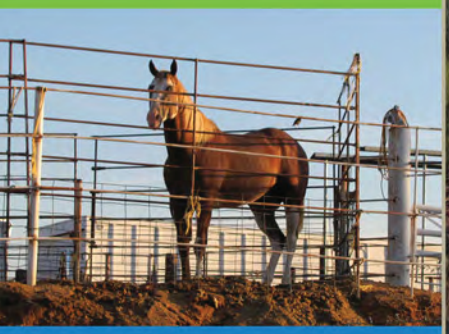
Fort McDowell Yavapai Nation Multimodal Long-Range Transportation Study



October 2012

ADOT

HDR

Fort McDowell Yavapai Nation
P.O. Box 17779, Fountain Hills, AZ 85269 Phone (480) 789-7000 Fax (480) 837-1630
President Dr. Clinton Pattea Vice President Bernadine Burnette Treasurer Pamela Mott
Council Member Paul Russell Council Member Pansy P. Thomas Council Secretary Selena Castaneda

RESOLUTION APPROVING THE FORT MCDOWELL YAVAPAI NATION MULTIMODAL LONG RANGE TRANSPORTATION STUDY

Resolution No. Ft. McD. 2012- 76

WHEREAS, the Fort McDowell Tribal Nation ("Nation") is a federally recognized Indian tribe and sovereign nation; and,

WHEREAS, the Nation's Tribal Council ("Tribal Council") is the governing body of the Nation; and,

WHEREAS, in 1990, the Tribal Council approved a comprehensive Transportation Plan for the Nation prepared and carried out by Presnell Associates, Inc. under the Bureau of Indian Affairs ("BIA") contract; and,

WHEREAS, since 1990, the Tribal Council has amended the Nation's Transportation Plan several times and now desires to approve a new and updated, comprehensive plan to meet the Nation's growing transportation needs for another 20 more years and beyond; and,

WHEREAS, the Nation, through the Nation's Community and Economic Development Division ("CEDD"), has prepared the 2012 Fort McDowell Yavapai Nation Multimodal Long-Range Transportation Study ("2012 Transportation Study"), attached to this resolution and incorporated herein; and,

WHEREAS, the 2012 Transportation Study identifies a plan of improvements for vehicular, transit, and nonmotorized transportations and outlines the specific actions and projects to implement and sustain the plan; and,

WHEREAS, the majority of funding for the projects will come from the Nation's general funds and the BIA Transportation Program; and,

WHEREAS, the Tribal Council has reviewed the 2012 Transportation Study and determines that approving the Study serves the best interest of the Nation.

NOW, THEREFORE BE IT FINALLY RESOLVED that the Fort McDowell Yavapai Nation Tribal Council hereby approves the 2012 Fort McDowell Yavapai Nation Multimodal Long-Range Transportation Study.

CERTIFICATION

Pursuant to the authority contained in Article V, Section 13(A)(1), (5), and (15) and (B)(1) and (2) of the Constitution of the Fort McDowell Yavapai Nation, ratified by the Tribe on October 19, 1999 and approved by the Secretary of the Interior on November 12, 1999, the foregoing

Resolution No. Ft. McD. 2012- 76 **cont. 2012 Transportation Study**

Resolution No. Ft. McD. 2012- 76 was adopted this 11 day of December, 2012, at a Special Tribal Council Meeting held at Fort McDowell at which a quorum of 5 members were present, 0 absent, by a vote of 4 for and 0 opposed and 0 abstained as documented below.

Vote of the Tribal Council:

Per the Nation's Constitution, Article V, the President only votes in a tie vote or under Article IX.

Dr. Clinton M. Pattea, President	__Absent	__for	__opposed	__abstained
Bernadine Burnette, Vice President	__Absent	X for	__opposed	__abstained
Pamela Mott, Treasurer	__Absent	X for	__opposed	__abstained
Paul Russell, Council Member	__Absent	X for	__opposed	__abstained
Pansy Thomas, Council Member	__Absent	X for	__opposed	__abstained

Dr. Clinton M. Pattea
President, Tribal Council

Attested to:

Selena Castaneda
Tribal Secretary

12-11-12
Date

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INTRODUCTION

The Fort McDowell Yavapai Nation (the Nation) *Multimodal Long-Range Transportation Study* (the Study) identifies a plan of improvements for vehicular, transit, and nonmotorized transportation and outlines the specific actions necessary to implement and sustain the plan. The recommendations for these elements are based on technical analyses of existing and future conditions as well as stakeholder and public input. The Study identifies projects that establish and improve multimodal options for Nation members. The development of these suggested projects includes consideration of evaluation criteria addressing such issues as safety and connection of multimodal transportation modes throughout the Nation and to the greater region. The Study projects will be included in the Nation's *Long-Range Transportation Plan (LRTP), which* provides the vision for meeting the community's transportation needs over a 20-year planning horizon.

The majority of funding for these projects will come from the Nation's general fund and the Bureau of Indian Affairs (BIA) Tribal Transportation Program (TTP).

The Study was completed with the input of a Technical Advisory Committee, whose insight and opinions were integral to preparation of the Study. In addition, two rounds of public outreach helped refine the recommendations and provide guidance for the Study. Finally, outreach was conducted through focus interviews with a number of stakeholders that included enterprises such as the casino and Fort McDowell Adventures and community service providers such as the police department, fire department, elders' center, the parks and recreation department, and the Nation's Planning Advisory Board.

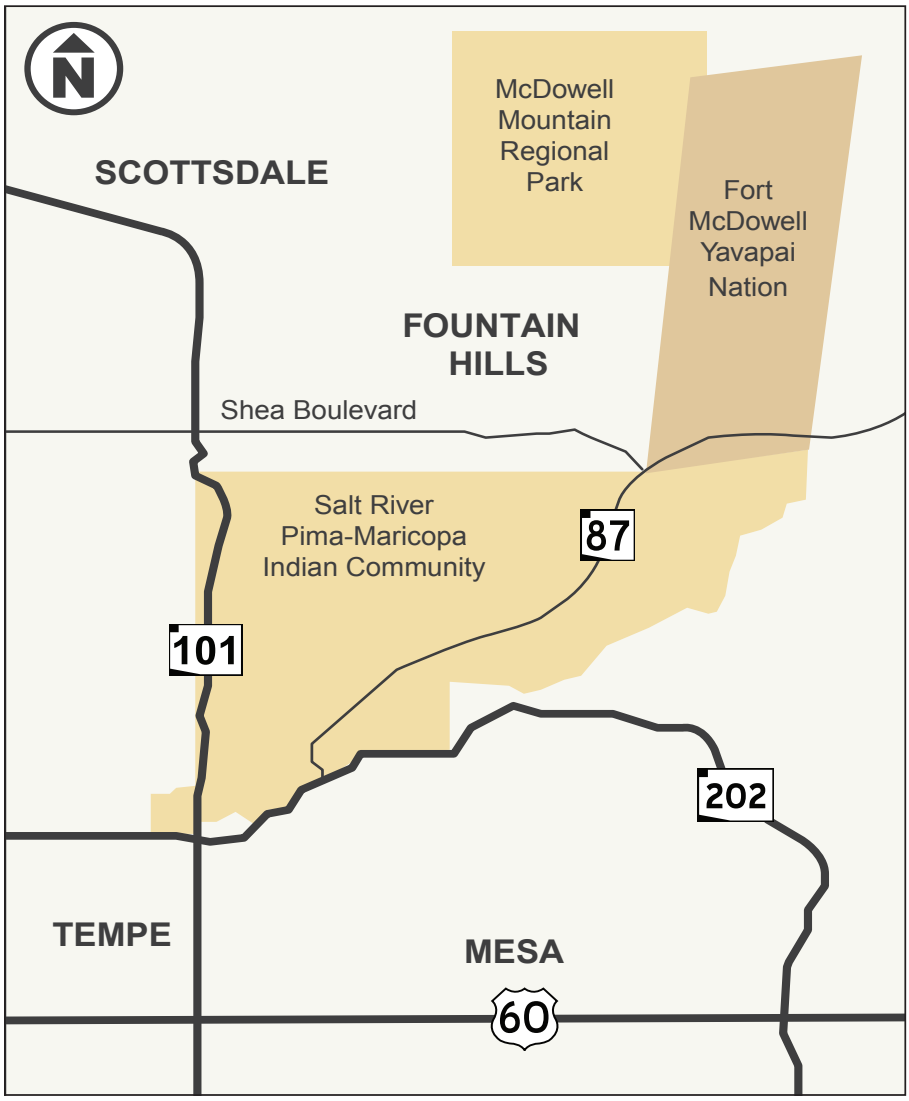
The Nation does not anticipate substantial development within its boundaries over the planning horizon. Residential development still follows a rural, single-family residence pattern. While the Fort McDowell Casino contemplates building new facilities, these will likely be developed on the existing casino site. The 'Hmañ 'shawa Early Childhood Development Center is under construction in the "downtown" area, already defined by a number of community activity centers (the elders' center, recreation center, library, and ballfields).The Plan for Improvements acknowledges and seeks to support this development pattern.

