. Figure 3-24 illustrates the bicycle system, pedestrian pathways, and equestrian trails proposed by the General Plan.

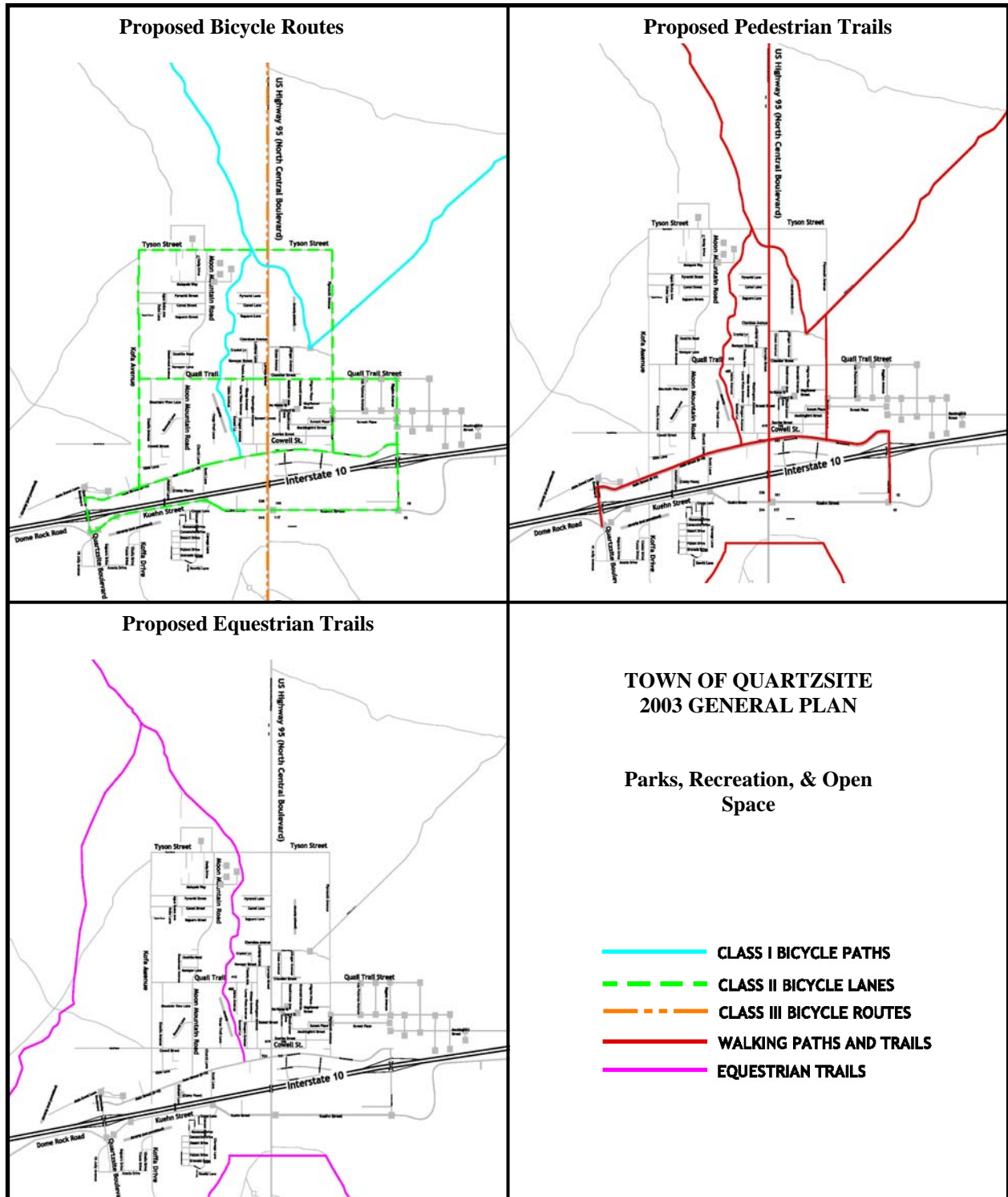
### ***Existing Trails***

La Paz County's diverse terrain and multitude of wilderness and mountains areas offers hundreds of miles of trails. Currently, no long-range planning related to parks, trails, and unincorporated areas is in effect; however, the 2005 La Paz County Comprehensive Plan acknowledged the need for a trail system and additional trail head marking. Major hiking trails in La Paz County include:

- Buckskin Mountain State Park Trails
- Ben Avery Trail
- Palm Canyon
- Harquahala Mountain Trail
- Eagletail Mountain Trails
- Rawhide Mountain Hiking Trails
- Harcuvar Peak Summit Trail
- Kofa National Wildlife Refuge Trails
- Trigo Mountains Wilderness Trails

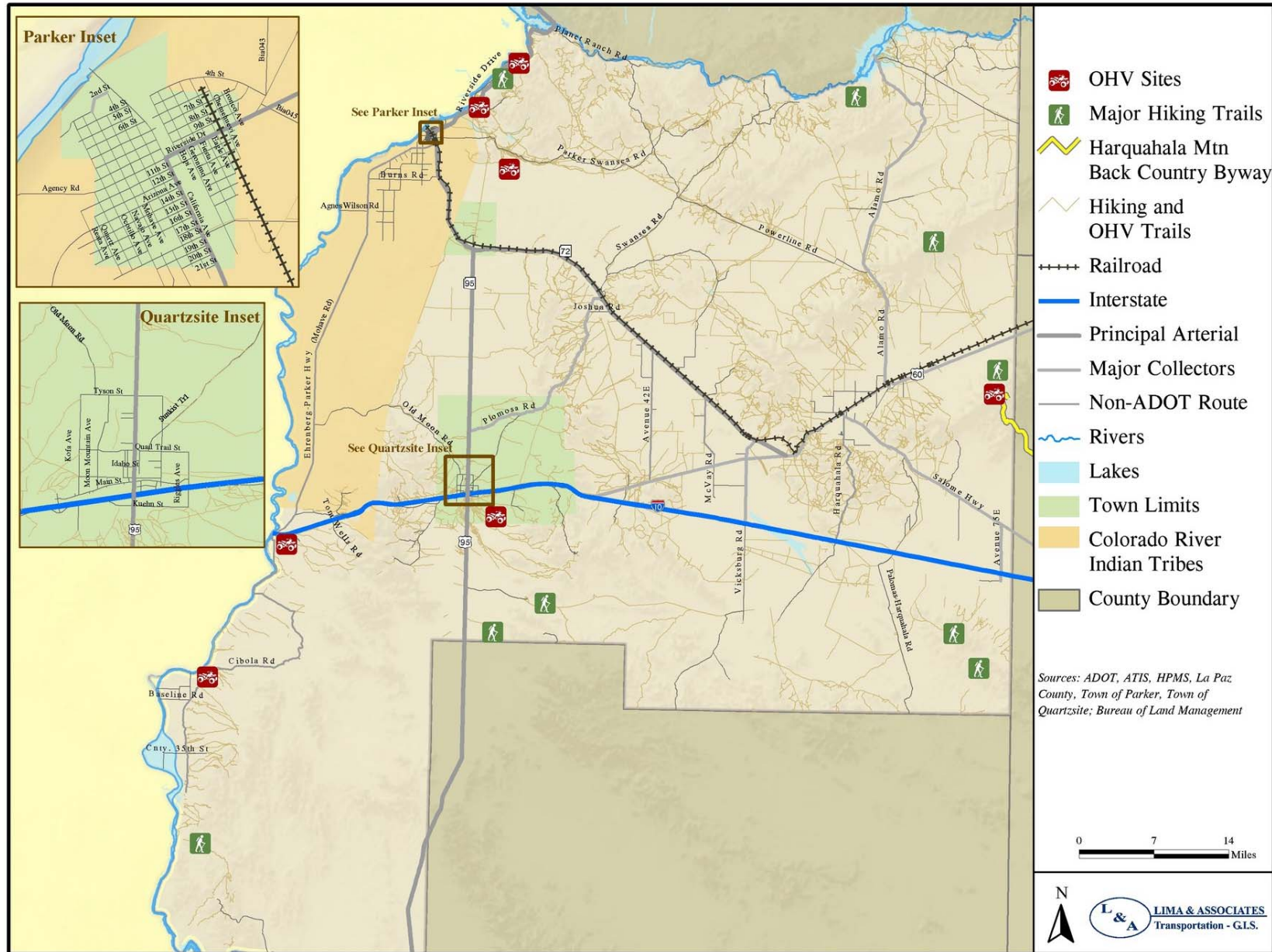
Figure 3-25 displays the hiking and off-highway vehicle trails in La Paz County.

**FIGURE 3-24. TOWN OF QUARTZSITE PROPOSED PEDESTRIAN AND BICYCLE FACILITIES**



Source: Town of Quartzsite 2003 General Plan

**FIGURE 3-25. TRAILS**





### ***Off-Highway Vehicle Recreation***

La Paz County's landscape and low elevation mountain areas provide numerous Off-Highway Vehicle (OHV) opportunities on remote backcountry roads, trails, and drivable washes. Major OHV trails include:

- Ehrenberg Sandbowl
- Parker 400 Desert Race Course
- Shea Spectator/Pit Areas and Osborn Wash
- Swansea Townsite
- Ehrenberg-Cibola OHV Routes
- La Posa OHV Routes (approximately 1,900 miles of "routes" exist within La Posa)
- Harquahala Mountain Summit Road

The Parker 400 Off-Road Race occurs annually and can attract thousands of spectators and participants to the event held every winter. According to the 1994 East Cactus Plain Wilderness Management Plan the Parker 400 Off-Road Race has the following impact on the surrounding wilderness area:

- unauthorized vehicle entry during course reconnaissance up to 2 weeks prior to the event
- unauthorized vehicle entry during the event
- congested parking along Swansea road, occasionally parking within the wilderness
- litter left behind by participants
- low-level helicopter and fixed-wing overflights
- increase noise and dust

Harquahala Mountain Back Country Byway has been designated as a scenic Back Country Byway by the Bureau of Land Management's Back Country Byways program. The Harquahala Mountain Back Country Byway is one of only three trails in Arizona to be designated as such. Harquahala Mountain Back Country Byway offers visitors a 15-mile scenic drive to the summit of the Harquahala Mountains and an observatory built by the Smithsonian in the 1920s. BLM has taken measures to reduce trail loss by paving approximately 100 yards of this 4x4 trail.



## 4. FUTURE CONDITOINS

This Chapter presents the projections and analysis of future socioeconomic conditions within La Paz County. The methodology for developing the future socioeconomic data including dwelling units and employment is described.

### FUTURE SOCIOECONOMIC CONDITIONS

This section presents the anticipated future socioeconomic conditions within the County for the years 2020 and 2030 including housing units, population, and employment. Future socioeconomic data were estimated for various residential and commercial categories using the following steps:

- Reviewed population projections of the Arizona Department of Commerce.
- Discussed potential growth and growth areas with the County and jurisdictions.
- Divided the County into geographical spatial analysis areas referred to as Transportation Analysis Zones (TAZs).
- Identified land use categories.
- Identified proposed and approved developments.
- Allocated land use to each TAZ.

### Growth Areas

Growth within the County will occur on current private lands and lands that potentially could be converted from non-private ownership to private ownership. Figure 3-3 in Chapter 3 illustrates land ownership within La Paz County, currently approximately five percent of the land is privately owned. An example of land that may convert to private ownership includes BLM parcels in the vicinity of the Town of Quartzsite. The BLM identified potential lands for sale in its *Approved Resource Management Plan*, January 2010 (See Map 2-17. Lands and Realty/Minerals and Appendix I: Lands Identified for Disposal). The Town of Quartzsite requested that the BLM offer parcels in the vicinity of the Town for sale and the BLM is evaluating the potential sale. Lands identified for disposal must meet the criteria for public land sale or exchange under existing laws, regulations, and policies at time of disposal.

Anticipated growth areas within the County include:

- Salome area
- Town of Quartzsite
- Town of Parker Annex
- Bouse area
- Ehrenberg area

In addition to the above growth areas, commercial growth is anticipated at the following I-10 interchanges:

- Ehrenberg (Exit 1)
- Exits 17 and 19, Quartzsite
- Vicksburg Road (Exit 45)
- 75E (Exit 69)

Approved and proposed residential and commercial developments within the County are shown in Figure 4-1 and listed in Table 4-1.

### **Future Population Projections**

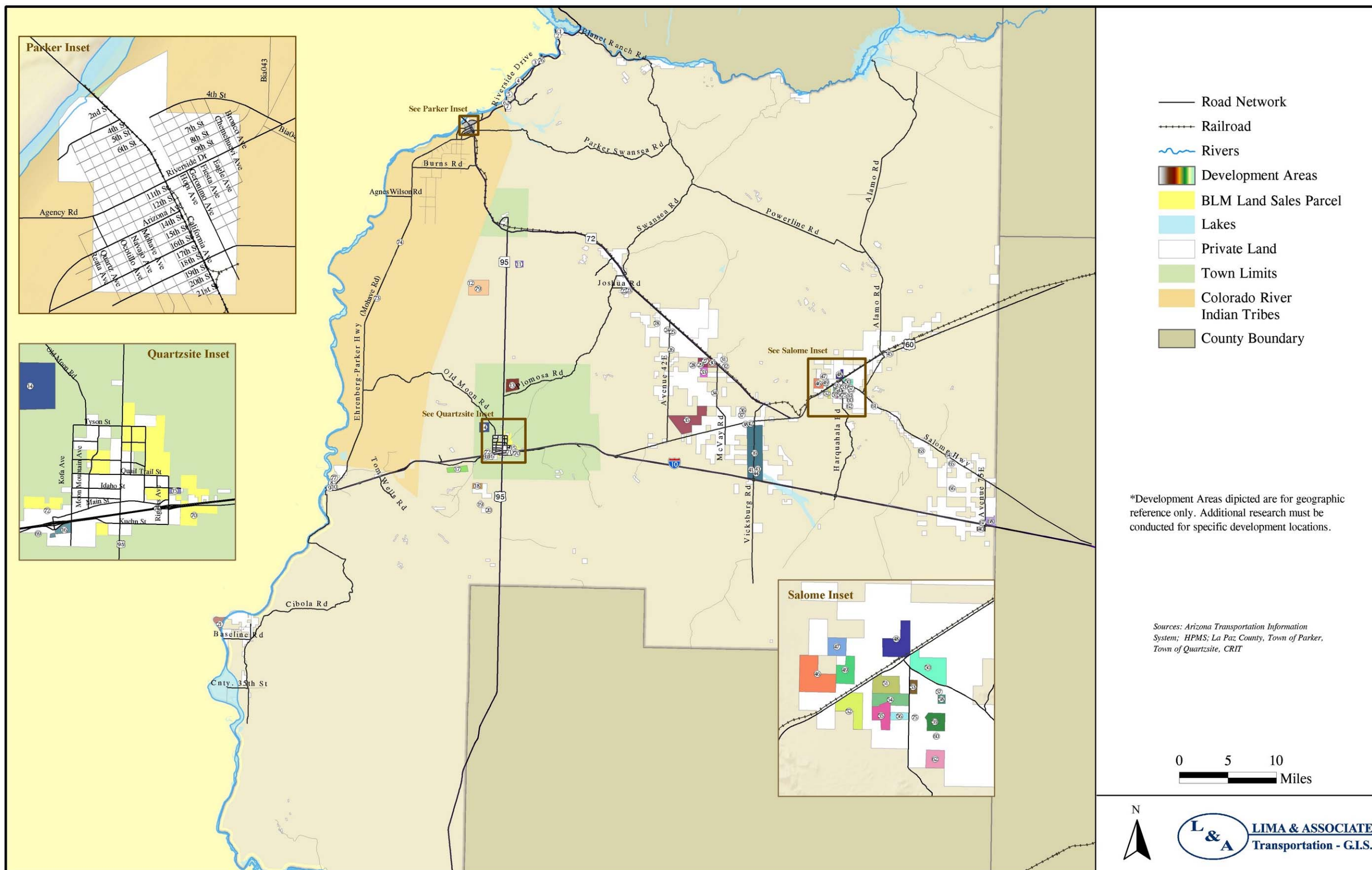
Future population projections were developed based on a review of projections by the Arizona Department of Commerce and planned and proposed developments within the County. The Arizona Department of Commerce is responsible for developing Statewide population projections, recently assuming responsibility from the Arizona DES. Table 4-2 presents the Department's population estimates from year 2009 and through year 2030. According to the Department of Commerce, La Paz County grew to an estimated population of 22,347 in 2009 from a population of 19,715 in the year 2000, a total of approximately 13.4 percent. The Department's population projection for La Paz County is just over 28,000 residents by 2030, an overall growth rate of approximately 26 percent from 2009 to 2030.

### ***More Aggressive Growth Scenario***

A more aggressive growth scenario was formulated to represent potential development of portions of the approved and proposed residential and commercial properties. This scenario is based on conversations with the County, Town of Parker, Town of Quartzsite, and Colorado Indian Tribes (CRIT). Yet, it is recognized that the magnitude of planned development over the past several years has slowed due to the economic downturn and that the completion years for many of these proposed developments have been delayed. During the review and discussion of the projections by the TAC and stakeholders, individuals expressed that the "more aggressive" scenario was too optimistic given the economic downturn and near-term development prospects. However, other individuals expressed that the scenario was not aggressive enough and particularly in the Quartzsite area that growth would be higher. The use of more aggressive population projections recognizes the potential for development of the approved and planned developments as the economy rebounds. This will allow for planning future infrastructure conditions and preserving rights-of-way.

The overall agreement of the TAC was to maintain the "more aggressive" growth scenario. The population projections for this Study can be revisited as updated population data becomes available. Sources of updated data will include: the 2010 US Census, updated population projections for the County from the Arizona Department of Commerce, and renewed activity with respect to the planning and approval of new developments.

FIGURE 4-1. LA PAZ COUNTY PROPOSED DEVELOPMENTS



**TABLE 4-1. LA PAZ COUNTY PROPOSED DEVELOPMENTS**

<b>Development Name</b>	<b>Map Reference</b>	<b>Units at Buildout</b>	<b>2020 Comm. Emp.</b>	<b>2020 Other Emp./Units</b>	<b>Units at 2020</b>	<b>2030 Comm. Emp.</b>	<b>2030 Other Emp./Units</b>	<b>Units at 2030</b>
BLM Lands for Potential Sale, Quartzsite	(1)	3465						
Springs Del Sol	1	34			34			34
Royal Palms/Pinnacle	2	32			32			32
Sundance	3	15			15			15
Thunderbird	4	11			11			11
Guardalabene	5	10			10			10
Lake Manor Condos	6	5			5			5
Mountain View	7	800			96			268
River Bend Estates	8	326			326			326
Arizona Travel Plaza	9		80	50		80	50	
Rio Laguna	10	200	250		200	500		200
Landfill	11							
Solar Tower Sites	12		20			20		
Light Industrial Site	13	No specific data for this site at this date						
Quartzsite Site	14	100			12			34
Quartzsite Park Place Travel Center	15		40	6 fuel sta			6 fuelling sta	
Petro Stopping Center	16			36 fueling sta			36 fueling sta	
Rainbow Acres	18							
Arroyos Preserve	19	129			16			43
Guido	20	58			58			58
Sprawls Island	21	200			200			200
Allen	22	2			2			2
Sunnyside	23	20			20			20
Haselbusch	24	158			158			158
Jones	25	5			5			5

**TABLE 4-1. LA PAZ COUNTY PROPOSED DEVELOPMENTS (CONTINUED)**

<b>Development Name</b>	<b>Map Reference</b>	<b>Units at Buildout</b>	<b>2020 Comm. Emp.</b>	<b>2020 Other Emp./</b>	<b>Units at 2020</b>	<b>2030 Comm. Emp.</b>	<b>2030 Other Emp./Units</b>	<b>Units at 2030</b>
Ranegras Estates	26	84			84			84
Bella La Paz	27	500			500			500
Brar	28	No specific data for this site at this date						
Portanova	29	52			52			52
Intaglio	30	100			12			34
Pittman	31	5			5			5
Honeycutt	32	5			5			5
Alta Vista	33	96			12			32
Boyajian	34	5			5			5
Solar energy Study Area	35	No specific data for this site at this date						
Brar Hill View Estates	36	No specific data for this site at this date						
Brar	37	No specific data for this site at this date						
Milagro Acres	38	64			6.4			19
Ag/Industrial Corridor	39							
Arizona Raceway	40	100	100		100	100		100
XL Dairy ethanol	41			160 acres ag			160 acres ag	
Winterhaven Estates	42	112			11			34
Brar	43	No specific data for this site at this date						
Brar	44	No specific data for this site at this date						
Amigos Del Valle	45	153			153			153
Arthur 480	46	192			23			64
Mt View	47	105			105			105
Arthur Salome North	48	960			115			322
Western Sky Airpark	49	300			36			101
Brown	50	960			115			322
Arthur Salome South	51	720			86			241
Sunland Estates	52	240			29			80
Cox 80	53	240			29			80
Sunset Links	54	480			58			161

**TABLE 4-1. LA PAZ COUNTY PROPOSED DEVELOPMENTS (CONTINUED)**

<b>Development Name</b>	<b>Map Reference</b>	<b>Units at Buildout</b>	<b>2020 Comm. Emp.</b>	<b>2020 Other Emp./</b>	<b>Units at 2020</b>	<b>2030 Comm. Emp.</b>	<b>2030 Other Emp./Units</b>	<b>Units at 2030</b>
Sunset Indian Hills	55	700			84			235
Indian Hills	56	375			375			375
Palmer	57	175			120			175
R & R	58	No specific data for this site at this date						
Cox 160	59	480			58			161
Sunshine Acres	60	120			120			120
Ten at Downing Street	61	84			84			84
Cox Balance	62	480			58			161
Sun West	63	8,000	50		960	200		2,680
Pfursich	64	5			5			5
Morales	65	5			5			5
Sittu	66	5			5			5
Centennial Truck Stop	67	No specific data for this site at this date						
Centennial Complex	68	596	40		596	50		596
Hotel	69			20			20	
Hotel	70			50			50	
Assisted Care Center	71			25			25	
Bill Ghost Travel Center	72			16 fuel sta.			16 fuel sta.	
Head Start Facility	73			45			45	
Juvenile Detention Facility	74			20			20	
Castle Lakes	75	1000			120			335
Emerald Springs	76	450			450			450
Emerald Springs Solar Farm	77	No specific data for this site at this date						
Bucksaw	78	54			54			54
American Bonanza Mining	79			100			100	

Source: La Paz County, Lima & Associates

(1) BLM Lands for potential sale are shown in Quartzsite inset in Figure 4-1

Comm.- Commercial, Emp. – Employee

**TABLE 4-2. ARIZONA DEPARTMENT OF COMMERCE,  
LA PAZ COUNTY POPULATION PROJECTIONS**

	Horizon Years			Total Growth		Annual Growth	
	2009	2020	2030	2009-2020	2009-2030	2009-2020	2009-2030
<b>La Paz County</b>	22,347	25,487	28,074	14.05%	25.63%	1.28%	1.22%
<b>Parker CCD</b>	22,347	25,487	28,074	14.05%	25.63%	1.28%	1.22%
Bluewater CDP	831	951	1,050	14.48%	26.40%	1.32%	1.26%
Bouse CDP	768	950	1,101	23.76%	43.33%	2.16%	2.06%
Cibola CDP	201	237	266	17.45%	31.84%	1.59%	1.52%
Ehrenberg CDP	1,416	1,486	1,543	4.95%	9.02%	0.45%	0.43%
Parker town	3,390	3,688	3,933	8.79%	16.04%	0.80%	0.76%
Parker Strip CDP	4,044	4,930	5,660	21.90%	39.95%	1.99%	1.90%
Poston CDP	389	389	389	0.00%	0.00%	0.00%	0.00%
Quartzsite town	3,793	4,317	4,748	13.81%	25.18%	1.26%	1.20%
Salome CDP	2,352	3,141	3,791	33.57%	61.22%	3.05%	2.92%
Wenden CDP	661	787	890	18.99%	34.64%	1.73%	1.65%
Remainder of Parker CCD	4,502	4,611	4,702	2.43%	4.44%	0.22%	0.21%
<b>Reservations</b>							
Colorado River (part)	7,769	8,130	8,428	4.65%	8.48%	0.42%	0.40%
<b>Total Reservation</b>	7,769	8,130	8,428	4.65%	8.48%	0.42%	0.40%
<b>Total Non-Reservation</b>	14,578	17,357	19,646	19.06%	34.76%	1.73%	1.66%

Source Arizona Department of Commerce Website:

<http://www.azcommerce.com/doclib/econinfo/FILES/2006LaPazProjectionsSC.xls> .

CCD – Census County Division – a subdivision of a county; CDP - Census Designated Place



The “more aggressive” growth scenario is based on the following assumptions (see Table 4-3):

- The Town of Quartzsite is expected to grow to 9,000 residents by 2030.
- The “Original Town of Parker” is assumed to grow in the future as estimated by the Arizona Department of Commerce based on historical growth and assumptions of future growth.
- The Parker Annex will grow to approximately 790 residents by 2030.
- The population of the Colorado River Indian Tribes is assumed to grow as projected by the Arizona Department of Commerce
- Commercial and industrial uses in the Parker Annex will grow to approximately 1,600 employees by 2030.

**TABLE 4-3. POTENTIAL GROWTH SCENARIO, LA PAZ COUNTY**

	<b>2009</b>	<b>2020</b>	<b>% Growth 2009-2030</b>	<b>2030</b>	<b>% Growth 2009-2030</b>
Total Dwelling Units	16,495	27,361	66.0%	33,386	102.0%
Population	21,114	35,022	66.0%	42,734	102.0%
Employees	9,456	14,473	1.54	16,281	73.0%
Employees/Population	0.45	0.41	N/A	0.38	N/A

Estimated by Lima & Associates; N/A – Not applicable

### **Socioeconomic Data Estimates**

Socioeconomic data were estimated including the number of dwelling units and employees for the purpose of projecting future population and for forecasting future traffic volumes. For this, socioeconomic estimates were made based on geographical spatial zones called Traffic Analysis Zones (TAZs). A TAZ is a building block of a geographic spatial framework used to depict and analyze socioeconomic conditions. Housing units, population, and employment were allocated among these zones for the years 2020 and 2030. The TAZ configuration of 144 internal TAZs used for the years 2020 and 2030 for the County is illustrated in Figure 4-2. Note that the TAZ configuration originally established for the year 2009 model calibration was refined to reflect new development within the County.

Future traffic volumes were forecasted using thirty land use categories to generate vehicle trips (see Table 4-4). The total dwelling units estimated for each TAZ was computed for the three residential categories—Rural Residential (SF), Multifamily Residential (MF), and Mobile Home Park (MH)—along with the number of employees for non-residential categories were also calculated. Working Paper 2, Appendix A includes figures illustrating the dwelling units and total employees by TAZ. Figures 4-3 through 4.6 illustrate the 2020 and 2030 population and employment densities.

**TABLE 4-4. LA PAZ COUNTY LAND USE CATEGORIES**

<b>Land Use</b>	<b>Unit</b>	<b>Land Use</b>	<b>Unit</b>
Rural Residential (SF)	Total Dwelling Units	Service Station	Fueling stations
Multifamily Residential (MF)	Total Dwelling Units	Elementary School	Employee
Mobile Home Park (MH)	Total Dwelling Units	High School	Students
General Commercial	Employee	College	Students
Casino	Employee	Warehousing	Employee
Golf Course	Employee	Light Industrial	Employee
Campground/Recreational Vehicle Park	Berths	Railyard	Employee
Interchange Node/Truck Terminal	Employee	Utilities	Employee
Commercial Airport	Employee	Public Space	Acre
Hospital	Employee	City Parks	Acre
Medical Office	Employee	County Parks	Acre
Resort Hotel	Employee	Government Office	Employee
Hotel/Motel	Employee	Open Space	Acre
Marina	Berths	Wildlife	Acre
Restaurant	Employee	Agriculture	Acre

