

TECHNICAL MEMORANDUM

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Subject: Long-Range Transportation Plan (LRTP) - Transportation History, Policy and Plans
Technical Memorandum (Final)

INTRODUCTION

Michael Baker International (Michael Baker) has prepared this technical memorandum summarizing the Cahuilla Band of Indians (Tribe) transportation history, programs, plans, agencies, design standards, and planned improvements. In coordination with the Tribe's Public Works Department, the following documents were reviewed, and relevant information related to both roadway and multimodal (pedestrian, bicycle and transit) projects have been summarized in this memorandum:

- 1997 Cahuilla Tribal Transportation Plan
- 2009 Tribal Transportation Needs Assessment
- 2017 Cahuilla Casino Expansion Traffic Impact Analysis
- 2017 Tribal Transportation Safety Assessment
- 2019 Cahuilla Indian Health Center Traffic Impact Analysis
- 2020 Cahuilla Roadway Study

TRANSPORTATION HISTORY

The Reservation is located in southern Riverside County and accessible from the east and west by State Route 371 (SR-371), a state-owned facility. For more than two decades, studies have been conducted on the roadway network to determine the need and recommend improvements. The process began in 1997 when the Bureau of Indian Affairs (BIA) was required to prepare Transportation Plans for Indian Reservations throughout the United States for Tribes to receive Highway Trust Funds (HTF) through the Federal Highway Administration (FHWA). The study evaluated the existing conditions, prepared recommendations, and conducted analyses to determine potential deficiencies in the transportation infrastructure. The result of that study was a list of seven roadway surfacing improvements. The Transportation Plan was updated in 2009 when the Tribal Transportation Needs Assessment was prepared that focused on roadway needs as well economic issues, public health concerns, desired improvements to transit, and pedestrian and bicycle infrastructure needs. The study identified improvements projects along SR-371 that would increase capacity.

In 2017, a safety assessment was conducted through the UC Berkeley Institute of Transportation Studies Tech Transfer Program. As part of this program, the Tribe identified four key areas of concern: SR-371 at Cary Road, SR-371 at Tribal Road/Casino and Travel Center Entrance to Homestead Road; SR-371 at Tribal Road/Casino and Travel Center Entrance to Puck-it Drive; and overall circulation around the Casino and Travel Center Campus. The study includes short-, medium- and long-term improvements along SR-371, which included modifying driveways, widening shoulders, adding rumble strips, adding turn lanes and traffic signals as well as signing and striping modifications along SR-371. Also, a multiuse path was recommended along the roadway connecting to SR-371 that would connect to the travel center and casino as well as other planned uses surrounding the casino and casino expansion site.

Most recently, the Tribe completed the Roadway Study with the assistance of Michael Baker. This study focused on the assessment of pavement conditions, a comprehensive inventory of all roadway surfaces, and recommendations to improve the surface type – similar to the process conducted in 1997. Some of the projects identified in that report are currently under construction or recently completed.

TRANSPORTATION PROGRAMS, PLANS, AGENCIES AND DESIGN STANDARDS

Below are transportation programs, plans, agencies, and design standards that are relevant to this project and to the development of improvements within the Reservation.

Cahuilla Public Works Department

The Public Works Department is responsible for maintaining and updating the Indian Reservation Roads inventory which is comprised of Tribal, BIA, County, and State-owned roads that are within the boundary of the Reservation or roads that provide access to and from the Reservation. Grading gravel roads, repairing/replacing culverts, and improving surface conditions on the Tribal and BIA-owned roadways are also responsibilities of the Public Works Department.

Economic Development Master Plan

The Reservation consists of approximately 18,000 acres of land, 2,000 of which has been set aside for economic development and community use on the west end of the Reservation. The planning effort began in 2016 when the Tribe’s Economic Development Corporation (EDC) hired a consultant team to prepare an Economic Development Master Plan¹ for the 2,000-acre site. Based on the multi-phase community engagement process, four major development categories were identified as candidate land uses for the site including retail shopping facilities including a grocery store and other local-serving retail and restaurants; destination uses/visitor-oriented facilities such as a RV Park, Dude Ranch, and Hot Springs; community services/facilities; and resourced-based commercial activities including crop growing and solar energy development.