View of the McDowell Mountains from Fort McDowell Yavapai Nation

Study Area Characteristics

The Nation is a sovereign Native American tribe of 971 members, with approximately 600 members living within the community's reservation (Census 2010). The reservation encompasses 24,680 acres. It is bordered by Fountain Hills to the west, the unincorporated community of Rio Verde and the Tonto National Forest to the north and east, and the Salt River Pima-Maricopa Indian Community to the south. The Nation is a member of the Maricopa Association of Governments (MAG), the municipal and intergovernmental planning organization for Maricopa County and the metropolitan Phoenix area.

The study area for the Study is the Nation itself. While Fountain Hills, Rio Verde, and Maricopa County are stakeholders in this planning effort, the study area does not include land owned by any of these jurisdictions. State Route (SR) 87 (the Duthie-Martin Highway) cuts through this area, providing a connection between Mesa and Payson. The exhibit below shows the Nation in its regional context.



Regional Context
Source: ADOT (2011)

PLAN FOR IMPROVEMENTS

This section lays out the measures identified to maintain and enhance multimodal mobility and safety. This plan has three principal elements: roadways, transit, and nonmotorized transportation. Recommendations for these elements are based on technical analyses of existing and future conditions as well as stakeholder and public feedback. This plan is the result of research carried out and documented in Working Papers 1 and 2. Working Papers 1 and 2 have additional information that supplements the Plan for Improvements and may be of value to future planning and design work. These papers can be downloaded from the ADOT website (www.azdot.gov/MPD/Systems_Planning/FMYN.asp).

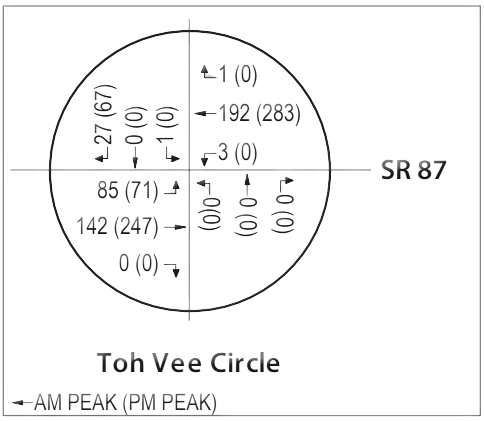
Roadway Improvements

Recommended roadway improvements were identified based on future development plans, capacity improvements, safety enhancement needs, and input received during stakeholder and public involvement activities. Roadway improvements are classified as near-term (defined as occurring within 5 years, or by 2017), mid-term (defined as occurring within 10 years, or by 2023), and long-term priorities (occurring after 2018 and before 2035, the project planning horizon). The recommended projects are shown in Figure 1, on page 5, and are keyed to the descriptions in the text starting on page 4. The keyed numbers do not reflect a project's priority; those recommendations are made in Table 5, beginning on page 25.

Near-term priorities are identified in the MAG and Maricopa County Department of Transportation (MCDOT) 5-year Transportation Improvement Programs (TIPs) and also include recommendations made in this Study for safety or operational improvements.

Mid- and long-term priorities are planned improvements that have not yet been identified for funding but are next on the priority list.

An effort was made to develop planning-level cost estimates for all projects , included in the Table 5, beginning on page 25. In some instances, the cost of roadway improvements may not be included because more detailed design studies are required to estimate costs. Figure 1 identifies the projects discussed below, and references in the text refer to the lettering key in Figure 1.

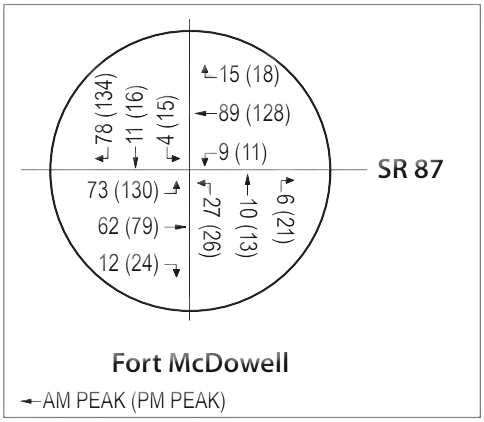


Toh Vee Circle and SR 87 intersection turning movements (December 2011)

A. Toh Vee Circle and SR 87 Intersection Improvement
Construct a westbound acceleration lane from Toh Vee Circle onto SR 87.

Toh Vee Circle is the primary access route to Fort McDowell Casino. The crash analysis indicated a number of rear-end crashes have occurred on SR 87 near Toh Vee Circle. Southbound right-turn traffic from Toh Vee Circle to westbound SR 87 faces an uphill slope, requiring a longer distance for vehicles to accelerate to the highway's posted speed of 65 miles per hour (mph). These factors increase the risk of rear-end collisions for cars merging onto SR 87 at this intersection. The study team heard from stakeholders that a westbound acceleration lane on SR 87 at Toh Vee Circle is desired. An acceleration lane would help in high-traffic volume roadways where a lack of gaps in traffic and higher speed create a challenge for merging traffic.

The Arizona Department of Transportation (ADOT) *Roadway Design Guidelines*, 2012 suggest that acceleration lanes should be provided where vehicles are entering a highway from a free right turn movement or where there is a significant number of vehicles turning right through a stop or yield-controlled movement. The width of the acceleration lane should be 12 feet with a minimum of 10 feet in very restricted urban areas. The existing low volume does not warrant an acceleration lane; however, to improve safety and comfort, a westbound acceleration lane would be beneficial. SR 87 is an ADOT facility with 200 feet of right of way and a 12-foot shoulder at this location. ADOT roadway design criteria would need to be followed to implement this project.



Fort McDowell Road and SR 87 intersection turning movements (December 2011)

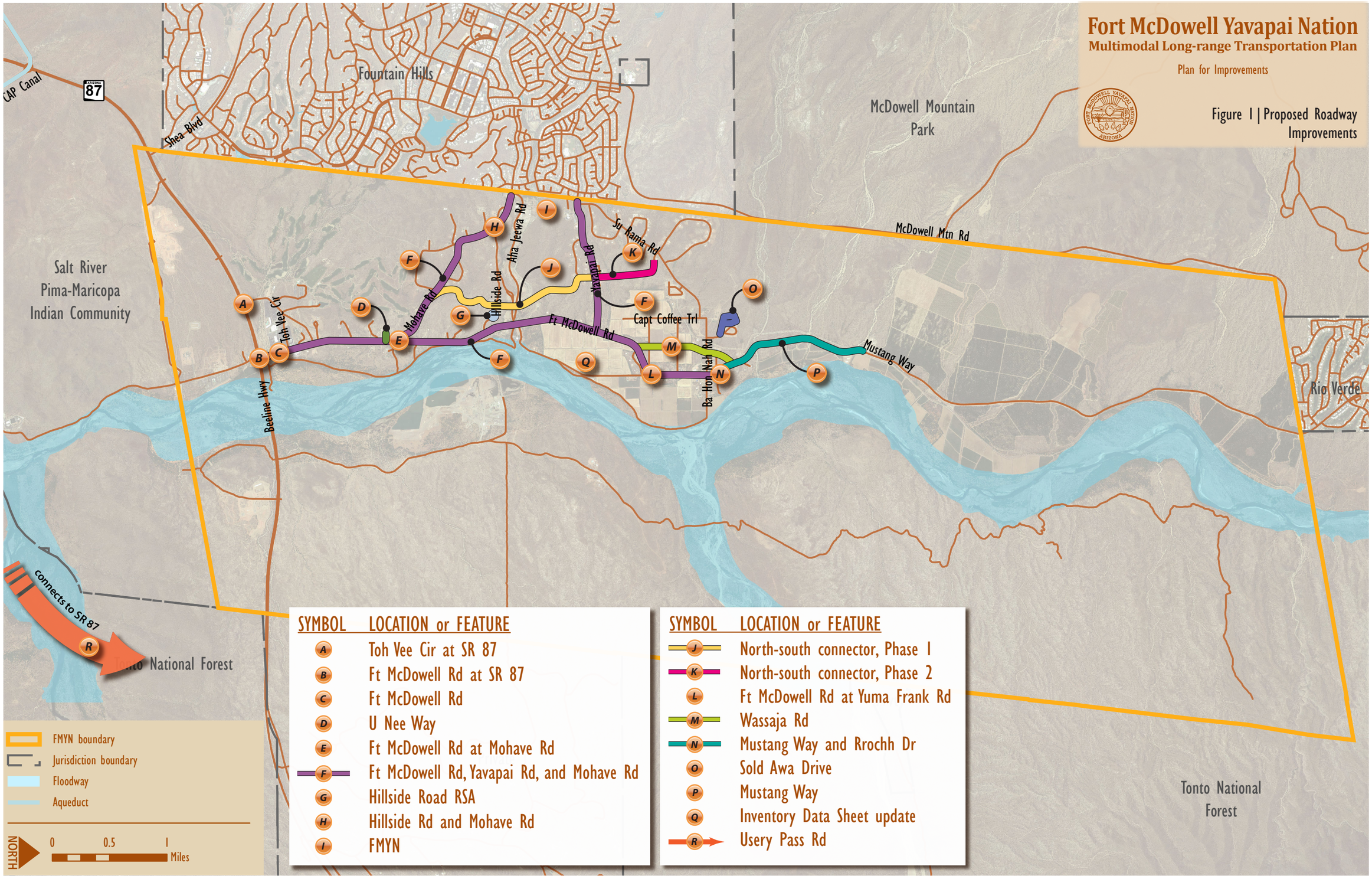
B. Fort McDowell Road and SR 87 Intersection Improvement
Construct an exclusive right-turn-only lane from SR 87 onto Fort McDowell Road.