FIGURE 4-2. 2030 TRAFFIC ANALYSIS ZONES

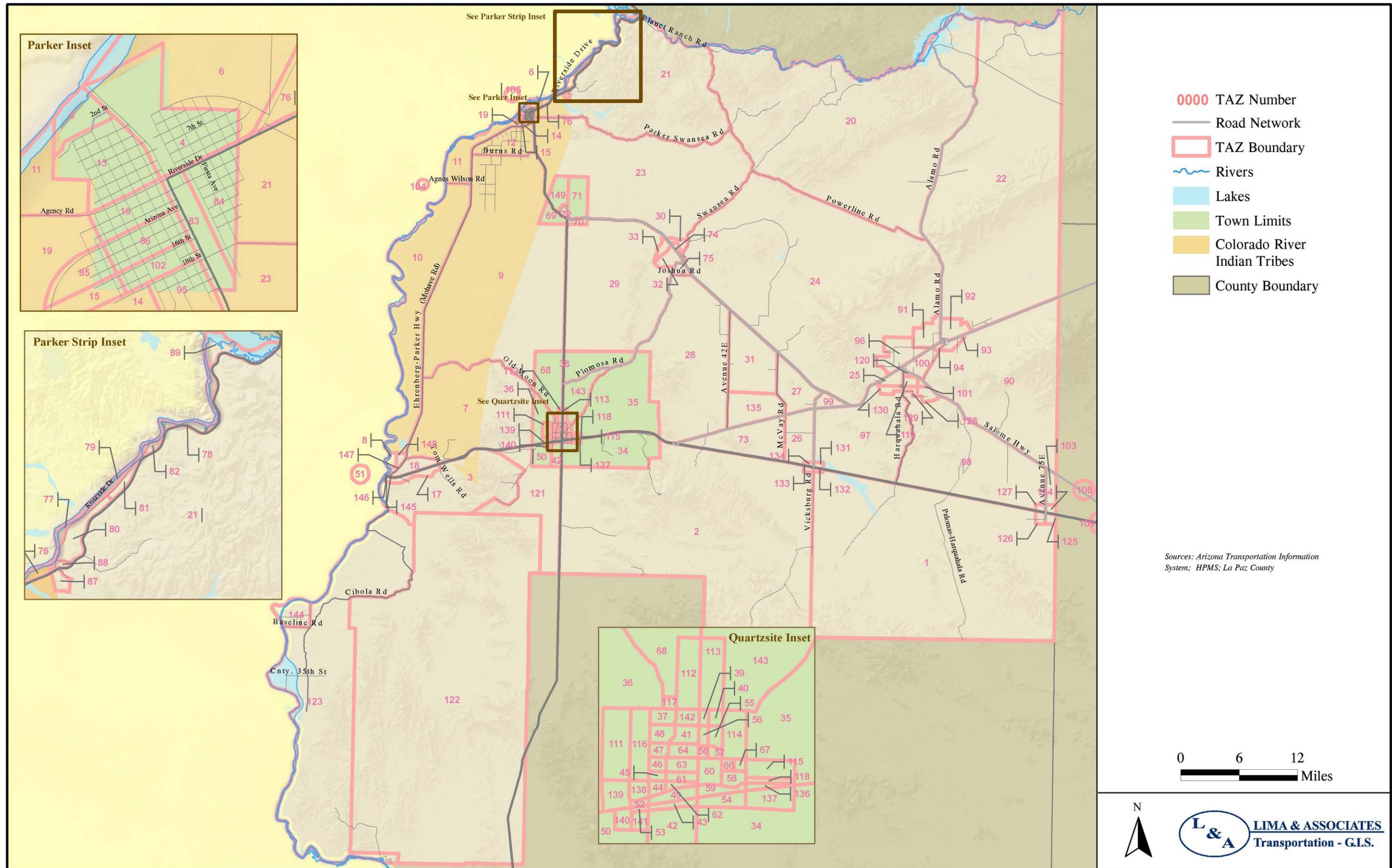


FIGURE 4-3. PROJECTED POPULATION DENSITY PER SQUARE MILE – 2020

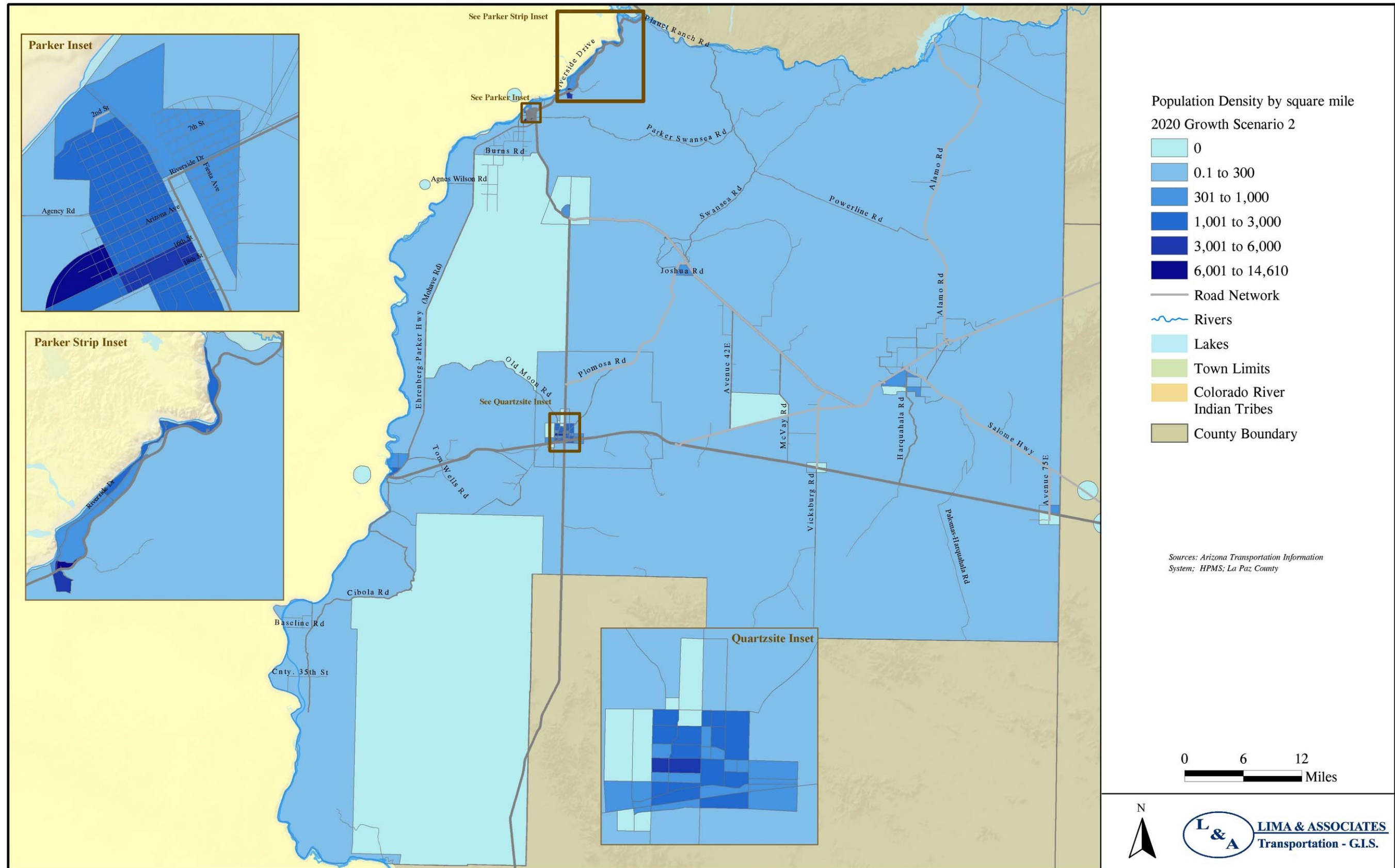


FIGURE 4-4. PROJECTED EMPLOYMENT DENSITY PER SQUARE MILE – 2020

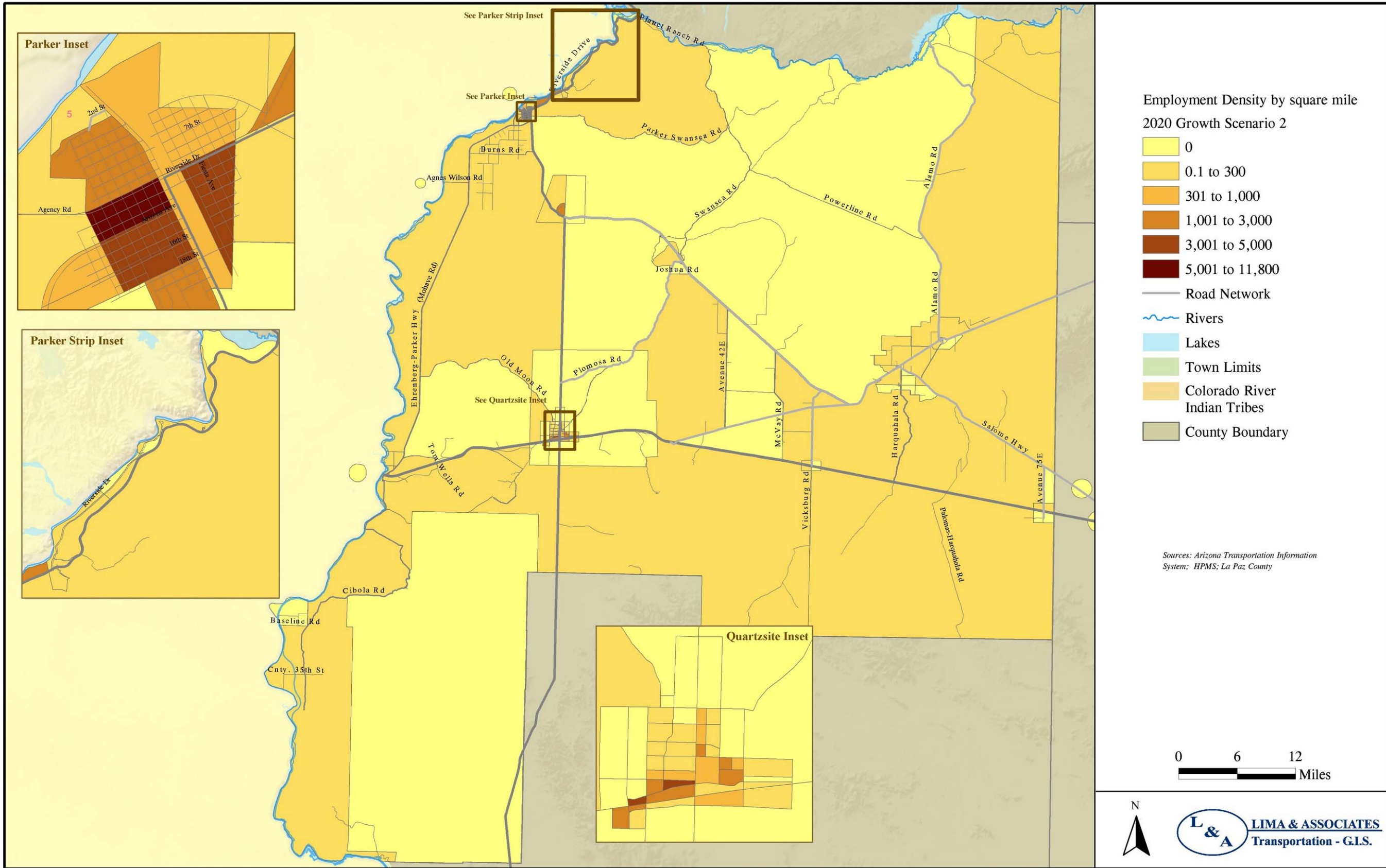


FIGURE 4-5. PROJECTED POPULATION DENSITY PER SQUARE MILE – 2030

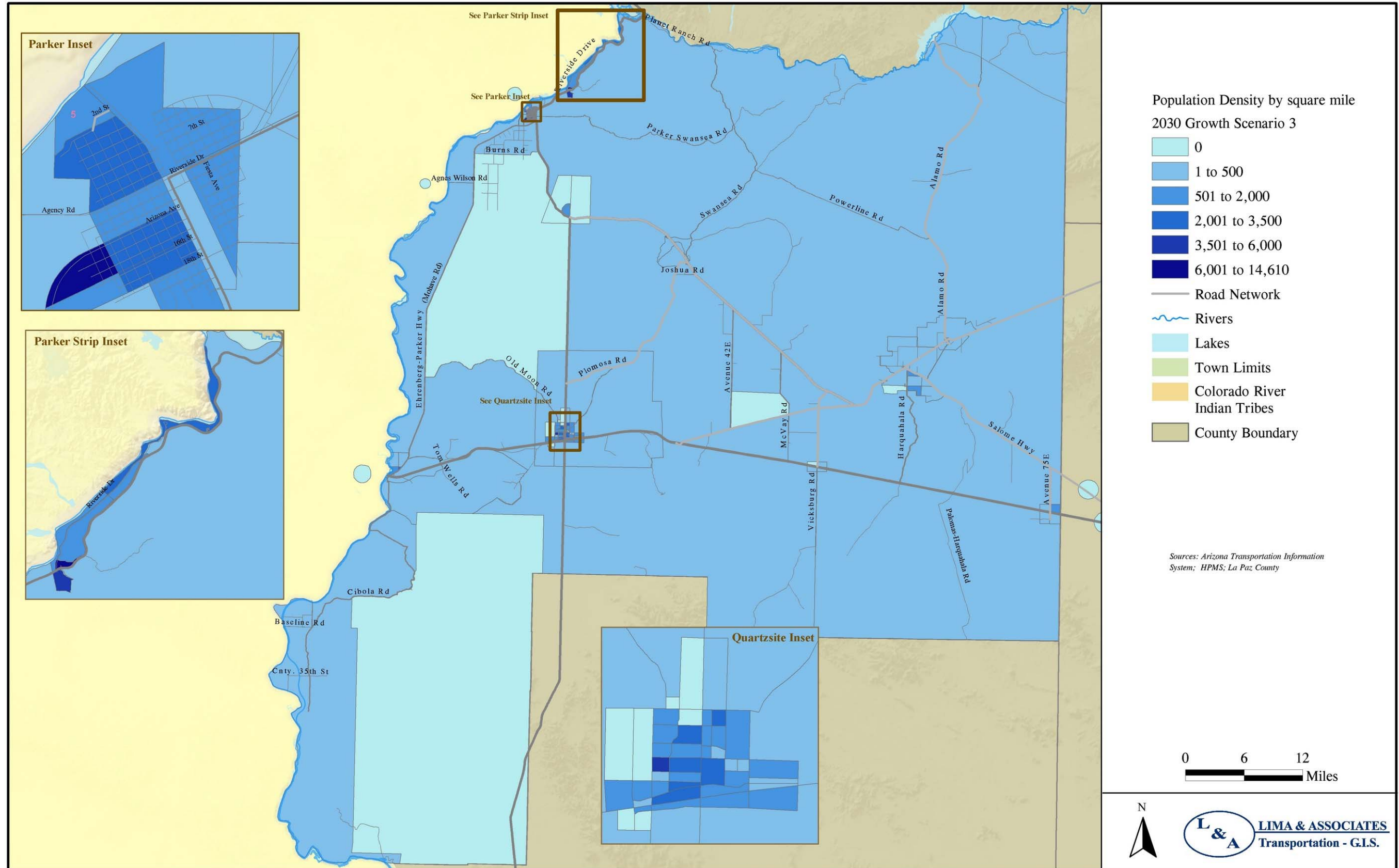
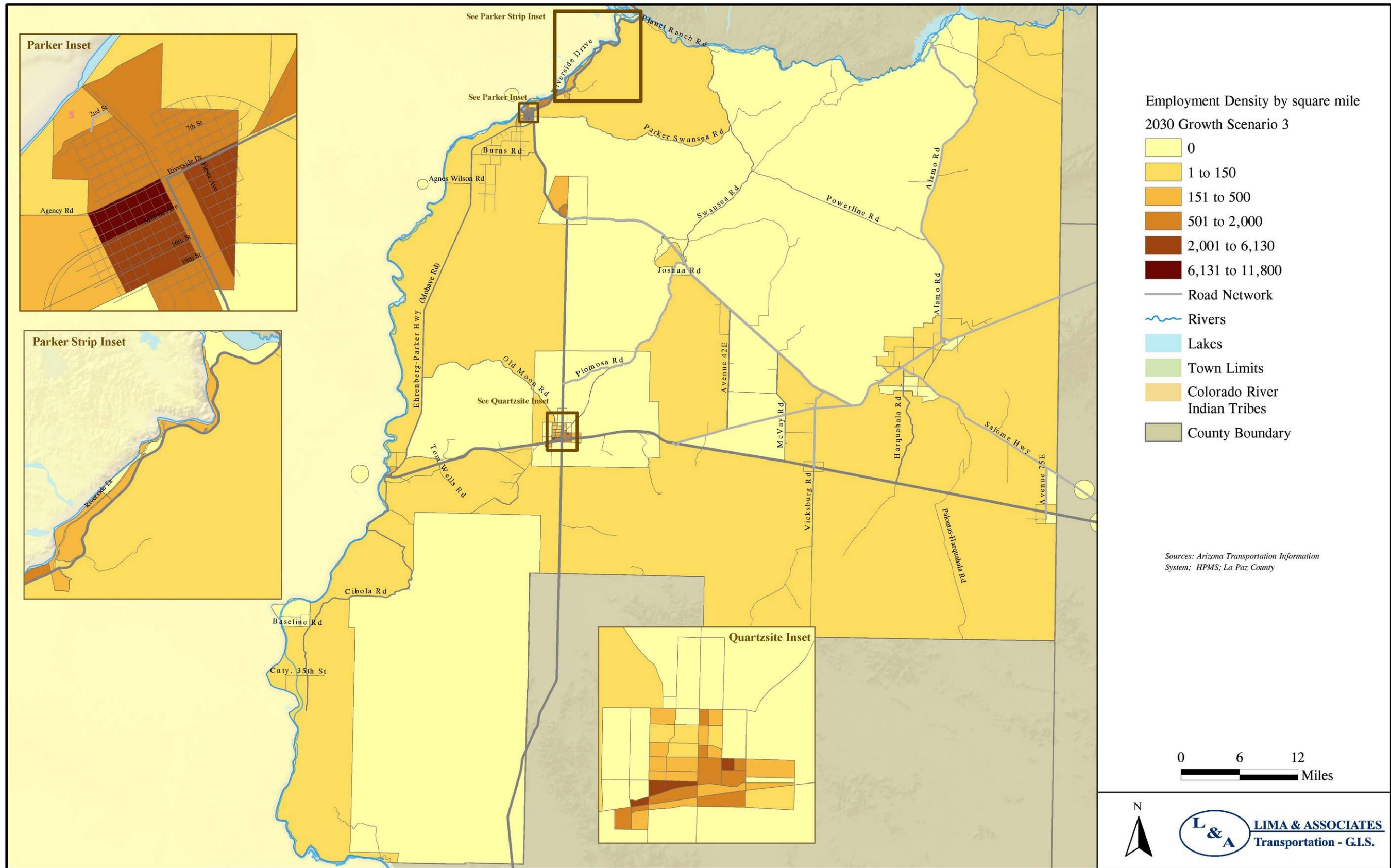


FIGURE 4-6. PROJECTED EMPLOYMENT DENSITY PER SQUARE MILE – 2030



## **FUTURE ROAD AND TRAFFIC CONDITIONS**

This section presents the projection of future traffic volumes and the analysis of traffic capacity deficiencies. The projection of future traffic volumes is based on the 2020 and 2030 socioeconomic conditions.

### **Traffic Forecasting Methodology**

The traffic forecasting modeling process included the development and calibration of a 2009 travel demand model based on 2009 road network and 2009 socioeconomic data including dwelling units and employees. The forecasting modeling process applied the TransCAD travel demand modeling software to forecast traffic volumes for the Study Area. The development and calibration of the travel demand model is documented in *La Paz County Travel Demand Model Documentation*. The document describes the structure of the travel demand model, model parameters, model input and output data, and model validation. The 2009 travel demand model was validated against the available traffic data to replicate 2008 daily traffic volumes on roads in the County.

The steps in developing the traffic forecasting model were:

- Create 2009 model street network.
- Configure TAZs. Allocate values for land use categories to each TAZ and compute dwelling units and employees for each TAZ.
- Generate 2009 vehicle trips based on current land use.
- Distribute vehicle trips among all the TAZs.
- Assign daily vehicle trips to the model 2009 street network.
- Compare assigned daily vehicle trips to actual traffic counts and adjust model parameters until performance criteria are satisfied.

The calibrated 2009 traffic forecasting model was applied to estimate future average daily traffic volumes for the years 2020 and 2030 given projected dwelling units and employees presented in the previous sections. The average daily traffic volumes were adjusted to peak-season daily traffic volumes based on seasonal traffic data reported on ADOT's Automated Traffic Recorders (ATRs) as well as the ratio of total dwelling units to occupied dwelling units reported in the 2000 US Census.

### **Projection of Future Traffic Volumes**

#### ***Base Road Network***

To identify potential future traffic capacity deficiencies, future average daily traffic volumes were estimated for a Base Future Road Network with both the projected 2020 and 2030 socioeconomic conditions.



The Base Future Road Network is comprised of the following roads:

- The future Quartzsite road functional classified roads identified in the *Town of Quartzsite General Plan*
- The future road function classified roads for the Town of Parker plus the Parker annex identified in the *Town of Parker General Plan*
- Existing County roads with existing number of lanes in the 2009 road network outside of the Town of Parker and the Town of Quartzsite
- Additional County roads in selected areas in recognition of proposed future developments
- Existing State routes SR 95, SR 72, and US 60 with existing number of lanes
- Existing I-10 mainline and interchanges with existing number of lanes

Figure 4-7 illustrates the functional classified roads in the Base Future Network and Figure 4-8 illustrates the number of lanes.

### **Capacity Deficiency Analysis Methodology**

The La Paz County TransCAD travel demand model previously discussed was used to estimate 2020 and 2030 daily traffic volumes for the Base Road Network using the 2020 and 2030 socioeconomic data, respectively (See Appendix A, Working Paper 2). The 2020 and 2030 daily traffic volumes represent off-peak season traffic volumes and were adjusted to reflect peak-season traffic volumes. The peak traffic season in La Paz County occurs from November through March due to an influx of winter visitors enjoying the winter climate and recreational activities.

#### ***Road Segment Capacity Deficiency***

Road capacity was analyzed using LOS that was previously described in Chapter 3. Levels of service range from LOS A to LOS F where LOS A represents the free flow of traffic with minimum interruptions and delay, and LOS F represents high congestion with significant delay and occasional blockage of intersections stopping traffic on particular road segments. Levels of service B-C are generally acceptable in rural areas and levels of service C-D are generally acceptable in urban areas.

#### ***Passing Lane Analysis***

Although a road segment may have adequate total capacity in both directions, the directional traffic volume combined with high heavy vehicle volume may warrant passing lanes. Passing lanes are currently located at the following locations (Table 4-5):

FIGURE 4-7. BASE ROAD NETWORK FUNCTIONAL CLASSIFICATION

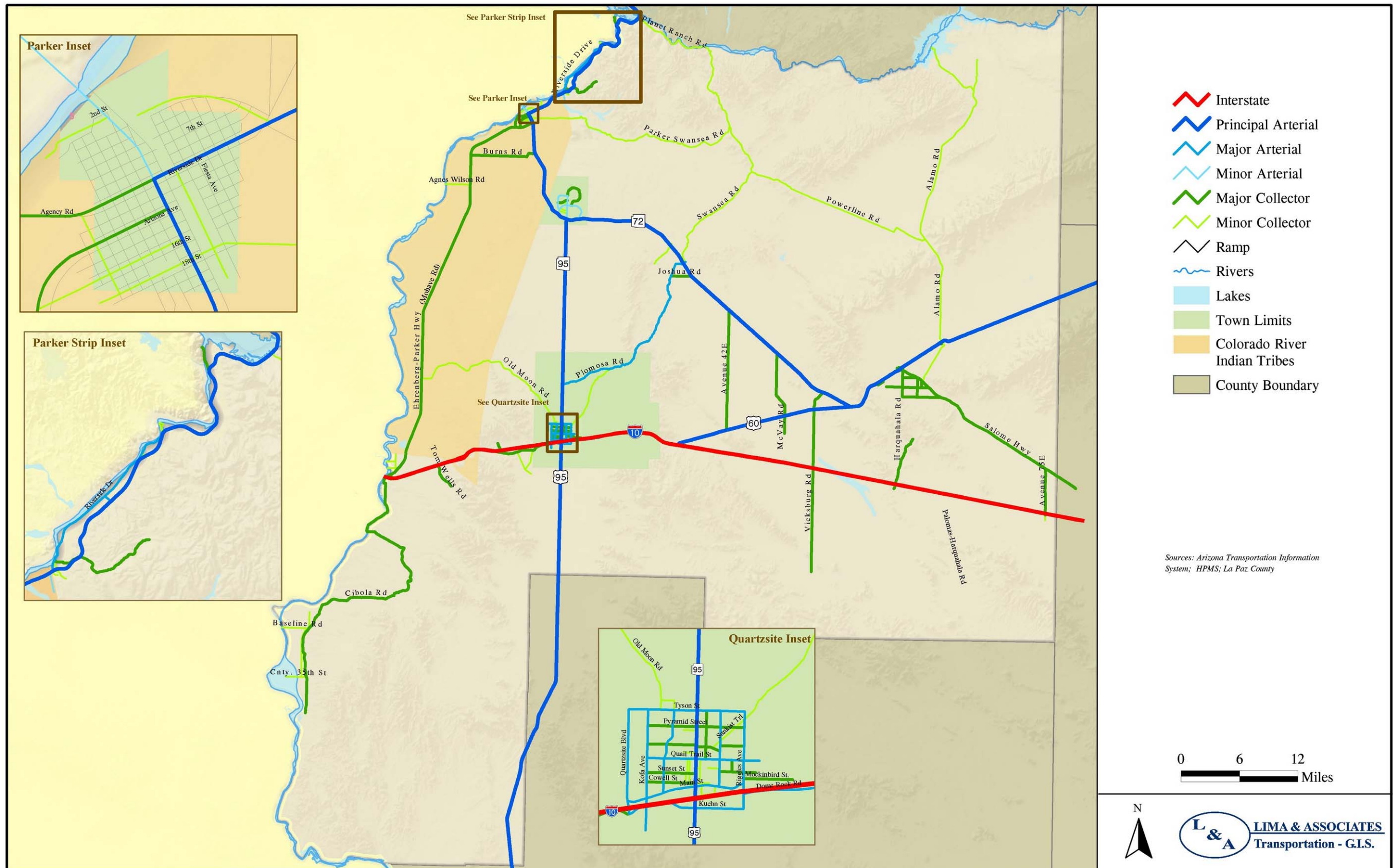
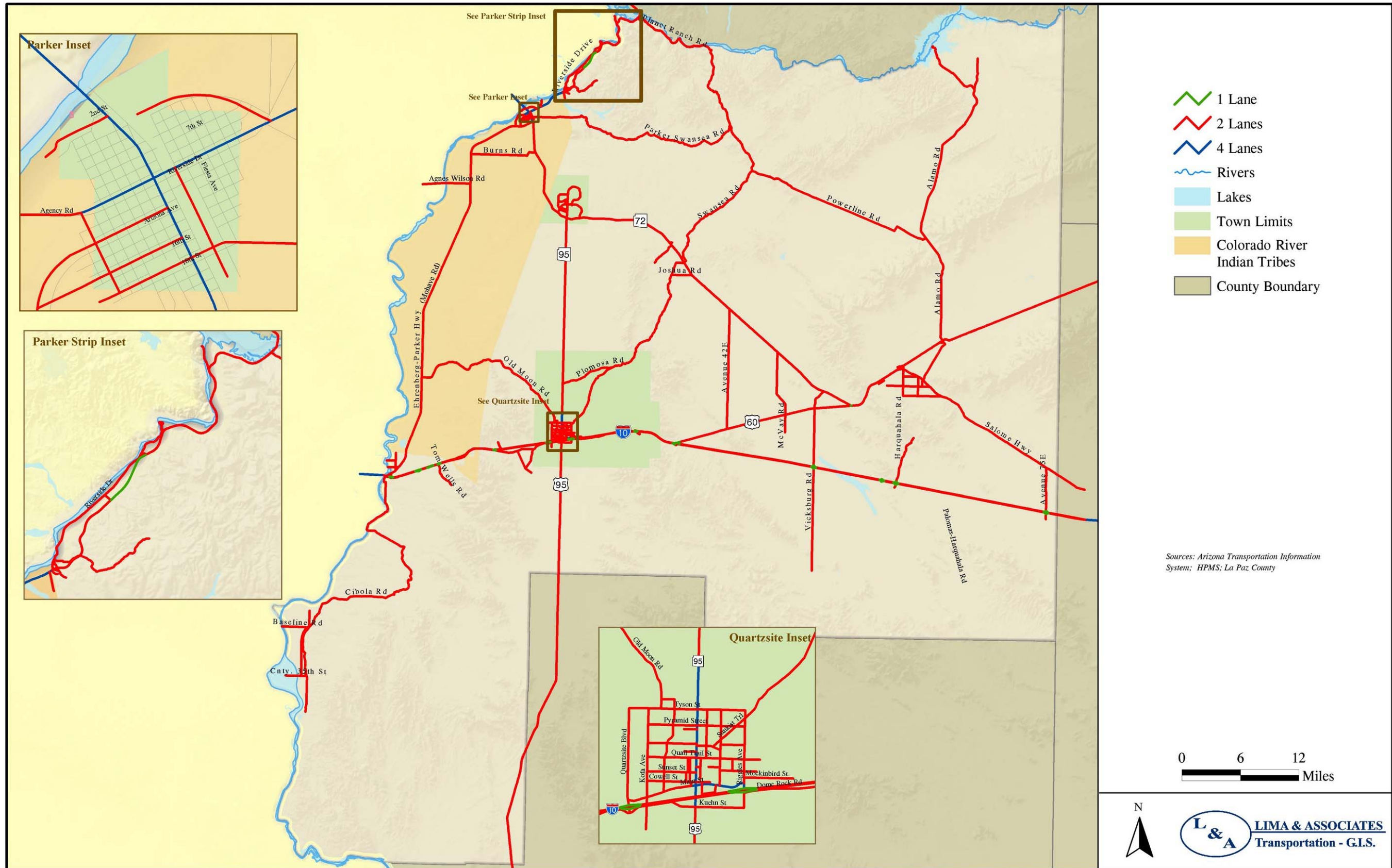


FIGURE 4-8. BASE ROAD NETWORK NUMBER OF LANES



**TABLE 4-5. CURRENT LOCATIONS OF PASSING LANES**

Route	Passing Lane		Terrain
	Begin Mile Post	End Mile Post	
US 95 NB	73.12	75.12	Level
SR 95 NB	116.00	117.34	Level
SR 95 SB	119.46	118.10	Level
SR 95 NB*	129.00	130.00	Level
SR 95 SB*	130.00	131.00	Level
SR 95 SB	153.29	149.52	Rolling
SR 95 SB	154.88	154.30	Rolling

\*Approximate mileposts

Research conducted by the Kansas Department of Transportation presents suggested minimum AADT values to prioritize the addition of passing lanes for rural two-lane highways at the network level (see Table 4-6). These values are based on the *Highway Capacity Manual (HCM)* level-of-service procedures for rural two-lane highways. The next step for implementing passing lanes would then be further evaluation of a potential passing lane at the project level. It is important to note that the tables do not include recreational vehicles and busses. This Study considered the next higher level of percent of trucks in the tables. For example, if the percentage of heavy vehicles is 20 percent, then the level for 30 percent trucks was used to account for additional recreational vehicles and buses.

**TABLE 4-6. SUGGESTED MINIMUM AVERAGE ANNUAL DAILY TRAFFIC (AADT) FOR RURAL TWO-LANE HIGHWAYS FOR LOS C THAT WOULD WARRANT PASSING LANE(S)**

% Trucks		Projected Design Year AADT Level Terrain					Projected Design Year AADT Rolling Terrain				
		10	15	20	30	40	10	15	20	30	40
		0%	6200	5890	5600	5110	4690	4850	4240	3770	3090
20%	5630	5340	5080	4630	4260	4500	3940	3500	2870	2430	
40%	5190	4930	4690	4280	3930	4040	3540	3140	2570	2180	
60%	4900	4660	4430	4040	3710	3690	3230	2870	2350	1990	
80%	4760	4520	4300	3920	3600	3460	3030	2690	2210	1670	
100%	4620	4380	4180	3800	3490	3230	2830	2520	2060	1740	

Source: Final Report. Review of the Effectiveness, Location, Design, and Safety of Passing Lanes in Kansas. Kansas State University, October 1999.

Assumptions: K=0.15, Directional split = 60/40, PHF=0.92, Lane width=12ft, Shoulder width=6ft  
 Shaded numbers were used for threshold AADTs for level and rolling terrain, respectively.

## Capacity Deficiency Analysis Results

### 2020 Capacity Deficiency Analysis

Figure 4-9 illustrates the 2020 average daily traffic volumes and levels of service for the Base Future Network. The 2020 daily traffic volumes were adjusted to represent peak-seasonal traffic and were then estimated for the roads in the Base Road Network (see Figure 4-10). Table 4-7 summarizes the road segments that are at, near, or over capacity. These segments are candidates for widening. Table 4-8 lists candidate locations for passing lanes in 2020.

**TABLE 4-7. 2020 CAPACITY DEFICIENCIES FOR ROADS AT, NEAR, OR OVER CAPACITY**

Road	Location
<b>Off-Peak Season Traffic</b>	
SR 95	Beacon Rd./Riverside Dr. to Rio Vista Rd.
<b>Peak Season Traffic</b>	
Kuehn Street, Quartzsite	Riggles Ave. to Quartzsite Blvd.
SR 95, La Paz County	Beacon Rd./Riverside Dr. to Cienega Springs Rd.
Ehrenberg-Parker Hwy	Juneau Ave. to Sourdough Rd.
I-10 Exit 17	EB off ramp and WB on ramp

Note: Roads listed in table are candidates for widening.

**TABLE 4-8. 2020 CANDIDATE LOCATIONS FOR PASSING LANES**

Road	Location
<b>Off-Peak Season Traffic</b>	
US 60	Alamo Road/Centennial Park Rd. to SR 72
SR 72	Willamette Dr. to SR 95
SR 95	Quartzsite Northern Boundary to SR 72
SR 95	SR 72 to Mohave Rd.
SR 95	Beacon Rd./Riverside Dr. to northern County Boundary
SR 95	Kuehn St to US 95 MP 99
<b>Peak Season Traffic</b>	
US 60	Alamo Road/Centennial Park Rd. to Vicksburg Rd.
SR 72	Avenue 42E to SR 95
SR 95	Quartzsite northern boundary to SR 72
SR 95	SR 72 to Mohave Road
US 95	Kuehn St to US 95 MP 99

Candidate locations based on a threshold daily traffic volume of approximately 4,300 AADT for level terrain and 2,300 AADT for rolling terrain.

**2030 Capacity Deficiency Analysis**

Similar to the analysis of the 2020 projected traffic volumes, 2030 average daily traffic volumes were estimated for the Base Future Road Network with the projected 2030 socioeconomic conditions (see Figure 4-11). Figure 4-12 illustrates the 2030 levels of service adjusted for the peak-traffic season. Table 4-9 lists the road segments that are at, near, or over capacity. These segments are candidates for widening by 2030. Candidate locations for passing lanes by 2030 are listed in Table 4-10.

**TABLE 4-9. 2030 CAPACITY DEFICIENCIES/NEEDS FOR ROADS AT, NEAR, OR OVER CAPACITY**

<b>Road</b>	<b>Location</b>
<b>Off- Peak Season Traffic</b>	
Ehrenberg-Parker Hwy	Juneau Ave. to Sourdough Rd.
SR 95	Beacon Rd./Riverside Dr. to Rio Vista Rd
<b>Peak Season Traffic</b>	
Kuehn St., Quartzsite	Riggles Ave. to Quartzsite Blvd
SR 95, La Paz County	Beacon Rd/Riverside Dr. to Cienega Springs Rd
Riverside Drive, Parker Strip	Golf Club Drive to SR 95 Exit 153 Crossing
Ehrenberg-Parker Hwy	Juneau Ave. to Comber Blvd
I-10 Exit 17	EB off ramp and WB on ramp

Note: Roads listed in table are candidates for widening.

**TABLE 4-10. 2030 CANDIDATE LOCATIONS FOR PASSING LANES**

<b>Road</b>	<b>Location</b>
<b>Off-Peak Season Traffic</b>	
California Ave	MP 144.4 to California border
US 60	Alamo Road/Centennial Park Rd. to Vicksburg Rd.
SR 72	Avenue 42E to SR 95
SR 95	Quartzsite Northern Boundary to SR 72
SR 95	SR 72 to Mohave Rd
SR 95	Beacon Rd./Riverside Dr. to northern County Boundary.
SR 95	Kuehn St to SR 95 MP 99
<b>Peak Season Traffic</b>	
California Ave.	MP 144.4 to California border
US 60	Alamo Road/Centennial Park Rd. to Vicksburg Rd.
US 60	I-10 to Ave. 42E
SR 72	Ave. 42E to SR 95
SR 95	Quartzsite Northern Boundary to SR 72
SR 95	Lakeside Blvd. to northern County Boundary
US 95	Kuehn St to southern County Boundary

Candidate locations based on a threshold daily traffic volume of approximately 4,300 AADT for level terrain and 2,300 for rolling terrain.

FIGURE 4-9. 2020 BASE AVERAGE DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - OFF-PEAK SEASON

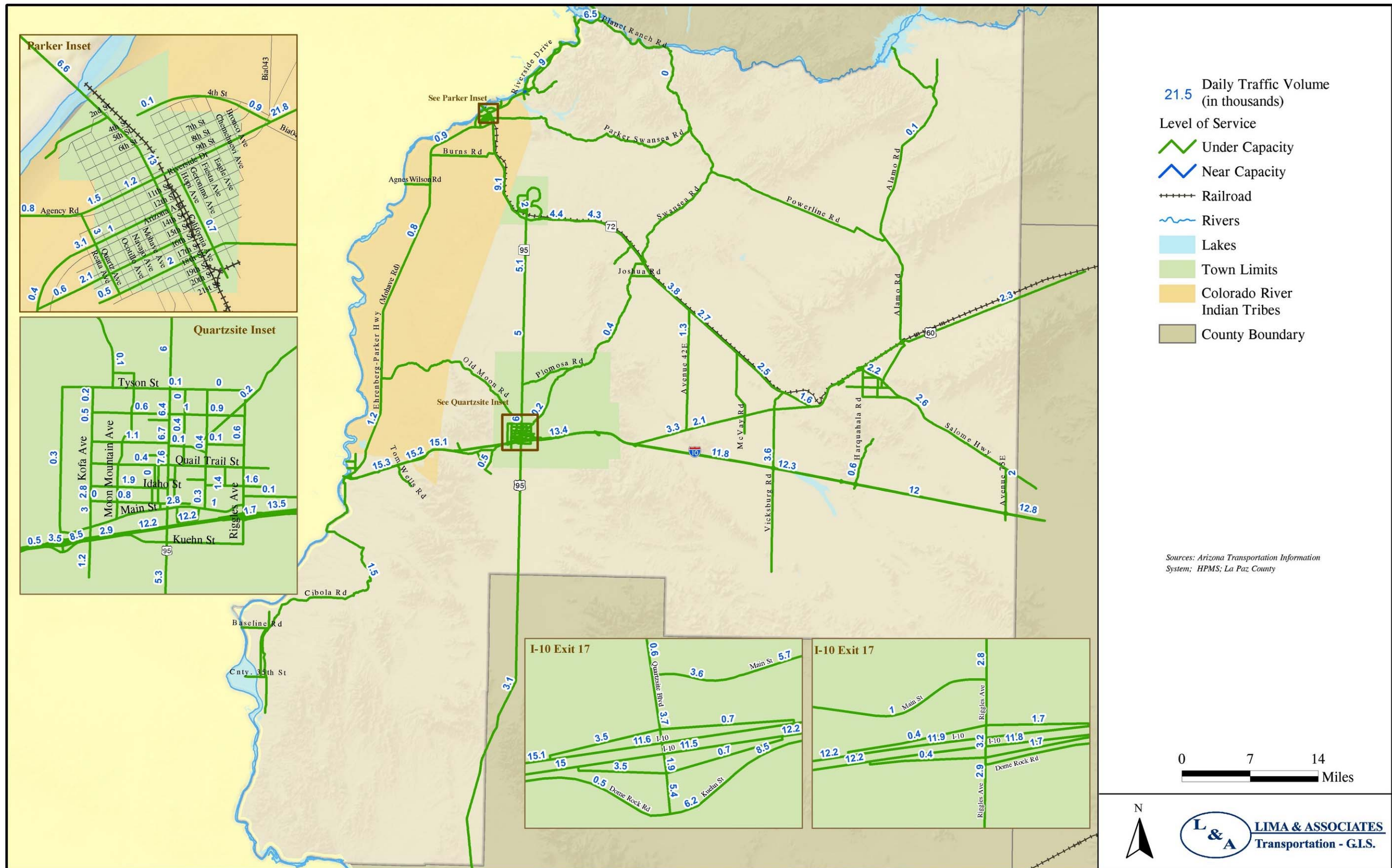


FIGURE 4-10. 2020 BASE AVERAGE DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - PEAK SEASON

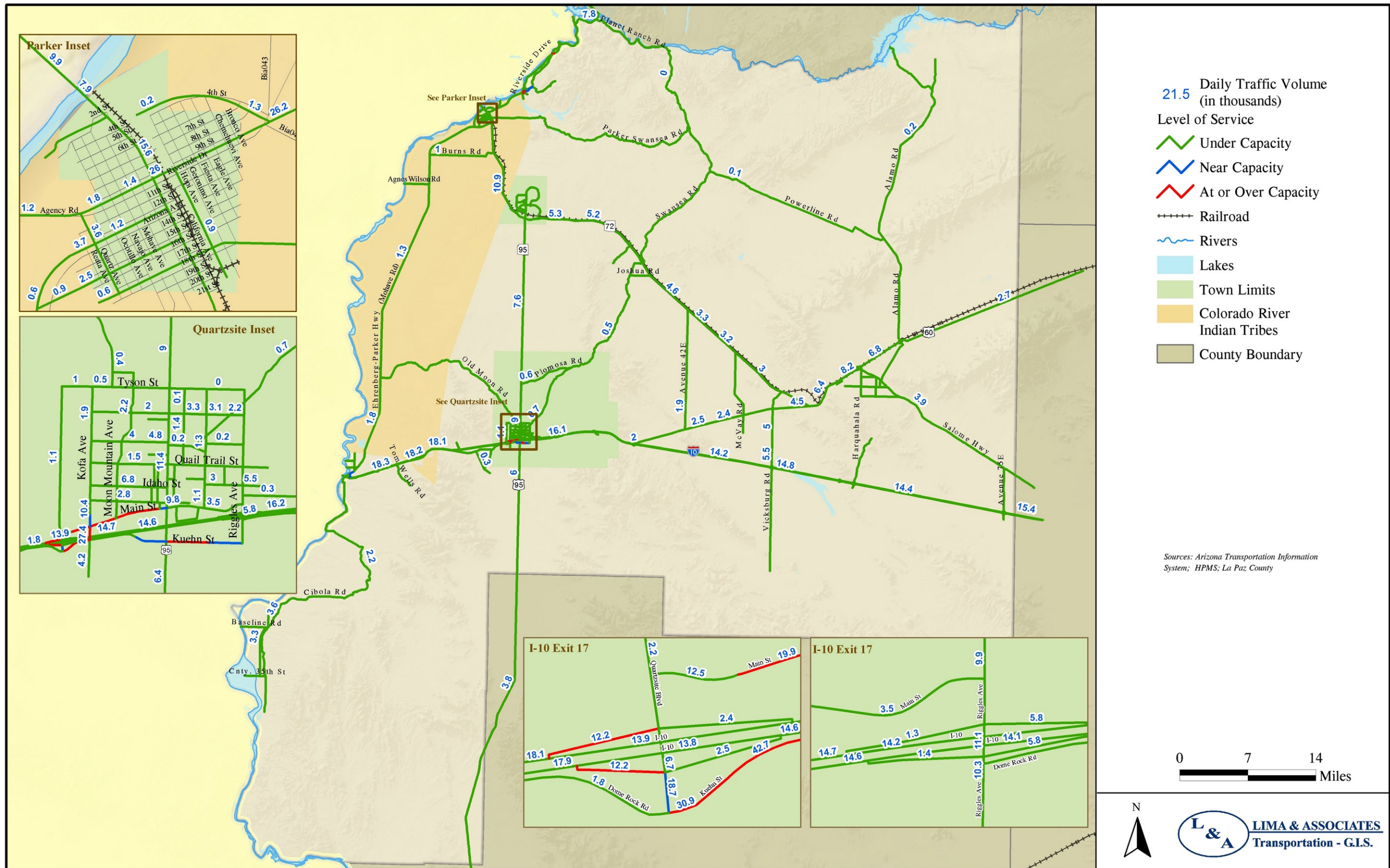




FIGURE 4-11. 2030 BASE AVERAGE DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE – OFF-PEAK SEASON