Subsequent to the planning efforts in 2016, the Tribe was able to secure development rights on a 183-acre parcel that adjoined the original 2,000 acres and had frontage on SR-371. This action triggered the need for the Economic Development Master Plan (EDMP) Update completed in 2020. The EDMP Update includes an updated market analysis of development opportunities to determine how the additional highway frontage property could affect market feasibility. The EDMP Update also includes a preliminary

¹ Economic Development Master Plan 2020 Update (March 2021)

analyses of technical civil engineering constraints, related to land use, drainage, and circulation, for both the 183-acre planning area located adjacent to SR-371 and the 2,000-acre planning area. Land use plans for both sites were prepared illustrating the potential development of retail commercial, multi-family housing, K-12 school, Pre-School, RV park, Parks, Self-Storage, Office/Industrial Space, Health Wellness Center, Tribal Cultural Facilities, and a Solar Farm.

Clean Mobility Options Project

The Tribe will use the Clean Mobility Options Mobility Project Voucher to fund Cahuilla's first zero-emission carsharing program, which will provide residents with six electric plug-in vehicles. Cahuilla's geographical area creates challenges to accessing essential goods like medical services, education, and religious and cultural gatherings. This program is a bridge to the resources we need while providing a clean and safe travel option. By servicing the elderly, youth and people with transportation barriers, this program improves quality of life, increases opportunities for tribal members by expanding affordable on-demand travel options while reducing our carbon footprint and protecting the environment.

Bureau of Indian Affairs (BIA)

Through an agreement with the FHWA, the BIA is required to prepare transportation plans for all Indian reservations in order to receive Highway Trust Funds for road construction on the Indian Reservation Road System (IRRS). The main objectives of this program is to establish a process for determining transportation needs on reservations and to prepare plans or update existing plans that define those needs and recommend improvements to meet them. This Long-Range Transportation Plan (LRTP) will meet the BIA's requirements by assessing the existing conditions, evaluate transportation needs, and identify improvements that provide safe and complete streets on the Reservation. The BIA is also responsible for the maintenance of roadways on the Reservation and roadways providing access to the Reservation. Road maintenance for the BIA is defined as the preservation of the roadways in their current condition and precludes new construction, improvement or reconstruction²

Indian Reservation Road System (IRRS)

The IRRS is comprised of private, BIA, County, and State-owned roads that are within the boundary of the Reservation and/or roads that provide access to the Reservation. The list of inventoried roadways includes the route name, owner, location, section, length in miles, and condition. The IRRS is useful in identifying transportation needs such as widening paved roads and upgrading dirt roads to gravel roads. Cahuilla's Public Works Department is responsible for maintaining these roads on a regular basis in order to maintain access within the Reservation.

California Department of Transportation (Caltrans)

Primary access to the Reservation is via SR-371 which is owned and maintained by Caltrans. SR-371 runs from State Route 79 (SR-79) in Aguanga to east of Anza where it terminates at State Routes 74 (SR-74). Approximately 3.88 miles of SR-371 are on the Reservation. Future improvements to SR-371 within Caltrans right-of-way will need to meet Caltrans design standards at outlined in the Caltrans Highway

² U.S. Department of the Interior Indian Affairs

Design Manual (HDM). In addition, any improvements along SR-371 will need to comply with Caltrans Encroachment Permit processes.

American Association of State Highway Transportation Officials (AASHTO)

The *American Association of State Highway Transportation Officials* (AASHTO) publishes specifications, test protocols, and guidelines that are used in highway design and construction throughout the United States. A Policy on Geometric Design of Highways and Streets, commonly referred to as the “Green Book”, contains the current design research and practices for highway and street geometric design. Roadway sections discussed in the 2020 *Cahuilla Roadway Study* are based on the *AASHTO Green Book* recommendations for rural roads with less than 200 vehicles per day.