Traffic counts conducted in December 2011 as part of this Study indicated heavy southbound-to-westbound right-turn movements at the intersection of Fort McDowell Road and SR 87. The crash analysis prepared for this Study shows a number of rear-end crashes also occurred at this location during the analysis period. MCDOT's *Roadway Design Manual* has a criterion that right-turn deceleration lanes are needed when the outside lane has an expected volume greater than 250 vehicles per hour and the right-turn volume is greater than 55 vehicles per hour. Although the outside lane volume is lower than 250 vehicles

Fort McDowell Yavapai Nation
Multimodal Long-range Transportation Plan

Plan for Improvements

Figure 1 | Proposed Roadway Improvements



SYMBOL	LOCATION or FEATURE
A	Toh Vee Cir at SR 87
B	Ft McDowell Rd at SR 87
C	Ft McDowell Rd
D	U Nee Way
E	Ft McDowell Rd at Mohave Rd
F	Ft McDowell Rd, Yavapai Rd, and Mohave Rd
G	Hillside Road RSA
H	Hillside Rd and Mohave Rd
I	FMYN

SYMBOL	LOCATION or FEATURE
J	North-south connector, Phase 1
K	North-south connector, Phase 2
L	Ft McDowell Rd at Yuma Frank Rd
M	Wassaja Rd
N	Mustang Way and Rrochh Dr
O	Sold Awa Drive
P	Mustang Way
Q	Inventory Data Sheet update
R	Usery Pass Rd

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per hour at this intersection, overall right-turn volume is high. Considering the posted speed limit of 65 mph on SR 87 and high right-turn volumes, it is recommended that an exclusive southbound right-turn lane be provided. The existing Fort McDowell Road right of way is 100 feet, which should accommodate an exclusive right-turn lane at this location. Because SR 87 is under ADOT authority and Fort McDowell Road is under MCDOT jurisdiction, roadway design criteria from both agencies should be reviewed.

C. Fort McDowell Road Improved Streetscape (nonmotorized amenities)

Add sidewalks and signs on Fort McDowell Road between SR 87 and Toh Vee Circle to improve nonmotorized circulation.

Fort McDowell Road between SR 87 and Toh Vee Circle, adjacent to the casino, does not have sidewalk or curb and gutter. The only identified bicycle facility on the reservation (a short section of pavement striping) is found here—but extends only along the length of the casino property. Fort McDowell Road provides a major access point to the casino from westbound SR 87 and to the Eagle's View recreational vehicle resort south of SR 87. With the planned new casino at this site, traffic accessing the casino from Fort McDowell Road is expected to increase. Improving or adding nonmotorized amenities, such as sidewalks and signs, would help promote nonmotorized circulation and walkability to the casino. This improvement could be undertaken in conjunction with the proposed casino expansion.

D. U Nee Way Reconstruction

Pave existing dirt road.

U Nee Way roadway provides access to five residences off of Fort McDowell Road. The road is currently unpaved. The project is not currently included in the list of unpaved roads to be paved as part of the Congestion Mitigation and Air Quality Improvement (CMAQ) Program funding. Paving the route will contribute to air quality, lessen run-off and reduce long-term maintenance costs.

E. Fort McDowell Road and Mohave Road Intersection Improvement

Construct exclusive left- and right-turn lanes on Mohave Road.

Mohave Road (under MCDOT jurisdiction) is a major circulation route for the Nation. At its intersection with Fort McDowell Road, it has an eastbound shared lane. Providing exclusive left- and right-turn lanes at this intersection will help reduce intersection delay and improve safety and traffic operations. The road has 80 feet of right of way with no shoulder, which should accommodate this improvement within the existing right of way.

F. Traffic Calming

Install traffic calming devices along Fort McDowell, Yavapai, and Mohave Roads.

Based on input gathered through the Study's outreach activities, there is mixed support for recommendations to reduce speed at various locations, including Fort McDowell, Yavapai, and Mohave Roads. As part of the traffic calming measures, several low-cost but effective devices are recommended. These safety and speed awareness measures

include items such as recessed pavement markers along lane markings to maintain driver attention and improve safety. Installing an electronic speed display board on Fort McDowell Road will alert the drivers to their speed, maintain driver attention, and improve safety. Stricter speed enforcement, driver education, and highly visible signs will also help. Note that the major routes travelling through the community—Fort McDowell, Yavapai, and Mohave Roads—are classified as MCDOT major collectors, and Maricopa County policy prohibits traffic calming measures such as speed humps.

G. Hillside Road, Road Safety Assessment Study

Conduct a safety assessment study.

Conduct an ADOT Road Safety Assessment (RSA); the RSA program conducts safety assessments on state, local and tribal road facilities. An RSA is an examination of user safety of a roadway by an independent multidisciplinary audit team, which includes qualified experienced members.

H. Hillside Road and Mohave Road Intersection Improvement

Realign Hillside Road to make a T-intersection with Mohave Road.

The Hillside Road and Mohave Road triangle-shaped intersection is located near the boundary of the town of Fountain Hills and the reservation. Currently, Hillside Road is stop-controlled at Mohave Road. Both roads have a posted speed limit of 35 mph. Several homes in the immediate vicinity use undesignated access to Mohave Road west of this intersection. Realigning Hillside Road to make it a T-intersection will enhance the sight distance and improve safety. Access management is recommended to encourage drivers to use only designated driveways to reduce conflicts along Mohave Road.

I. Traffic Study

Conduct an origins-destinations study.

Through the stakeholder and public outreach activities, the study team heard mixed concerns regarding cut-through traffic. Several stakeholders representing Nation enterprises noted that cut-through traffic supports Nation businesses, specifically casino operations. The study team also heard that cut-through traffic represents safety concerns, with regard to speed and accidents (occasionally involving livestock). Several tribal members expressed concern regarding illegal dumping of trash and other violations of the Nation's laws, presumably by non tribal members cutting through the community.

This study recommends that an origin-destination traffic study be conducted to evaluate in detail the extent of cut-through traffic along major roadways such as Fort McDowell, Yavapai, and Mohave Roads. By conducting a detailed origin-destination traffic study, the traffic flow pattern by direction and time of the day can be evaluated and recommendations be made to address this issue. In the meantime, the recommendations identified under the preceding Traffic Calming section will help mitigate the public safety concerns of cut-through traffic.

J and K. North–south Connector between Mohave Road and Su Rama Road

New north-south street providing alternate connection between Mohave and Su Rama Roads.

Fort McDowell Road is the primary north–south access throughout the community. This requires some residents to travel long, circuitous routes because of the lack of an alternative north–south connection within the community. A potential 2.25-mile-long north-south route connecting Mohave Road and Su Rama Road midway between Fort McDowell Road and the western Nation boundary will improve mobility and reduce travel times. A new two-lane connector is recommended as a long-term priority to enhance connectivity and improve public safety access to residences. The project could be conducted in several phases depending on community growth patterns. Four potential wash crossings and undulating terrain would need to be considered during the feasibility analysis of this route.