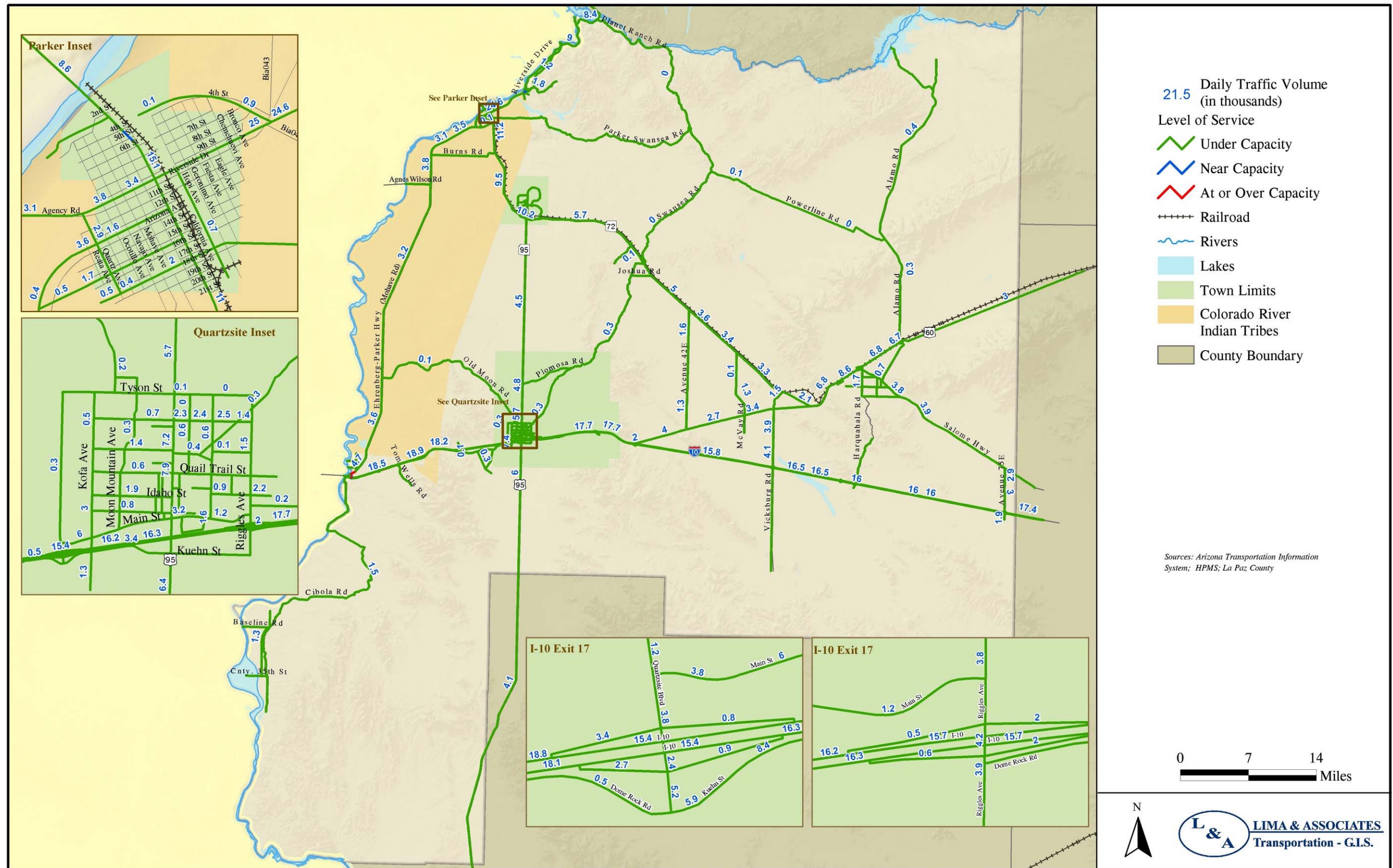
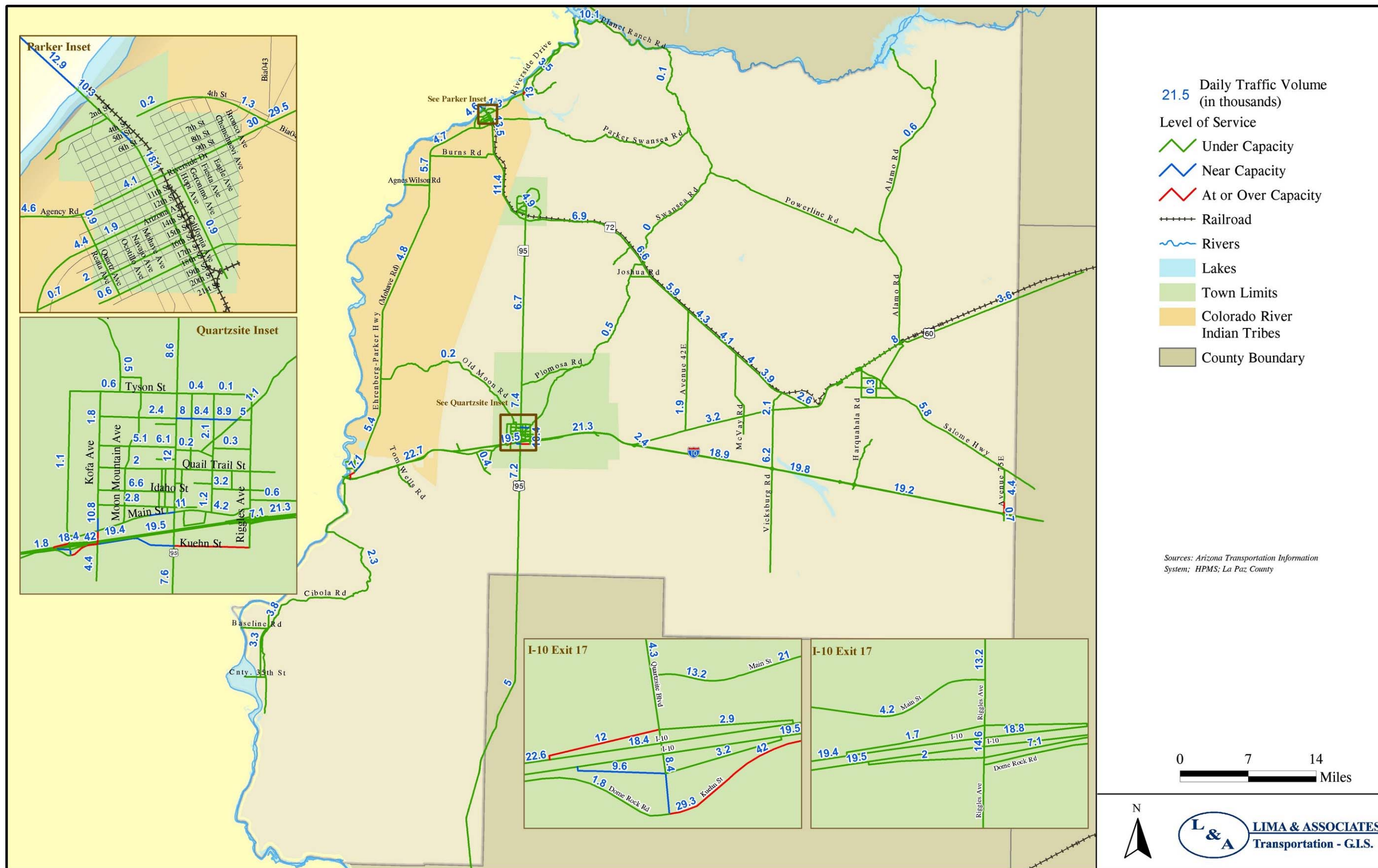


FIGURE 4-12. 2030 BASE AVERAGE DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - PEAK SEASON



## HIGHWAY-RAIL CROSSINGS

The significance of highway-rail crossings relates to the volume of train traffic and the volume of motor vehicle traffic on the roadway. The Arizona & California Railroad (ARZC) operates between two and four trains daily. Moreover, with the exception of Riverside Drive (SR 95) in downtown Parker, all of the rail crossings in the Study Area traverse comparatively lightly traveled roadways. Hence, the potential for train-motor vehicle crashes at crossings is less than in areas with higher train volumes and/or motor vehicle volumes on the roadways being crossed by the railroad. Table 4-11 is an inventory of the crossings in the La Paz planning area.

**TABLE 4-11. HIGHWAY-RAIL CROSSINGS WITHIN LA PAZ PLANNING AREA**

Crossing#	Type	Position	Nearest Community	Roadway	Protection	
					Crossbucks	Gates
025909Y	Public	At Grade	Wenden	Avenue 74E	Yes	No
025910T	Public	At Grade	Wenden	Avenue 69E	Yes	No
025911A	Private	At Grade	Wenden	El Paso Gas Co.	No	No
025912G	Public	At Grade	Wenden	Second St.	Yes	Yes
025913N	Public	At Grade	Wenden	Avenue 64E	Yes	No
025915C	Public	At Grade	Salome	Avenue 62E	Yes	No
025916J	Public	At Grade	Salome	Hall St.	Yes	Yes
025917R	Public	At Grade	Salome	Center St.	Yes	Yes
025918X	Public	At Grade	Salome	Avenue 59E	Yes	No
025919E	Public	At Grade	Vicksburg	Vicksburg Rd.	Yes	No
025920Y	Private	At Grade	Vicksburg		No	No
025921F	Public	At Grade	Bouse	Fewell Ranch Rd	Yes	No
025922M	Public	At Grade	Bouse	Avenue 46E	Yes	No
025923U	Private	At Grade	Bouse		No	No
025924B	Public	At Grade	Bouse	Main St	Yes	Yes
025925H	Public	At Grade	Bouse	Willamette Dr	Yes	No
025926P	Private	At Grade	Parker	Shea Rd	No	No
025927W	Private	At Grade	Parker	Mohave Rd	No	No
025928D	Public	At Grade	Parker	21 <sup>st</sup> St.	Yes	No
025929K	Public	At Grade	Parker	California Ave	Yes	No
025930E	Private	At Grade	Parker		No	No
025931L	Public	At Grade	Parker	18th St.	Yes	No
025932T	Private	At Grade	Parker		No	No
025933A	Public	At Grade	Parker	11th St	Yes	No
025934G	Public	At Grade	Parker	Riverside Drive	Yes	No
914397N	Private	At Grade	Parker	Parker Rd	Yes	No
914398V	Private	At Grade	Parker		Yes	No
914399C	Public	At Grade	Parker	Central Av	Yes	No

In addition to the safety concerns related to operation of trains across roadways, the noise of the locomotive horns at the crossings is becoming an increasing concern. In heavily populated areas with high train volumes, “quiet zones” are sometimes established where additional gates and other safety appliances are installed at crossings, making the horn signaling less necessary.

Railroads and the Federal Railroad Administration both encourage the closing of at-grade highway rail crossings where feasible to reduce train-vehicle collisions, pedestrian deaths, and vehicle delay. Selecting one of the following options can eliminate grade crossings:

- Constructing a connector road, or improving roadways along alternate routes to direct traffic to an adjacent crossing.
- Dead-ending affected streets and rerouting traffic, creating cul-de-sacs.
- Constructing grade separation.
- Relocating or consolidating railroad operations.
- Some crossings may have vehicle volumes too low to justify expenditures for the costs of automated warning devices or grade separation. Railroad crossing candidates identified for railroad closure or consolidation include:
  - Crossings within a quarter mile of one another that is part of the same highway or street network.
  - Crossings where vehicular traffic can be safely and efficiently redirected to an adjacent crossing.
  - Crossings where a high number of crashes have occurred.
  - Crossings with reduced sight distance because of the angle of the intersection, curve of the track, trees, undergrowth or man-made obstructions.
  - Adjacent crossings where one is replaced with a bridge or upgraded with new signaling devices.
  - Several adjacent crossings when a new one is being built.
  - Complex crossings where it is difficult to provide adequate warning devices or which have severe operating problems--such as multiple tracks, extensive railroad-switching operations, or long periods of blocked crossings.
  - Private crossings for which no responsible owner can be identified.
  - Private crossings where the owner is unable or unwilling to fund improvements and alternate access to the other side of the tracks is reasonably available.

### ***Grade Separated Railroad Crossings***

When railroad and vehicle traffic volumes reach a high level, the most effective solution may be to separate highway and rail traffic. Generally, there are two options for grade separation: a below-grade (underpass) crossing, and an above-grade (overpass) crossing. An overpass

crossing is when a roadway bridge is built to span the railroad tracks. An underpass crossing is when the roadway grade is depressed under the railroad tracks.

Due to both the high cost of grade separation and the low daily train volumes, grade-separate crossings are rare on short line railroads such as the ARZC, unless necessitated by area topography.

## **SUMMARY OF ROAD DEFICIENCIES AND POTENTIAL NEEDS**

Table 4-12 summarizes both capacity and non-capacity deficiencies. Non-capacity deficiencies include safety and geometric deficiencies and capacity deficiencies include inadequate number of lanes to efficiently accommodate traffic volumes. Potential improvements to address the deficiencies and potential needs are also listed in Table 4-12. Capacity deficiencies were identified by both area stakeholders and through the analysis of capacity deficiencies for the Base Network discussed above. The non-capacity deficiencies and potential needs were identified through meetings with area stakeholders, review of previous plans and studies documented in Chapter 2, and by field observations made by the Study team.

Note that the potential improvements listed in Table 4-12 are suggested for further analysis. These improvements are evaluated later in this report including an analysis of capacity improvements for road improvements such as road widening, passing lanes, potential road realignments, and new roads.

**TABLE 4-12. LA PAZ COUNTY ROAD NEEDS AND DEFICIENCIES**

Condition/Need	Potential Improvements for Further Analysis
<b>Countywide Roads</b>	
<ul style="list-style-type: none"> <li>Roads Countywide are narrow and many lack shoulders.</li> </ul>	<ul style="list-style-type: none"> <li>Revise roadway standards if necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Odd-angle intersections in Salome and other County locations.</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruct with standard lanes and shoulders.</li> </ul>
<ul style="list-style-type: none"> <li>Need to accommodate flooding.</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruct roads with right-angle intersections.</li> </ul>
<ul style="list-style-type: none"> <li>Need to upgrade County roads as development occurs</li> </ul>	<ul style="list-style-type: none"> <li>Construct drainage facilities/bridges.</li> </ul>
<ul style="list-style-type: none"> <li>Plans for 3 traffic circles in Ehrenberg—one on each side of I-10 TI, also one where Parker-Ehrenberg (Mohave) Road meets access road.</li> </ul>	<ul style="list-style-type: none"> <li>Identify/construct County roads as development occurs.</li> </ul>
<ul style="list-style-type: none"> <li>Roundabout is planned at intersection of Vicksburg Road and US 60.</li> </ul>	<ul style="list-style-type: none"> <li>Construct proposed 3 traffic circles in Ehrenberg.</li> </ul>
<ul style="list-style-type: none"> <li>Cibola Bridge may be a candidate for Stimulus funds.</li> </ul>	<ul style="list-style-type: none"> <li>Construct roundabout at US 60/Vicksburg.</li> </ul>
<ul style="list-style-type: none"> <li>Consider crossing Alamo Road into Mohave County. Link up with road into Kingman. Alternate route between I-10 and I-40.</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitate/reconstruct Cibola Bridge.</li> </ul>
	<ul style="list-style-type: none"> <li>Review potential location and assess general feasibility of alternate route between I-10 and I-40.</li> </ul>
<b>Parker Streets</b>	
<ul style="list-style-type: none"> <li>Tractor-trailer rigs park on California Avenue and within striped median. Creates sight-distance issues for persons exiting driveways of commercial establishments.</li> </ul>	<ul style="list-style-type: none"> <li>Enforce parking restrictions.</li> </ul>
<ul style="list-style-type: none"> <li>Town has ordinance prohibiting parking on California Avenue within 100 feet of an intersection. Town has not discussed implementing a similar ordinance on Riverside.</li> </ul>	<ul style="list-style-type: none"> <li>Implement parking ordinance on Riverside.</li> </ul>
<ul style="list-style-type: none"> <li>Part of street system needs to be resurfaced. No current pavement improvement program.</li> </ul>	<ul style="list-style-type: none"> <li>Develop plan/schedule to resurface or reconstruct Parker streets.</li> </ul>
<ul style="list-style-type: none"> <li>“Parker Central”—the original one-square-mile town site—is built out. Need to add curb and gutter to Hopi and Geronimo Streets, also sidewalks.</li> </ul>	<ul style="list-style-type: none"> <li>Resurface/reconstruct streets, add curb and gutter and sidewalks.</li> </ul>
<ul style="list-style-type: none"> <li>Town has obtained a transportation enhancement grant that will be used to improve California Avenue from 7th Street to the Colorado River Bridge.</li> </ul>	<ul style="list-style-type: none"> <li>Construct street enhancements on California Avenue.</li> </ul>
<ul style="list-style-type: none"> <li>Town does not have a capital improvement program for roadways. A Streets and Traffic Committee handles roadway improvement issues.</li> </ul>	<ul style="list-style-type: none"> <li>Develop capital improvement program building on recommendations of this Study.</li> </ul>
<ul style="list-style-type: none"> <li>No warrant studies have been conducted—two traffic signals currently exist within Parker Central—at California and Arizona, and at California and Riverside.</li> </ul>	<ul style="list-style-type: none"> <li>Identify locations to recommend traffic warrant studies.</li> </ul>
<ul style="list-style-type: none"> <li>Projected higher traffic volumes on California and Riverside.</li> </ul>	<ul style="list-style-type: none"> <li>Widen roads/intersections.</li> </ul>
	<ul style="list-style-type: none"> <li>Realign SR 95.</li> </ul>

**TABLE 4-12. LA PAZ COUNTY ROAD NEEDS AND DEFICIENCIES (Continued)**

Condition/Need	Potential Improvements for Further Analysis
<b>Quartzsite Streets</b>	
<ul style="list-style-type: none"> <li>• Drainage issues with washes.               <ul style="list-style-type: none"> <li>○ Box culvert for Plymouth Wash stopped due to lack of matching funds.</li> <li>○ Kuehn Road has a low-water crossing of Tyson Wash. Need bridge over Tyson Wash. Flowing water degrades shoulders.</li> <li>○ Kuehn Road congested during peak season. Need to widen and straighten Kuehn Road to accommodate 18-wheelers and RVs.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Improve drainage at washes.</li> <li>• Construct box culvert at Plymouth Wash.</li> <li>• Construct bridge across Tyson Wash.</li> </ul>
<ul style="list-style-type: none"> <li>• Congestion, connectivity issues along SR 95               <ul style="list-style-type: none"> <li>○ Connect I-8, I-10, and I-40. SR 95 is logical connector. Environmental restrictions preclude developing or improving roadway in California.</li> <li>○ Consider need for by-pass along Riggles Road alignment—or further east—connecting I-10 to Plomosa Road.</li> <li>○ Consider the need for a by-pass from I-10 MP 11 up to Tyson Road.</li> <li>○ Consider the need for a by-pass on SR 95 south of Town.</li> <li>○ Long Range—new road connecting SR 95 with SR 72 and Ehrenberg-Parker Highway (Mohave Road).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Redesign/widen Kuehn Road, improve intersections.</li> <li>• Realign SR 95 in the vicinity of Quartzsite, Parker, improve SR 95 to 4 lanes.</li> </ul>
<ul style="list-style-type: none"> <li>• Division of Town by I-10, SR 95 sometimes interferes with first responders.</li> </ul>	<ul style="list-style-type: none"> <li>• Review potential crossing and priority treatments for emergency vehicles.</li> </ul>
<ul style="list-style-type: none"> <li>• General Motors is looking at Yuma Proving Grounds for testing facility.</li> </ul>	<ul style="list-style-type: none"> <li>• Review location in regard to access.</li> </ul>
<b>Colorado River Indian Tribes Roads</b>	
<ul style="list-style-type: none"> <li>• MVD office is opposite the T-intersection of Mohave Road with SR 95. Motorists from Mohave Road are crossing SR 95 to reach MVD. CRIT would like a traffic warrant study.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct traffic signal warrant study</li> </ul>
<ul style="list-style-type: none"> <li>• Engineering for a re-design of the intersection of Burns Road/SR 95 has been completed. The Tribes hope that it will qualify for stimulus funding. Requests have been made to the BIA.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct SR 95/Burns Road intersection</li> </ul>
<ul style="list-style-type: none"> <li>• Several bridges on Mohave Road are only rated for 22 tons, but routinely used by heavier trucks. Mohave Road, a de-facto part of the State system, is deteriorating, and the Tribal allocation is insufficient to maintain it. Heavy truck traffic is wearing out road. The road is the main arterial for the Reservation and is used by local farmers, etc. Southern end is in poor condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct Mohave Road and Bridge</li> </ul>
<ul style="list-style-type: none"> <li>• Tribal Complex located on the SE Corner of Mohave/Second Ave is a major traffic generator.</li> </ul>	<ul style="list-style-type: none"> <li>• Review traffic forecasts for potential deficiencies.</li> </ul>
<ul style="list-style-type: none"> <li>• Agnes Wilson Road has heavy truck use.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify potential alternative routes.</li> </ul>
<b>I-10</b>	
<ul style="list-style-type: none"> <li>• I-10 Exit 17 needs improvement to specifications of Exit 19 to accommodate 18-wheelers &amp; RVs.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct Exit 17 to better accommodate heavy vehicles.</li> </ul>
<ul style="list-style-type: none"> <li>• Need to look at traffic operations stop sign at Exit 17 exit.</li> </ul>	<ul style="list-style-type: none"> <li>• Review traffic forecasts on Exit 17.</li> </ul>

**TABLE 4-12. LA PAZ COUNTY ROAD NEEDS AND DEFICIENCIES (Continued)**

Condition/Need	Potential Improvements for Further Analysis
<ul style="list-style-type: none"> <li>• Ehrenberg Port-of-Entry (POE) needs to be upgraded--#1 POE in State in traffic volume.                             <ul style="list-style-type: none"> <li>○ POE reconstruction is on hold due to funding downturn.</li> </ul> </li> <li>• I-10 Exit needs to be reconstructed and enhanced.</li> <li>• Rock cut area, I-10, MP 8 through MP 10, both directions.</li> <li>• The median crossings on I-10 from milepost 0-71 are in need of paving.</li> <li>• Rest Areas are expensive. Ehrenberg rest area costs \$14,000 or more to maintain monthly.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct Ehrenberg POE.</li> <li>• Reconstruct Exit 1.</li> <li>• Identify potential rockfall protection measures.</li> <li>• Pave I-10 median crossings.</li> <li>• Identify potential private/public rest area opportunities.</li> </ul>
<b>SR 95</b>	
<ul style="list-style-type: none"> <li>• Intersection of SR 95 and 95 Spur “Parker Dam Road” needs to be reconfigured.</li> <li>• Pavement condition on Riverside is poor</li> <li>• Need bike lanes, especially for winter visitors.</li> <li>• Rumble strips on shoulders inhibit bicycle travel.</li> <li>• Need to repave passing lanes.</li> <li>• Need to correct passing zone on blind turn north of Resort Road on SR 95 at MP 155.</li> <li>• Need additional passing lanes on SR 95 between Parker and Lake Havasu City.</li> <li>• SR 95 at MP 152 appears to be subsiding—may be due to culvert installation.</li> <li>• Motorists SB on SR 95 at Blue Water Casino entrance cannot see traffic signal at sunset.</li> <li>• Putting in culverts on SR 95 at Holiday Harbor—MP 157—short passing lane needs reassessment</li> <li>• 12-Mile Junction (SR 95/SR 72) still perceived as dangerous.</li> <li>• SR 95 needs improvement from the Mexico Border to I-40.</li> <li>• Rock cut area on SR 95 between MP 158 and MP 161.7.</li> </ul>	<ul style="list-style-type: none"> <li>• Redesign/Reconstruct intersection.</li> <li>• Repave Riverside.</li> <li>• Improve shoulders for bicycle suitability.</li> <li>• Repave passing lane</li> <li>• Conduct passing zone study.</li> <li>• Identify candidate passing lanes/widen SR 95.</li> <li>• Reconstruct SR 95 at MP 1 52.</li> <li>• Review traffic signal location at entrance with ADOT.</li> <li>• Discuss project at Holiday Harbor with ADOT.</li> <li>• Assess the new signal, discuss potential roundabout.</li> <li>• Widen SR 95, realign SR 95 in vicinity of Quartzsite, Parker.</li> <li>• Identify potential rockfall protection measures.</li> </ul>
<b>SR 95 Spur</b>	
<ul style="list-style-type: none"> <li>• A new Colorado River bridge is planned for Spur 95 (California Avenue)</li> </ul>	<ul style="list-style-type: none"> <li>• Construct new Spur 95 Bridge.</li> </ul>
<b>US 60</b>	
<ul style="list-style-type: none"> <li>• US 60 traffic growing in Brenda area.</li> </ul>	<ul style="list-style-type: none"> <li>• Widen US 60.</li> </ul>
<b>SR 95 - Buckskin Park Entrance</b>	
<ul style="list-style-type: none"> <li>• Geometry of entrance from North has caused motorists to lose control and overturn.</li> <li>• A passing lane on SB 95 begins right at Park entrance. Motorists confused as to whether this is a passing lane, an acceleration lane for motorists exiting the Park SB, or both.</li> </ul>	<ul style="list-style-type: none"> <li>• Redesign/reconstruct park entrance/access road to eliminate parking and provide for safe walking.</li> <li>• Improve directional/warning signing.</li> </ul>



**TABLE 4-12. LA PAZ COUNTY ROAD NEEDS AND DEFICIENCIES (Continued)**

Condition/Need	Potential Improvements for Further Analysis
<ul style="list-style-type: none"> <li>When “old road” was closed and barricaded, an ad hoc parking site was created. Additional “ad hoc” parking exists in triangle median formed by access roadways at Park entrance.</li> <li>Motorists park illegally at Park entrance, try to access trails while avoiding Park fees by climbing up roadway embankments to pedestrian bridge north of entrance, creating hazard.</li> <li>Park visitors wishing to hike old road walk up access road, which has blind corners and no shoulders and is not safe for pedestrians.</li> <li>Plans exist to convert old road to multi-use path and a TE grant for this has been applied for.</li> </ul>	<ul style="list-style-type: none"> <li>Implement signing for parking restrictions/enforce regulations.</li> <li>Identify potential parking restrictions &amp; enforcement strategy.</li> <li>Identify potential restrictions.</li> <li>Resubmit enhancement application if necessary</li> <li>Construct multi-use path.</li> </ul>
<b>SR 72</b>	
<ul style="list-style-type: none"> <li>Need to address low-water crossings on SR 72. Centennial Wash is the site of fatality on SR 72.</li> <li>SR 72 has a high percentage of commercial traffic and high travel speeds.</li> <li>Need for passing lanes and/or pull-outs.</li> <li>Narrow lanes, and no shoulders.</li> </ul>	<ul style="list-style-type: none"> <li>Construct drainage improvements across SR 72.</li> <li>Construct left-turn lanes and acceleration/ deceleration lanes.</li> <li>Construct passing lanes/pullouts.</li> <li>Widen shoulders &amp; lanes to standard cross section.</li> </ul>
<b>Harquahala Road/Salome Road</b>	
<ul style="list-style-type: none"> <li>Harquahala Road/Salome Road intersection is poor—needs to be reconstructed as T-intersection.</li> <li>County has not perfected right-of-way (ownership) along Salome Road and possibly other roads.</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruct intersection to standards.</li> <li>Identify strategy to clarify ROW ownership.</li> </ul>
<b>Vicksburg Road:</b>	
<ul style="list-style-type: none"> <li>Planning a 3” overlay on Vicksburg Road from I-10 to US 60.</li> </ul>	<ul style="list-style-type: none"> <li>Implement pavement overlay.</li> </ul>
<b>Salome Road</b>	
<ul style="list-style-type: none"> <li>Salome Road traverses open range—vehicle-animal crashes occur. Also need right-of-way fence updated on I-10.</li> </ul>	<ul style="list-style-type: none"> <li>Improve warning signs for animal crossings, provide right of way fence.</li> <li>Update right of way fence on I-10.</li> </ul>
<b>Other Roads</b>	
<ul style="list-style-type: none"> <li>Shea Road (Osborn Well Road) has 2’ diameter potholes, creating severe hazard. Some, but not all, are spray-painted with red paint to make them more visible.</li> <li>A new Colorado River bridge is planned for Spur 95 (California Avenue).</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruct/Pave Shea Road.</li> <li>Construct new Colorado River Bridge for Spur 95.</li> </ul>
<b>Regional</b>	
<ul style="list-style-type: none"> <li>Need 4-lane facility connecting Lake Havasu City, Parker, and Quartzsite.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct corridor study and Design Concept Study.</li> <li>Construct 4-lane, realign SR 95.</li> </ul>

## FUTURE MULTIMODAL CONDITIONS

This section presents future multimodal conditions for the Study Area including transit, pedestrian and bicycle conditions, and airport needs. Unmet multimodal needs are summarized in Table 4-13. Discussions are then presented on future transit demand. In addition, a discussion is included on future needs for bicycle and pedestrian facilities. Airport needs are discussed in the final section. Rail and truck freight service future conditions are discussed in the following section.

**TABLE 4-13. SUMMARY OF MULTIMODAL NEEDS AND DEFICIENCIES**

Multimodal Condition/Need	Potential Improvement
<b>Transit Needs</b>	
<ul style="list-style-type: none"> <li>• High percentage of transit dependent populations.</li> <li>• Dispersed activities throughout low density County.</li> <li>• High seasonal visitors. Seasonal local area circulator service may be needed in Quartzsite to mitigate traffic congestion and facilitate access to local services by winter visitors and rock and gem show attendees.</li> <li>• No transit service between “old Town” Parker and Parker Annex.</li> <li>• Lack of local transit circulators</li> <li>• Limited regional rural transit service.</li> <li>• May need future transit between Parker Central and Parker South when Parker South becomes more built up.</li> <li>• Regional transit service connecting the Study Area with Yuma to the south and Lake Havasu City, Bullhead City, Kingman, and Needles to the north may be needed in the future.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct feasibility study for construction of rail spur from Arizona and California main line east of Parker.</li> <li>• Implement local transit circulators.</li> <li>• Expand regional rural transit service.</li> <li>• May need future transit between Parker Central and Parker South when Parker South becomes more built up.</li> </ul>
<b>Bicycle, Pedestrian, Trail Needs</b>	
<ul style="list-style-type: none"> <li>• Lack of local sidewalks, multiuse paths, and equestrian trails.</li> <li>• Inadequate sidewalk width.</li> <li>• Limited street crossing opportunities particularly across high-volume wide roads.</li> <li>• Lack of regional connectivity of both bicycle and pedestrian facilities.</li> <li>• Inadequate shoulder width on many segments of State Routes.</li> <li>• Limited availability of bicycle lanes and other bicycle facilities on Town and County roads and streets.</li> <li>• Rumble strips on shoulders inhibit bicycle travel.</li> </ul>	<ul style="list-style-type: none"> <li>• Construct sidewalks, implement multiuse and equestrian trail plans.</li> <li>• Widen shoulders of roadways with heavy bicycle use.</li> <li>• Provide safe, paved area outside of rumble strip for bicyclists.</li> <li>• Designate bike routes, bike lanes and multiuse paths locally and regionally.</li> </ul>

**TABLE 4-13. SUMMARY OF MULTIMODAL NEEDS AND DEFICIENCIES  
(Continued)**

<b>Multimodal Condition/Need</b>	<b>Potential Improvement</b>
<b>Airport Needs</b>	
<i>Quartzsite</i>	
Need airport—primarily air cargo facility to serve industrial park in NE quadrant of Town.	<ul style="list-style-type: none"> <li>Develop plan for future airport and industrial park.</li> </ul>
<i>CRIT Airport</i>	
<ul style="list-style-type: none"> <li>Airside program is almost complete. The new runway project is in the final phase, with electrical work (Medium Intensity Runway Lights) and striping remaining to complete.</li> <li>Need to reconstruct entry road and parking lot. The parking lot is higher than the floor of the building containing a hangar and airport office. Consequently, this structure floods whenever it rains with run-off from the parking lot. Plan is to reconstruct and lower parking area, create drainage to wash running north of terminal area.</li> <li>Need to enhance entrance visually—create “gateway” to airport. This improvement is planned in conjunction with the reconstruction of the SR 95/Airport Road/Wal-Mart intersection.</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruct entry road and parking lot.</li> <li>Design and construct “gateway” for airport entrance.</li> </ul>
<i>County Airports</i>	
<ul style="list-style-type: none"> <li>Two private airparks exist in the Harquahala/Salome area. Indian Hills Airpark has a ½ mile paved runway that belongs to the 96 lot owners. Western Sky Airpark NW of Salome has a fixed base operator and allows transient aircraft. Western Sky has a 3,500-ft runway. Both runways are well maintained.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage the expanded use of the airports to stimulate development in the area.</li> <li>Incorporate the airport planning into County aviation planning.</li> </ul>
<b>Funding</b>	
<ul style="list-style-type: none"> <li>A guaranteed funding source—or sources—are needed for transit. Current funding available through the Western Arizona Council of Governments is insufficient for the future expansion of transit services.</li> </ul>	<ul style="list-style-type: none"> <li>Study implementation of a funding source, or sources, to provide matching funds for transit.</li> </ul>
<b>Other</b>	
<ul style="list-style-type: none"> <li>Need environmentally appropriate means of accommodating off-highway vehicle recreation.</li> </ul>	<ul style="list-style-type: none"> <li>Identify potential strategies to mitigate impact.</li> </ul>

**Transit Needs**

Transit users are composed of choice and transit dependent riders. Choice riders use transit by making a specific decision to use transit for work, shopping, medical, or other personal business trips. Transit dependent riders are those individuals in population groups that statistically are the most likely to use transit if available. The groups include (as defined by

the US Census); person aged 65 or over, persons aged 16 to 64 with mobility limitations, and persons aged 64 or under residing in households with incomes below the poverty level.

Residents of La Paz County comprise relatively high percentages of residents in the three transit dependent groups. The County is considered to be one of the “oldest” counties in the nation and there are high percentages of people with mobility limitations and with incomes below the poverty level. Table-4.14 shows the total 2030 forecasted populations for each group in the hypothetical service area.