EXISTING TRANSPORTATION PROJECTS

Within the next five (5) years, the Tribe has plans to construct projects that could potentially impact the local transportation system. The following list outlines each of the projects that are expected to start construction by 2026:

- Car Wash and Warehouse is planned to be constructed near the Casino and Hotel;
- Transfer Station is planned to be constructed on the west side of Cary Road approximately 200 feet north of Homestead Road;
- Fire Station is planned to be constructed on the northwest corner of Homestead Road and Cary Road;
- Pave the Upper Maintenance Yard parking lot with asphalt;
- Pave Tribal members driveways with asphalt; and
- Pave the Public Works Yard, Clinic and RV Parks with asphalt.

PLANNED TRANSPORTATION PROJECTS

Over the past 20 years, studies have been conducted on the roadway network to determine the need and recommended improvements. The first Transportation Plan for the Reservation was conducted in 1997 and the latest Roadway Study was completed in March 2020. Based on a comprehensive review of six (6) documents related to transportation needs and improvements, a list of future planned improvements were extracted and presented in **Table 1**. This table summarizes the planned roadway, pedestrian, bicycle, and transit improvements for the Reservation that have not yet been constructed.

Figure 1 shows the location of the Planned Improvements within and near the Reservation. The numbers presented on Figure 1 correlate to the Planned Improvements listed in Table 1.

Table 1 – Cahuilla’s Planned Improvements

#	Project Location	Planned Improvements
Roadway Improvements		
1	Wellman Road	Widen and resurface road
2	Bailey Road – Section 20	Pave Road
3	SR-371 (along Reservation frontage)	Widen roadway to improve capacity and safety issues.
4	Local Roads on Cahuilla Reservation	All local dirt roads need improved grading and maintenance to reduce erosion.
5	SR-371 / Homestead Road	Install a traffic signal at the intersection.
		Widen to provide a westbound left-turn lane.
		Extend the eastbound right-turn lane.
		Provide new pavement markings at the intersection.
		Provide intersection warning signs with solar powered flashing beacons on SR-371 for both eastbound and westbound approaches to the intersection.
		Provide guide signs at least 600 feet in advance of the intersection to notify drivers they are approaching the Casino and Travel Center.
6	SR-371 from Cary Road to Puck-it Drive	Provide safety lighting at the intersection to provide more visibility at the intersection.
		Install more curve warning signs, chevron signs and delineators to better guide traffic through the reverse curves.
		Install solar powered speed feedback signs.
		Provide passing lanes where feasible on this section of SR-371.
		Widen the shoulders to eight feet and provide rumble strips along the edge of the travel lane behind a six-inch wide edge line.
7	SR-371 / Cary Road	Require all new/modified driveways to provide left/right turn deceleration/acceleration lanes.
		Pave the south leg of Cary Road and create a secondary access road from Cary Road to the Casino and Travel Center Complex.
		Regrade lane behind SR-371 paved shoulder on the southwest corner of the intersection to improve sight distance.
		Provide a Stop Ahead warning sign on the northbound approach.
8	Homestead Road from SR-371 to Casino/Hotel	Provide left and right-turn lanes at the northbound approach.
		Install a traffic signal or one-lane roundabout at the intersection.
		Upgrade the existing speed hump ahead warning signs so they are the size specified for local streets in accordance with the MUTCD.