Potential phases could be as follows:

- **Phase 1:** Mohave Road at Cactus Drive to Yavapai Road at Cidiya Drive (1.5 miles, within the next 10 years)
- **Phase 2:** Yavapai Road at Cidiya Drive to Su Rama Road at Bootha Circle (0.75 mile, within the next 20 years)

Implementing Phase 1 will provide a direct north–south access between Mohave and Yavapai Roads, the two major east–west routes within the community, adding a parallel road to Fort McDowell Road. This would improve mobility to residences as well as to the Nation's administrative offices located on Yavapai Road. Phase 2 will connect Yavapai Road to Su Rama Road, providing enhanced mobility.

L. Fort McDowell Road Safety Improvement at Yuma Frank Road

Install highly visible reflective delineators along the guardrail and roadside lighting at the Yuma Frank Road curve.

Fort McDowell Road has a sharp curve at the intersection with Yuma Frank Road. The curve is a safety hazard, especially at night because of the lack of roadway lighting. There is guardrail along the eastern curve of Fort McDowell Road. Safety improvements are recommended at this location to increase visibility and lighting. It is recommended that safety conditions be improved by using highly visible reflective delineators along the guardrails and by installing roadside lighting.

Fort McDowell Road at Yuma Frank Road

M. Wassaja Road Bypass

Promote Wassaja Road as the main truck route between the Farm and Fort McDowell Road.

The Nation is developing plans to reconstruct Wassaja Road between Mustang Way and Fort McDowell Road. Wassaja Road will be a two-lane road, with one lane in each direction and a variable shoulder width, within a 50-foot right of way. Trucks currently use Fort McDowell Road to access the Fort McDowell Farm, raising community concerns


Pavement condition on Wassaja Road at Heque Da Trail

regarding noise, safety, and pavement deterioration within the downtown area. This Study recommends an alternative truck route along Wassaja Road, thereby eliminating potential truck traffic conflicts at community destinations, existing and planned, along Fort McDowell Road through the downtown area.

Intersection improvements on Wassaja Road at Mustang Way and Fort McDowell Road are recommended to accommodate the wide turning radii of trucks, along with exclusive turn lanes at Fort McDowell Road. The current reconstruction plan should keep a provision to use Wassaja Road as a truck corridor by providing a continuous shoulder throughout the entire stretch of Wassaja Road and using thicker, truck-appropriate pavement materials. Wassaja Road is functionally classified as a Type 5 Rural Local Road (refer to BIA functional classifications found in Appendix A) used by local residents. Nation members would need to be consulted prior to designating this as a local truck route because of potential noise and safety issues.

N. Mustang Way and Rrochh Drive Intersection Improvement

Reconstruct intersection with larger turning radii.

Mustang Way provides access to the Fort McDowell Farm. As such, it is used by farm trucks accessing SR 87 by way of Fort McDowell Road. The geometry of the intersection of Mustang Way at Rrochh Drive is not truck-friendly because of the narrow road width and tight curvature. It is understood that trucks up to and including size WB-67 (defined as 53 feet of trailer length and 8 feet of tractor width) access the farm using this route. The American Association of State Highway and Transportation Officials (Exhibit 2-16) recommend a minimum 45-foot design turning radius to accommodate WB-67 trucks.

Improving this intersection, with the criteria noted above, as a near-term priority is critical to improve truck operation and safety. As a long-term priority, this study recommends Wassaja Road as the future primary truck route.

O. Sold Awa Drive

Construct new two-lane road.

Construct a new loop road serving the FMYN cemetery expansion, a distance of approximately 0.5 miles.

P. Mustang Way Pavement Rehabilitation

Currently, Mustang Way is paved for 1.5 miles north of Fort Loop Road. Pavement condition along the paved stretch of the road is deteriorating because of heavy truck activity and a lack of maintenance (although the 2008 *Transportation Plan Update* reports a 2003 Surface Condition Index of 78—meaning "good" pavement condition). Pavement rehabilitation by 2-inch mill and replacement, along with pavement striping and marking, will help reduce noise, control dust, and improve safety and comfort.

Q. Inventory Data Sheets

Update the roadway Inventory Data Sheets, last updated in 2008.

The roadway Inventory Data Sheets (Sheets) of the *Fort McDowell Mohave-Apache Indian Reservation Transportation Plan* were last updated in 2008. The Sheets need to be updated to reflect changes to the road configuration, to include current representative photographs, and to evaluate the current pavement condition by assigning a Surface Condition Index (SCI). The update should be in the form of a brief Technical Memorandum that outlines the methodology for determining the SCI and summarizes the results of the update to the Sheets.

R. Usery Pass Road

Support the construction of a new road to Mesa.

The *Final Candidate Assessment Report for an Extension of Usery Pass Road between Bush Highway and Beeline Highway* (June 2008) evaluated Usery Pass Road as a route connecting the city of Mesa at Power Road to SR 87, within the general vicinity of the town of Fountain Hills and the Nation. The study evaluated a four-lane divided highway with a 200-foot right of way in the design year of 2030. Major challenges of this route include a crossing of the Salt River, the need for multijurisdictional agreements, and an alignment that passes through sensitive cultural and environmental sites. The study considered three alternatives:

1. Connecting Power Road (from the south) to SR 87 at Shea Boulevard (to the north). The route is approximately 5.7 miles long. The estimated cost is $78.2 million in 2007 dollars.
2. Connecting Power Road (from the south) to SR 87 (to the north) approximately 300 feet north of the Central Arizona Project Canal. The route is approximately 4.9 miles long. The estimated cost is $72.9 million in 2007 dollars.
3. Connecting Power Road (from the south) to SR 87 (to the north) at the Center Gate of Goldfield Ranch (Vista del Oro), approximately 4.4 miles east of Fort McDowell Road. This alternative proposes a grade-separated traffic interchange at its termination with SR 87. The route is approximately 4.1 miles. The estimated cost is $90 million in 2007 dollars.

Road Functional Classification

In 1990, the Nation completed an inventory for the IRR Program of all roads and bridges within the community. This inventory provided detailed information on road characteristics, including number of travel lanes, BIA functional classification, average daily traffic, route ownership, and surface condition. This inventory was updated in 2008. Existing BIA roadway functional classifications within the Nation are shown in Working Paper 1 (Figure 3); the recommended classifications are shown here in Figure 2.

Functional Classification Update Recommendations

Based on the roadway improvement recommendations, the existing IRR roadway functional classification for SR 87 and Fort McDowell, Yavapai, and Mohave Roads needs to be updated in the *2008 Update to the 1990 Fort McDowell Mohave-Apache Indian Reservation Transportation Plan*. Table 1 outlines existing classifications and recommended updates in the BIA roadway functional classification system. Figure 2 shows the proposed functional classifications.

Table 1 Recommended Road Inventory Update for the Nation

Route	Non-BIA Route Number	Existing Functional Class (IRR Type)	Recommended Update (IRR Type)
SR 87		Rural minor arterial (Class 2)	Major arterial (Class 1)
Fort McDowell Road	9001	Rural local/stub road (Class 5)	Rural major collector (Class 4)
Yavapai Road	9056	Rural local/stub road (Class 5)	Rural major collector (Class 4)
Mohave Road	9103	Rural local/stub road (Class 5)	Rural major collector (Class 4)

Public Transit Improvements

Existing Services

The community does not have fixed-route bus service; however, several community departments offer van service for specific purposes to community members. The parks and recreation department has a bus for camp pickup. The Wassaja Family Services Clinic provides on-demand service for specialized medical needs (for example, dialysis treatment) off the reservation. The elders' center has one van used daily for transporting seniors to the center and for facilitating supply runs by staff. The recreation center has two vans used mainly for off-site outings; they are used almost daily and more frequently in the summer. Nation vans are generally maintained on-site by an on-staff mechanic.

Community members expressed an interest in transportation services that would provide access to destinations outside of the community. Several types of service were reviewed: on-demand, regularly scheduled, infrequent service, and a volunteer program. Considerations for the type of transit service that would be most appropriate for the Nation included the number of people living on the reservation, their transportation needs, start-up and operating costs, and projected transit demand.