**TABLE 4-14. FUTURE POPULATION OF SERVICE GROUPS IN SERVICE AREA**

<b>Service Group</b>	<b>2030 Population</b>	<b>Percent Total 2030 Population</b>
Persons aged 65 or over	10,915	26.0%
Persons aged 16 to 64 with mobility limitations	10,813	26.0%
Persons aged 64 or under, residing in households with incomes below the poverty level	8,145	19.0%

Based on an estimated 2030 population of approximately 42,000 residents  
Source: Lima & Associates

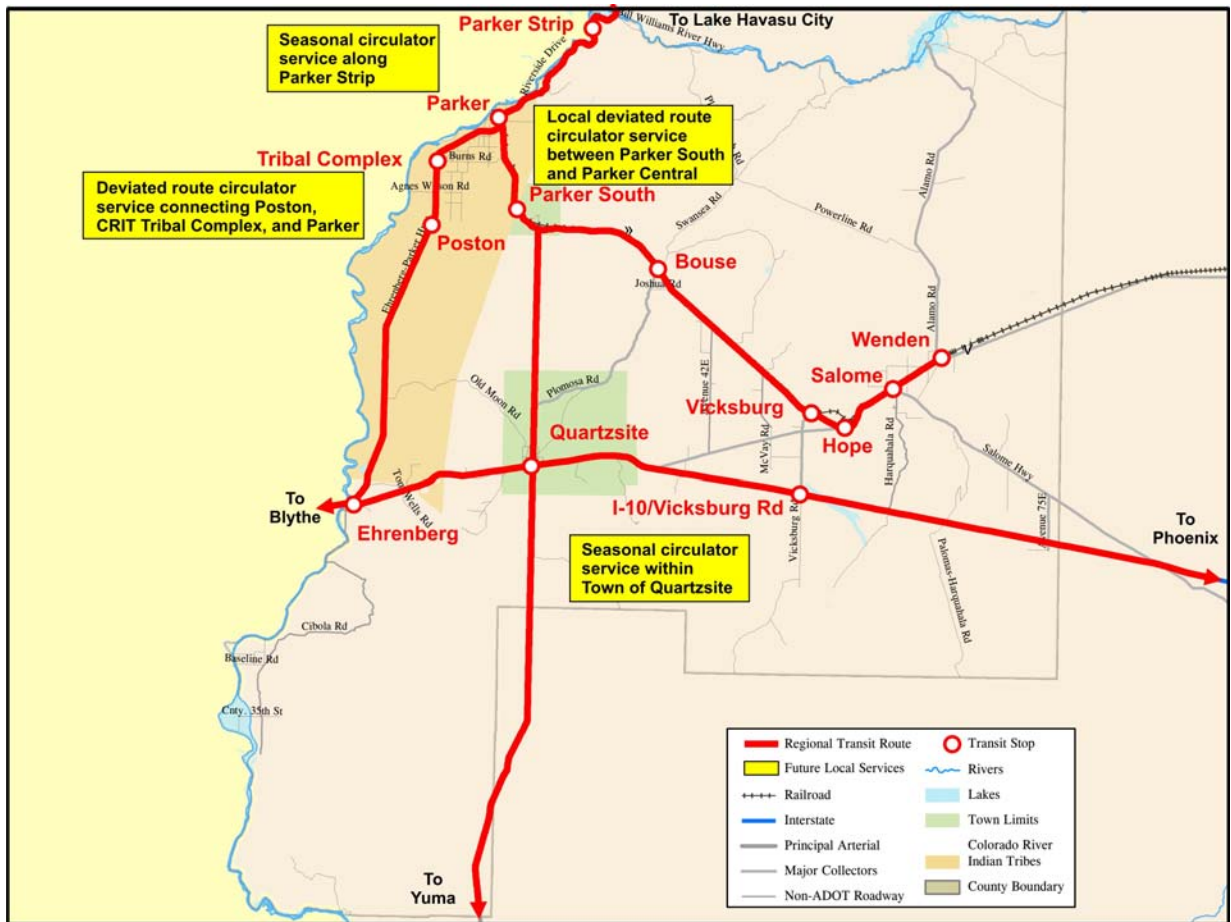
In addition to the high number of transit dependent residents, La Paz County attracts a high number of older visitors to enjoy the weather and available recreational activities along the Colorado River and other areas. Thus the number of individuals within the transit dependent groups grows substantially during the peak season. In addition, spatially dispersed activities within the County increase the need for transit service.

***Estimating Transit Demand for Regional System***

Estimating demand for rural regional transit in La Paz County provides a general idea of what type of services may be feasible and how many people may be expected to use a transit system. To estimate possible demand for transit service in the County, Transportation Cooperative Research Program (TCRP) Report 3, *Workbook for Estimating Demand for Rural Passenger Transportation*, was utilized. This workbook provides a methodology for estimating transit demand for rural systems, using population data for the year of proposed service start-up and assumptions of service area size and route lengths.

The demand methodology outlined in TCRP Report 3 required that a hypothetical system be developed for analysis purposes only (see Figure 4-13). Note that the routes depicted in Figure 4-13 are for demand-estimating purposes only and do not necessarily represent a recommended system. Even if the methodology did not require the identification of such a hypothetical system, the sparse population of large portions

**FIGURE 4-13. HYPOTHETICAL TRANSIT ROUTES**



Source: Lima & Associates

of the County would necessitate this approach in order to obtain realistic results. To conduct the demand estimation procedure, the following assumptions were made:

- The service area for the hypothetical system is the entire extent of La Paz County.
- Every resident of the County is a potential user of the system.
- The percentages of County residents aged 65 and over, having mobility limitations, or living below the poverty level will be the same in 2030 as they were in 2000.

Demand estimates are based on route mileage, service area, and population within La Paz County only.

The following assumptions were made regarding levels of transit service provided:

- I-10 Route providing three round trips daily between Quartzsite and Blythe and two round trips daily between Quartzsite and Phoenix

- North-South Route providing two round trips daily between Parker, Parker Strip, and Lake Havasu City and two round trips daily between Parker, Quartzsite, and Yuma
- CRIT Route providing three round trips daily between Parker, Poston, and Ehrenberg with connections to/from Blythe
- Wenden-Parker Route providing two round trips daily between Wenden, Salome, Vicksburg, Bouse, and Parker
- All routes operate seven days per week

Documentation of the transit demand estimating process and draft transit schedules are provided in Appendix B of Working Paper 2.

### ***Summary of Transit Demand Estimation***

The demand methodology in TCRP Report 3 includes both base and alternative methods of demand estimation. The consultant conducted both procedures to compare the results from each. The base and alternative methods of transit demand estimation resulted in daily estimates of 88 and 161 trips, respectively. Given the lack of alternative travel, the comparatively compact service area, and the assumed connections to/from Phoenix, an average of 124 trips per day would be a reasonable estimate.

While 124 trips per day is not a large number, consider how such a ridership level might affect the hypothetical system shown in Figure 4-13. If the system were operated with vehicles having, for example, an average capacity of 7 passengers (e.g. seating for 5 and two wheelchair positions), the total “seats per day” that could be offered would be 196, or 7 times the 28 one-way trips represented by the hypothetical schedules. If the 124 daily riders were distributed evenly among these 28 vehicle trips, each vehicle would have four or five of its seven seats filled.

Note that the demand procedure estimated the number of riders originating or terminating in La Paz County, Parker, Quartzsite, and the CRIT only. The I-10 trips could be part of an expanded corridor service carrying passengers between Phoenix and Southern California. The North-South schedules could be coordinated with—or part of—the transit services proposed for connecting Lake Havasu City, Bullhead City, Needles, and Kingman. The Parker-Wenden services could also be extended to Phoenix, or to connections with future commuter rail service in Wickenburg. Such services would be likely to use vehicles with capacities of more than seven persons.

### **Bicycle and Pedestrian Needs**

This section summarizes bicycle and pedestrian future conditions and needs in La Paz County. Table 4-13 summarizes the bicycle and pedestrian deficiencies and potential improvements to address these. Chapter 5 includes recommendations for Bicycle and Pedestrian projects.

La Paz County and the communities within it are also popular destinations for recreational cross-country bicyclists. Such groups do travel between communities and need safe facilities. However, distances in the Study Area discourage bicycle and pedestrian travel between communities for travel to and from work, school, or shopping. Walking or bicycling to work or school within some of the communities is more practical. For example, the “Central” portion of the Town of Parker is one-square mile in size, and many trips within Parker Central can be made on foot or on a bicycle.

As part of “Arizona’s West Coast” La Paz County hosts large numbers of tourists—in-State visitors from Metropolitan Phoenix and other areas, visitors from California and other states, and “snow bird” winter visitors to Quartzsite, the Parker Strip, and the McMillan Valley. Many of these visitors arrive in recreational vehicles or in pick-up trucks towing boats—neither of which is convenient for short trips around town such as trips to the grocery store, or trips for camping, fishing, or boating supplies. Bicycles—which can be carried in the pick-up or RV—would be handy for these visitors to make use of, provided safe and convenient places to ride bikes are provided.

### ***Bicycling on State Routes***

The Bicycle Cycle User Map of Arizona’s Highway System developed for ADOT identifies characteristics relating to biking on State routes throughout Arizona. A study area detail of this map is shown in Figure 4-14. Characteristics considered in developing the map included the traffic volume, effective shoulder width, and bridge width. As Figure 4-14 shows, the effective shoulder width is less than 4 feet on most of the miles on SR 95 and SR 72. A segment of US 60 between SR 72 and Alamo Road also has shoulder widths less than 4 feet. Although shoulder widths on I-10 are greater than 4 feet, traffic volumes and the number of trucks are higher.

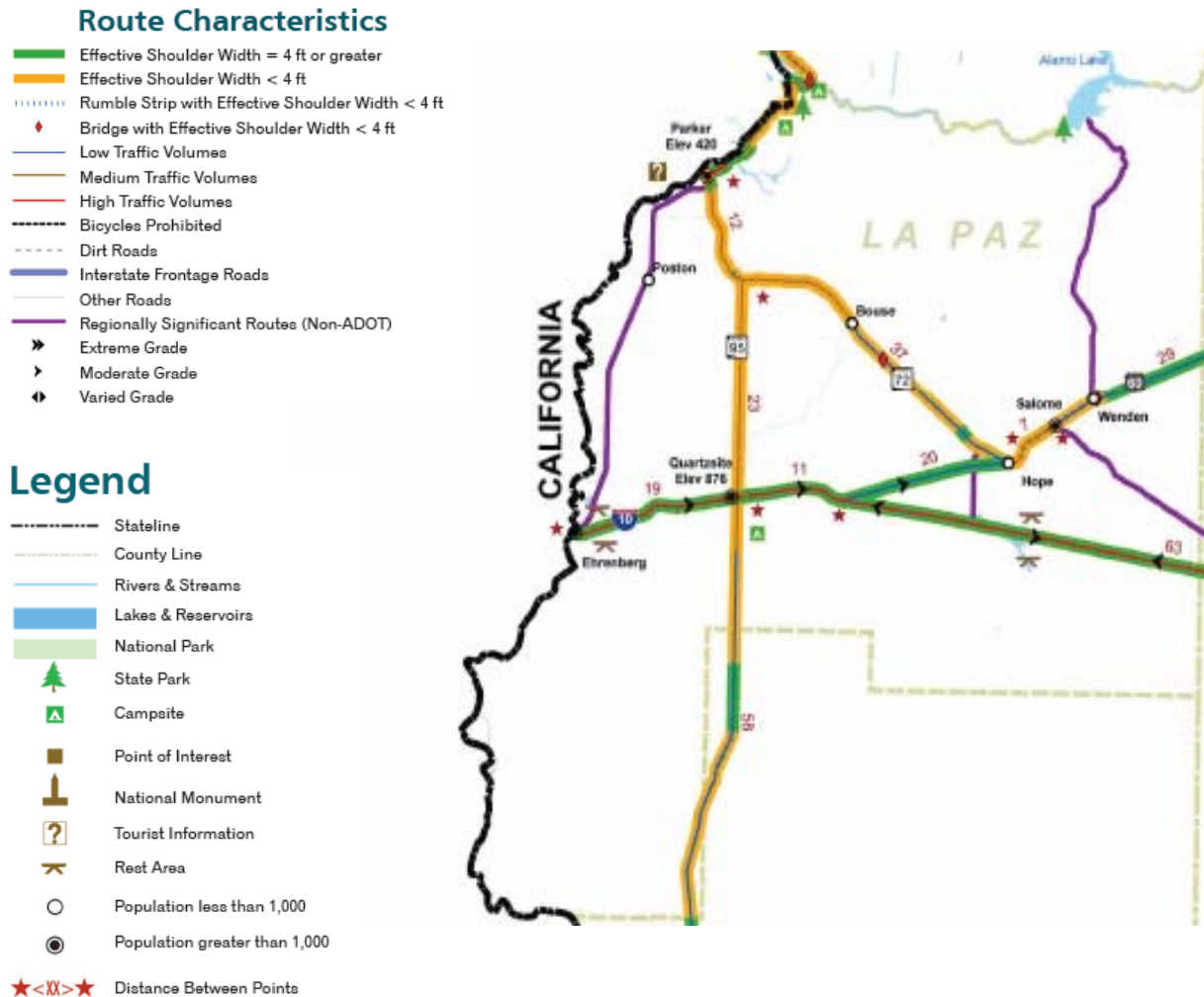
SR 72, a favorite route for cyclists, lacks shoulders and has numerous hills, dips, curves, and low-water crossings. At the same time, this facility is popular with commercial truckers.

SR 95 between Parker and Lake Havasu City is a scenic drive—or bike ride—but also lacks shoulders in many places and has tight curves where sight distance restrictions adversely affect the ability of a motorist to see oncoming bicyclists. The width of the Bill Williams Bridge on SR 95 is also tight.

US 60 through the McMillan Valley communities of Wenden and Salome has wider shoulders, as does SR 95 south of Parker. However, as motor vehicle traffic on these and other roadways increases, signalized crosswalks and other techniques may be needed to permit safe bicycle and pedestrian travel between the parts of a community divided by the highway.

The Town of Quartzsite is much larger in area than Parker Central, and could likely benefit from a local circulator transit system, especially for the many senior visitors who might not be

**FIGURE 4-14. BICYCLE USER MAP – STUDY AREA DETAIL**



up to lengthy bike rides for shopping, dining, and other trips. Nevertheless the provision of a contiguous network of bike paths and lanes, together with a complementary network of pedestrian sidewalks and multiuse paths, is needed in Quartzsite.

***Local and Regional Bicycle and Pedestrian Facilities***

Current and future bicycle and pedestrian facility deficiencies in the Town of Parker, Town of Quartzsite, CRIT, and developments in the non-incorporated areas of the County include the following:

- Limited to no sidewalks in built areas.
- Inadequate sidewalk width.



- Limited street crossing opportunities particularly across high-volume wide roads.
- Lack of regional connectivity of activities by both bicycle and pedestrian facilities.
- Lack of bicycle lanes, routes, and multiuse paths.

The increase in traffic volumes and heavy vehicles and accompanying congestion in the future will aggravate the deficiencies. Alternative modes to the automobile are needed to mitigate these impacts. Chapter 5 recommends actions to implement bicycle and pedestrian facilities as part of the overall transportation plan.

As documented in *Working Paper 1: Current Conditions*, the general or comprehensive plans of the participating agencies in the La Paz Transportation Planning Study include provisions for the enhancement and expansion of bicycle and pedestrian facilities.

Goal 2, in the County’s *Comprehensive Plan*, “Develop a multimodal transportation system,” includes policies to:

- Develop La Paz County standards for bike paths and trails.
- Develop an integrated bicycle trail system in the Parker Strip area that will allow visitors and residents an alternate form of transportation.
- Encourage the development of bike paths that provide inter-area travel and connection to the regional system.
- Work with ADOT to develop bicycle paths.

As a priority, the County would like to develop a regional bicycle network linking Quartzsite, Bouse, Parker South, Parker, and the Parker Strip.

Plans adopted by the Colorado River Indian Tribes, the Town of Parker, and the Town of Quartzsite include similar provisions addressing the future needs of pedestrians and bicyclists. The CRIT’s *Parker Strip Recreation Area Management Plan* identifies locations for new equestrian trails, recreation trails, and trailheads. The *Quartzsite General Plan* recommends construction of separated sidewalks, pedestrian-scale lighting and other amenities designed to encourage walking for short trips. The Town’s *General Plan* also recommends the development of a Bicycle Plan to identify routes, lanes, and paths needed for a bicycle network.

### **Aviation Deficiencies and Needs**

Aviation deficiencies are summarized by airport in Table 4-13. Summary of Multimodal Needs and Deficiencies. As discussed in Working Paper 1, three aviation facilities currently exist within the Study Area. The Avi Suquilla Airport, adjacent to the Town of Parker, is operated by the CRIT. The other two are private facilities in the Salome area, Indian Hills Airpark and

Western Sky Airpark. No scheduled commercial air service is provided at any of these facilities. Scheduled commercial air service is available at both Yuma and Lake Havasu City.

Avi Suquilla is a general aviation facility open to the public. The airport has no control tower, but dusk-to-dawn medium intensity runway lighting is provided. The airport is staffed between 8:00 am and 10:00 pm. Runway 01/19 is 4,780 feet in length, 75 feet in width, and paved with asphalt. Tie-downs for transient aircraft are available. The new runway project is in the final phase, with electrical work (Medium Intensity Runway Lights) and striping remaining to complete. A need exist to reconstruct the entry road and parking lot. The parking lot is higher than the floor of the building containing a hangar and airport office. Consequently, this structure floods whenever it rains with run-off from the parking lot. The plan is to reconstruct and lower the parking area, and create drainage to the wash running north of terminal area. A need also exist to enhance the entrance visually—create a “gateway” to the airport. This improvement is planned in conjunction with the reconstruction of the SR 95/Airport Road/Wal-Mart intersection.

Both of the Salome area airparks are for private use only and permission is required prior to landing. Indian Hills Airpark has a 2,200-ft paved runway and Western Sky Airpark has a 3,500-ft paved runway (The Arizona Outback Online, [www.azoutback.com/airpark](http://www.azoutback.com/airpark)).

No airport currently exists in the vicinity of Quartzsite.

## **FUTURE FREIGHT CONDITIONS**

Anticipated future conditions for rail and truck freight service are discussed in this section. Table 4-15 summarizes the unmet rail and truck freight service needs within La Paz County.

### **Rail and Truck Freight Service**

The La Paz area serves as a gateway for truck and rail freight entering Arizona from California. According to the *Multimodal Freight Analysis Study* conducted for ADOT in 2008, economic and logistics trends have the following implications For Arizona:

1. Growing Arizona population centers will drive increasingly higher levels of freight activity and truck traffic, as consumer consumption drives the need for freight movements.
2. Southern California will continue to be a primary gateway for Trans-Pacific container traffic. While expansion of the Panama Canal currently underway (scheduled for completion in 2014) will draw more Asian containerships directly to east coast ports, Arizona will continue to see high volumes of “landbridge” rail and truck traffic from the San Pedro, CA Ports.

**TABLE 4-15. TRUCK AND RAIL FREIGHT NEEDS AND DEFICIENCIES**

Truck and Rail Freight Condition/Need	Potential Improvement
<p><b>Parker</b></p> <ul style="list-style-type: none"> <li>• A transload facility exists where low-grade hazardous material brought in by rail is loaded on trucks and taken to Nevada for disposal.</li> <li>• Railroad also off-loads fertilizer for agriculture—stored in tanks.</li> <li>• Switching movements in the Arizona &amp; California rail yard impacts crossing of Riverside Drive (SR 95).</li> </ul>	<ul style="list-style-type: none"> <li>• Continue with periodic inspections to insure safe handling of hazardous materials.</li> <li>• Study feasibility of extending ARZC yard tracks east to facilitate the coupling and uncoupling of freight cars without obstructing crossing.</li> </ul>
<p><b>Ehrenberg</b></p> <ul style="list-style-type: none"> <li>• Port of Entry facility is obsolete and in disrepair.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct Port of Entry. Provide adequate storage for arriving trucks. Demolish and rebuild POE building and provide up-to-date communications and data collecting technology.</li> </ul>
<p><b>CRIT</b></p> <ul style="list-style-type: none"> <li>• Commercial truck traffic on Ehrenberg-Parker (Mohave Road) Highway exceeds weight and volume capacity for which roadway and bridges were designed.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct roadway and bridges to accommodate commercial truck traffic.</li> <li>• Track future ITS technological improvements that would make prevention of POE or scale avoidance feasible.</li> <li>• Improved POE with expedited handling of trucks entering State may limit POE avoidance detours over Ehrenberg-Parker Highway (Mohave Road).</li> </ul>
<p><b>Quartzsite</b></p> <ul style="list-style-type: none"> <li>• I-10, Exit 17 used by commercial truckers visiting truck stops or winter visitors in recreational vehicles arriving in Quartzsite. Large vehicles cannot negotiate area quickly due to one-lane bridge across freeway and other constraints.</li> <li>• Need for improvement and expansion of the Arizona and California Railroad including the addition of a spur to the vicinity of Quartzsite to serve industrial parks proposed for the SR-95 corridor north of the Town.</li> </ul>	<ul style="list-style-type: none"> <li>• Reconstruct exit to provide wider bridge and to accommodate turning radii of larger vehicles.</li> <li>• Conduct feasibility study for construction of rail spur from Arizona and California main line east of Parker.</li> </ul>
<p><b>Regional</b></p> <ul style="list-style-type: none"> <li>• High truck volumes combined with restricted road capacity, road geometric constraints will continue to contribute to congestion and safety impact.</li> </ul>	<ul style="list-style-type: none"> <li>• Improve major roads, provide passing lanes, widen roads.</li> <li>• Consider construct new alignments.</li> </ul>

3. Increasing highway congestion will drive supply chain strategies like transloading that will impact commercial development and regional land use in Arizona.
4. Remaining competitive in the new economy may propel businesses to seek environments where public and private infrastructure supports integrated supply chain strategies; namely transportation networks that are reliable, agile, dependable, and to some extent redundant.
5. Freight transportation sector is a significant contributor to airborne emissions and air quality issues. As citizens and communities become increasingly sensitive to environmental quality, companies are recognizing the need to respond with transport options that reduce carbon emissions

Within the Study Area, a key concern is the increasing truck volumes on I-10. Throughout the Study Area, commercial trucks—primarily large tractor-trailer rigs—comprise about 40 percent of all motor vehicle traffic on I-10. On SR 72, trucks comprise 44 percent of all traffic. While total motor vehicle traffic volume on SR 72 is less than a tenth of that on the Interstate, SR 72 is a narrow, two-lane, largely shoulder-less facility. Sight-distance on SR 72 is frequently impacted by dips through low-water crossings, and opportunities for motorists to pass trucks are limited.

The high truck volumes on the two lane road segments of the State routes significantly degrade traffic level of service. These high truck volumes combined with roads segments in rolling and mountainous terrain further degrade traffic levels of service. An example of such a segment is SR 95 from Buckskin State Park north to the County boundary.

### ***Potential Distribution Center***

The proximity of Quartzsite to the growing area of Western Maricopa County, including the planned Hassayampa and Hidden Valley areas, suggests the potential for the development of Quartzsite as a potential distribution center. If a rail spur is completed to Quartzsite, containerized freight from the West Coast could be delivered directly to Quartzsite to be trans-loaded to trucks, by-passing congested trans-loading facilities and roadways in Southern California. The development of this center would require significant additional investment in both rail and roadway infrastructure, but would also provide stable, year-round employment.

The BNSF Railway is currently planning to develop a similar “inland port” facility in the vicinity of Luke Air Force Base in the West Valley, where the noise contour from military aircraft operations precludes other than industrial uses for the rail-served acreage. However, if the air base were closed in the future, the land planned for the development of the freight facility could be opened for commercial or residential development. Such an occurrence might prompt development of an inland port at an alternate location, such as Quartzsite.

## 5. MULTIMODAL TRANSPORTATION PLAN

Chapter 5 presents the Multimodal Transportation Plan for La Paz County including 2020 and 2030 Road Plans, Multimodal Transit Element, and a Freight Element. The road plans and multimodal elements were developed based on the analysis of future conditions presented in Chapter 4. Additional analyses were conducted to assess possible alternative road networks in the County and are presented in this chapter.

### TRANSPORTATION VISION

The following vision for the transportation system in La Paz County was prepared based on stakeholder comments:

The La Paz County Transportation System will be developed and maintained in cooperation with the residents, visitors, businesses, County, Town, Colorado River Indian Tribes, federal land management agencies, businesses, and other stakeholders. The transportation system will be efficient and safe supporting economic development, tourism, and recreational activities for residents, businesses, and visitors. A multimodal transportation system will serve pedestrians, equestrian riders, bicyclists, automobiles, and transit users. Alternative routes and transit services will be provided connecting the Towns, Colorado River Indian Tribes, and rural areas as well as provide for interregional travel connecting County activities to Phoenix, Las Vegas, and Los Angeles metropolitan areas.

### ALTERNATIVE ROAD NETWORK ANALYSIS

Capacity deficiencies for the years 2020 and 2030 were identified in *Working Paper 2: Future Conditions*. This section presents the analysis of alternative road networks to correct the capacity deficiencies. The analysis included the following steps.

1. Identify alternative road networks.
2. Forecast of off-peak and peak season average daily traffic volumes.
3. Computation of level of service for the alternative road networks.
4. Compare alternative road networks using performance and feasibility measures.

#### Identify Alternative Road Networks

Three alternative roadway networks were identified based on the capacity deficiencies as well as stakeholder suggestions. The three alternative networks are: 1) Road Widening Network; 2) New Alignments Network; and 3) Mohave Road Extension.

### ***Road Widening Alternative Network***

Figures 5.1 and 5.2 present the functional classification and number of lanes for the Road Widening Alternative Network, respectively. This network includes roads in the Base Future Network plus the following segments widened from two to four lanes:

- Kuehn Street, Quartzsite from Riggles Avenue to Quartzsite Boulevard
- Quartzsite Boulevard from Main Street to Kuehn Street
- Riggles Avenue from Main Street to Kuehn Street
- SR 95 from SR 72 north to Mohave Road
- SR 95 from Lakeside Boulevard to northern La Paz County boundary

### ***New Alignments Network***

Figures 5-3 and 5-4 present the functional classification and number of lanes for the New Alignments Alternative Network. This road network includes roads in the Road Widening Network plus the following new road alignments:

- Four-lane realignment of SR 95 from south of the Town of Quartzsite to north of Plomosa Road.
- Four-lane realignment of SR 95 from existing SR 95 west of the Parker Annex running northeast to SR 95 to the vicinity of Lakeside Boulevard.

### ***Mohave Road Extension***

The extension of Mohave Road in the Parker area was assessed from SR 95, S. California Avenue to Riverside Drive. The potential extension traverses to the east, staying to the south of the Avi Suquilla Airport, and then turns north to intersect with SR 95, Riverside Drive beyond the new runway.

### **Forecasting Traffic and Computing Level of Service**

The methodology for estimating daily traffic volumes and levels of service was discussed in *Working Paper 2: Future Conditions*. In brief, the LA Paz County TransCAD travel demand model was used to estimate daily traffic volumes and LOS were then estimated for the Road Widening and New Alignments alternatives for both the off-peak and peak seasons. Levels of service were then computed for roads based on the relationship of volume-to-capacity ratios to LOS ranges of A to F. Level of service A indicates free flow and LOS F represents congested conditions. In general, levels of service in the range LOS C-D are considered acceptable.