Table 1 – Cahuilla’s Planned Improvements

#	Project Location	Planned Improvements
		<p>The lowest edge of the new signs may be at least 5 feet above the adjacent roadway pavement. The existing signs are too low.</p> <p>Raise the existing speed limit signs so that the lowest edge of the sign is at least 5 feet above the adjacent roadway pavement.</p> <p>The existing speed humps may be replaced by speed humps that conform to the design suggested in the Institute of Transportation Engineers (ITE) Guidelines for the Design and Application of Speed Humps.</p>
9	New Access Road on West End of Reservation from SR-371 (approx. 1 mile east of Puck-it Drive)	Pave the new access road and provide left and right-turn lanes on SR-371 allowing full access to the new road.
10	Ball Park Road; Cahuilla Way; Candelaria Road; Homestead Road; Puck-it Drive; Via Rios Road; Walker Ranch Road; Cary Road; BIA Route 21, BIA Route 23; Batista Road; and Shrecka Road	Asphalt millings surface type.
11	Elder Creek Road; Jerome’s Way; Pu’Uish Road; South Boundary Road; and Tribal Road Route 19	Recycled Base Material surface type.
12	Cienga Truck Trail; Clark Ranch Road; and Yucca Road	Cement Treat/Stabilize Road surface type.
Pedestrian & Bicycle Improvements		
13	SR-371	Bicycle lanes on both sides of the road.
14	SR-371	Pedestrian crosswalk on SR-371 linking the northern and southern portions of the Reservation.
15	SR-371 & Homestead Road	Installation of school bus shelters for students.
16	SR-371	Pedestrian and bicycle access to and from the Reservation
17	Homestead Road	Construct a multi-use path along one side of the roadway connecting SR-371 to the Casino and Travel Center to allow pedestrians to circulate among the various buildings when the Hotel and other land uses are constructed.
Transit Improvements		
18	From Cahuilla Reservation to Temecula	Provide regional transit service to and from the Cahuilla Reservation to Temecula for employment, medical, shopping, and educational trips.
19	From Cahuilla Reservation to Anza	Provide local transit service for Cahuilla tribal members and the residents of the Anza community.
20	From Cahuilla Casino to Employee Pick-up/Drop-off location	Provide transit service for employees traveling to and from the Casino.

Table 1 – Cahuilla’s Planned Improvements		
#	Project Location	Planned Improvements
21	From Cahuilla Reservation to Anza	Provide medical transportation service to the Indian Health Clinic in Anza.

CONCLUSION

Over the past 20 years, six transportation-related documents that have been prepared for the Reservation. Michael Baker reviewed these documents and extracted information related to transportation improvements within the Reservation and along SR-371. Many of the roadway projects described in the documents focus on improving access and safety to the Tribal members that live on the Reservation and visitors traveling to the Casino and Hotel. Improving pedestrian and bicycle access to and from the Reservation was also a key element as the Tribe seeks to encourage active transportation. Transit improvements would provide transit service to tribal members, employees on the Reservation, and residents of the Anza community from the Reservation to Temecula and Anza.



PROJECT LIST

- 1 **Wellman Road:** Widen & resurface
- 2 **Bailey Road:** Pave Section 20
- 3 **SR-371:** Widen along reservation frontage
- 4 **All local roads:** Improve grading & maintenance
- 5 **SR-371 / Homestead Road:** Install a traffic signal. Provide left-turn lane. Extend eastbound right-turn lane. Install new pavement markings. Install warning signs on east and westbound approaches. Install guide signs for Casino & Travel Center. Install safety lighting
- 6 **SR-371 from Cary Road to Puck-it Drive:** Add more signs & delineators. Install solar powered speed feedback signs. Provide passing lanes where possible. Widen shoulders to 8-ft & add rumble strips. Require deceleration/acceleration lanes for all new or modified driveways
- 7 **SR-371 / Cary Road:** Pave south leg & create secondary access road to the Casino & Travel Center Complex. Regrade line behind paved shoulder on south west corner. Install "Stop Ahead" sign. Add left and right-turn lanes. Install traffic signal or one-lane roundabout
- 8 **Homestead Road from SR-371 to Casino:** Upgrade speed hump and warning signs. Raise signage to be at least 5-ft above pavement
- 9 **SR-371:** Create new access road 1-mi east of Puck-it Drive
- 10 **Multiple roadways:** Asphalt millings surface types
- 11 **Multiple roadways:** Install Recycled Base Material surface type
- 12 **Yucca Road:** Cement treat/stabilize road
- 13 **SR-371:** Install bike lanes on both sides of roadway
- 14 **SR-371:** Pedestrian crosswalk across SR-371
- 15 **SR-371 & Homestead Road:** Install school bus shelters
- 16 **SR-371:** Create pedestrian and bike access to Reservation
- 17 **Homestead Road:** Construct multi-use path
- 18 **From Reservation to Temecula:** Provide regional transit service
- 19 **From Reservation to Anza:** Provide local transit service
- 20 **Casino to Employee Pick-up/ Drop-off:** Provide transit service for employees
- 21 **From Reservation to Anza:** Provide medical transportation service to the Indian Health Clinic in Anza

LEGEND

- # ROADWAY IMPROVEMENT
- # BIKE/PED IMPROVEMENT
- # TRANSIT IMPROVEMENT