Recommended Services

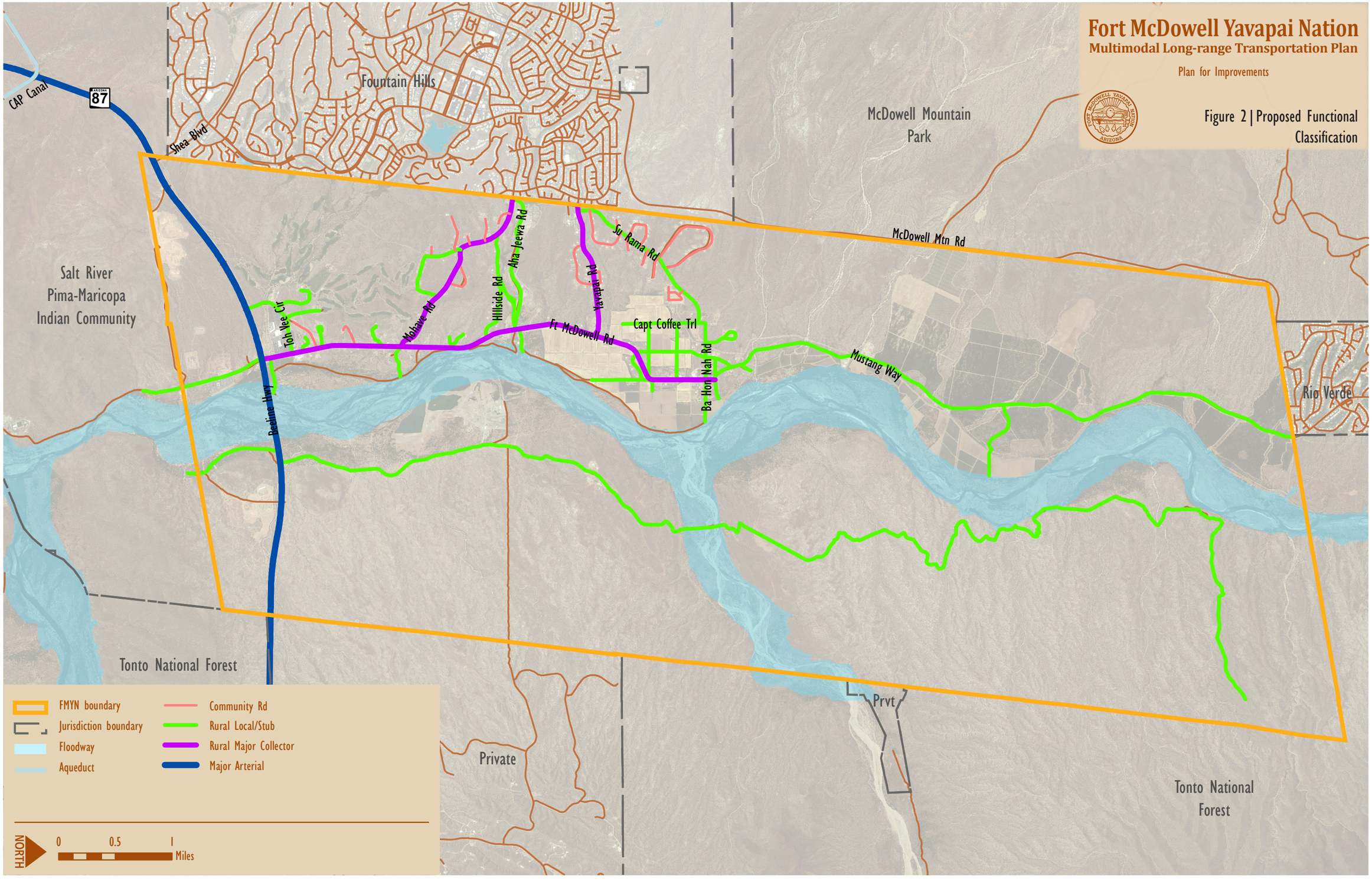
The type of transit service recommended for the community is infrequent, regularly scheduled service. It is recommended because the service is expected to have low ridership but high demand to a small number of destinations. As the name implies, this type of service would operate on an infrequent schedule, with two trips per day on Tuesdays, Thursdays, and Saturdays. The route would begin and end in the downtown

Fort McDowell Yavapai Nation

Multimodal Long-range Transportation Plan

Plan for Improvements

Figure 2 | Proposed Functional Classification



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and would stop at the tribal headquarters, casino, and the Four Peaks Plaza in Fountain Hills. A sample schedule is shown in Table 2; the proposed route is shown on Figure 3.

Table 2 Example Weekly Schedule for Infrequent Service to Fountain Hills Four Peaks Plaza

Trip Length = 9.5 miles
Travel Time = 34 minutes

Day	Elders' Center	Tribal Headquarters	Casino	Four Peaks Plaza	Four Peaks Plaza	Casino	Tribal Headquarters	Elders' Center
Tuesday	10:00 a.m.	10:10 a.m.	10:23 a.m.	10:34 a.m.	11:30 a.m.	11:41 a.m.	11:54 a.m.	12:04 p.m.
	2:00 p.m.	2:10 p.m.	2:23 p.m.	2:34 p.m.	3:30 p.m.	3:41 p.m.	3:54 p.m.	4:04 p.m.
Thursday	10:00 a.m.	10:10 a.m.	10:23 a.m.	10:34 a.m.	11:30 a.m.	11:41 a.m.	11:54 a.m.	12:04 p.m.
	2:00 p.m.	2:10 p.m.	2:23 p.m.	2:34 p.m.	3:30 p.m.	3:41 p.m.	3:54 p.m.	4:04 p.m.
Saturday	10:00 a.m.	10:10 a.m.	10:23 a.m.	10:34 a.m.	11:30 a.m.	11:41 a.m.	11:54 a.m.	12:04 p.m.
	2:00 p.m.	2:10 p.m.	2:23 p.m.	2:34 p.m.	3:30 p.m.	3:41 p.m.	3:54 p.m.	4:04 p.m.

The anticipated cost for the infrequent, regularly scheduled transit service is summarized in Table 3.

Table 3 Estimated Cost for Start-up and First-year Operations for Infrequent, Regularly Scheduled Transit Service

Expenditure Type	Start-up/Annual Cost	Total
1 van[a]	$50,000	$50,000
1 part-time employee with benefits	$25,000	$25,000
Fuel cost/mileage		
6 trips per week (24 trips per month)		
288 annual trips (5,700 annual miles)		
10 mpg = 570 gallons at $4 per gallon		
Subtotal fuel cost	$2,280	$2,280
Insurance and maintenance	$13,580	$13,580
Administration[b]	27,250	27,250
Contingency	$4,790	$4,790
Office space/Vehicle storage	Existing	$0
TOTAL START-UP AND FIRST-YEAR OPERATING COSTS		$122,900

a. This service could share a vehicle and/or driver with another department. If a vehicle is available, subtract $50,000 from the total; if a driver is available, subtract $25,000 from the total.

b. Smaller scoped services tend to have a higher percentage of administrative costs due to small economies of scale. This provides at least $20,000 in salary (including employer paid Social Security/Medicare) for a part-time staff person and $5,000 - 10,000 in costs associated with licensing, operator testing, and other state\federal compliance.

A shade and transit shelter is recommended at the Elders' Center. The cost is included in the nonmotorized costs.

Recommended transit vehicle

Infrequent service can be designed to make use of vehicles and drivers from other Nation departments, thus significantly reducing start-up and operating costs.

If the Nation is interested in pursuing 5300 funding (Coordinated Mobility Programs) to assist with costs associated with starting up and operating a transit system, a feasibility/implementation plan would need to be prepared to apply for such funding.

Nonmotorized Transportation Improvements

The recommended nonmotorized system focuses the majority of facilities in the downtown area. Downtown is the location of many of the community's gathering destinations—the clinic, the recreation center, the library, the elders' center, and the new school. It is to and from these destinations that many people choose to walk, or from which most walking programs are generated. Other community destinations (the tribal center and casino, to name two) are considerably distant from the downtown area (beyond the comfortable ¼-mile walking radius) and so are not proposed to be connected through nonmotorized facilities at this time. Also, because of the distance, hilly terrain, and the spread-out nature of the community's residences, connecting neighborhoods to community destinations is not recommended at this time. As improvements are made in the downtown area, and are deemed successful, expanding the nonmotorized network further across the Nation should be considered.

Few sidewalks exist in the Nation. Of the ones that do exist, the majority are adjacent to and around buildings but do not extend to, or along, the roads. There are, along many roads, fairly wide, hard-packed dirt shoulders that are used by community members as walkways.

To clarify terminology, "paths" are paved routes and "trails" are unpaved routes. Paved path material can be asphalt, concrete, or other similar hard material. Unpaved trails can be the native surface with large rocks removed, stabilized granite, or other similar soft material.

Pedestrian Trails and Paths

Promenade

Figure 4 illustrates the proposed nonmotorized facilities. There are five recommended facility types: promenade, multiuse path, trail, cleared trail, and bicycle lane. The promenade and multiuse path are hard-paved features; the trail and cleared trail are soft paved. Bicycle lanes are on the widened asphalt of the roadway. These are more fully described below.