FIGURE 5-1. ROAD WIDENING ALTERNATIVE NETWORK FUNCTIONAL CLASSIFICATION

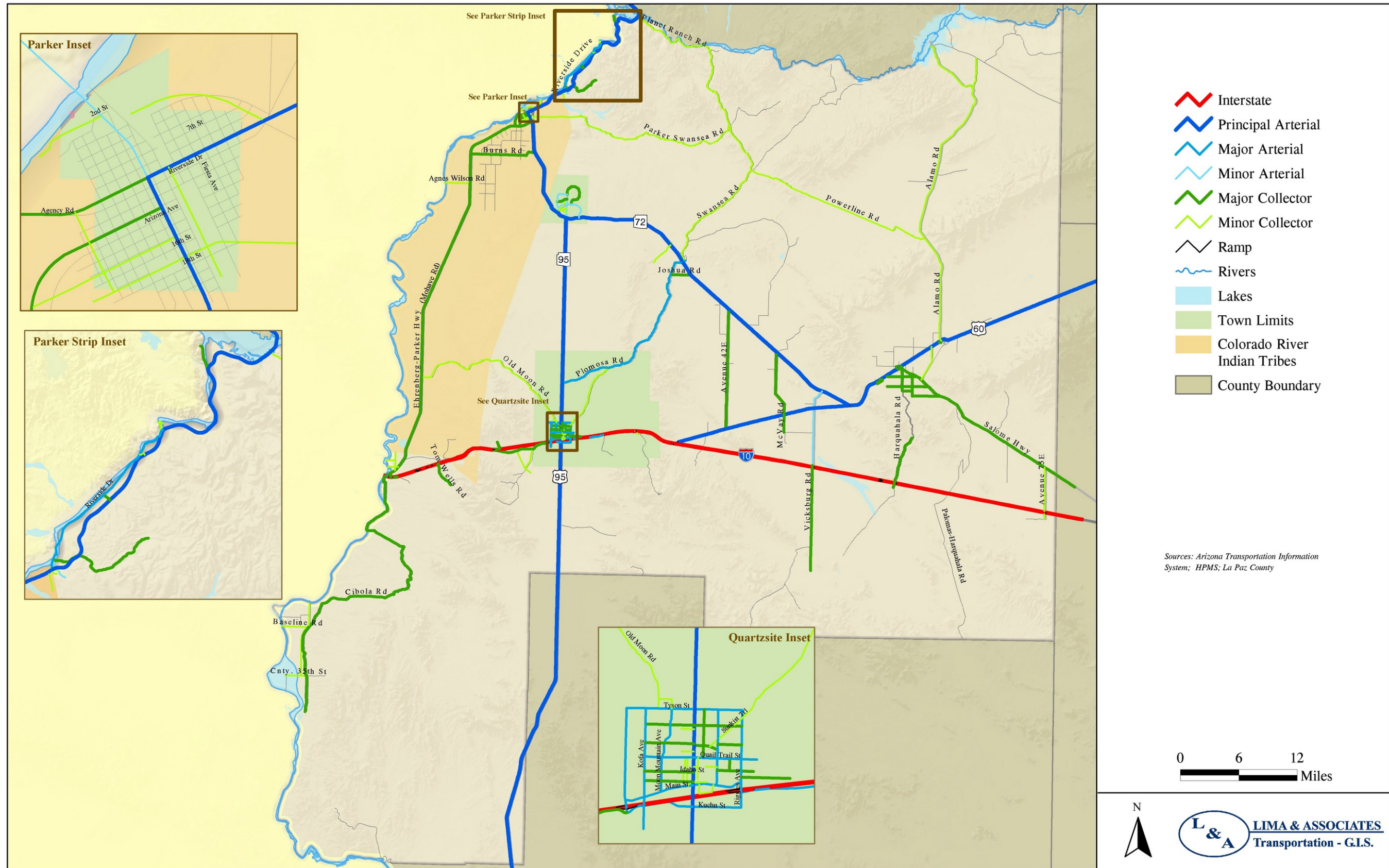


FIGURE 5-2. ROAD WIDENING ALTERNATIVE NETWORK NUMBER OF LANES

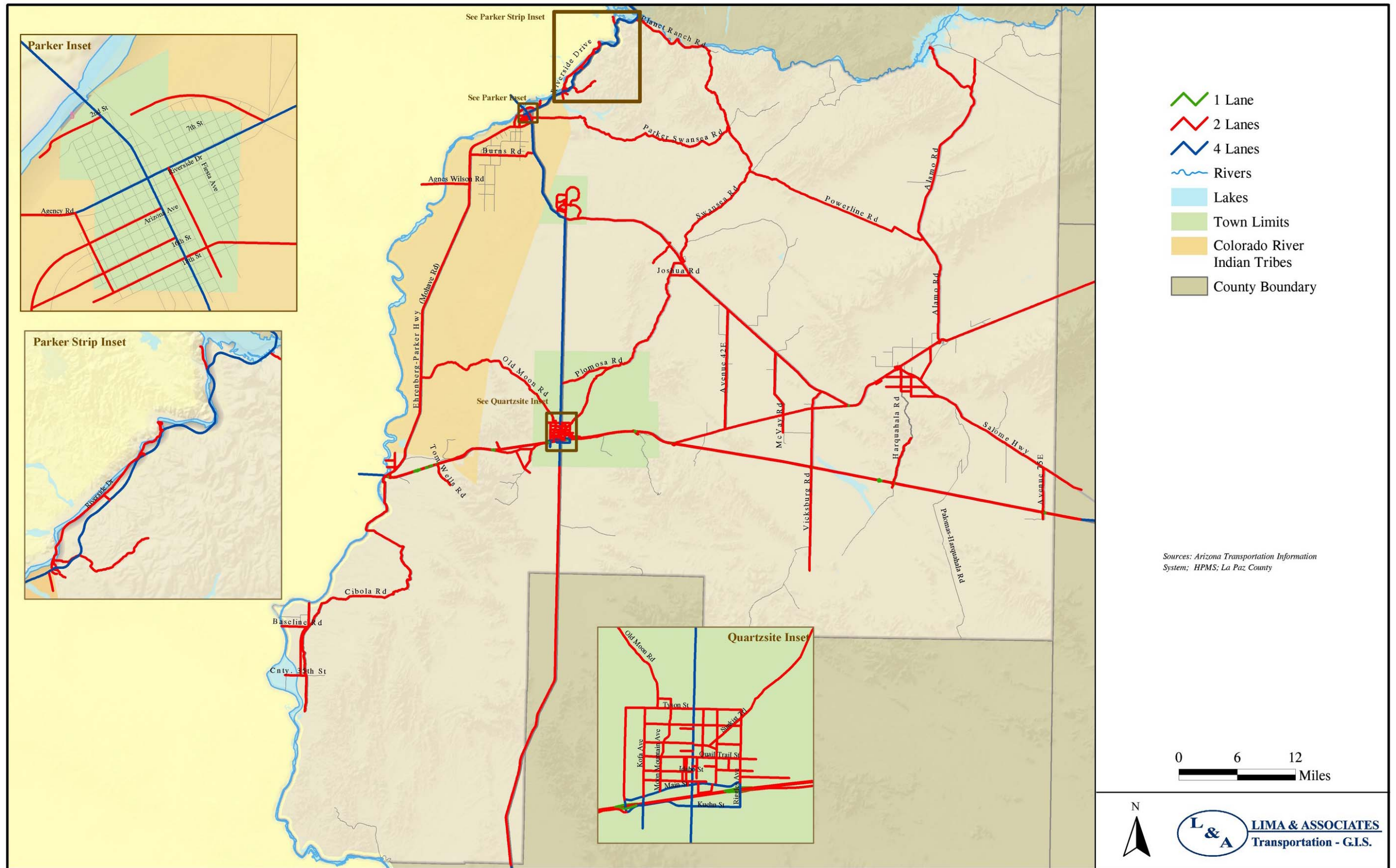




FIGURE 5-3. NEW ALIGNMENTS ALTERNATIVE FUNCTIONAL CLASSIFICATION

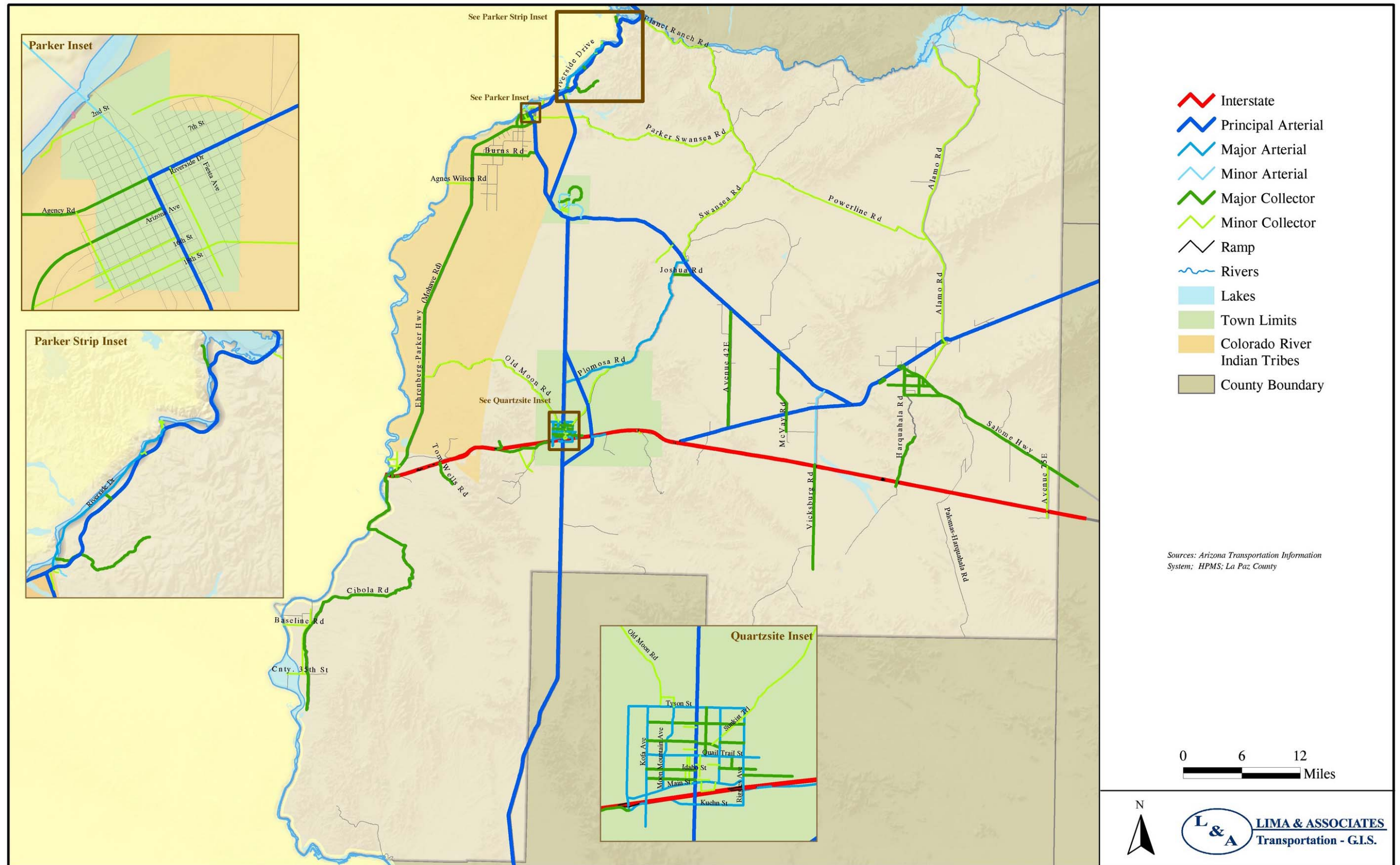
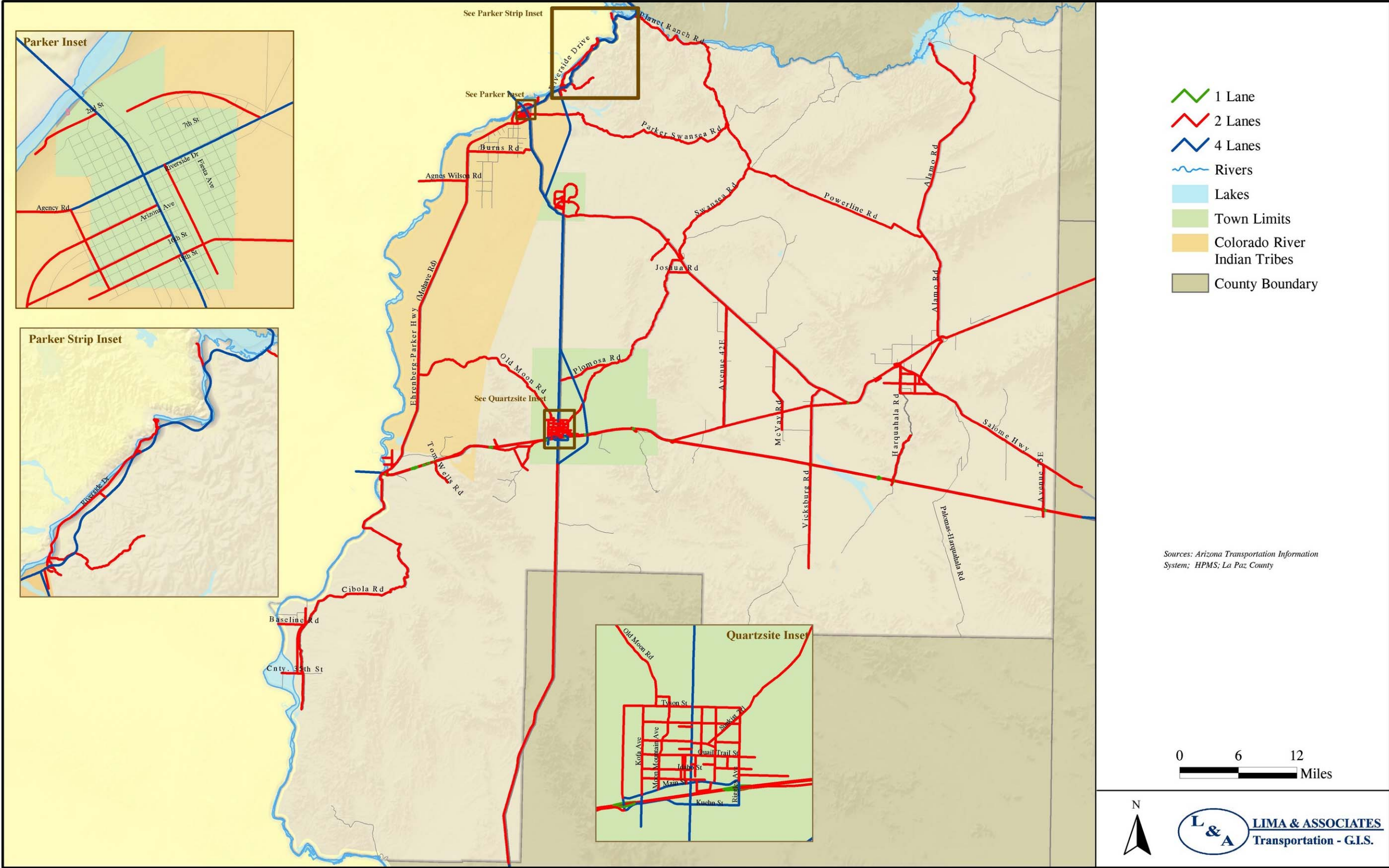


FIGURE 5-4. NEW ALIGNMENTS ALTERNATIVE NUMBER OF LANES



### ***Road Widening Alternative Network***

Figures 5-5 and 5-6 present the daily traffic volumes and level of service for the Road Widening Alternative Network during the off-peak season and peak season, respectively. The analysis shows that the roads in the network will operate at or above level of service range of C-D during the both the off-peak season and peak season.

### ***New Alignments Alternative Network***

Figures 5-7 and 5-8 present the daily traffic volumes and level of service for the New Alignments Alternative Network during the off-peak season and peak season, respectively. The analysis shows the following:

- The 2030 daily traffic volume during the peak season on the new alignment connecting US 95 south of Quartzsite to SR 95 north of Quartzsite is low ranging from 500 vehicles per day (vpd) to 2000 vpd.
- The 2030 daily traffic volume on the new alignment connecting SR 95 south of Parker to SR 95 (Riverside) east of Parker has a volume of approximately 6,200 vpd.
- Roads in the New Alignments Alternative Network will operate at or above level of service range of C-D during both the off-peak season and peak season.
- The level of service on portions of Kuehn Street is improved over the Road Widening Alternative Network.
- The New Alignments Alternative Network also reduces traffic volumes on California Avenue south of Riverside Drive and Riverside Drive east of California Avenue due to the realignment of SR 95 to the east of the Town of Parker.

### ***Mohave Road Extension***

The estimated 2030 Daily Peak Seasonal Traffic Volume on the Mohave Road Extension is approximately 9,900 vehicles per day. The extension decreased the traffic volume on Riverside Drive west of Bluewater Drive by approximately 13,625 vehicles per day from the Base Road Network. The traffic volume on California Avenue north of Mohave Road is decreased by approximately 11,427 vehicles per day.

The following table presents traffic volumes for selected locations with and without the extension:

**TABLE 5-1. MOHAVE ROAD EXTENSION TRAFFIC VOLUMES**

Location	2030 Daily Peak Seasonal Traffic Volumes (Vehicles Per Day)		
	Base Road Network Without Mohave Road Ext.	Base Road Network With Mohave Road Ext.	Change in Traffic Volume
SR 95, S. California Ave. North of Mohave Road	26,112	14,685	-11,427
SR 95, Riverside Drive West of Bluewater Drive	29,648	16,023	-13,625
Mohave Road Extension	N/A	9,913	N/A

**Evaluation Methodology**

Potential alternative road networks were compared using a set of performance measures (Table 5-2). The feasibility of implementing each alternative road network was also assessed using a set of feasibility criteria. The results of the evaluation of performance and feasibility measures for the alternative networks are presented later in a comparison table.

**TABLE 5-2. PERFORMANCE MEASURES**

Performance Measures
Mobility/Congestion Relief
Accessibility and Connectivity
System Preservation
Integration and Connectivity with Other Modes
Safety (Reduction in Crashes)
Economic Benefits

Each criterion was assessed to the degree it impacts the feasibility positively or negatively. Based on previous studies, general right-of-way needs and general level of costs for the roadway concepts were established. Additionally, the socioeconomic impacts of the concepts were evaluated together with other impacts to adjacent property. General economic and land use impacts and possible economic opportunities were determined.

FIGURE 5-5. 2030 DAILY TRAFFIC VOLUMES ROADWAY WIDENING ALTERNATIVE - OFF-PEAK SEASON

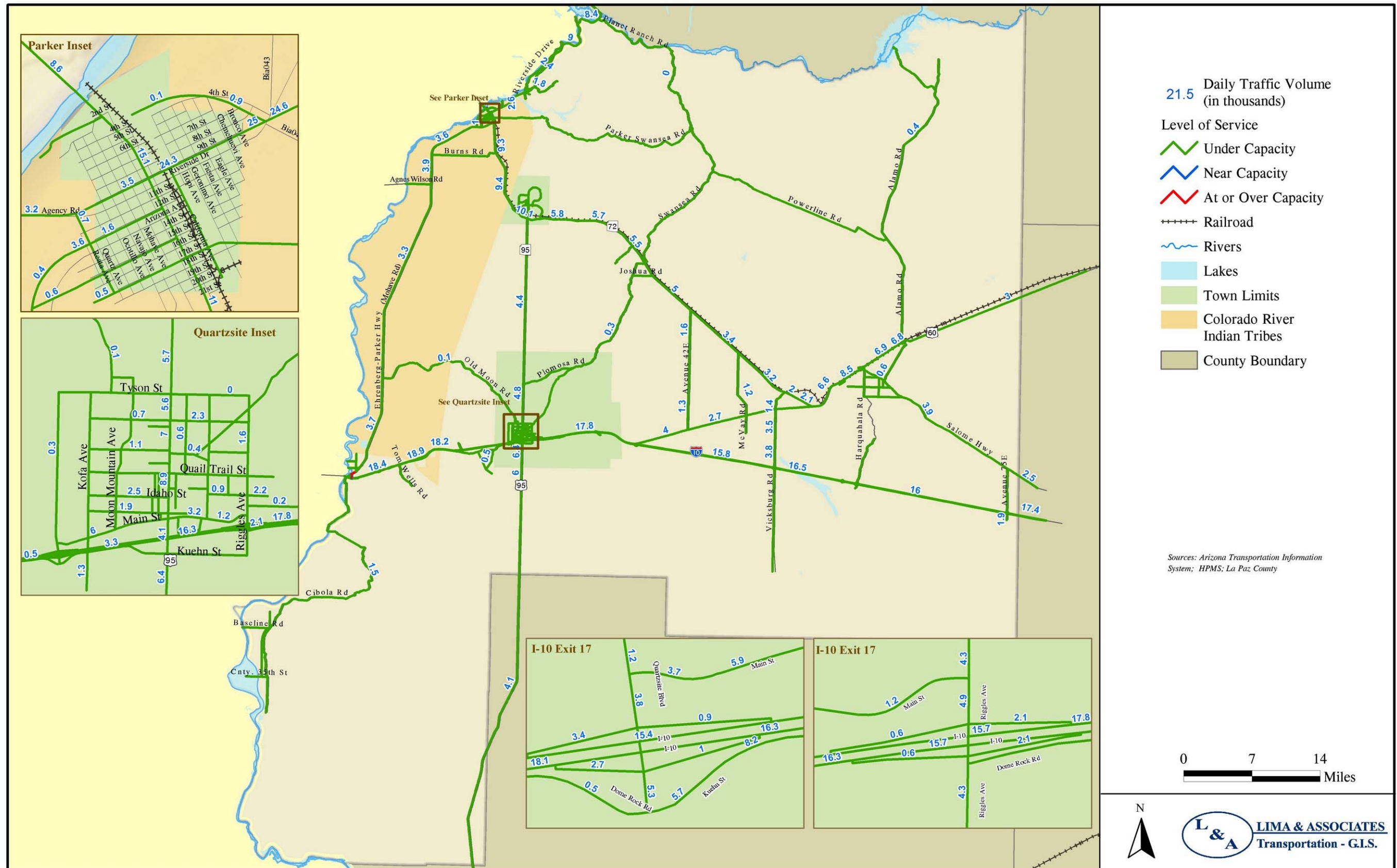


FIGURE 5-6. 2030 DAILY TRAFFIC VOLUMES ROADWAY WIDENING ALTERNATIVE - PEAK SEASON

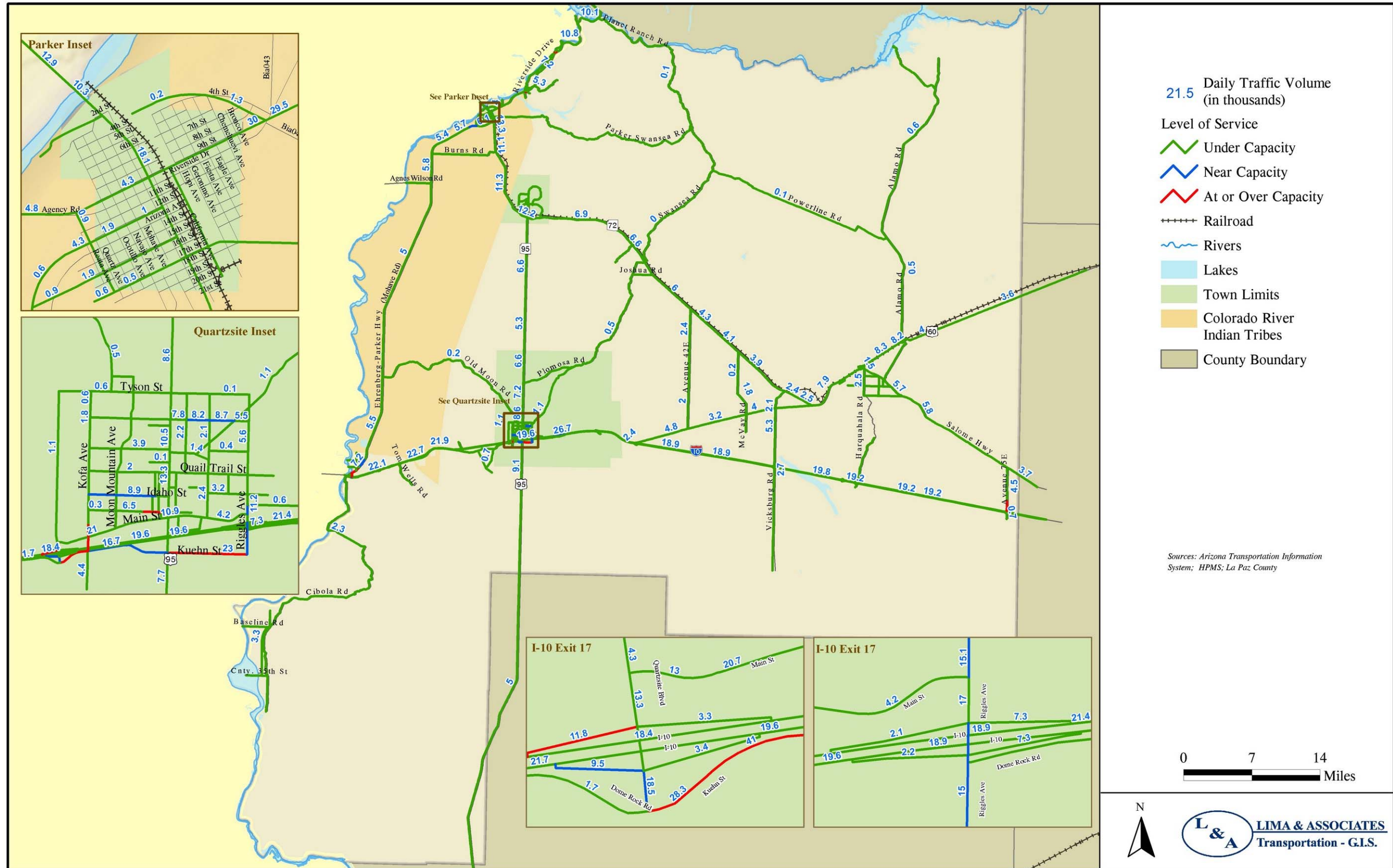


FIGURE 5-7. 2030 DAILY TRAFFIC VOLUMES NEW ALIGNMENT ALTERNATIVE - OFF-PEAK SEASON

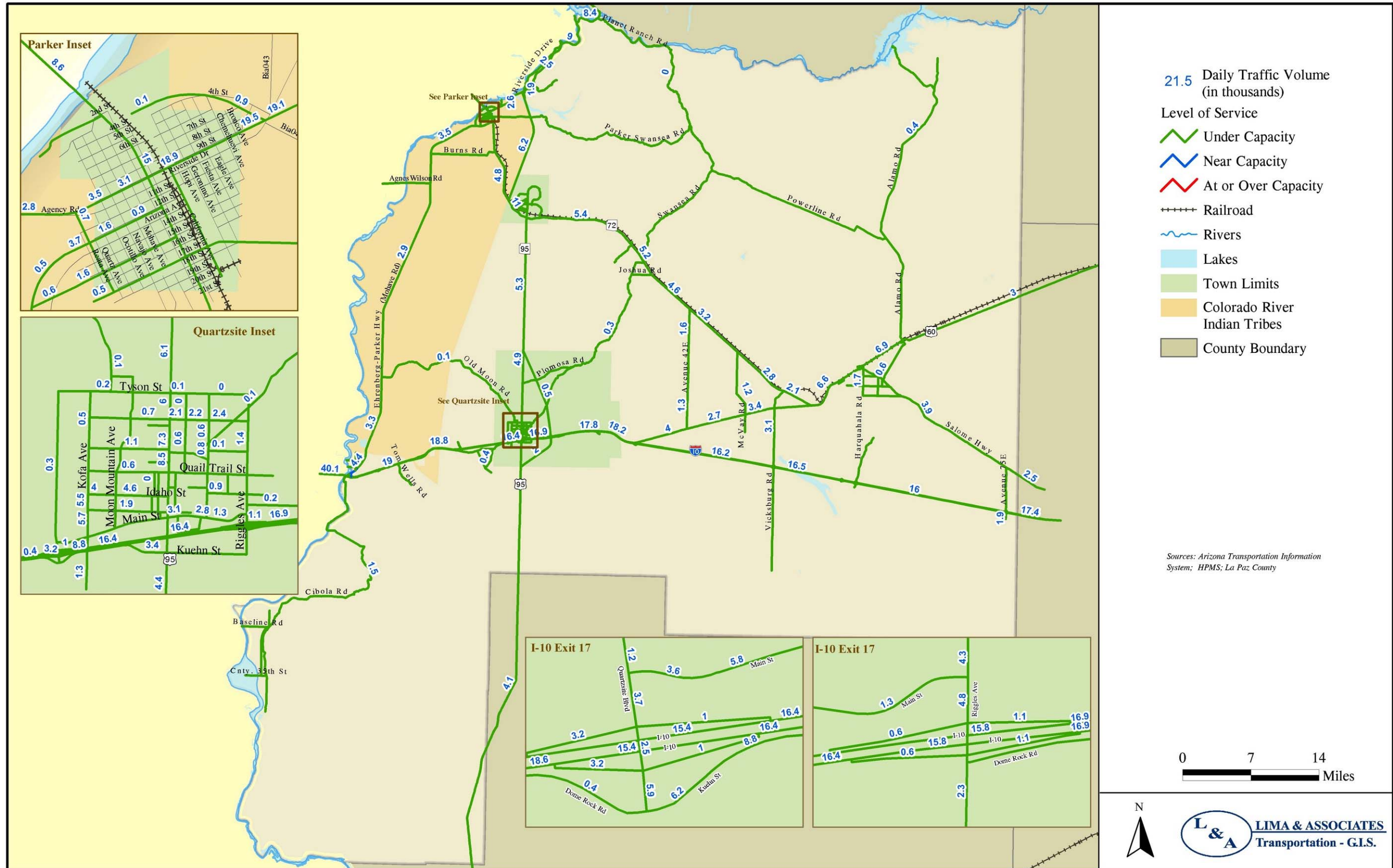
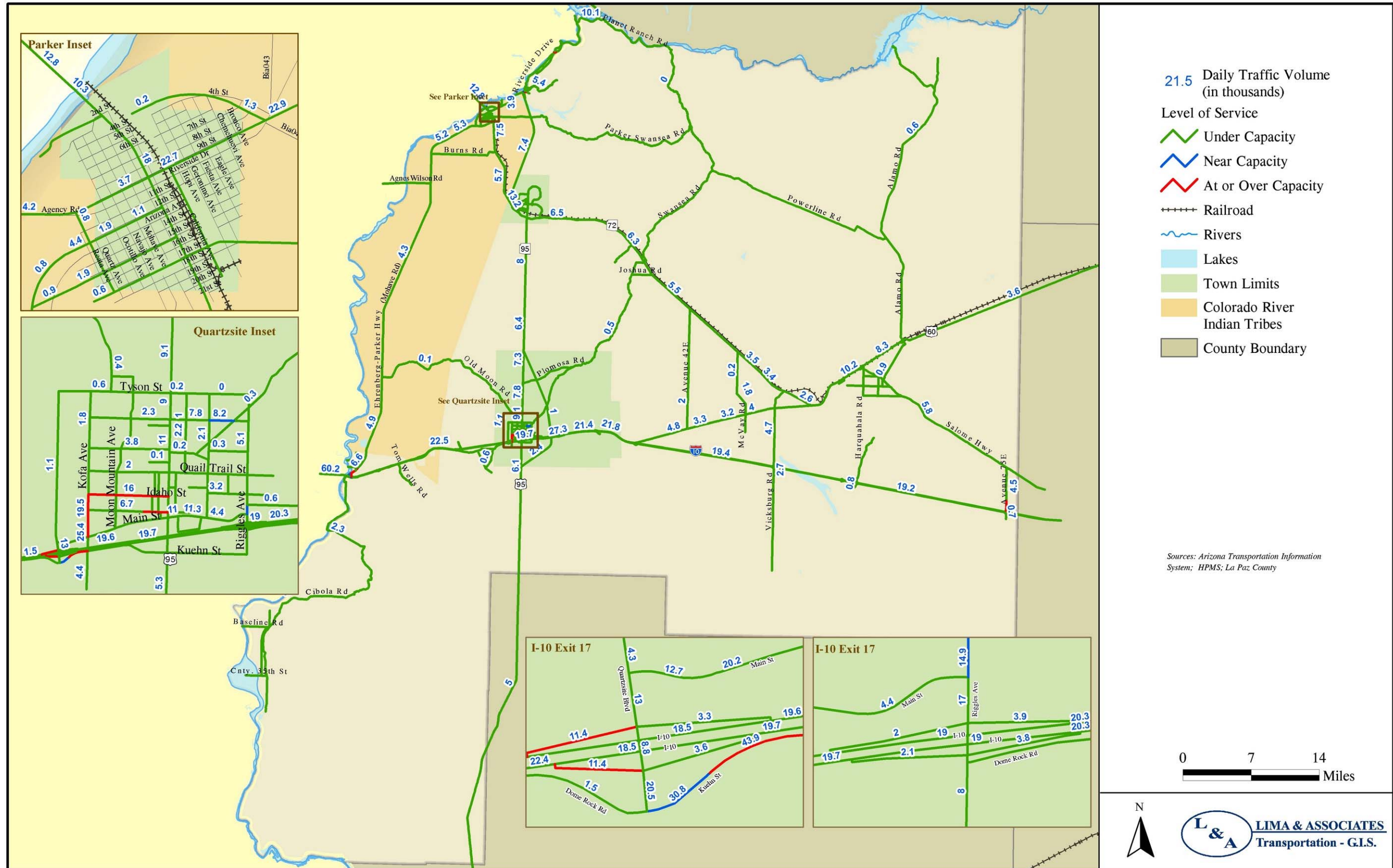


FIGURE 5-8. 2030 DAILY TRAFFIC VOLUMES NEW ALIGNMENT ALTERNATIVE - PEAK SEASON





**Mobility/Congestion Relief (Travel Demand, Street level of service).** Each potential network was evaluated for its impact on future mobility, and the ability of residents and visitors to move from place to place. Mobility is both a quantitative and qualitative measure. Mobility of residents and visitors was assessed for potential road and multimodal transportation improvements including pedestrian, bicycle, and transit improvements. The potential of an improvement to provide a desirable level of service of the roadway system was also measured.

**Accessibility and Connectivity.** The accessibility between activity centers within the County and the connectivity of residential areas and major activity centers to other regions and states was evaluated for each potential road network.

**System Preservation.** The preservation and maintenance of the efficiency of an existing and future transportation system is vital, particularly given the existing constrained economy. System preservation was considered for both existing and potential new improvements.

**Integration and Connectivity with Other Modes.** A key goal in the development of the transportation system in the La Paz PARA Study Area is to maximize the use of all modes of transportation including walking, bicycling, and transit use. Each alternative was evaluated in regard to the potential to accommodate alternative modes such as transit service and bicycle facilities.

**Safety (Reduction in Crashes).** The potential to reduce crashes by implementing improvements such as road widening and constructing passing lanes was assessed.

**Economic Benefits.** The economic benefit of potential improvements was evaluated. Economic benefits of transportation development include travel time and cost savings to residents and businesses, business productivity gains, increased value of land, and access to suppliers and consumers.

### *Feasibility Measures*

The following measures (Table 5-3) were used to evaluate the feasibility of implementing an alternative road network.

**TABLE 5-3. FEASIBILITY MEASURES**

<b>Feasibility Measures</b>
Socioeconomic, Land Use
Environmental and Cultural Resources
Engineering Opportunities and Constraints
Multimodal Considerations
Public Support
Costs/Right-of-way (ROW)/Funding

Each criterion was assessed to the degree it impacts the feasibility positively or negatively. Based on previous studies, general right-of-way needs, and general level of costs for the roadway concepts were established. Additionally, the socioeconomic impacts of the concepts were evaluated together with other impacts to adjacent property. General economic and land use impacts and possible economic opportunities were determined.

**Socioeconomic and Land Use.** The impact of a potential road network on adjacent communities and land use was assessed. This included community disruption and other direct and indirect impacts on communities such as potential traffic impacts. Alternatives that include road widening may require additional right-of-way and will impact adjacent residential and business properties.

**Right-of-Way.** Right-of-way will be required for new street arterials and collectors. It is critical that right-of-way be identified as early as possible and preserved. The alternatives that include road widening on SR 95 from Lakeside Boulevard to the northern La Paz County boundary will require additional right-of way.

**Environmental and Cultural Resources.** Potential impacts of improvements on environmental and cultural resources were considered in the evaluation of alternatives.

**Engineering.** Engineering considerations include the ability to apply acceptable geometric and traffic operational standards to provide safe and efficient improvements. Possible obstacles were identified that would preclude moving forward with the development of a facility. Also, constraints to the constructability of a potential facility were considered. Consideration was also given to impacts of the new facility on visual aesthetics, new right-of-way, cultural and environmental resource mitigation, and particularly drainage requirements.

**Multimodal Considerations.** High quality transportation service can be obtained through provision of an array of transportation alternatives including pedestrian, bicycle, and transit facilities. As residents age and the City grows, transit demand will increase. Each alternative was evaluated in regard to the potential to accommodate alternative modes.

**Costs.** The general level of construction costs was assessed for each roadway network based upon the functional classification and number of lanes for roadways.

### **Comparison of Alternative Road Networks**

The Road Widening Network Alternative performed better than the other alternative networks evaluated in regard to performance and feasibility criteria. The road widening and passing lane candidate projects comprising this alternative provide good mobility and safety throughout the County with minimal impacts on residents, businesses, and the environment. This alternative also corrects infrastructure deficiencies on existing facilities. The magnitude of the daily traffic volumes accommodated during the peak season by the New Alignments and Mohave Road Extension alternatives **do not warrant** the cost and impacts of constructing new

facilities. In addition, the New Alignments and the Mohave Road Extension alternatives would adversely impact the economy of the Towns of Quartzsite and Parker by diverting traffic from business centers.

Table 5-4 presents a comparison of the Base Future Network, Road Widening Alternative Network, and New Alignments Alternative Network. *Working Paper 2: Future Conditions* described the Base Future Network and presents the forecasted traffic volumes and levels of service for the Base Future Network. The following summarizes the performance and feasibility of the alternative networks.

### ***Road Widening Alternative Network***

The Road Widening Alternative provides an acceptable level of service with the increased traffic volumes in 2030 and improves accessibility by providing a higher level of service. Road widening and passing lane projects in this alternative would improve safety and extend the life of existing road segments. Improvements of shoulders on State Routes on widening sections and potential passing lanes could encourage other modes such as bicycling. Moreover, the improved mobility due to a higher level of service will improve economic opportunities.

The widening of roads in the Road Widening Alternative will impact adjacent properties to some extent. However, reduced traffic congestion also reduces impacts on adjacent properties. Improved speeds and reduced congestion may reduce air pollution. But noise may be increased with increased vehicle speeds. Public lands may also be impacted as roads are widened. No major engineering constraints are anticipated. Right-of-way may be required for widening of some road segments and potential passing lane segments. This alternative would require moderate capital costs. Road reconstruction for road widening and passing lane projects provides opportunities to incorporate multimodal facilities such as bike lanes and pedestrian paths.

### ***New Alignments Alternative***

The New Alignments Alternative provides the overall highest level of service and accessibility, slightly reduces through traffic in Quartzsite, and provides some relief of traffic in Parker. The road widening and passing lane projects would improve the life of existing roads. New alignments would reduce traffic volumes on portions of existing roads and thereby extend the life of some portions of existing roads. This alternative would provide the highest level of safety with road widening, possible passing lanes, and new alignments. The New Alignments Alternative would significantly impact local businesses in Quartzsite and Parker by diverting traffic from business centers.

This alternative reduces congestion impacts on adjacent properties. Improved speeds and reduced congestion may reduce air pollution. But noise may be increased with increased

vehicle speeds. This alternative has high impact on properties and businesses where new alignments are constructed. Moreover, the new alignments would generate the highest direct impact on environmental resources and public lands. Also, the alternative requires the highest level of planning and design. In addition, the alternative has the highest level of topographical and drainage constraints. However, no major engineering constraints are anticipated. The New Alignments Alternative has high cost and right-of-way requirements for road widening and new alignments. Road reconstruction for road widening and passing lanes and new alignment projects provides the most opportunities to incorporate multimodal facilities such as bike lanes and pedestrian paths.

### ***Mohave Road Extension***

The Mohave Road Extension would reduce traffic volumes on California Avenue south of SR 95 and Riverside Drive east of California Avenue in the Parker area and improve accessibility in the Parker area. The reduced traffic volumes on California Avenue and Riverside Drive will improve safety and extend the pavement life on those segments. Reduced congestion on California Avenue and Riverside Drive may reduce air pollution as well as noise levels along these segments.

The Mohave Road Extension generates significant impacts. The diversion of traffic from Parker Central by the Extension will significantly adversely impact business in the Town of Parker. The extension lays entirely in the CRIT reservation and would impact CRIT lands. The extension would also have significant impact on virgin land, species habitat, and cultural resources. Engineering location and design studies would be required. In addition, the alternative would require the relocation and of Bluewater Drive in order to align with the Mohave Road extension to the north of the airport. The relocation would entail significant earthwork and reconstruction of Bluewater Drive. The extension would also require significant right-of-way all within the CRIT area and would also require high construction costs. Similar to the other alternatives, a new facility would provide an opportunity to incorporate multimodal facilities such as bike lanes and pedestrian paths.

**TABLE 5-4. COMPARISON OF 2030 NETWORKS**

<b>Measure</b>	<b>Base Future</b>	<b>Road Widening</b>	<b>New Alignments</b>	<b>Mohave Road Extension</b>
<b>Performance Factors</b>				
Mobility	Level of service will degrade as traffic increases. Mobility will be reduced during peak traffic season, particularly on such streets as Kuehn Street.	Provides acceptable level of service. Some road segments such as portions of Kuehn Street operate below desirable levels of service during the peak season.	Provides highest level of service. Slightly relieves through traffic in Quartzsite and provides relief of traffic in Parker.	Reduces traffic volumes on California Avenue south of SR 95 and Riverside Drive east of California Avenue in the Parker area.
Accessibility	Provides accessibility throughout region. Reduced accessibility in Peak Season.	Improves accessibility by providing a higher level of service.	Provides highest level of accessibility.	Improves accessibility in the Parker area.
System Preservation	Infrastructure of existing roads will degrade as traffic increases. However, improvement projects could be programmed on the Base Network to extend some life to existing roads.	Road widening and passing lane projects would extend life of existing road segments improved.	Road widening and passing lane projects would improve the life of existing roads. New alignments would reduce traffic volumes on portions of existing roads and thereby extend life of some portions of existing roads.	The reduced traffic volumes on California Avenue and Riverside Drive will extend the pavement life on those segments.
Integration with other modes	Limited integration of other modes with current roads due to restricted geometrics of existing roads. However, improvement projects could be programmed to improve infrastructure such as adding shoulders.	Improvements of shoulders on State Routes on widening sections and potential passing lanes could encourage other modes such as bicycling.	Allows for integration of other modes into new alignments.	Allows for integration of transit and bicycling modes.
Safety	Increased future traffic volumes on the Base Network with existing roads would adversely impact safety.	Improves safety with road widening and possible passing lanes.	Provide highest level of safety with road widening, possible passing lanes, and new alignments.	Improves safety on California Avenue and Riverside Drive.
Economic Benefits	Reduced mobility due to increased traffic congestion on existing roads will adversely impact economic growth.	Improved mobility due to a higher level of service will improve economic opportunities.	New alignments will divert traffic from business centers and adversely impact business in Quartzsite and Parker. Higher overall mobility may provide economic benefits throughout the region.	Diversion of traffic from Parker Central will significantly adversely impact business in the Town.

**TABLE 5-4. COMPARISON OF 2030 NETWORKS (Continued)**

<b>Measure</b>	<b>Base Future</b>	<b>Road Widening</b>	<b>New Alignments</b>	<b>Mohave Road Extension</b>
<b>Feasibility Measure</b>				
Socioeconomic	Least direct impact on adjacent properties and business. However, increased traffic congestion during peak season impacts adjacent properties.	Widening of roads impacts adjacent properties. Reduced traffic congestion reduces impacts on adjacent properties.	Reduces congestion impacts on adjacent properties. However, highest impact on properties and businesses where new alignments are constructed.	The extension lays entirely in the CRIT reservation and would impact CRIT lands.
Environmental	Lower speeds and stopping due to increased congestion would increase air pollution.	Improved speeds and reduced congestion may reduce air pollution. Increased speeds may increase noise levels. May be some impact on public lands as roads are widened.	Improved speeds and reduced congestion may reduce air pollution. Increased speeds may increase noise levels. Potentially highest direct impact on environmental resources and public lands.	Significant impacts on virgin land, species habitat, and cultural resources. Reduced traffic volumes on California Avenue and Riverside Drive may reduce air pollution and noise levels.
Engineering	Engineering would be limited to minor improvements. However, projects could be programmed for existing roads to include road and bridge projects. No major engineering constraints are anticipated.	Planning and engineering would be required for road widening and passing lanes. No major engineering constraints are anticipated.	Requires highest level of planning and design. Highest level of typographical and drainage constraints. No major engineering constraints are anticipated.	Requires engineering location and design studies. Would require the relocation of Bluewater Drive in order to align with the Mohave Road Extension. The relocation would entail significant earthwork and reconstruction of Bluewater Drive.
Multimodal Considerations	Existing road cross sections and right-of-way limits incorporation of multimodal facilities such as bike lanes and pedestrian paths.	Road reconstruction for road widening and passing lane projects provides opportunities to incorporate multimodal facilities such as bike lanes and pedestrian paths.	Road reconstruction for road widening and passing lane and new alignment projects provides the most opportunities to incorporate multimodal facilities such as bike lanes and pedestrian paths.	The extension would provide an opportunity to incorporate multimodal facilities such as bike lanes and pedestrian paths.
Costs/Right-of-way	Lowest capital cost. Least right-of-way requirements. Minor right-of-way may be required.	Right-of-way may be required for widening of some road segments and potential passing lane segments. Moderate capital costs required.	Highest cost and right-of-way requirements for road widening and new alignments.	Requires significant right-of-way all within the CRIT area. Requires major reconstruction of Bluewater Drive. The Extension and relocation of Bluewater Drive would require high construction costs.

## RECOMMENDED ROAD PLAN

This section presents the recommended road plans for the 2020 and 2030 planning horizon years. The plans have been developed based on the analysis of alternatives presented in the previous section.

While this Study includes roadway facilities owned and operated by ADOT within the planning area, it is important to recognize that improvements to the State Highway System can be made only after in-depth planning and engineering studies are conducted by ADOT, and upon approval of the State Transportation Board. All traffic interchange improvements must be approved by the Federal Highway Administration (FHWA). Any recommendations made by this Study for improvements on State facilities can serve only as suggestions for further study.

### 2020 Road Plan

Figure 5-9 illustrates the recommended road functional classification for both 2020 and 2030. Figure 5-10 illustrates the 2020 road plan with number of lanes and improvement projects. Key components of the 2020 road plan include:

#### *State Routes*

##### SR 95/US 95

- Widen SR 95 to four lanes - Beacon Road/Riverside Drive to Cienega Springs Road.
- Widen California Avenue to four lanes – 7th Street to California Avenue Bridge.
- Construct new California Avenue Bridge across Colorado River.
- Upgrade configuration and traffic signalization at the California Ave/Riverside Drive intersection.
- Reconstruct intersection and upgrade traffic control at the SR 95/SR 72 intersection.
- Construct additional passing lanes in the following candidate locations:
  - Quartzsite Northern Boundary to SR 72
  - Kuehn Street to SR 95 MP 99
  - Lakeside Boulevard to northern County Boundary
  - SR 95 - SR 72 to Mohave Road

##### SR 72

- Reconstruct SR 72 to include standard road cross section, construction cross drainage.
- Reconstruct SR 72/US 60 intersection.
- Reconstruct intersections with local roads along SR 72 to right-angle intersections with left-turn lanes and acceleration and deceleration lanes. (Possible configuration for these intersections is illustrated in Road Design and Access Criteria section.)

- Construct passing lanes in the following candidate location:
  - Willamette Drive to SR 95
- Construct cross drainage improvements on SR 72

### US 60

- Reconstruct US 60 to include standard road cross section, construct cross drainage, and reconstruct intersections to right-angle intersections with left-turn lanes and acceleration and deceleration lanes.
- Construct cross drainage improvements on US 60 at Centennial Wash.
- Construct passing lanes in the following candidate location:
  - Alamo Road/Centennial Park Road to Vicksburg Rd.

### I-10

- Reconstruct I-10 Exit 1.
- Reconstruct I-10 Exit 17 interchange and upgrade traffic control.

### *Town of Quartzsite*

- Widen and reconstruct Kuehn Street including drainage structures, Town of Quartzsite from Riggles Avenue to Quartzsite Boulevard to four lanes as shown.
- Widen Quartzsite Boulevard to four lanes from Main Street to Kuehn Street, Town of Quartzsite.
- Widen Riggles Avenue to four lanes from Main Street to Kuehn Street.
- Widen Kofa Avenue to four lanes from Main Street to Kuehn Street.

### *Ehrenberg*

- Reconstruct Juneau Avenue to Minor Arterial standards from I-10 Exit 1 to Ehrenberg Parker Highway.
- Reconstruct Ehrenberg Parker Highway to a Minor Arterial standard from Juneau Avenue to Southern CRIT Boundary to increase capacity.

### *La Paz County*

- Construct new Cibola Bridge.
- Construct new River Road Bridge.
- Reconstruct Salome Highway from US 60 to I-10.



- Pave the road segments as shown in Figure 5-10.
- Reconstruct Vicksburg Road and construct passing lanes between I-10 and SR 72.

### *Colorado Indian Tribes*

- Reconstruct Ehrenberg Parker Highway (Mohave Road) from CRIT southern boundary to SR 95 to standard cross section with cross drainage improvements.
- Reconstruct bridges on Ehrenberg Parker Highway (Mohave Road).

### **2030 Road Plan**

Figure 5-9 illustrates the recommended road functional classification for both 2020 and 2030 and Figure 5-11 illustrates the recommended 2030 Road Plan. Key components of the 2030 road in addition to those recommended for the 2020 Road Plan include:

### *State Routes*

#### SR 95/US 95

- Widen SR 95 to four lanes from the Town of Quartzite to the northern County boundary.
- Construct 4-lane divided highway on US 95 from MP 70.2 to southern County boundary as recommended by the *Initial Design Report: US 95, MP 42 to Cibola Lake Road*, September 2008.
- Add passing lanes between MP 99 and southern County Border, (approximately MP 60).

#### SR 72

- Add passing lanes on the following road segment:
  - Avenue 42E to Willamette Drive

#### I-10

- Reconstruct I-10 Interchanges at all locations by 2030.

### *Ehrenberg*

- Reconstruct Ehrenberg Parker Highway to a higher two-lane road standard from Juneau Avenue to CRIT southern boundary.
- Reconstruct Juneau Avenue to a higher two-lane road standard from I-10 to Ehrenberg Parker Highway (Mohave Road).

FIGURE 5-9. RECOMMENDED FUTURE FUNCTIONAL CLASSIFICATION

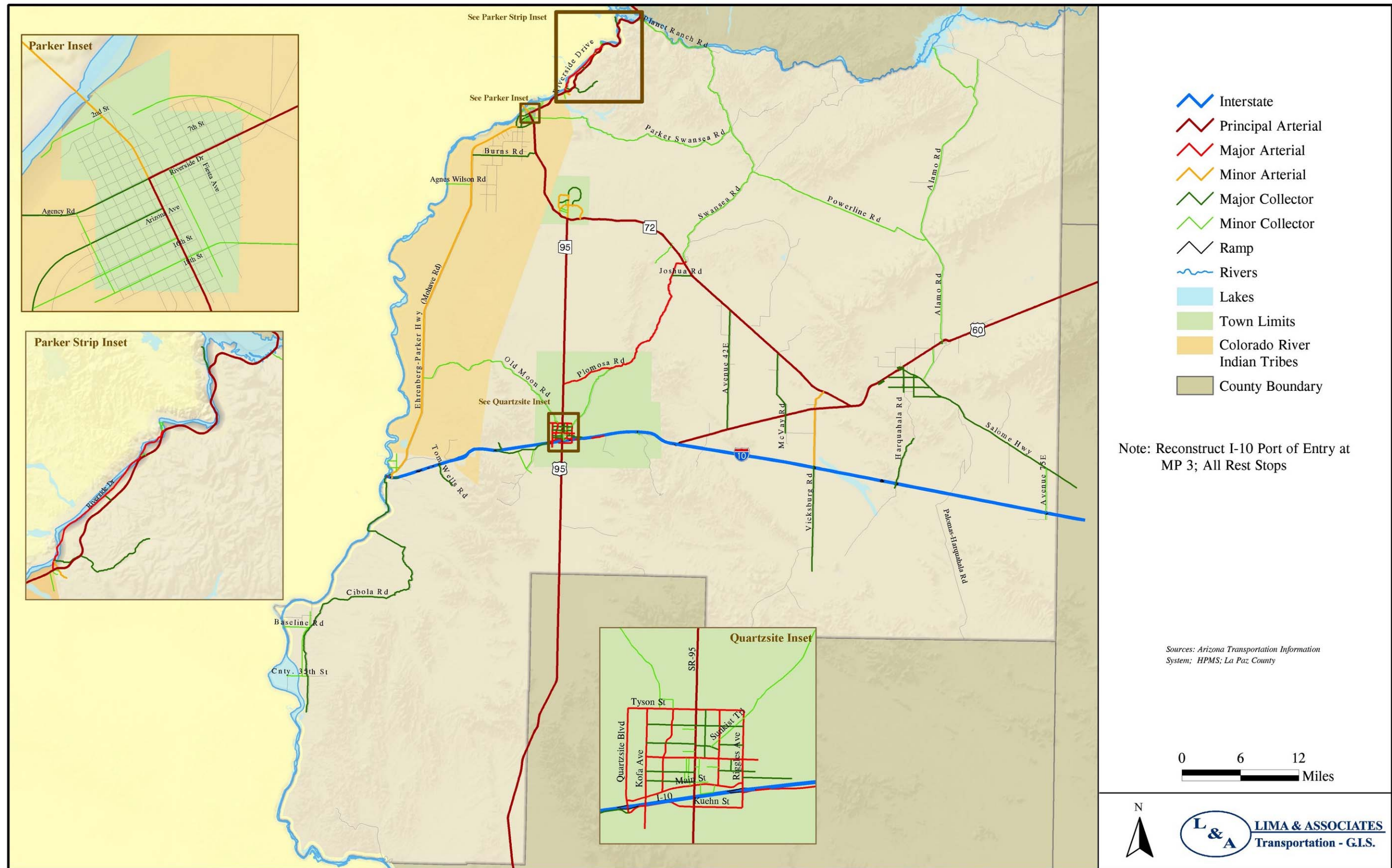


FIGURE 5-10. 2020 ROAD PLAN

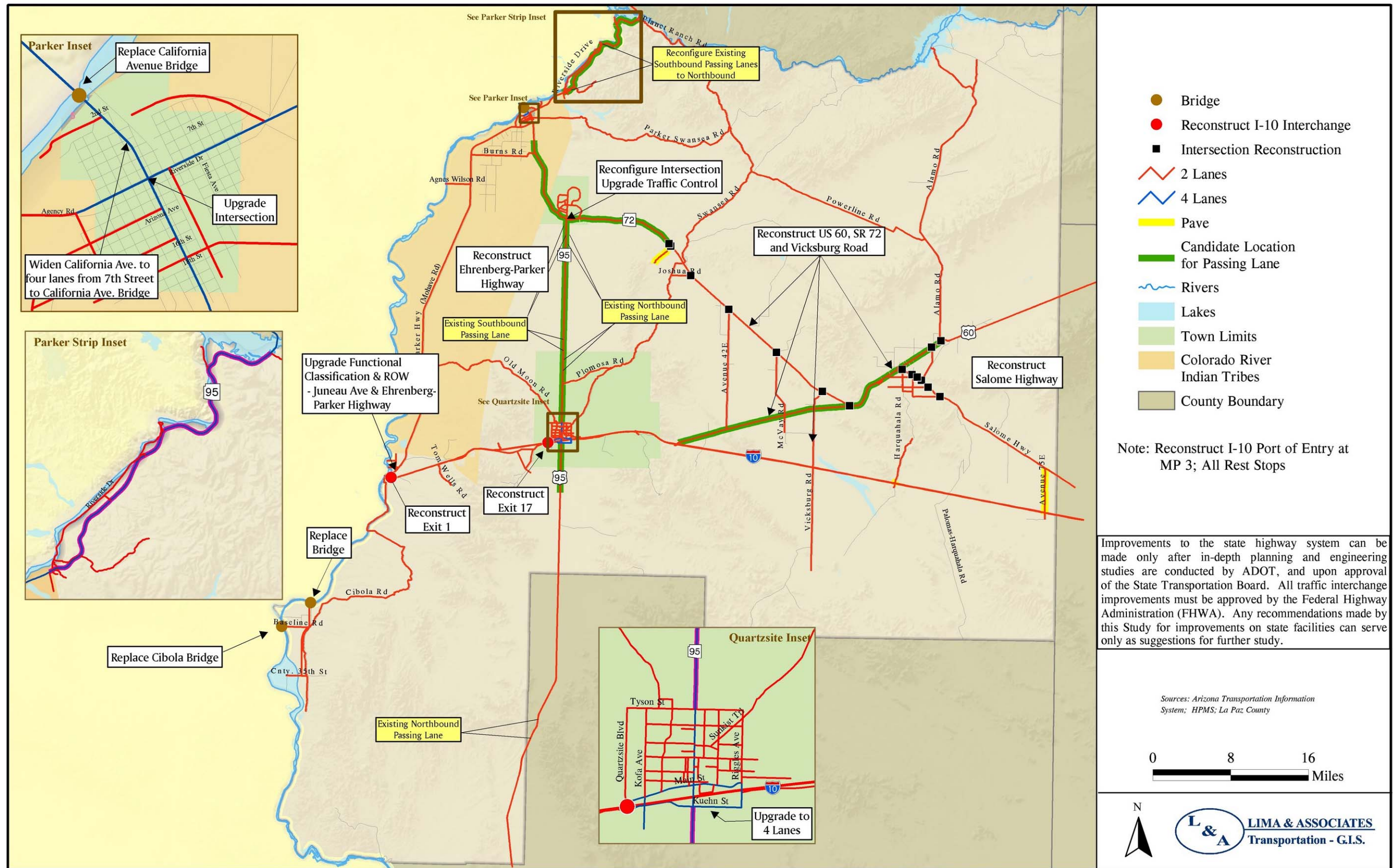
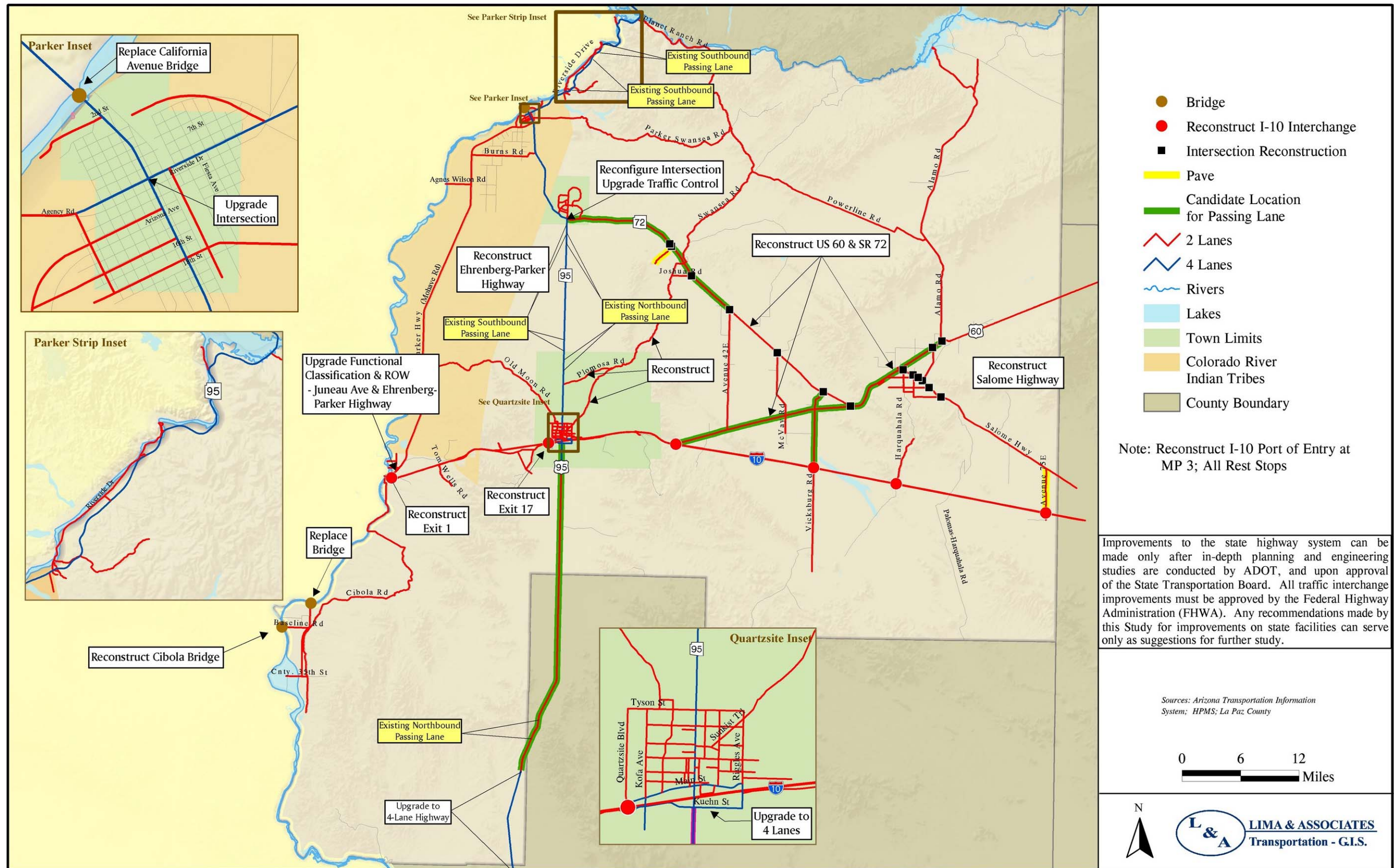


FIGURE 5-11. 2030 ROAD PLAN



## **ROAD DESIGN AND ACCESS CRITERIA**

Table 5-5 presents the proposed design and access criteria for the roadway classifications. Figures 5-12 through 5-16 illustrate the road cross-sections of five functional classes of roadways. **Note that the criteria presented in the table are minimum spacing needs and that it is recommended that longer spacing intervals be provided between intersections and between driveways.**

Road deficiencies that were previously documented in both Working Paper 1 and Working Paper 2 included the oblique-angled intersections along SR 72 and other roads. In addition, the need for turning lanes and acceleration and deceleration lanes was identified for T-intersections along SR 72. Figure 5-17 presents a schematic plan view of potential improvements at T-intersections.

### **Access Management**

A major goal for the design of roads and streets of all levels in La Paz County is: to provide for the safe and efficient movement of people and goods at a high level of service. Access management is one tool to obtain and maintain efficient and safe operations.

#### ***Need for Access Management***

Safety and mobility will be maintained along roads and streets where access is managed. As property develops, if access is not controlled, additional signalized and unsignalized intersections and driveways would have an adverse effect on mobility and safety. Along arterial streets, the failure to control direct vehicle access would force more trips onto the arterial streets. Planned developments' internal access systems would be developed with insufficient capacity. Level of service would decrease as traffic congestion increased on the roads. In addition, crashes would generally increase along such a road due to the large number of turning movements and other conflicts.

#### ***Definition of Access Management***

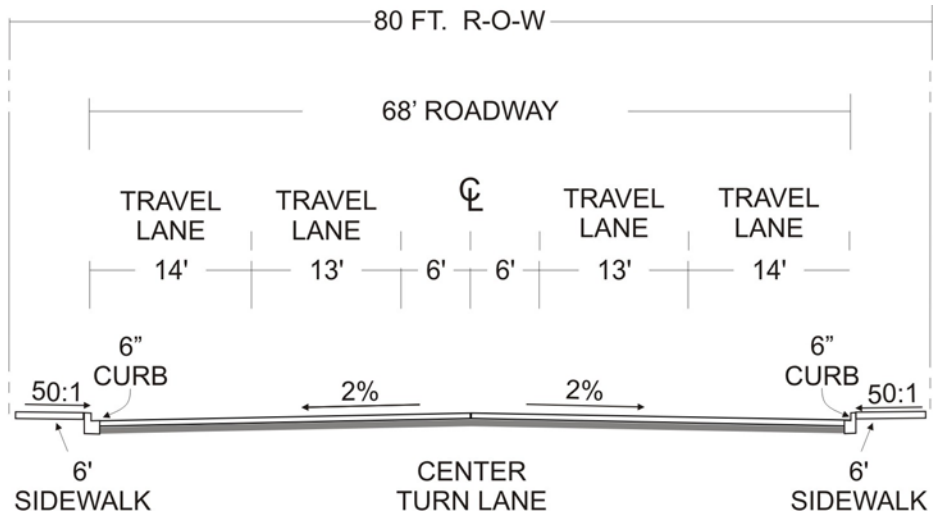
One way to minimize the adverse impact of increased access to adjacent property is to apply access management techniques along transportation corridors. According to the FHWA, access management is: *The process that provides access to land development while simultaneously preserving the flow of traffic on the surrounding system in terms of safety, capacity, and speed.* In practical terms, this process requires the regulation of vehicular access to public highways from adjoining property in order to limit the number of access points to a roadway, and, therefore, to reduce the number of potential conflict points among the users of the roadway. The primary principles of access management are:

**TABLE 5-5. MINIMUM ROAD DESIGN AND ACCESS CRITERIA**

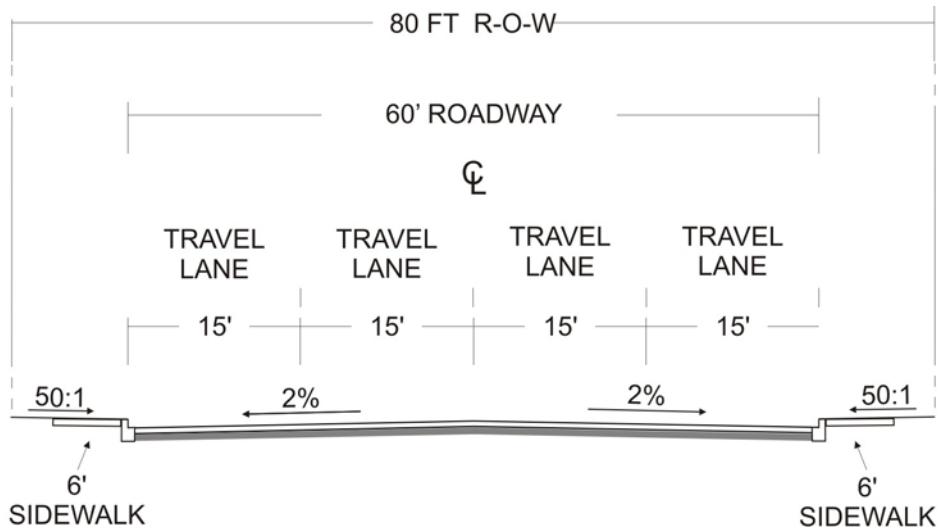
Criteria	Functional Classification					
	Freeway	Principal/Major Arterial	Minor Arterial	Commercial Collector	Collector	Local Street
Road Purpose	Mobility	Mobility	Mobility/Access	Access/Mobility	Access	Access
Planning Average Daily Traffic	> 55,000	45,000-55,000	30,000	10,000	8,000	1,000
<b>Design Standards</b>						
Design Speed	75 mph	55 mph	45 mph	35 mph	35 mph	20 mph
Right-of-Way Width	300' +	130' - 150'	110'	80'	70'	50'
Median	Divided	Divided	Raised Median	TWLT	TWLT	N/A
Number of Lanes	4 and greater	6	4	3	3	2
Left-turn Lanes	N/A	At all locations where permitted	At all locations where permitted	At all locations where permitted	At all locations where permitted	N/A
Right-turn Lanes	N/A	At all locations where permitted and warranted	At all locations where permitted and warranted	At all locations where permitted and warranted	At all locations where permitted and warranted	N/A
<b>Access Management Guidelines</b>						
Public Access	Grade-Separated Interchanges Only	1/8-1/2mile	1/8-1/4 mile	1/8-1/4 mile	1/8 mile	Residential street
Property Access	None	Rt. in/Rt. Out. Full access where approved	Rt. in/Rt. Out. Full access where approved	Full access where approved	Full access where approved	Not Restricted
Traffic Signal Spacing	N/A	Mile and ½ mile locations, Fully coordinated and progressed where warranted	½ mile locations, ¼ mile locations where warranted	½ mile locations, ¼ mile locations where warranted	N/A	N/A
Typical Traffic Control	N/A	Signalized, two-way stop	Signalized, two-way stop	Signalized, two-way stop	Signalized, two-way stop	Stop Control
<b>Alternative Modes</b>						
Transit	Potential HOV Lane	Bus pull-outs and queue jumpers where warranted	Bus pull-outs and queue jumpers where warranted	N/A	N/A	N/A
Bike Lanes	None	4'	4'	4'	4'	None
Sidewalk (both sides)	None	6' meandering	6' meandering	6' meandering	6' meandering	4'

TWLT – Two-way Turning Lanes

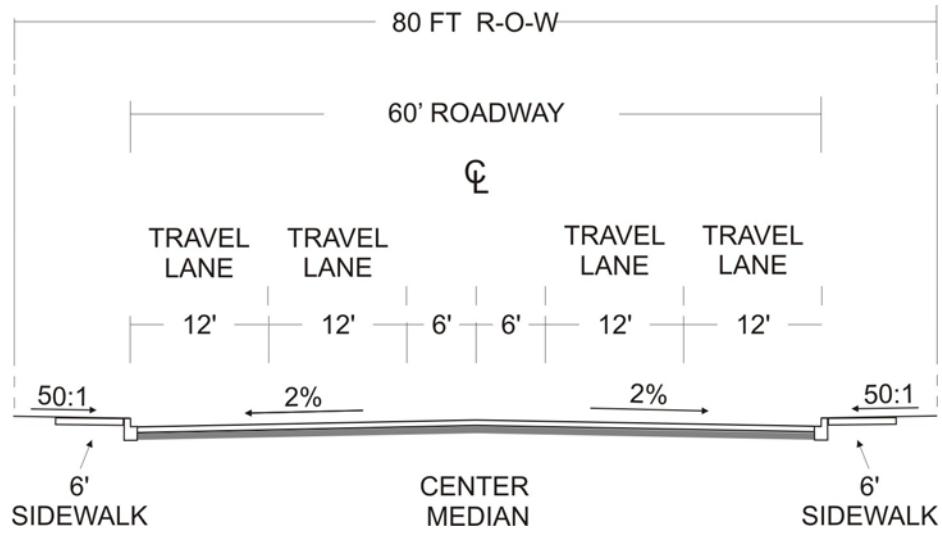
**FIGURE 5-12. ARTERIAL CROSS SECTION**



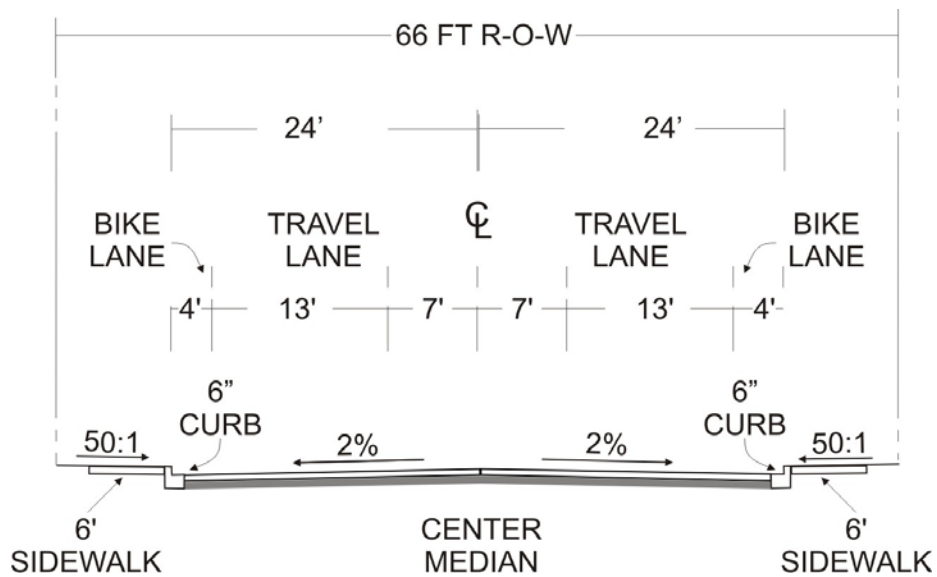
**FIGURE 5-13. MAJOR COLLECTOR STREET**



**FIGURE 5-14. MAJOR COLLECTOR STREET ALTERNATIVE**

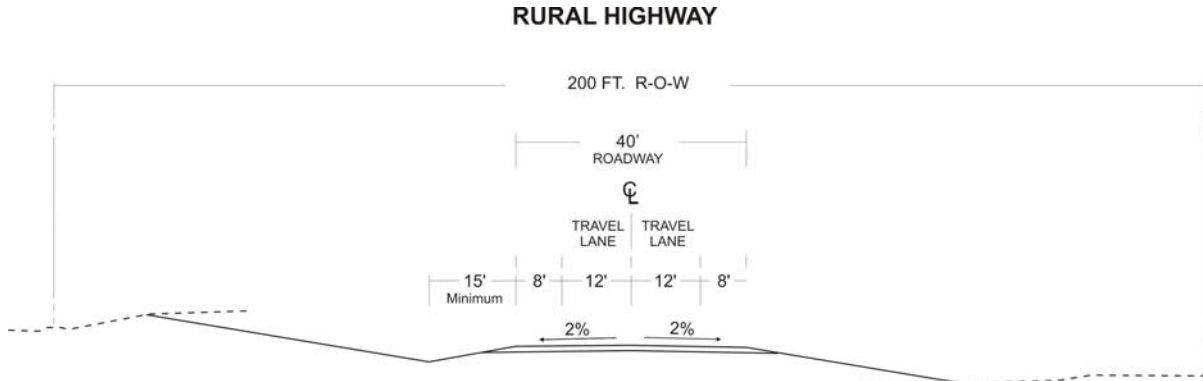


**FIGURE 5-15. RESIDENTIAL COLLECTOR STREET**

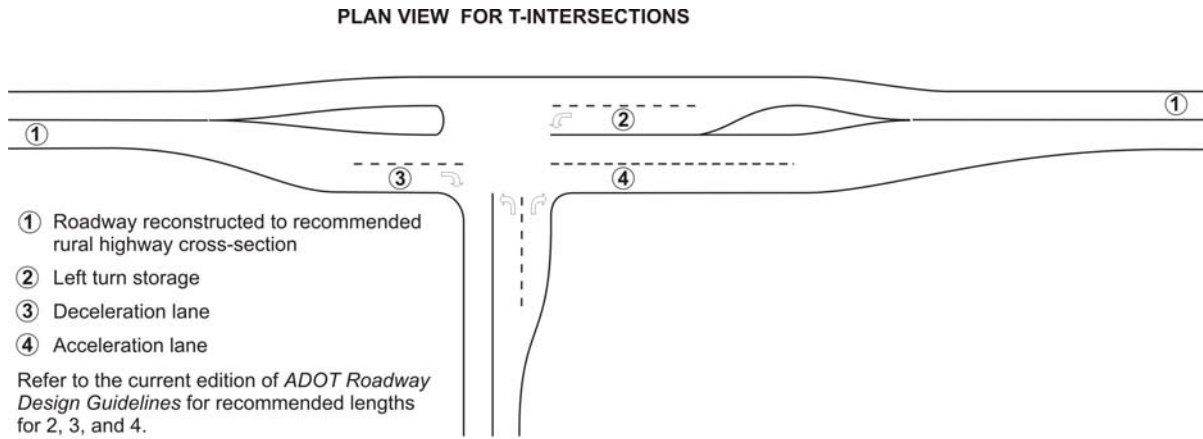




**FIGURE 5-16. RURAL HIGHWAY**



**FIGURE 5-17. POTENTIAL IMPROVEMENTS AT T-INTERSECTION**



- Prevention of traffic problems caused by unmanaged development.
- Addressing how land is accessed along arterials.
- Focusing on mitigating traffic problems arising from development and increased traffic volume traveling to new activity centers.
- Calling upon local planning and zoning to address overall patterns of growth and the aesthetic issues arising from development.

Access management involves the use of techniques by State and local governments to improve access to highways and local roads. The purpose of those techniques is to improve travel time and improve safety. Techniques include:

- Increasing spacing of intersections and interchanges to improve movement and traffic flow.
- Reducing the number of driveways to avoid conflict points and decrease the crash rate.
- Using left- and right-turn lanes to separate traffic movements, improving both traffic flow and safety.
- Applying median treatments including two-way left-turn lanes and raised medians that allow drivers to make safe left turns off the highway.
- Using frontage and backage roads that provide for safer and easier access to businesses and local roadways (A backage road functions like a frontage road but provides access to the rear of the properties being served).
- Implementing land use policies and regulations that assure appropriate connections between the various land uses and the transportation network.

### ***Benefits of Access Management***

The primary benefits of access management are:

- Overall reduced travel time.
- Reduced vehicle crashes.
- Reduced travel time for customers to reach businesses.

Benefits of access management are well documented in professional literature including the TRB *Access Management Manual*, NCHRP Report 420, *Impacts of Access Management Techniques* and other reports. Some of the most important access management techniques relate to the frequency of driveways and intersections and the uniformity of traffic signal spacing. Travel time has been shown to decrease significantly as speed increases with the reduction in the number of driveway and intersection access points. The uniform and increased spacing of traffic signals will also increase travel speeds.

Many studies have shown that crash rates increase with greater frequency of driveways and intersections. More driveways and intersections mean more potential conflicts between vehicles and also between vehicles and pedestrians. Crashes can be reduced significantly with fewer driveways and intersections.

Complaints about access management typically come from businesses concerned about restricting access to their enterprises. However, studies have shown that the application of access management techniques reduces the travel time from residential areas to commercial areas and thereby increases the overall market area for businesses. The reduction in the number of access points ensures safer access to businesses. The positive impact of access management on businesses is documented in the FHWA brochure and accompanying CD *Safe Access is Good for Business*. The brochure includes support from business owners who were in opposition before access management techniques were applied, but in support after the techniques were in effect.

### ***Access Management Methods***

Access management methods can be grouped into two broad categories: land use techniques and technical tools. Individual methods within these categories are listed below.

#### Land use and Development Techniques:

- Acquisition of Access Rights
- Transit Oriented Design
- Transfer of Development Rights
- Cluster Zoning
- Subdivision Regulations and Site Plan Review
- Dedication and Exactions
- Purchase of Development Rights
- Land Development Regulation
- Overlay Zones
- Zoning Regulation

#### Technical Tools:

- Intersection and Driveway Spacing Standards
- Traffic Signal Spacing Standards
- Driveway Consolidation
- Right-in/Right-out Driveways
- Raised Medians
- Frontage and Backage Roads (located at rear of property)
- Driveway Control
- Joint Driveway/Cross-Access
- Alternative Access Streets

## ***Recommended Access Management Principles for Local Roads***

Recommended access management principles for local and County roads include:

- **Primary Access.** For sites that have frontage on two streets, primary access should be onto the minor street.
- **Minimize Access Points.** Subdivisions and sites should be designed to minimize the number of access points. A maximum of two driveway entrances are permitted.
- **Cross Access.** Where new development adjoins other similarly zoned property or compatible land uses, a cross access easement may be required to permit vehicular movement between the parcels and reduce the number of access points required onto the adjacent public street.

## **RECOMMENDED MULTIMODAL ELEMENT**

The Multimodal Element for La Paz County is recommended as a component of the overall La Paz County Multimodal Transportation Plan. The Element includes components of transit facilities and services, pedestrian and bicycle facilities, and aviation facilities.