Fort McDowell Yavapai Nation
Multimodal Long-range Transportation Plan

Plan for Improvements

Figure 3 | Transit Plan

FOUR PEAKS PLAZA

Fountain Hills

Shea Blvd

TRIBAL HEADQUARTERS

Aha Jeewa Rd

Su Rama Rd

Yavapai Rd

Hillside Rd

Ft McDowell Rd

Capt Coffee Trl

ELDERS CENTER

Ba Hon Nah Rd

Mohave Rd

Beeline Hwy

Toh Vee Cir

CASINO

FMYN boundary

Jurisdiction boundary

Floodway

Transit destination

Transit route

NORTH

0 0.25 0.5 Miles

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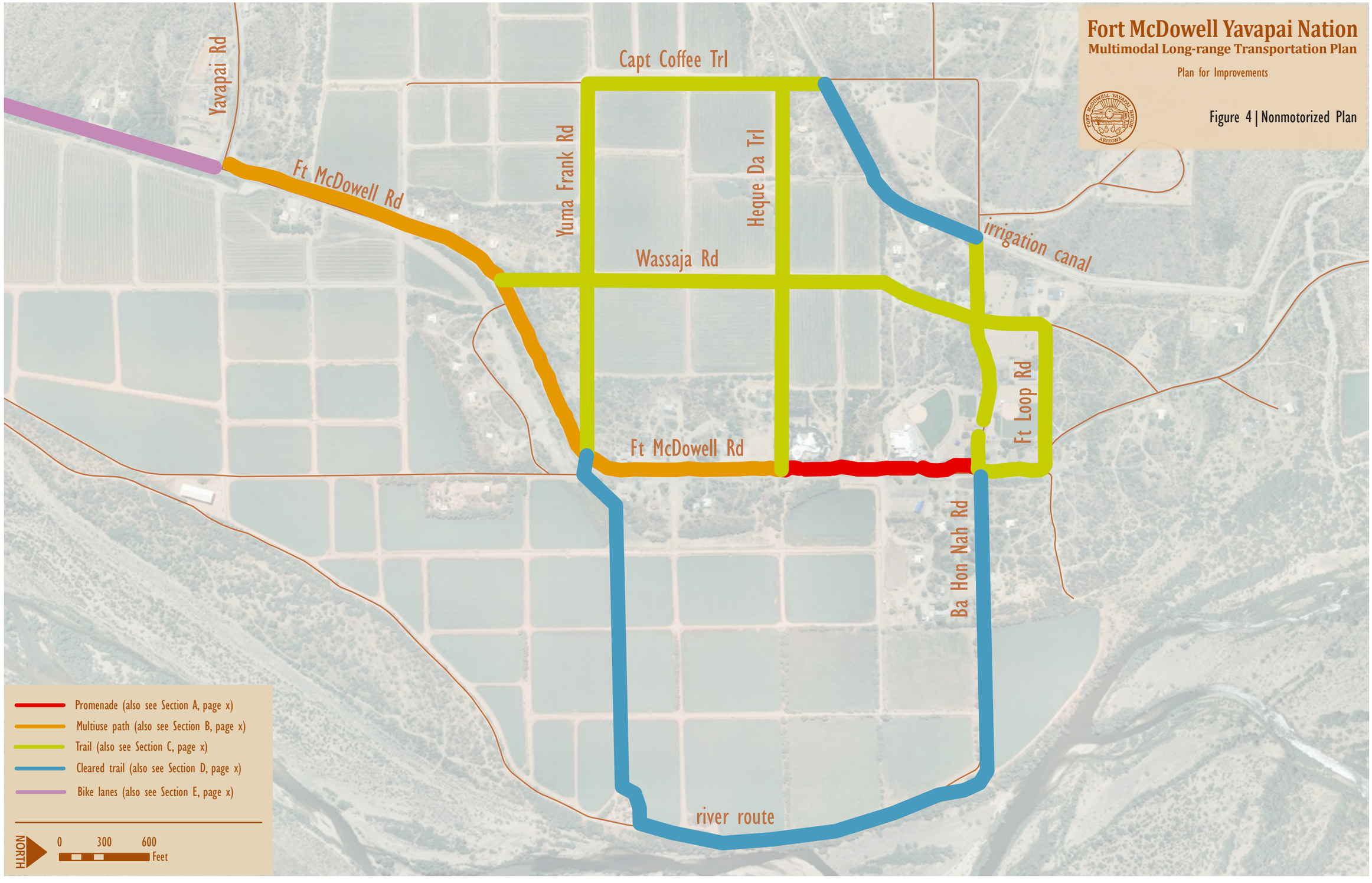
Fort McDowell Yavapai Nation
Multimodal Long-range Transportation Plan

Plan for Improvements

Figure 4 | Nonmotorized Plan



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The major element of the system is a multiuse promenade along the western side of Fort McDowell Road from Heque Da Trail to Ba Hon Nah Road. The proposed promenade would be set back 14 feet from the edge of pavement to maintain a recommended clear zone. The 10-foot wide promenade would be constructed of concrete or similar hard surface that has design flexibility. This flexibility would allow for the surface to colored and textured in an artistic manner designed by, or desirable to, the Nation. Numerous benches would be located along the promenade, shaded by new or existing trees. The benches can be custom designed or can be off-the-shelf. The benches will provide spots for family members to wait for other family members who may be visiting one of the facilities along that section of road and also provide locations for Nation members to sit and visit with those people who are passing by. The path would accommodate all types of nonmotorized users (people walking, people with strollers, bicyclists, and rollerbladers or skateboarders).

Multiuse Path

Continuing south on Fort McDowell Road, south of Heque Da Trail, would be a 10-foot-wide multiuse path, of a material similar to the promenade. This multiuse path would continue down the western side of Fort McDowell Road to Yavapai Road. This path would accommodate all types of nonmotorized users and would provide a connection between downtown and the turnoff to the Tribal Center (Yavapai Road).

Trail

The promenade and multiuse path would be segments in a network of walking loops in downtown. The network would be primarily made up of 6-foot-wide, soft-surface trails. The trails, like the promenade and multiuse path, would be located at the edge of the clear zone. The recommended trail surface is stabilized decomposed granite in a color similar to the native soil but with enough difference in tone to distinguish it from the surrounding ground. An edging material made out of a natural product would also help define the trail for users and for maintenance crews. The stabilized granite would provide a stable walking surface and define the zone for pedestrians versus cars. A stabilized granite surface accommodates most users but is not as desired by people with strollers or walking assistance devices and cannot be used at all by rollerbladers or skateboarders.

Cleared Trail

Another component of the loop system are the numerous farm roads and irrigation canals and the road along the river. Any of these could be used to add variety in the loop system, but because they are primarily intended for farming purposes (with the exception of the river road), they are not recommended as locations for permanent improvements. However, one segment along the main irrigation canal is included as an important link in the loop system. Also shown on the plan is a route that connects the downtown loop system to the existing trail along the river. The intent is that these segments be kept clear of brush and large rocks. Locations for benches, seating, or discreet picnic shelters along the river route are an option. It is felt these amenities would be well out of sight of non-residents and would not be accessed by them.

Crossings

Where the system of loops crosses a road, a crosswalk should be added. As the majority of these crossings are across low-vehicular-activity roads, a painted crosswalk would be sufficient and the least visually intrusive improvement. Pedestrian-activated lighted crosswalks are not warranted. Painted crosswalks should be at minimum 8 feet wide and can be the standard yellow- or white-hatched pattern or can be a custom design created by the Nation.

Drainage

The downtown area, where most of the improvements would occur, is relatively flat and drainage runoff is predominantly sheet flow across the road and through rights-of-way. Any proposed improvement will need a drainage study to determine how the new facility might affect runoff.

Bicycle

From information gathered during various public outreach events, it was determined that bicycling by Nation members was not a major activity. Several Nation members, however, expressed concern about the non-community member bicyclists who do ride along the Nation's roads. The traffic lanes are generally only 12 feet wide and in most places the pavement beyond the outside stripe is less than 2 feet wide, so bicyclists are forced to share the vehicular lane, which is unsafe and also causes traffic backups when cars cannot pass the bicycles. Most of these bicyclists are not community members; they are non-residents who enjoy the views and terrain challenges of the Nation's roads. The most frequented route, based on anecdotal information, is on Fort McDowell Road from SR 87 to Yavapai Road and west on Yavapai Road to Fountain Hills. Riders sometimes continue north on Fort McDowell Road to Ba Hon Nah Road and return west and south along Su Rama Road to get back to Yavapai Road and Fountain Hills.