### **Recommended Transit Plan**

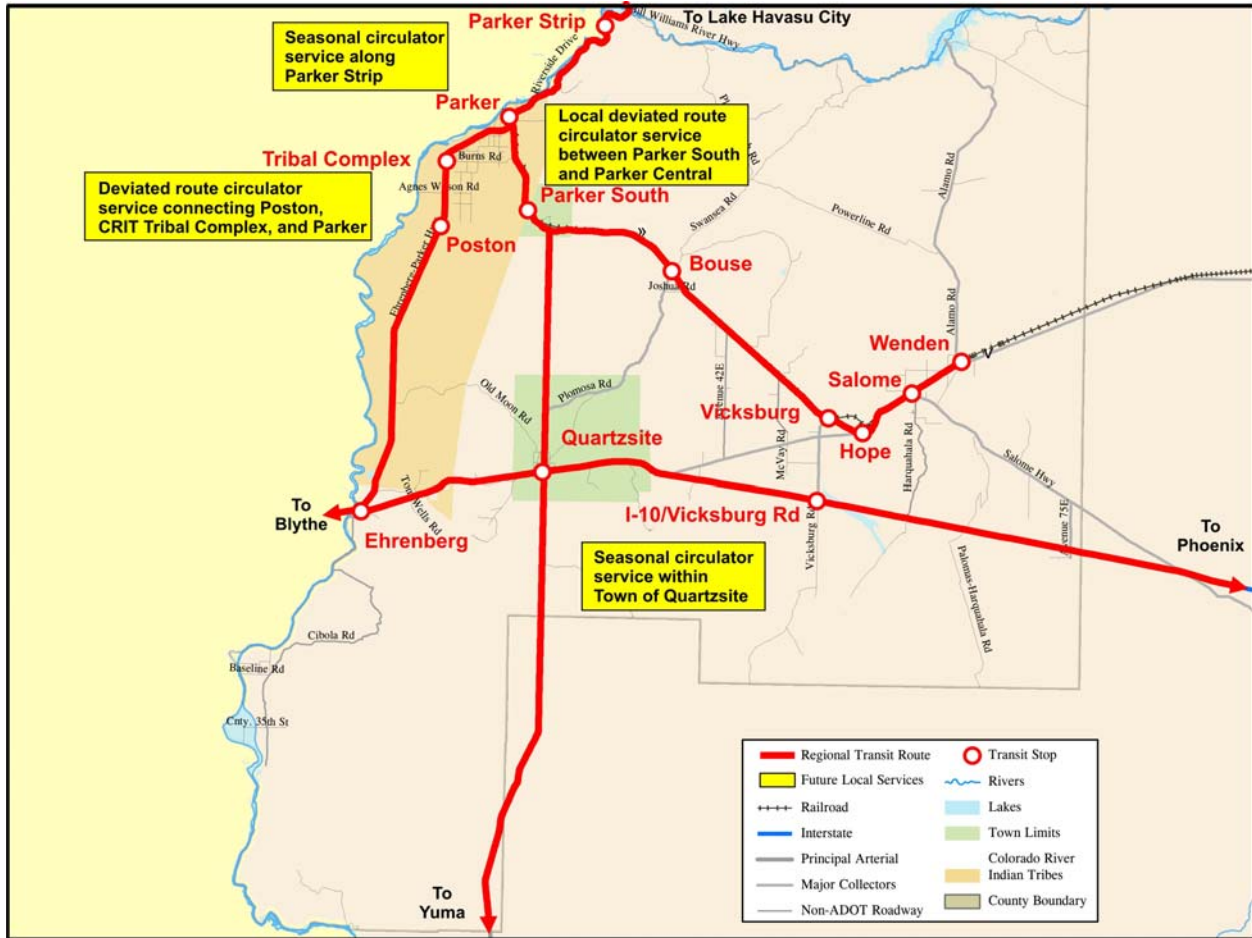
As documented in Working Paper 1, two public transportation operations currently serve the area: Quartzsite Transit Services provides local service within the Town of Quartzsite as well as regional service between the Town and Blythe, Lake Havasu City, Parker, and Yuma, serving different communities on different days of the week. La Paz County provides service within the Town of Parker as well as regional service to Bouse, Ehrenberg, Lake Havasu City, and Wickenburg, also serving different areas on different days of the week. In effect, both existing services are hybrids—providing some local services as well as regional services.

### ***Expanding Service to Address Projected Future Increases in Transit Demand***

Figure 5-18 depicts a transit plan which includes the regional routes used in the conduct of the future regional transit demand procedure described in Working Paper 2, together with proposed future local services. Draft regional transit schedules are presented in Table 5-6. Based on these schedules, each vehicle would have four or five of its seven seats filled.

The I-10 trips could be part of an expanded corridor service carrying passengers between Phoenix and Southern California. The North-South schedules could be coordinated with—or part of—the transit services proposed for connecting Lake Havasu City, Bullhead City, Needles, and Kingman. The Parker-Wenden services could also be extended to Phoenix, or to connections with future commuter rail service in Wickenburg. Such services would be likely to use vehicles with capacities of more than seven persons.

**FIGURE 5-18. TRANSIT PLAN**



Source: Lima & Associates

**Future Local Circulator Services**

The transit demand estimating process documented in Working Paper 2 addressed regional services only. Methodologies exist for estimating local transit demand—that is, demand for transit trips within a particular town or community—however, these methodologies are designed for application to urban areas with significantly greater populations than any of the communities in the Study Area. Existing local transit demand is likely being met by the services currently being operated by La Paz County and by the Town of Quartzsite. However, it is recommended that the following local services be considered for future implementation:

- Implement deviated fixed-route local circulator service along the Parker Strip, connecting Parker South, Parker Central, the Casino, and the residential areas along SR 95 up to the Parker Dam area and beyond. The Parker Central-Parker South segment should be year-round, but a population threshold for Parker South to trigger

**TABLE 5-6. DRAFT REGIONAL TRANSIT SCHEDULES**

<b>I-10 Route</b>									
<b>Westbound – Rear Down</b>			<b>Stations</b>			<b>Eastbound – Rear Up</b>			
↓	10:45 AM	4:45 PM	Lv.	Phoenix	Ar.	10:25 AM	4:25 PM	↑	
↓				I-10/Vicksburg		8:42 AM	2:42 PM	↑	
	12:28 PM	6:28 PM		Road					
7:00 AM	1:00 PM	7:00 PM		Quartzsite		8:10 AM	2:10 PM	8:10 PM	
7:20 AM	1:20 PM	7:20 PM		Ehrenberg		7:50 AM	1:50 PM	7:50 PM	
7:25 AM	1:25 PM	7:25 PM	Ar.	Blythe	Lv.	7:45 AM	1:45 PM	7:45 PM	

<b>North-South Route</b>									
<b>Southbound – Rear Down</b>			<b>Stations</b>			<b>Northbound – Rear Up</b>			
6:30 AM	↓	4:30 PM	Lv.	Lake Havasu	Ar.	↑	3:40 PM	10:40 PM	
6:50 AM	↓	4:50 PM		Parker Strip		↑	3:20 PM	10:20 PM	
7:10 AM	12:10 PM	5:10 PM		Parker		12:00 PM	3:00 PM	10:00 PM	
7:25 AM	12:25 PM	5:25 PM		Parker South		11:45 AM	2:45 PM	9:45 PM	
8:00 AM	1:00 PM	6:00 PM		Quartzsite		11:10 AM	2:10 PM	9:10 PM	
9:25 AM	↓	7:25 PM	Ar.	Yuma	Lv.	9:45 AM	↑	7:45 PM	

<b>CRIT Route</b>									
<b>Southbound – Rear Down</b>			<b>Stations</b>			<b>Northbound – Rear Up</b>			
6:10 AM	12:10 PM	6:10 PM	Lv.	Parker	Ar.	9:00 AM	3:00 PM	9:00 PM	
6:20 AM	12:20 PM	6:20 PM		Tribal Complex		8:50 AM	2:50 PM	8:50 PM	
6:40 AM	12:40 PM	6:40 PM		Poston		8:30 AM	2:30 PM	8:30 PM	
7:20 AM	1:20 PM	7:20 PM	Ar.	Ehrenberg	Lv.	7:50 AM	1:50 PM	7:50 PM	

<b>Wenden-Parker Route</b>									
<b>Westbound – Read Down</b>			<b>Stations</b>			<b>Eastbound – Read Up</b>			
7:15 AM		1:15 PM	Lv.	Wenden	Ar.	12:05 PM		6:05 PM	
7:22 AM		1:22 PM		Salome		11:58 AM		5:58 PM	
7:31 AM		1:31 PM		Hope		11:49 AM		5:49 PM	
7:37 AM		1:37 PM		Vicksburg		11:43 AM		5:43 PM	
8:07 AM		2:07 PM		Bouse		11:13 AM		5:13 PM	
8:40 AM		2:40 PM	Ar.	Parker	Lv.	10:40 AM		4:40 PM	

Source: Lima & Associates

its implementation should be determined. The Parker Strip segment of this service could begin as a seasonal operation—ultimately year-round service may be needed.

- Implement deviated fixed-route local circulator service within the Town of Quartzsite. Such service could mitigate traffic congestion on Main Street during the tourist season, and facilitate local travel among the RV Parks, Rock and Gem Shows, and other area traffic generators and attractions.
- Local circulator transit serving Tribal communities on the CRIT. Initially, this service could double as the Parker-Ehrenberg regional service, with a more relaxed schedule to allow for route deviation. Ultimately, this and other local circulators should be structured to feed passengers to the fixed-route regional routes.

As population and seasonal activities both increase, a study should be conducted to assess the feasibility of providing increased local circulator services in the Study Area.

In the near term, ridesharing programs and other lower-cost techniques should be examined as ways of enhancing the mobility of Study Area residents and visitors. Opportunities may also exist for enhancing the efficiency of the two existing operations through closer coordination. These concepts are summarized in the following section.

## **Potential Transit And Intercity Bus Services and Facilities**

### *Different Types of Transit Service*

Transit services that may be in operation in the Study Area by 2030 include the following:

- Dial-A-Ride and Paratransit Services.
- Deviated Fixed Route Service.
- Regional Commuter Bus Service including service connecting Study Area communities and adjacent communities as follows:
  - ✓ I-10 corridor service connecting the Quartzsite and Vicksburg areas with metropolitan Phoenix and Southern California.
  - ✓ SR 95 corridor service connecting the Quartzsite, Parker, and Parker Strip areas with Yuma and with Lake Havasu City.
  - ✓ Service on US 60 and SR 72 connecting the Wenden, Salome, Vicksburg, and Bouse areas with Parker and connecting to the other proposed services.
  - ✓ CRIT commuter service on the Ehrenberg-Parker Highway connecting Poston and other CRIT communities with Ehrenberg, Parker, and connections to the other proposed services.

The regional commuter service could be structured as either a fixed-route service or a deviated fixed route service. Vehicles typically used for these services are shown in Figure 5-19.

## FIGURE 5-19. TYPES OF TRANSIT VEHICLES

Vans similar to this vehicle operated in Pinal County are used in Parker and Quartzsite to transport seniors to and from Senior centers as well as trips to Blythe, California for shopping, medical, and other purposes. Future vehicles could be configured with higher roof lines to facilitate boarding and alighting of wheelchair and mobility-limited passengers.



—Lima & Associates photo



—Lima & Associates photo

This “cutaway” vehicle, comprising a minibus body constructed on a recreational vehicle chassis, is used by Valley Metro for paratransit services. However, similar vehicles are typically used in both deviated fixed route and downtown or neighborhood circulator services.

Full size motorcoaches such as this one operated by Phoenix Bus Charter are used to bring tourists from Phoenix and other communities to area attractions such as the Colorado River, Tribal gaming, rock and gem shows, and historic area tours. Similar vehicles are used by Greyhound for I-10 corridor schedules serving Quartzsite.



—Phoenix Bus Charter photo



**Dial-a-Ride Service** is a demand-response service. Vehicles do not operate on a fixed route or schedule, but pick-up patrons at their origins and deliver them directly to their destinations. Before the trip begins, and during the course of the trip, the driver receives information from a dispatcher concerning pick-up and drop-off requests. The dispatcher and driver decide the most efficient order in which to make stops. Such a procedure often means that, after being picked up, a passenger must remain on board while “detours” to pick up or drop off other passengers are made. Hence, a dial-a-ride trip can take significantly longer to complete than if the passenger had been able to drive directly to his or her destination, and such service appeals primarily to transit-dependent persons.

**Paratransit** is complementary dial-a-ride service provided to seniors or disabled persons in a fixed-route service area as required by a provision of the Americans with Disabilities Act. **Reserve-a-Ride** is dial-a-ride service that requires that pick-up requests be made 24 hours in advance.

**Regional Commuter Service** could be operated with any of the types of vehicles shown, or with full size over-the-road coaches, as demand warrants. Commuter services typically offer several departures in the morning, timed to arrive at the employment center at the beginning of the work day, and afternoon departures scheduled at the end of the work day. Such services do not necessarily operate on weekends, but may offer weekend schedules timed to accommodate shoppers and tourists.

**Fixed Route Buses** operate on a route that never varies, although alternate routes may be used on Saturday or Sunday. In large urban areas, fixed route buses typically operate on headways of 60 minutes or less—with even more frequent service offered during peak travel periods. All passengers board at posted bus stops. Some of these are “time points” that appear in published timetables, but intermediate stops not listed in schedules may also be served.

**Deviated Fixed Route Service**, sometimes referred to as “checkpoint” service, is considered an intermediate step between dial-a-ride, which targets transit dependent riders, and fixed route service, which is more efficient in larger cities having significant volumes of transit ridership.

A deviated fixed route stops at scheduled “time points”—or “checkpoints”—much as a fixed route service does. However, the route taken between points can vary from trip to trip. This “connect-the-dots” approach offers the best of both worlds: Passengers wishing to catch the bus at the last minute can wait at a time point; at the same time, the driver can receive a pick up request from a dispatcher and “deviate” from the route accordingly. Hence, deviated fixed route trips can take longer than fixed route trips. At the same time, the service is more visible to the public than one that operates on strictly a demand-response basis.

### *Types of Bus Transit Vehicles*

The vehicles used by a public transportation operation are the most tangible aspects of the service, and it is tempting to think of the service provided by a particular operation in terms of

its vehicles. We all know what a “Greyhound Bus” looks like, for example. Technically speaking, however, any type of vehicle can be used for the operation of any type of service. On a lightly traveled route, for example, a 14-passenger van often functions as a scheduled intercity bus. At the other end of the scale, full size coaches, when chartered by groups, perform a function not unlike that of a taxi—except for the number of persons carried.

Five basic types of vehicles are used to provide public transportation:

- Automobiles
- Vans and customized vans
- Body-on-recreational-vehicle-chassis or cutaway vehicles
- School bus vehicles
- Purpose-built vehicles—intercity and transit coaches

Examples of the vehicle types most commonly associated with the different types of operation are shown in Figure 4-20. With the exception of automobiles, all vehicle types are routinely fitted with wheel chair lifts and other appliances designed to facilitate accessibility pursuant to the specifications of the Americans with Disabilities Act.

### **Transportation Demand Management**

Transportation Demand Management consists of a wide range of programs and services that enable people to get around without driving alone. Included are alternative transportation modes such as carpooling, vanpooling, transit, bicycling, and walking, as well as programs that alleviate traffic and parking problems such as telecommuting, variable work hours, and parking management.

Transportation Demand Management can address the needs of those traveling long distances with rideshare options such as vanpools and carpools. These types of services are vital in moving people around large areas, whether for work or for traveling to regional centers that have special services, medical facilities, or retail stores.

**Rideshare Matching Programs** provide service by identifying people who live and work close to each other and then facilitate carpooling and vanpooling. Matching services can pair full-time partners, or simply someone to call in an emergency. Rideshare matching can be done by individual employers or on a community-wide basis. In addition to commute trips, travelers can be matched with others participating in the same extracurricular school function, medical-related trip, shopping trip, or community activity.

Rideshare matching is typically done through a computerized system. A variety of vendors have created inexpensive, effective software that makes this process easy to use. Rideshare services can also be offered on-line. A sample rideshare application is provided in the Appendix in Working Paper 3.

Two common forms of ridesharing are carpools and vanpools. Carpool participation is higher than the national average in rural Arizona, suggesting that a potential for developing additional carpools in the area exists. Strategies for formalizing and increasing carpooling in the La Paz Planning Area follow:

- The carpooling that is already established needs to be quantified and documented. This process could be an employer-based registration system that provides an incentive for filling out an information/registration card. Incentives might be as simple as a chance to be entered in a drawing for dinner for two at a popular restaurant. Periodic updates and opportunities for future carpooling incentives would be an option for carpoolers.
- A benefit of registering carpools is that the informal carpools might be able to serve another commuter who works the same shift, or an additional participant in the same periodic activity. The baseline data forms the beginning of destination-driven ride matching.
- Once the baseline data quantifies a level of carpool usage, goals for increasing participation and incentives to attract more new carpools can be identified and implemented.

Vanpools are also an alternative to be considered for area commuting. The methodology described above for carpools is one way to begin building a database for informal vanpools. By asking vehicle capacity on the registration card, the information helps organizers build an “excess capacity” database.

This type of vanpool is very informal and maintains its schedule based on employee needs. Matching commuters from the same or other businesses is the growth potential. Again, the object is to quantify and document existing vanpool commuters and build the program where possible.

Another option is to provide businesses with an incentive to let the vehicle be used for a formal vanpool program with a wider group of employees. If the vehicle becomes a part of a formal program, maintenance, insurance and vehicle upkeep can be offered as an incentive. Such a fleet of vanpool vehicles can be used as a “guaranteed ride home” for bus/rideshare commuters who have an unscheduled midday need to get home.

A few issues arise with shared-use vehicles as those described above. If the driver of the vanpool is an employee who is also commuting to work, the type of insurance needed is different than if the driver is paid or if the vehicles are used for other service during the day. As with any formal bus service, vanpools need back-up vehicles or a plan for alternate service.

### *Coordinating Local Human Services Transportation Programs*

La Paz County may benefit from a program called **Arizona Rides**, a Statewide effort to coordinate provision of human services transportation within counties or regions of counties to

increase efficiency, limit service duplication and confusion, and save costs. Arizona Rides was initiated in response to the federal “United We Ride” program established in 2004. “Pinal Rides,” a pilot project of the program, funded a study of the concept in Central Pinal County. The Final Report of the pilot project was published in December 2005. The pilot project consisted of two phases. In the first phase, existing human services transportation providers in Pinal County were inventoried, and potential areas of service duplication and inefficiency were identified. In Phase II, specific implementation objectives were identified, together with impediments to service coordination, and key service providers were selected for participation in a model coordination project. Recommendations included the establishment of a transit coordinating council for the Study Area and the implementation of service along two regional corridors.

Existing and future public transportation services in La Paz County may benefit from techniques for coordinating services, pooling equipment, and other concepts developed by Pinal Rides. The County, the Towns of Parker and Quartzsite, and the CRIT should evaluate the results of the Pilot Program.

### ***Promoting the Dial-a-Ride Service***

By far the most effective means of promoting the service, particularly in a small service area such as La Paz County, is by word-of-mouth. In order to get positive word-of-mouth, efforts should be made to tailor the service to the needs of existing and potential riders to the extent possible. Transit Marketing, LLC, with CJI Research Corporation conducted a transit marketing study in 2006 that documented data gathering techniques used by a number of transit companies nationwide. Brief summaries of techniques used to obtain marketing data by various transit systems were reviewed: Table 5-7 summarizes the different techniques used by different operators:

The most popular means of gathering data among the agencies reviewed was the conduct of an on-board survey. On-board surveys can be used to gauge customer satisfaction with the current service as well as obtain suggestions regarding unmet needs.

Other methods employed were:

- Telephone surveys of service area residents as well as surveys of the dial-a-ride users themselves
- Conduct of focus groups consisting of existing and potential users of the service
- Internet surveys of students as well as employees of major employers
- Interviews with service area stakeholders such as major employers

Most of the transit operating agencies conduct periodic strategic plans where the data collected is assessed and indicated improvements are programmed.

**TABLE 5-7. SUMMARY OF TRANSIT MARKETING DATA GATHERING TECHNIQUES**

Transit Operation	Marketing Data Gathering Technique						
	Community Telephone Survey	Focus Groups	Internet/E-mail Survey	On-Board Survey	Origin-Destination Survey	Stakeholder Interviews	User Telephone Survey
Beeline				✓	✓		
Big Blue Bus				✓			
CATA	✓	✓		✓		✓	
Champaign Urbana		✓	✓	✓		✓	
Chatham Area Transit	✓	✓		✓		✓	
Golden Empire Transit	✓			✓			
Hartline		✓		✓			
Intercity Transit			✓	✓			
KCATA				✓			
Lane Transit				✓			
LAVTA	✓			✓			✓
PeopleMover	✓			✓			
Potomac and Rappahannock	✓			✓			
Sacramento Regional Transit	✓			✓			✓

Source: CJI Research Corporation

### *Community Gateway Centers*

The participating agencies in the La Paz Planning Area should consider developing one or more community gateway centers. In late 2009, the Arizona Department of Transportation chose to close a number of highway rest stops—including several located on Interstate 10 in La Paz County. The opportunity exists for local agencies, private sector firms, or one or more public-private partnerships to provide gateway center facilities on I-10 and on other heavily-traveled roadways within the Study Area.

Such “gateway centers” should be designed or re-configured to provide more than simple sanitary facilities. Possible elements of these centers could include transfer terminals for use by intercity bus services and future local area circulators as well as park-and ride facilities for transit passengers, car pool, and van pool participants. Examples of amenities that these centers could provide include:

- Tourist and Newcomer information centers staffed by local volunteers or Chamber of Commerce staff.
- Internet “hot spots” where travelers—using their own or provided computers—could look up information on-line about area attractions, hotel accommodations, dining, boating, casino gaming, or other available recreation, and so forth.
- Transit centers and transfer points among local and regional public transportation providers.
- Economic development satellite offices.
- Full service truck and RV stops.
- Secure parking for bus and rail patrons.
- Bicycle lockers and bicycle rental.

Private establishments such as truck stops could “host” these centers and agree to provide restroom facilities for motorists in return for “Tourist Information” signage on the highways and other forms of free promotion designed to increase patronage.

### **Bicycle and Pedestrian Facilities**

This section presents a strategy to develop bicycle and pedestrian facilities as an integrated system. Bicycle facilities include bicycle lane, multi-use paths, bicycle routes, and shared roadway. Pedestrian facilities include sidewalks, separate pedestrian paths, and multi-use paths. In order to develop this strategy, the available general and comprehensive plans for the agencies participating in the Study were reviewed as well as national and local practice in planning and designing for bicycle and pedestrian facilities.

The bicycle and pedestrian strategy for the La Paz County transportation system is to provide regional and local bicycle and pedestrian facilities as alternatives to motorized travel. Local facilities should be connected to State Routes and regional facilities.

Regional bike travel can occur on discrete desert paths or on widened shoulders of State Highways and other regional roadways such as Plomosa and Alamo Roads. This Study's recommendations to reconstruct segments of SR 95, SR 72, and US 60 and provide full shoulders support interregional bike travel connecting regional activities as well as serve cross-country bicycling. The bicycle and pedestrian network should be designed to provide access to and connect regional activity centers such as the Buckskin Mountain and River Island State Parks. Bureau of Land Management trails, wildlife preserves as well as local activity centers in urban areas such as town parks, libraries, and schools.

As existing County roads are upgraded and new County roads constructed, bike lanes, sidewalks, and paths should be incorporated in the road cross section. Low volume County roads such as Plomosa Road, Powerline Road, and Alamo Road should be designated as bike and pedestrian routes. In some areas, abandoned roadways could be redeveloped as multi-use paths. For example, the abandoned old SR 95 along the Colorado River should be designated a multi-use path. In emerging urban areas, such as the McMillan Valley communities of Salome and Wenden that are bisected by US 60, future bicycle and pedestrian crossings should be installed when warranted. Side streets in these communities should be designated as bike routes as appropriate to support population growth and existing and future activity centers attracting bicycle travel such as schools and parks.

As part of the strategy, the CRIT should incorporate pedestrian and bicycle facilities into reservation roads. For example, the reconstruction of Ehrenberg-Parker Road should incorporate wider shoulders. In addition, marked cross walks should be provided for safe crossing of streets.

The plans of all the agencies—La Paz County, the Town of Parker, the Town of Quartzsite, and the CRIT—contain goals that recognize the need for developing local and regional bicycle and pedestrian facilities. The Town of Quartzsite General Plan also included maps of proposed bicycle and pedestrian trails and paths in their plan (see Chapter 3). Local bike and pedestrian facilities such as those recommended in *Town of Quartzsite General Plan*, include bicycle lanes, multi-use paths, separate pedestrian paths, and shared roadways. In addition, these facilities should connect to regional facilities such as State routes and other facilities.

### ***Other Factors***

A goal for all communities is to be walkable and bikeable. All facilities need to be designed according to American Disabilities Act standards that include providing curb ramps. Intersection and mid-block crossings need to be provided for safe crossing of streets. Bridges need to provide adequate shoulders or sidewalks for connectivity and safe pedestrian and bicycle crossings. Traffic calming measures in residential neighborhoods should be considered

to provide pedestrian friendly and safe environments. In addition, intersections and traffic control devices such as traffic signals and marked crosswalks should be designed to accommodate pedestrians and bicyclists. Also, as transit becomes more prevalent throughout the County, safe access to transit stops and well designed transit stops must be provided. In certain situation, pedestrian overpasses or underpasses may be considered.

The preparation of a map illustrating regional bicycle and pedestrian facilities is recommended to encourage safe bicycling and walking. A Safe Routes to School map is also recommended as a local and County guide to promote safe walking to school routes.

## **Aviation Plan**

Within the Study Area, potential aviation improvements are the following:

- Correct the deficiencies identified for the CRIT Avi Suquilla Airport at Parker, including the reconstruction of the airport entry, access road, parking lot, and terminal facilities.
- Study the feasibility of a new airport at Quartzsite, which could serve as both a General Aviation facility open to the public and an adjunct to the proposed industrial park—designed to permit future introduction of scheduled passenger service.
- Closely monitor the volume of flight operations at the two private McMillan Valley airports to identify when the development of a General Aviation facility in the area might be warranted.

## **Recommended Next Steps**

The Consultant recommends that La Paz County, the Town of Parker, the Town of Quartzsite, the Colorado River Indian Tribes, and the Participating Agencies in the La Paz Transportation Planning Study, take the following steps, as appropriate, to implement and expand multimodal transportation services:

- **The Participating Agencies should closely study the Pinal Rides Pilot Program to learn what features of the program are applicable to the Study Area.** In particular, the agencies currently operating dial-a-ride or commuter van services should explore coordination, operational, and marketing opportunities among the services.
- **La Paz County, the Town of Parker, the Town of Quartzsite, and the Colorado River Indian Tribes should communicate and coordinate with organizations and agencies** that are evaluating and/or advocating inter-regional transit service options affecting the Study Area including the ADOT Multimodal Planning Division, WACOG, Maricopa Association of Governments, California Department of Transportation, and the Arizona Transit Association.



- **La Paz County, the Town of Parker, the Town of Quartzsite, and the Colorado River Indian Tribes should continue to present short- and long-range plans to ADOT Multimodal Planning Division** including plans for future seasonal local circulator services, additional dial-a-ride services, and regional bus services. Demographic thresholds for the implementation of each should be identified and the demographics tracked periodically.
- **The Participating Agencies should conduct a Transit Feasibility and Implementation Study to identify current and future public transportation needs within the Study Area as well as demographic thresholds for implementing future services.**
- **The Participating Agencies should designate a Transportation Coordinator, when needed,** to develop a rideshare program, serve as a clearing house for local and regional public transportation information, and manage the implementation and operation of transit services. The Transportation Coordinator could also manage the implementation of non-motorized transportation facilities such as multi-use paths and trains.
- **The Participating Agencies should appoint a volunteer Transportation Advisory Committee** to assist in identifying the desirable attributes of the coordinator position and to work with the coordinator after his or her selection. The Transportation Advisory Committee could act as a liaison for public transportation issues among the agencies, and the business community, and could also provide input for public transportation mode choice, equipment selection, route selections and additions, and transit center concept and site selection. The Advisory Committee would also oversee the implementation of non-motorized facilities and the dissemination of information to potential bike system users, transit riders, and pedestrians.
- **The Participating Agencies should explore the concept of providing one or more “gateway centers” within the Study Area** and evaluate options for public or private development and operation of these facilities.
- **The Colorado River Indian Tribes should continue to work with ADOT Aeronautics Division to program improvements to the Avi Suquilla Airport.**
- **The Town of Quartzsite should study the feasibility of developing an airport in conjunction with the proposed industrial park described in the following section as part of the Recommended Freight Plan.**

### *Implementation Options*

Table 5-8 presents a suggested implementation schedule for transit improvements. The schedule is based on the “Next Steps” recommended above. The actual costs of both implementing and funding multimodal services will depend upon a number of variables, including the following:

**TABLE 5-8. SUGGESTED PUBLIC TRANSPORTATION IMPLEMENTATION SCHEDULE**

<b>Action</b>	<b>Responsibility</b>	<b>Time Frame</b>
Appoint Transportation Advisory Board	La Paz County, Town of Parker, Town of Quartzsite, Colorado River Indian Tribes	Near Term
Designate Transportation Coordinator	Participating Agency councils, with input from the Transportation Advisory Board	
Contract for Transit Feasibility Study	Participating Agency councils, with input from the Transportation Advisory Board and the ADOT Multimodal Planning Division	Near Term
Contract for Bicycle and Pedestrian Mobility Study	Participating Agency councils, with input from the Transportation Advisory Board and the ADOT Multimodal Planning Division	Near Term
Assess “Gateway Center” concept	Participating Agency councils, with input from the Transportation Advisory Board	Near Term
Select initial funding sources and set Budgets	Public Works departments of Participating Agencies	Near Term
Present short, long-range plans in partnership with the ADOT Multimodal Planning Division	Transportation Coordinator	Near Term
Begin Ridesharing Program Development	Transportation Coordinator with input from the Transportation Advisory Board	Near Term
Recommend transit service types and implementation thresholds	Transportation Coordinator with input from the Transportation Advisory Board and the ADOT Multimodal Planning Division	Mid Term
Obtain funding approval from ADOT	Participating Agency councils and Public Works departments	Mid Term
Request Design Concept Proposals for Gateway Centers	Public Works departments of Participating Agencies	Mid Term
Request proposals for equipment, and gateway center construction	Public Works departments of Participating Agencies	Mid Term
Develop Transit Service Marketing concepts	Transportation Coordinator with input from the Transportation Advisory Board	Long Term
Implement Marketing Campaign	Transportation Coordinator	Long Term
Order equipment and begin construction	Public Works departments of Participating Agencies input from the Transportation Coordinator and the Transportation Advisory Board	Long Term
Equipment arrives and transit service starts	Transportation Coordinator with input from the Transportation Advisory Board	Long Term

- Which mode, or modes, of transit service are recommended for implementation?
- What type of vehicles will be used and how many will be purchased?
- Will gateway centers be built initially? Or will they be programmed for later fiscal years?
- What new vehicle maintenance facilities will be needed? Can existing facilities belonging to either the County or local jurisdictions be used initially for starting or expanding bus systems? Or is contracting the maintenance out to another agency or a private sector provider practicable?
- What bus stop furniture will be provided? Will shelters be constructed at stops?
- Can bicycle and pedestrian facilities be included in the programming of roadway improvements? Or must they be funded separately?

## **RECOMMENDED FREIGHT ELEMENT**

A goal of the Multimodal Transportation Element in the La Paz County Comprehensive Plan included developing County rail and trucking facilities. A Freight Element is presented here that addresses rail and trucking strategies to encourage freight related economic development within the County. During the course of the La Paz Transportation Planning Study, the consultant discussed freight issues with area stakeholders including ADOT, County, Town, Tribal, and railroad officials.

A number of strategies are focused on moving trucks efficiently and safely through and within the County. The following actions are recommended:

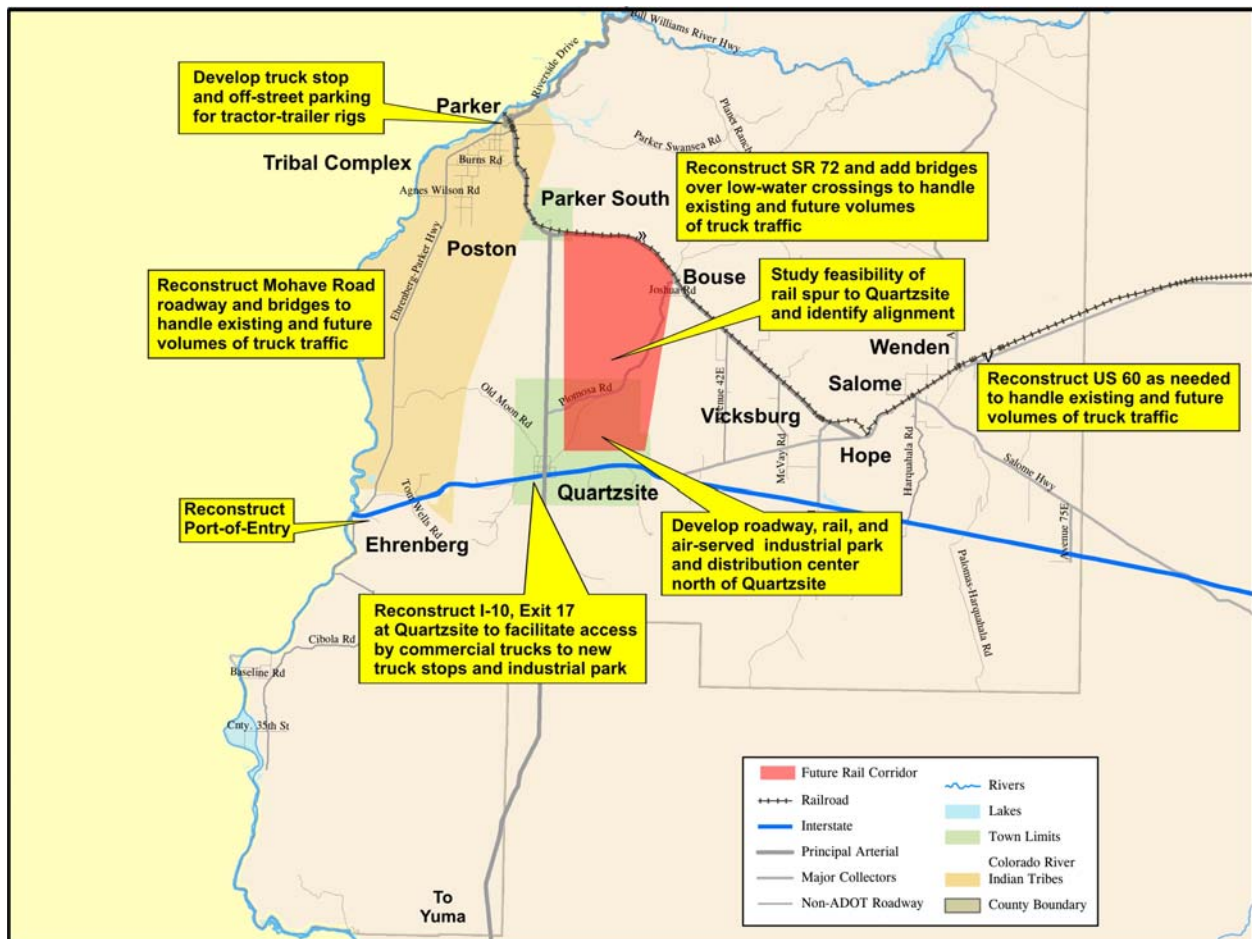
- Develop truck stop and off-street parking for tractor-trailer rigs in the Town of Parker to eliminate truck parking in the center median of California Avenue.
- Reconstruct Ehrenberg Parker Highway (Mohave Road) roadway and bridges to handle existing and future volumes of truck traffic that use the facility as a short cut from I-10 West to SR 95 North.
- Reconstruct SR 72 and add bridges over low-water crossings to handle existing and future volumes of truck traffic. Also Reconstruct US 60 as needed to handle existing and future volumes of truck traffic.
- Reconstruct the Ehrenberg Port-of-Entry. Upgrade the Port-of-Entry building and communications system to provide sufficient staging area and storage for trucks being processed.
- Develop a Travel Plaza at the I-10/Ehrenberg Highway interchange in Ehrenberg, including facilities for exchanging truck tractors, facilities to enable tractor-trailer overnight parking without idling, and other facilities as appropriate.