Bicycle lanes are proposed for Fort McDowell Road from SR 87 to Yavapai Road. The lanes would be at minimum 6 feet wide to provide a safe, comfortable width for bicycle riders and for the drivers who are passing by.

Estimated costs of nonmotorized facilities are included in Table 5, beginning on page 24.

Proposed Materials and Amenities

Lighting

Discrete, low-level lighting is recommended for the promenade section only. Bollards, 3-foot-high maximum, are recommended to provide downward-focused lighting along the path surface only and are recommended to be on from dusk to 9 p.m. only so as not to disturb the dark, rural character of the area. The period from dusk to 9 p.m. should accommodate those people walking home from events or appointments at the activity centers along that section of road.

Amenities

Benches are recommended, as noted previously, for locations along the promenade and at points along the river. Six locations along the promenade are shown, but the number could be greater or smaller as desired by the Nation. The plan (shown in Working Paper 2) shows the benches located adjacent to the path in small alcoves. An alternative is to install off-the-shelf benches (minimum 6-foot length) on a concrete pad adjacent to the path.

Shade trees are recommended along the promenade. This section of road has a fair number of existing trees already; however, providing additional trees at bench locations as needed or to provide at least 50 percent shade along the promenade is recommended. Trees native to Sonoran Desert are the recommended species type.

A system of mile markers along the promenade, multiuse path, and trails is recommended. The mile markers would help those people walking for exercise keep track of the number of miles walked.

Design Standards

Table 4 lists the design standards for nonmotorized facilities.

Table 4 Nonmotorized Facility Design Standards

Facility	Setback (feet)	Width (feet)	Material	Amenities
Promenade	14	10	Concrete	Benches, shade trees, lighting
Multiuse path	14	10	Concrete or asphalt	
Trail	14	6	Stabilized granite	
Cleared trail	14, where applicable	3–6	Native soil, hard packed as needed	Benches along river portion
Bicycle lane	0	6	Asphalt	

Distance Loops

As noted in previous paragraphs, all these facilities (promenade, multiuse path, trail, and primitive trail) make up a network of loops that will provide the community with a variety of walking opportunities. When all the facilities are complete, there will be loop distances starting at 0.5 mile up to, at a minimum, 2 miles. A few of the possible loop options are shown in Working Paper 2.

Path and Trail Numbering

Nonmotorized transportation facilities, for the purposes of funding, are assigned IRR numbers based on the roadway they are associated with. The nonmotorized facilities on the plan, associated with a numbered BIA road, were given the following numbers:

Yuma Frank Road	0102T1	Ba Hon Nah Road	0102T3
Heque Da Trail	0102T2	Wassaja Road	0102T4

Planning Level Cost Estimate

Planning-level cost estimates of the recommended roadway improvement projects are presented in Table 5. Unit costs were derived from recent roadway improvement projects throughout Maricopa County. These estimates use the following assumptions:

- Right of way acquisition, drainage upgrade, and street lighting costs are not included.
- Side street or all-way stop traffic control is assumed at all intersections.
- Roadway design would be conducted in accordance with Nation, MCDOT, and ADOT standards.
- Estimated costs include only engineering, design, planning, and construction.

The following unit costs (2012 dollars) were assumed in this planning-level estimate:

- new road construction: $1 million per lane mile
- exclusive turn lane, including design and construction: $300,000
- pavement rehabilitation: $250,000 per lane mile; includes 2-inch mill and replacement and pavement striping and marking

Recommended Projects

Table 5 outlines the recommended projects. They are listed in a preliminary order of priority. However, the list should be considered flexible to accommodate changing needs of the community and availability of funding.

Table 5 Recommended Improvement Projects

Priority	IRR Number	Location	Type	Description	Jurisdiction	Estimated Cost (in $1,000s)
Near-term Priority (2012 to 2017)						
Roadway						
1		Wassaja Rd. truck route	Designated truck route to farms from SR 87 via Fort McDowell Rd.	Improve Wassaja Rd intersections at Mustang Way and Fort McDowell Rd. to better accommodate trucks along Wassaja Rd.	Nation	750
2		Roadway functional classification	Administrative change	Re-designate routes based on BIA roadway functional classification	Nation/ ADOT/ MCDOT	2[1]
3		U Nee Way	Reconstruction	Pave dirt road	Nation	80[1]
4		Fort McDowell, Yavapai, and Mohave Roads	Traffic calming	Installing traffic calming devices	Nation/ MCDOT	10
5		Mustang Way, north of Fort Loop Rd.	Pavement rehabilitation	2-inch mill and replacement, pavement striping and marking on 1.5-mile stretch	Nation	750

[1] Cost estimate provided by Fort McDowell Yavapai Nation.

Table 5 Recommended Improvement Projects

Priority	IRR Number	Location	Type	Description	Jurisdiction	Estimated Cost (in $1,000s)
6		Fort McDowell Rd.	Nonmotorized	Sidewalk, signs	Nation	40
7		Hillside Rd. west of Fort McDowell Rd. (N)	Study	Conduct an ADOT Road Safety Assessment (RSA). The RSA program conducts safety assessments on state, local and tribal road facilities. An RSA is an examination of user safety of a roadway by an independent multidisciplinary audit team, which includes qualified experienced members.	FMYN/ ADOT	n/a
Transit/Nonmotorized						
8		Fort McDowell Rd.	Promenade	Design and build promenade between Heque Da Trail to Ba Hon Nah Rd.	Nation	417
9		Multiple locations	Trails (with crosswalks)	Ba Hon Nah Rd., from Fort McDowell Rd. to Wassaja Rd. Wassaja Rd., from Ba Hon Nah to Fort Loop Rd. Fort Loop Rd., from Wassaja to Fort McDowell Rd. Fort McDowell Rd., from Fort Loop Rd. to Ba Hon Nah Rd. Heque Da Trail, from Fort McDowell Rd. to Wassaja Rd. Wassaja Rd., from Heque Da Trail to Ba Hon Nah Rd. Crosswalks (north–south on Fort McDowell Rd. at Ba Hon Nah Rd. and north–south on Wassaja Rd. at Ba Hon Nah Rd.)	Nation	261
10		Elders' Center	Shelter	Shade/transit shelter	Nation	25
11		Community-wide	Administrative update	Update the roadway Inventory Data Sheets, which were last updated in 2008.	Nation	46
12		Community-wide	Study	Prepare a transit feasibility/ implementation plan for transit services	Nation/ ADOT	80
				TOTAL NEAR-TERM COST ESTIMATE		**2,461**

Table 5 Recommended Improvement Projects

Priority	IRR Number	Location	Type	Description	Jurisdiction	Estimated Cost (in $1,000s)
Mid-term Priority (2018 to 2023)						
Roadway						
	12	Fort McDowell Rd. at SR 87	Intersection improvement	Provide exclusive southbound right-turn lane	Nation/ MCDOT/ ADOT	300
	13	Toh Vee Circle at SR 87	Intersection improvement	Provide westbound acceleration lane on SR 87	Nation/ ADOT	300
	14	Fort McDowell, Yavapai, and Mohave Roads	Traffic calming	Installing traffic calming devices	Nation/ MCDOT	10
	15	Nation	Origin-destination traffic study	Identify cut-through traffic, travel pattern, and direction by time of day	Nation	50
	16	Fort McDowell Rd. at Yuma Frank Rd.	Safety improvement	Improve the curve visibility and lighting conditions	Nation/ MCDOT	50
	17	Fort McDowell Rd. at Mohave Rd.	Intersection improvement	Provide exclusive eastbound right-turn lane	Nation/ MCDOT	300
	18	Hillside Rd. and Mohave Rd.	Intersection improvement	Realign Hillside Rd. to make a T-intersection at Mohave Rd.	Nation/ MCDOT	400
	19	Sold Awa Drive	New two-lane road	New loop road serving the FMYN cemetery expansion (.5 miles)	Nation	1,000
	20	Community-wide	Intermittent, regularly scheduled transit service	Purchase van, hire driver, begin service	Nation	123
	21	Mustang Way and Rrochh Dr.	Intersection improvement	Accommodate WB-67 size trucks	Nation	150