- Develop roadway, rail, and air-served industrial park and distribution center north of Quartzsite. Also include the study of an airport as mentioned as part of the industrial park. Study the feasibility of constructing a rail spur south from the ARZC main line to Quartzsite and identify alignment.
- Reconstruct I-10, Exit 17 at Quartzsite to facilitate access by commercial trucks to the new truck stops being constructed as well as the proposed industrial park.

Figure 5-20 illustrates the locations of the proposed improvements.

As part of the Arizona Multimodal Freight Analysis Study conducted for ADOT in 2008, a proposed Freight Planning Agenda was developed for ADOT. Table 5-9 summarizes the proposed agenda. La Paz County, the Town of Parker, the Town of Quartzsite, and the Colorado River Indian Tribes should take into consideration the findings and recommendations of the Study. The Transportation Advisory Committee previously recommended coordination with ADOT and truck and rail freight stakeholders.

**FIGURE 5-20. FREIGHT PLAN**



**TABLE 5-9. SUMMARY OF PROPOSED ADOT  
FREIGHT PLANNING AGENDA**

<b>Strategic Response #1: Link Freight Planning to Economic Development</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
1a. Engage the private sector in transportation planning	<ul style="list-style-type: none"> <li>• Number of freight stakeholder outreach activities</li> <li>• Number of private sector attendees at events</li> </ul>
1b. Support freight-related training and education for State, regional, and local planning staff.	<ul style="list-style-type: none"> <li>• Number of training sessions or workshops hosted</li> <li>• Number of MPO/COG representatives at training sessions</li> </ul>
1c. Market the link between transportation and Arizona’s economy.	<ul style="list-style-type: none"> <li>• Public attitudes toward freight in omnibus surveys</li> <li>• Sponsorship of the CAPS Center for Strategic Supply Research or similar organizations</li> </ul>
<b>Strategic Response #2: Coordinate Freight Planning and Local Land Use Planning</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
2a. Encourage and support efforts on behalf of local governments to develop land use planning guidelines for freight-intensive development.	<ul style="list-style-type: none"> <li>• Number of Arizona communities that adopt or develop land use guidelines specifically addressing freight developments</li> <li>• Number of in-State university research projects addressing land use and freight</li> </ul>
2b. Encourage communities to work closely with the private sector when developing freight logistics centers	<ul style="list-style-type: none"> <li>• Number of communities that develop local freight stakeholder forums or groups</li> </ul>
<b>Strategic Response #3: Preserve and Prioritize Key Freight Infrastructure</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
3a. Expand Arizona’s participation in high-priority corridor initiatives.	<ul style="list-style-type: none"> <li>• Number of corridor-level agreements with other states</li> <li>• Number of projects funded through or initiated by COF or other corridor-based programs</li> </ul>
3b. Support railroad mainline capacity expansions.	<ul style="list-style-type: none"> <li>• The formation of, or participation in, rail corridor coalitions</li> <li>• Rail freight facility access improvements</li> <li>• Number of at-grade crossings removed</li> </ul>
3c. Prioritize and protect priority highway corridors for efficient freight movement.	<ul style="list-style-type: none"> <li>• Average truck trip time between trade centers</li> </ul>
3d. Establish and maintain a freight data collection program.	<ul style="list-style-type: none"> <li>• The number or percent of planning studies, such as framework studies, that include some element of freight analysis</li> <li>• Average travel time and buffer indices for major truck corridors</li> </ul>
<b>Strategic Response #4: Seek Opportunities to Improve Freight Operations</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
4a. Incorporate heavy truck movements into highway design and reduce bottlenecks	<ul style="list-style-type: none"> <li>• Percent of priority truck routes meeting ADOT standards for: <ul style="list-style-type: none"> <li>○ pavement condition</li> <li>○ bridge condition</li> <li>○ WB-67 intersection design</li> <li>○ adequate acceleration lanes for trucks</li> </ul> </li> <li>• Adequate climbing lanes for trucks on steep grades</li> </ul>

**5-8. SUMMARY OF PROPOSED ADOT  
FREIGHT PLANNING AGENDA (Continued)**

<b>Strategic Response #4: Seek Opportunities to Improve Freight Operations (Continued)</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
4b. Expand Arizona’s NHS intermodal connector network for freight.	<ul style="list-style-type: none"> <li>• Number of Arizona road segments on the FHWA-NHS connector listing that serve freight facilities</li> </ul>
4c. use innovative technology to improve highway operations for commercial vehicles.	<ul style="list-style-type: none"> <li>• Number of ITS projects on freight-significant corridors in Arizona</li> <li>• Estimated time savings from ITS investments on priority truck corridors</li> </ul>
<b>Strategic Response #5: Enhance Freight System Safety and Security</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
5a. Target improvements to truck crash “hot spots.”	<ul style="list-style-type: none"> <li>• Commercial vehicle crash rates by segment</li> <li>• Percent of vehicle and driver attributes for truck crashes for which the response “unknown” is listed in crash reports</li> </ul>
5b. Provide safe, secure parking opportunities for commercial vehicle drivers.	<ul style="list-style-type: none"> <li>• Percent of public truck parking spaces occupied by time of day</li> <li>• Distance (in miles) between public truck parking facilities on major corridors</li> </ul>
5c. Monitor/improve the safety of railroad grade crossings that have a crash history.	<ul style="list-style-type: none"> <li>• Number of crashes by crossing</li> <li>• Number of at-grade improvements</li> </ul>
5d. Implement performance-based truck size and weight enforcement policies.	<ul style="list-style-type: none"> <li>• Annual pavement and bridge infrastructure savings from weight enforcement</li> </ul>
5e. Monitor impacts of TSA air cargo screening requirements on businesses.	<ul style="list-style-type: none"> <li>• Number of meetings with air cargo stakeholders to monitor impacts</li> </ul>
<b>Strategic Response #6: Environmental Preservation and Energy Efficiency</b>	
<b>Tactics</b>	<b>Performance Measures/Indicator</b>
6a. Promote “green” freight initiatives in Arizona’s growing freight transport sector.	<ul style="list-style-type: none"> <li>• Percentage reduction in mobile source emissions from large trucks</li> <li>• Percentage reduction in energy consumption from large trucks</li> </ul>
6b. Study options for moving through trucks out of congested urban corridors.	<ul style="list-style-type: none"> <li>• Percentage reduction in truck VMT on congested urban corridors</li> </ul>

Source: Arizona Department of Transportation, *Arizona Multimodal Freight Analysis Study*, Wilbur Smith Associates, et. al., 2008

## Next Steps

The consultant recommends the following next steps relating to freight improvements:

- In the process of updating general or comprehensive plans, **La Paz County, the Town of Parker, the Town of Quartzsite, and the Colorado River Indian Tribes should take into consideration the findings and recommendations of the *Arizona Multimodal Freight Analysis Study* conducted for ADOT in 2008.** Participating agencies should focus on those findings and recommendations that pertain to the impact that increased truck and rail shipments from the West Coast will have on Western Arizona infrastructure and traffic volumes.
- The participating agencies should also **monitor closely the concepts for developing alternatives to West Coast ports such as Punta Colonet and Guymas**, which were alluded to in the *Multimodal Freight Analysis Study*. The opening of these facilities—and the new highway and/or rail alignments that might be constructed as a consequence—could significantly impact the opportunities for developing freight facilities and could also affect future traffic flows and volumes.
- **The Town of Parker should identify candidate locations for off-street parking for tractor-trailer rigs and program funding for site preservation.** The Town should continue to work for attracting truck stop developers to the area.
- **The CRIT should work with ADOT to program roadway and bridge improvements for Ehrenberg Parker Highway (Mohave Road).**
- The participating agencies should continue to **encourage ADOT to program improvements to SR 72 and SR 95 related to the efficient and safe movement of heavy trucks**, including the installation of bridges or culverts on low-water crossings, improvements to roadway geometry, and widening.
- The participating agencies should continue to **encourage ADOT to program reconstruction of the Ehrenberg Port-of Entry.**
- **The Town of Quartzsite should study the feasibility of developing a multimodal industrial park north of Town** and begin the appropriate site preservation and zoning processes. The Town should coordinate with the ADOT Multimodal Planning and Aeronautics Divisions to explore funding for studying the feasibility of multimodal transportation facilities—air, highway, and rail—to serve the proposed park. The Town should continue to coordinate with the Arizona & California Railroad and keep the Railroad informed of the progress of the concept.
- **The County should work with ADOT and private interests to develop a Travel Plaza** at the I-10/Ehrenberg Parker Highway interchange in Ehrenberg to serve commercial trucking as well as the general public.
- **The Town of Quartzsite should continue to urge ADOT to program the reconstruction of I-10, Exit 17** to improve access and safe movement of heavy trucks into the Town from the West.

## 6. IMPLEMENTATION

### CHALLENGES TO IMPLEMENTATION

Implementing the multimodal transportation infrastructure within the context of approved development plans presents several major challenges, including the following:

- Coordination of recommendations among the various stakeholders
- Right-of-way needs and preservation for roadways
- Lead time needed to construct roads
- Cost of needed improvements and funding implications
- Limited funding and ability to obtain funding
- Prioritization of projects as development phases in
- Implementation of multimodal and transit projects

### IMPLEMENTATION STRATEGIES

#### Agency and Stakeholder Coordination

To meet these challenges, it is essential that an implementation action plan for short-, mid-, and long-range transportation projects be developed in coordination with the following agencies and organizations:

- ADOT
- La Paz County
- Town of Parker
- Town of Quartzsite
- CRIT
- WACOG
- BLM
- Arizona State Land Department
- Developers and other private sector stakeholders

It is important to note that recommendations made by this Study for improvements on State facilities can serve only as suggestions for further study. Improvements to the State Highway system can be made only after in-depth planning and engineering studies are conducted by ADOT, and upon approval of the State Transportation Board. All traffic interchange improvements must be approved by the Federal Highway Administration. In addition, environmental assessments must be conducted and Design-Concept Reports must be developed prior to the construction of any new roadway or multimodal facility.

Tables 6-1 through 6-3 list recommended strategies for road, multimodal and freight projects for the 2010, 2015, 2020, and 2030 planning horizons. The tables also list the likely primary responsible parties for implementing the projects.



**TABLE 6-1. LA PAZ ROADWAY IMPLEMENTATION STRATEGIES**

Implementation Strategy	Horizon Years			Responsibility
	2010-2015	2020	2030	
<b>Plan and Program Adoption</b>				
- Adopt the La Paz PARA Study.	X			County, Towns, CRIT
- Adopt roadway functional classifications, design standards, access management, and traffic-calming policies.	X			County, Towns, CRIT
- Program the recommended multimodal improvements into the Capital Program.	X			County, Towns, CRIT, ADOT
<b>Coordination</b>				
- Coordinate with ADOT on completion of ADOT Design Concept Studies.	X			County, Towns, CRIT, ADOT, other Stakeholders
- Coordinate with ADOT and stakeholders on Design Concept Studies for high capacity corridors.	X			County, Towns, CRIT, ADOT, other Stakeholders
- Coordinate with WACOG on continuous updating of population projections.	Continuous			County, Towns, CRIT, other Stakeholders
- Coordinate with ADOT to review development proposals that may impact right-of-way on State highways.	Continuous			County, Towns, CRIT, other Stakeholders
- Work with ADOT and the Arizona Office of Tourism to establish an information center on I-10 to welcome incoming motorists and inform them of attractions and facilities in Arizona and La Paz County.	X			County, Towns, CRIT, ADOT, other Stakeholders
- Work with ADOT to develop an emergency alternate route plan that alleviates impacts to non-redundant routes from accidents and emergencies.	X			County, Towns, CRIT, ADOT, other Stakeholders
<b>Planning and Studies</b>				
- Establish a process to coordinate land use and transportation decisions on a regular basis.	X			County, Towns, CRIT, other Stakeholders
- Implement a pavement management system.	X			County, Towns, CRIT, other Stakeholders
- Conduct Traffic Warrant Studies	X			ADOT, other jurisdictions
- Conduct study to assess potential upgrade of California Ave./Riverside Drive intersection	X			ADOT, Town of Parker, CRIT, other Stakeholders

**TABLE 6-1. LA PAZ ROADWAY IMPLEMENTATION STRATEGIES (Continued)**

Implementation Strategy	Horizon Years			Responsibility
	2010-2015	2020	2030	
<b>Project Development</b>				
- Develop and implement access management plans for the State Routes, County roads, and local streets.	X			County, Towns, CRIT, other Stakeholders
- Develop and implement pavement maintenance program.	X			County, Towns, CRIT
- Conduct Design Concept Studies for passing lanes on SR 95, US 60, and SR 72.	X			ADOT
- Conduct Design Concept Studies to reconstruction State routes to standard cross sections, improved cross drainage, turning lanes, and acceleration and deceleration lanes.				ADOT
- Conduct Design Concept Studies for widening SR 95 to four lanes.	X			ADOT
- Address capacity and safety concerns on paved County roads and work with land owners to pave existing unpaved County roads.	Continuous			County, Stakeholders
<b>Right-of-way Preservation</b>				
- Preserve right-of-way for arterials and State Highways	X	X	X	ADOT, County, Towns, CRIT, other Stakeholders
<b>Construct Improvements</b>				
- Construct recommended roads as shown in 2020 Road Plan.		X		ADOT, County, Towns, CRIT, other Stakeholders
- Construct recommended roads as shown in 2030 Transportation Plan.			X	ADOT, County, Towns, CRIT, other Stakeholders
- Upgrade existing roadways to comply with adopted functional classifications and standards as warranted.	X	X		ADOT, County, Towns, CRIT, other Stakeholders
- Upgrade California Ave./Riverside Drive intersection.		X		ADOT, Town of Parker, CRIT, other Stakeholders
<b>Funding</b>				
- Identify high priority funding strategies.	X			ADOT, County, Towns, CRIT, other Stakeholders
- Coordinate to obtain funding and leverage funds for improvements.	X			ADOT, County, Towns, CRIT, other Stakeholders
<b>Monitoring and Updating Plan</b>				
- Implement a process to monitor and update plan.	Continuous			ADOT, County, Towns, CRIT, other Stakeholders
- Coordinate on a regional traffic count program.	Continuous			ADOT, County, Towns, CRIT, other Stakeholders

**TABLE 6-2. LA PAZ MULTIMODAL IMPLEMENTATION STRATEGIES**

Implementation Strategy	Horizon Years			Responsibility
	2010-2015	2020	2030	
<b>Plan and Program Adoption</b>				
- Adopt the La Paz PARA Study.	X			County, Towns, CRIT, ADOT
- Program the recommended multimodal improvements into the capital program.	X			Public Works departments of Participating Agencies, ADOT
<b>Coordination</b>				
- Appoint Transit Advisory Board.	X			County, Towns, CRIT
- Designate County Transportation Coordinator.	X			County, Towns, CRIT
- Explore implementation of ride-sharing program.	X			Transportation Coordinator with input from the Transportation Advisory Board
- Participate in an “Arizona Rides” program as warranted. Assess unmet needs and deficiencies with respect to human services transportation and potential rationalization of vehicles and other assets.	X	X		Transportation Coordinator with input from the Transportation Advisory Board and the ADOT Multimodal Planning Division
- Work with ADOT to improve shoulders for biking.	X			County, Towns, CRIT, ADOT
<b>Planning and Studies</b>				
- Conduct La Paz County Transit Feasibility Study.	X			County, Towns, CRIT, ADOT Multimodal Planning Division
- Identify potential sites of future park-and-ride lots, transit centers, and passenger rail facilities and preserve acreages.	X			County, Towns, CRIT
- Study improvement and expansion of multiuse pathway network. Determine most appropriate bicycle and pedestrian facilities for each roadway segment given planned abutting land uses.			X	County, Towns, CRIT with input from the Transportation Coordinator and Transportation Advisory Board
- Develop La Paz County standards for bike paths and trails.				Public Works departments of Participating Agencies
- Develop regional bike and trails system.				Public Works departments of Participating Agencies
- Develop an integrated bicycle trail system in the Parker Strip area that will allow visitors and residents an alternate form of transportation.	X			Public Works departments of La Paz County, Town of Parker, and CRIT

**TABLE 6-2. LA PAZ MULTIMODAL IMPLEMENTATION STRATEGIES (Continued)**

Implementation Strategy	Horizon Years			Responsibility
	2010-2015	2020	2030	
- Construct extensions to multiuse pathway network to connect new developments as warranted.		X	X	Public Works departments of Participating Agencies with input from the Transportation Coordinator and Transportation Advisory Board
- Work with the ADOT Aviation Department and the CRIT to monitor activity at Avi Suquilla Airport and anticipate and prepare for future facility improvements.	X	X		Public Works departments of La Paz County, Town of Parker, and CRIT
- Construct additional T-hangars at airport.		X		CRIT Public Works department
- Design and construct new airport terminal building.			X	CRIT Public Works department
- Complete 2030 multimodal plan.			X	Public Works departments of Participating Agencies with input from the Transportation Coordinator and Transportation Advisory Board
<b>Funding</b>				
- Identify high priority funding strategies.		X		Transportation Coordinator with input from the Transportation Advisory Board and the ADOT Multimodal Planning Division
- Coordinate to obtain funding and leverage funds for improvements.		X		Participating Agency councils, with input from the Transportation Advisory Board
<b>Monitoring and Updating Plan</b>				
- Implement a process to monitor and update plan.		X		Public Works departments of Participating Agencies with input from the Transportation Coordinator and Transportation Advisory Board
- Coordinate on a regional multimodal usage count program (incorporating motor vehicle traffic counts and gathering of transit ridership data).	Continuous			Public Works departments of Participating Agencies with input from the Transportation Coordinator and Transportation Advisory Board

**TABLE 6-3. LA PAZ RAIL AND TRUCK FREIGHT IMPLEMENTATION STRATEGIES**

Implementation Strategy	Horizon Years			Responsibility
	2010-2015	2020	2030	
<b>Plan and Program Adoption</b>				
- Adopt the La Paz PARA Study.	X			County, Towns, CRIT, ADOT
<b>Coordination</b>				
- Assist the Arizona & California Railroad in recruiting rail-served industries to Parker South and other La Paz County sites.	X	X		County, Town of Parker, ARZC
- Consider existing and future needs of truck operators when developing expansion and access management plans for County roadways.	X			Councils and Public Works departments of Participating Agencies
- Develop a plan for an industrial and distribution center north of Quartzsite.	X			Town of Quartzsite Public Works with input from La Paz County and ADOT
- Develop a plan for a truck-tractor interchange facility near Ehrenberg to accommodate truck-tractor swaps as California moves to ban diesel tractors from the State.	X	x		ADOT Multimodal Planning Division with input from La Paz County and CRIT

## FUNDING SOURCES

This section summarizes multimodal revenue sources and estimates that are applicable to the La Paz area, together with financial constraints and opportunities pertaining to needed roadway improvements. A number of funding mechanisms exist that could be used to fund multimodal improvements in the Study Area. Key federal, State, regional, and local sources are shown in Table 6-4. Funding options include both traditional and innovative sources. Traditional sources are the Arizona Highways User Revenue Fund (HURF); the Local Transportation Assistance Fund (LTAF); Federal-aid funds (Surface Transportation, Bridge, Safety, and Transportation Enhancement Funds); and local general funds, such as general obligation bonds and revenue bonds. Alternative sources of funding include special assessment districts, developer dedications, and exactions such as impact fees.

**TABLE 6-4. MATRIX OF KEY FUNDING SOURCES**

<b>Fund Name</b>	<b>Description</b>	<b>Eligible Uses</b>	<b>Application Process</b>
<b>Federal</b>			
Surface Transportation Program (STP)	Federal funds, administered by FHWA and ADOT	Variety of capital projects including highways, bridges, and enhancement projects	Programmed WACOG and ADOT District
High Risk Rural Roads	Federal funds, administered by FHWA and ADOT	Correct safety problems on roadways classified as rural major collectors, rural minor collectors and rural local roads	Programmed through ADOT
Safe Routes to School Program	Federal funds, administered by FHWA and ADOT focused on enabling and encouraging children to safely walk and bicycle to school.	Projects can include sidewalk, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, and traffic diversion improvements near schools. Each State must use between 10-30 percent of the funds for non-infrastructure related activities, such as public awareness campaigns, traffic education and enforcement near schools, and student sessions on pedestrian and bicycle safety.	Programmed through ADOT.
Highway Safety Improvement Program (HSIP)	Federal funds administered by FHWA and ADOT	Funds can be used on safety improvement projects to reduce the number and severity of highway-related crashes. As a part of the HSIP, there are specific set asides for <b>High Risk Rural Roads</b> and for Railway-Highway Grade Crossings. Every state is required to develop a Strategic Highway Safety Plan that involves a comprehensive, collaborative and data driven approach of highway safety.	Programmed through WACOG and ADOT.

**TABLE 6-4. MATRIX OF KEY FUNDING SOURCES (Continued)**

<b>Fund Name</b>	<b>Description</b>	<b>Eligible Uses</b>	<b>Application Process</b>
<b>Federal (Continued)</b>			
Federal Transit Administration (FTA)	Federal Transit Funds administered by ADOT Multimodal Transportation Division.	<ul style="list-style-type: none"> <li>- Section 5310: Formula Grants for Special Needs of Elderly Individuals and Individuals with Disabilities</li> <li>- Section 5311: Formula Grants for rural and small urban public transportation</li> <li>- Section 5313: State Planning and Research Programs</li> </ul>	Application to ADOT Multimodal transportation Division
Community Development Block Grants	Funds provided by the Federal Office of Housing and Urban Development.	Construction of capital improvement projects that benefit low to medium income groups. Projects that alleviate slums or address an urgent need such as circumstances caused by a natural disaster may be eligible. A transportation improvement project must be located in a census tract or block group with at least 51 percent of the population in the low and moderate-income group.	Application submitted to Federal Office of Housing and Urban Development.
<b>State</b>			
Highway User Revenue Fund	State funds, derived from fuel tax and VLT, administered by ADOT	Nearly any capital project related to roadway improvements	Funds allocated to jurisdiction as proportion of population
LTAF	State funds derived from lottery sales	General transportation improvements	Funds allocated to jurisdiction as proportion of population
Off-Highway Vehicle Recreation Fund	State funds as a portion of total license tax on motor fuel.	Designation, construction, and maintenance of OHV recreational facilities, OHV use areas, and OHV trails, enforcement of off-highway vehicle laws, and mitigation of damages to land.	Funds distributed to the State Parks Department, and Game and Fish Department.
Arizona State Parks Law Enforcement and Boating Safety Fund (LEBSF)	State funds granted to County Boards of Supervisors intended to support boating safety and law enforcement.	Funds enforcement of boating laws to ensure safety.	Application to Arizona State Parks Department.
Economic Strength Projects Fund	State funds administered by Arizona Department of Commerce and funded by HURF.	Selected road projects that support economic development objectives.	Application to Arizona Department of Commerce.

**TABLE 6-4. MATRIX OF KEY FUNDING SOURCES (Continued)**

<b>Fund Name</b>	<b>Description</b>	<b>Eligible Uses</b>	<b>Application Process</b>
<b>State (Continued)</b>			
Governor's Office of Highway Safety	Federal funds are allocated by the Governor's Office of Highway Safety to finance State and local government highway safety projects.	Projects are selected according to safety priorities.	Application to Governor's Office of Highway Safety.
<b>Municipal/Regional</b>			
Regional Area Road Fund	State law provides for the enacting of transportation excise taxes, which are subject to voter approval.	Funds eligible for road construction improvements	Fund is submitted to County voters for adoption of an excise tax.
Sales tax	Funds provided by an allocation of a portion of a municipality's sales tax.	Funds eligible for transportation improvements	Locally administered
Impact Fees*	Fee imposed by local jurisdiction on development on per unit basis	Used to fund a variety of infrastructure needs including transportation	Locally administered
Development Stipulations*	Requirements that developers dedicate appropriate ROW and build streets adjacent to project	Benefits are derived by offsetting cost of acquiring ROW and building infrastructure	Locally administered
Community Benefits	Developer forms an agreement with local government to provide certain community benefits.	Benefits are derived through commitments to local hiring and living wage jobs, construction of affordable housing off site, and traffic mitigation/traffic calming measures.	Locally administered

\*if implemented

- Notes: (1) State budgetary concerns resulting from the 2008 Recession caused the Arizona State Parks Department to cancel the LEBSF programs and other grant programs in 2009.  
 (2) ADOT has recently adopted a policy providing that, on a case-by-case basis, a private sector non-profit agency may be the recipient of Section 5311 funds.  
 (3) As of this writing, no LTAF monies will be available for transportation purposes in Fiscal 2011.

**Federal Funds**

The Federal government funds a variety of transportation programs: Most applicable to the Study Area would be the Surface Transportation Program funds. Arizona receives about \$155 million in STP funds per year. These funds can be used on State highways or for bridge



rehabilitation, transportation enhancements, and safety projects. The County would work through ADOT and WACOG to utilize STP funds. In addition, FHWA STP “Flex” funds can also be used for transit capital projects. The State also administers Federal Transit Administration Section 5304, Statewide Transportation Planning Funds; Section 5310, Elderly & Persons with Disabilities Transportation Program Funds; and Section 5311, Rural Public Transportation Program Funds.

In 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was enacted by the federal government, providing funding for highways, highway safety, and public transportation totaling \$244.1 billion. Table 6-5 lists the amounts of major funding categories of federal funds in SAFETEA-LU and the amounts of authorized funds for Arizona for Fiscal Year (FY) 2008.

The federal transportation funding bill for the next five-year period has been delayed. The emphasis of the next bill is uncertain at this time. The amount of funding available to the State of Arizona is also unknown.

**TABLE 6-5. FY 2008 FEDERAL FUNDING SOURCES FOR ARIZONA  
(IN MILLIONS OF DOLLARS)**

<b>Description</b>	<b>Amount</b>
Surface Transportation Enhancement (TEA)	\$138.8
National Highway System Interstate Maintenance	\$16.5
Highway Safety Improvement Program (HISP)	\$174.1
Bridge Replacement and Rehabilitation	\$128.0
Congestion Mitigation & Air Quality	\$33.8
Recreational Trails	\$22.9
Planning and Research	\$35.2
Metropolitan Planning	\$4.9
Border Infrastructure Program	\$12.6
Safe Routes to School	\$5.3
Equity Bonus	\$8.9
Indian Reservation	\$2.8
FTA, Section 5310	\$74.4
FTA, Section 5311	\$0.6
<b>Total</b>	<b>\$607.2</b>

Source: Arizona Department of Transportation, Funding Sources and Authorities, FY 2008 portion of State Transportation Funds are flexed to FTA for Transit projects Statewide.

## American Recovery and Reinvestment Act “Stimulus” Funds

The American Recovery and Reinvestment Act of 2009 (ARRA) includes provisions for modernizing infrastructure. Allocation of the approximate \$350 million received by ADOT for highway and bridge projects Statewide according to State formula has resulted in funding for two projects within the La Paz Planning Area as summarized in Table 6-6.

**TABLE 6-6. ARRA FUND PROJECTS IN LA PAZ PLANNING AREA**

<b>Project Name:</b>	US 95, Peligro to Clarks	SR 95, Passing lanes south of Bouse Wash
<b>Project Type:</b>	Pavement preservation and pipe liners. Selected milling and overlaying of asphalt pavement, polyethylene lining of existing corrugated metal pipes, and extension of existing CMP pipes at a ford wall.	Construct passing lanes. Construct passing lanes one mile in length south of Bouse Wash (near junction of SR 72 between Quartzsite and Parker).
<b>Estimate:</b>	\$13,500,000	\$2,000,000
<b>Contract Value:</b>	\$6,695,724	\$1,279,002
<b>Contractor:</b>	JAR Concrete	Combs Construction Company
<b>Date Awarded:</b>	7/17/09	6/19/09
<b>Project Status:</b>	Awarded	Awarded

Source: Arizona Department of Transportation

## Arizona State Shared Revenue

### *Highway User Revenue Fund (HURF)*

One of the main sources of State transportation funds is the Highway User Revenue Fund. These funds are comprised of gasoline taxes, use fuel tax, motor carrier fees, vehicle license taxes, other registration fees, border crossing fess, and other miscellaneous fees. The FY 2008 HURF allocation was approximately \$1.25 billion and the FY 2010 HURF forecast is approximately \$1.45 billion (Arizona Department of Transportation, Financial Management Services, September 2008).

The HURF is the primary source for State highway funding and HURF funds are limited to highway use by the Arizona Constitution. Monies from the HURF are intended for the improvement of the State’s highways and bridges. Once collected, the HURF revenues are distributed to ADOT, and in turn distributed as an entitlement share to cities, towns, and counties in proportion to population and to the Economic Strength Project Fund (described later in this chapter). HURF distributions may be used as debt service for revenue bond projects.

La Paz County received \$3.77 million of HURF funds in Fiscal 2009; the Town of Parker received \$1.00 million and the Town of Quartzsite received \$1.09 million. The County received a total of \$20.18 million for fiscal years 2004 through 2008. The Town of Parker received a total of \$5.68 million for fiscal years 2004 through 2008, and the Town of Quartzsite received a total of \$6.18 million (Arizona Department of Transportation, Financial Management Services, September 2009).

***Public Transit Funds***

**Local Transportation Assistance Funds (LTAF I and LTAF II)**

Local Transportation Assistance Funds include LTAF I, which is funded by Arizona Lottery receipts other than Powerball, and LTAF II, which is funded by Powerball receipts. Both of these funds are distributed based on population. Each requesting municipality is guaranteed a minimum of ten thousand dollars of LTAF1 funds. Cities and towns with a population of more than 300,000 persons were required to use LTAF funds for public transportation. Smaller communities could use the funds for other transportation projects. In addition, up to 10 percent of funds could have been used for the arts or for disabled and handicapped assistance. LTAF II monies were required to be used for transit by nearly all jurisdictions. From the implementation of LTAF II through Fiscal Year 2010, the legislature provided that when Powerball receipts reached a certain threshold amount in any fiscal year, the balance flowed to the LTAF II program for apportioned distribution to councils of governments, county governments, and local governments. Table 6-7 presents the fiscal year 2010 LTAF II distribution for La Paz County, the Town of Parker, and the Town of Quartzsite. Note that for Fiscal 2011, the legislature “swept” the LTAF monies into the General Fund as part of an effort to mitigate the State budget deficit caused by the recession. As of this writing, no LTAF monies will be available in Fiscal 2011 and the future of the LTAF and LTAF II programs for 2012 and subsequent fiscal years is unknown.

**TABLE 6-7. LTAF II DISTRIBUTION, COUNTIES AND CITIES/TOWNS FY 2010**

<b>Jurisdiction</b>	<b>County Level Distribution</b>	<b>Jurisdiction Level Distribution</b>
La Paz County	\$29,897.61	\$20,076.53
Town of Parker		\$4,697.52
Town of Quartzsite		\$5,123.56

Source: Arizona Department of Transportation, Multimodal Planning Division

### ***Surface Transportation Program Flexible Funding***

Since 2000, the State Transportation Board has made available \$6.5 million annually in STP “flexible funds” Statewide for qualified transit capital projects such as vehicles and transit facilities. These funds, created within the federal TEA-21 program and continued under SAFETEA-LU, are regarded as “flexible” in that the monies may be used for either highway or transit purposes. Funding originates with the Federal Highway Administration and is administered by ADOT.

Additional sources of revenue available for transit services include the following: 1) Welfare to Work Act; 2) Older American Act Title III funds, Department of Economic Security; 3) Division of Developmental Disability funds; 4) Transportation funding through Medicaid administered through the Arizona Health Care Cost Containment System; 5) Head Start, Behavioral Health Funding; and 6) Transit fares.

### ***Pedestrian/Bicyclist Funding***

Revenue sources for bicycle facilities primarily for transportation:

- Federal funds are available to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the NHS.
- Federal Lands Highway Funds are available to construct bicycle facilities and pedestrian walkways in connection with roads, highways, and parkways.
- Surface Transportation Program Funds are available to construct pedestrian walkways and bicycle transportation facilities, and modifications to make existing sidewalks accessible for mobility-limited persons.

Other funds for bicycle and pedestrian facilities include:

- National Recreational Trails Fund, which provides funds for recreational programs for bicyclists and pedestrians.
- Scenic Byways Program can fund bicycle facilities along highways.
- Federal Transit Funds can be used to provide bicycle and pedestrian access to transit facilities including shelters and bicycle parking facilities.
- Additional funding is available through the new “Safe Routes to Schools” program explained in the previous section.

Another potential funding source for trails is the Heritage Fund. The Arizona State Parks Board Heritage Fund legislation stipulated the use of Arizona Lottery Fund revenues for trails. Eligible projects are trail land acquisition, design, engineering, development and renovation activities, and trail support facilities.

## **ENVIRONMENTAL JUSTICE CONSIDERATIONS**

This Study has analyzed the effects of the draft recommended transportation plan upon environmental justice populations, using procedures developed following Executive Order 12898 (1994), *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. This Study addresses the environmental justice protected classes including the elderly (Aged 65 and older), minority and low-income populations, and mobility-limited populations. *Working Paper 1: Existing Conditions* presented an inventory of these population groups based on the 2000 US Census.

La Paz County has been identified as a County that has one of the highest proportions of people aged 65 and older in the nation. The percent population 65 and over in the County is double the Statewide proportion, approximately 26 percent compared to the State proportion of approximately 13 percent. This proportion increases during the peak season as winter visitors come to the County. Similarly, the proportion of mobility limited is relatively high, 26 percent compared to the State proportion of approximately 18 percent. The proportion of the population below poverty is also higher – 19 percent compared the State proportion of approximately 14 percent.

Although the countywide proportion of minority populations tracks that of the Statewide proportion of approximately 36 percent, Native Americans residing on the Colorado River Tribes Reservation and throughout the County are a critical group to address. Projects such as reconstructing the Ehrenberg Parker Highway (Mohave Road) will impact Native Americans both positively and negatively. Other projects such as transit service will improve mobility of Native Americans.

Both potential positive and negative impacts need to be analyzed closely when projects are implemented. Positive impacts on Environmental Justice population groups include increased mobility and safety through traffic operations improvements, provision of transit facilities, and implementation of pedestrian and bicycle facilities. Potential negative impacts on these population groups include disruption of neighborhoods with higher proportions of elderly and minority populations as well as populations below the poverty level. Another negative impact is not providing transportation alternatives such as transit service.

Future more detailed studies of recommended improvements must assess the positive and negative impacts on Environmental Justice population groups. Examples of possible future studies include Design Concept Reports for road improvements and transit feasibility studies.

## **ENVIRONMENTAL IMPACTS**

Future more detailed studies of recommended improvements must also assess the impacts on environmental and cultural resources. Potential impacts include impacts on vegetation, wildlife habitat, wildlife movement corridors, water impairment, Native American cultural resources, and other historical resources. Sensitive environmental areas in La Paz County

were described in *Working Paper 1: Current Conditions*. Wildlife Movement Corridors are one of the sensitive environmental areas that need to be considered where roads in the County intersect with the corridors. The Arizona Game and Fish Department identified Wildlife Movement Corridors in the County that have been included in the Resource Management Plans prepared by the Lake Havasu and Yuma Field Offices, respectively. These corridors are illustrated in Working Paper 1. The following factors contribute to the importance of wildlife corridors:

- Increased interaction between populations to maintain diversity, increase population size, decrease probability of extinction, and prevent inbreeding
- Increased foraging area for a wide range of species
- Escape or refuge from predators, fire, and other disturbances

More detailed studies for the planning and design of potential road improvements should assess the need for mitigation measures that would facilitate wildlife movement along the corridors across roadways and help in reducing vehicle/animal crashes.

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