Table 5 Recommended Improvement Projects

Priority	IRR Number	Location	Type	Description	Jurisdiction	Estimated Cost (in $1,000s)
Transit/Nonmotorized						
22		Multiple	Multiuse path, trail, crosswalks, and amenities	Multiuse path on Fort McDowell Rd. from Heque Da Trail to Yuma Frank Rd. Trail on Yuma Frank Rd. from Fort McDowell Rd. to Wassaja; Wassaja Rd. from Yuma Frank Rd. to Heque Da Trail Crosswalks (north–south on Fort McDowell Rd. at Heque Da Trail and north–south on Wassaja Rd. at Heque Da Trail) Seating area paving (six locations) Seating area benches (six locations) Lighting Landscaping (additional trees)	Nation	333
23		Multiple	Multiuse path, trail, and crosswalks	Multiuse path on Fort McDowell Rd. from Yuma Frank Rd. to Wassaja Rd. Trail on Wassaja Rd. from Fort McDowell Rd. to Yuma Frank Rd. Crosswalks (north–south on Fort McDowell Rd. at Yuma Frank Rd. and north–south on Wassaja Rd. at Yuma Frank Rd.)	Nation	237
24		Multiple	Trails and crosswalks	Trail on Yuma Frank Rd. from Wassaja Rd. to Captain Coffee Trail; Captain Coffee Trail from Yuma Frank Rd. to canal Trail on Heque Da Trail from Wassaja Rd. to Captain Coffee Trail Trail on Bo Hon Nah Rd. from Wassaja Rd. to canal Crosswalks (all east–west, on Captain Coffee Trail at Heque Da Trail; on Ba Hon Nah Rd. at Wassaja Rd.; on Heque Da Trail at Wassaja Rd.; and on Yuma Frank Rd. at Wassaja Rd.)	Nation	232
25		Multiple	Multiuse path and crosswalks	Multiuse path on Fort McDowell Rd. from Wassaja Rd. to Yavapai Rd. Crosswalk (east–west on Fort McDowell Rd. at Wassaja Rd.)	Nation	319

Table 5 Recommended Improvement Projects

Priority	IRR Number	Location	Type	Description	Jurisdiction	Estimated Cost (in $1,000s)
26		Multiple	Trails and amenities	River trail loop from intersection of Fort McDowell Rd. and Ba Hon Nah Rd. east to river, south along river to approx. alignment of Yuma Frank Rd., west to Fort McDowell Rd. Seating area paving (three locations) Seating area benches (three locations)	Nation	12
				TOTAL MID-TERM COST ESTIMATE		**3,816**
Long-term Priority (2018 to 2035)						
Roadway						
27		Fort McDowell, Yavapai, and Mohave Roads	Traffic calming	Installing traffic calming devices	Nation/ MCDOT	20
28		Yavapai Coral Drive	Reconstruction	Pave dirt road from SR 87 to gravel pit	FMYN	500[1]
29		North–south connector	New two-lane road	Phase I: Mohave Rd. to Yavapai Rd. (1.5 miles)	Nation	3,000
30		North–south connector	New two-lane road	Phase 2: Yavapai Rd. to Su Rama Rd. (0.75 mile)	Nation	1,500
31		Usery Pass Rd.	New four-lane divided highway	Regional connector road between city of Mesa and Nation vicinity	Nation/ MCDOT	72,000–90,000[2]
Transit/Nonmotorized						
32		Fort McDowell Rd.	Bicycle lanes	Bicycle lanes on Fort McDowell Rd. from Yavapai Rd. to SR 87	Nation	1,700
				TOTAL LONG-TERM COST ESTIMATE		**6,720**

Source: HDR Engineering, Inc., April 27, 2012

[2] Not included in totals.

As shown in Table 5, the estimated planning-level cost for near-term priority projects is $2,461,000 (in 2012 dollars), mid-term projects are $3,816,000, and the long-term estimated project cost is $6,720,000 (excluding the Usery Pass Corridor).

Development of Road Construction Priorities

The Nation should review and evaluate the project listing contained in the LRTP, taking into account the Nation's annual share of IRR construction funds, and establish a recommended priority list based on an objective ranking system designed to rank projects on the basis of public safety, pavement management, and other criteria using Tribal Council input.

FUNDING

A number of federal funding programs can be used to address transportation needs within the study area. These funds are typically distributed through and by ADOT and BIA. In some cases, such as Transportation Enhancement Funds, MAG ranks the local applications.

Potential Roadway Project Funding Sources

Tribal Transportation Program

The Tribal Transportation Program (formerly the IRR Program) of the Federal Lands Highway Program is one funding source for transportation projects on the reservation. The Federal Highway Administration (FHWA) and BIA jointly administer the program. Tribal Transportation Program (TTP) funds may be used to pay for transportation planning, research, engineering, and construction or reconstruction of any type of transportation project eligible for assistance under Title 23 that provides access to or within the Nation. These include, but are not limited to, road, bridge, transit, pedestrian, and bicycle facilities. In addition, TTP funds can be used as the state/local match for most types of Federal-aid highway funded projects.

On July 6, 2012 Moving Ahead for Progress in the 21st Century (MAP-21) was signed into law (refer to Public Law 112-141), with an effective date of October 1, 2012. Division G of MAP-21 - Surface Transportation Extension Act of 2012, Part II, keeps the former Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) funding in effect through the end of 2012.

Main components of MAP-21 of interest to the Nation include the changing of the IRR program to the "Tribal Transportation Program," a consolidation of programs, a new tribal safety program, a new formula for fund distribution (phased in over a four year period), and a "new" approach to the High Prioriy Projects Program.

The TTP funds made available will be administered in accordance with Chapter 2 of Title 23. MAP-21 contains a statutory formula which replaces the Relative Need Distribution Factor (RNDF) formula included in Subpart C of 25 CFR Part 170. The new formula will calculate tribal shares using three different factors (as percentages of national or regional totals):

- 27 percent of funding based on the Tribe's approved road mileage (national percentage)
- 39 percent of funding based on the Tribe's most recent population (national percentage)
- 34 percent of funding based on the Tribe's RNDF and Population Adjustment Factor (PAF) amounts from FY05 to FY12 (regional percentage)

The mileage used to generate a Tribe's share of funding includes the following:

- Any BIA owned road included in the FY12 Inventory;

- Any tribal owned road included in the FY12 Inventory; and
- Any road owned by another entity that was included in the BIA System of Roads used to generate funding prior to October 1, 2004. These are generally known as "grandfathered roads."

Funds must only be expended on projects and activities identified on an FHWA approved Transportation Improvement Program (TIP). Road Inventory data will continue to be a major part of transportation planning. TTP funds are 100 percent Federal share, and, like IRR funds, can be used to satisfy local match requirements on construction projects.

Tribes may use up to 25 percent of their TTP funds or $500,000, whichever is greater, for eligible and approved maintenance activities. These activities must be included on the Tribe's TIP approved by FHWA. The funds may be used for the maintenance of roads and bridges and for purchase of maintenance equipment, as approved by the BIA and FHWA.

Surface Transportation Program

The Surface Transportation Program (STP) is one of the major federal highway funding programs. The STP provides the bulk of federal money to the states and the Federal Lands Highway Program. Funds flow through the state but are divided by MAG through the Regional Transportation Plan. STP funds can be used on roads classified higher than "rural minor collector." FHWA records "rural locals" by county. Up to 15 percent of rural STP funds can be used on rural minor collectors.

Other Funding Considerations

Federal Lands Highway-Discretionary Funds

Federal Lands Highway-Discretionary Funds are available from the FHWA Federal Lands Highway Office, through state departments of transportation, for road construction projects and for transportation planning that promotes and/or benefits tourism and recreational travel. Applications for these funds are submitted by the Nation to ADOT.

Tribal High Priority Program

MAP-21 includes a new Tribal High Priority Program (THPP). The THPP and the previous Indian Reservation Roads High Priority Projects (IRRHPP) are very similar.

The THPP includes $30 million from the General Fund (the THPP is not a contract authority, an appropriation is needed from the general fund before funding can be made available for the THPP). These funds are available on an application basis for tribal projects needed for emergencies or disasters, or for tribes whose funding allocation under the formula is insufficient to build their highest priority project. Such projects must be TTP-eligible and may not exceed $1 million per project.

Highway Expansion and Extension Loan Program

House Bill 2488, enacted into law on August 21, 1998, established a comprehensive loan and financial assistance program for eligible highway projects in Arizona. The new

program, designated as Highway Expansion and Extension Loan Program, or HELP, provides the state and communities in Arizona a new financing mechanism to stretch limited transportation dollars and bridge the gap between needs and available revenues.

The program is currently suspended. See http://www.aztribaltransportation.com/aztt/funding.asp for information on HELP and other funding resources.

Potential Transit Project Funding Sources

Tribal transit funds can be pursued through the U.S. Department of Transportation, Department of Agriculture, Department of Housing and Urban Development, and Department of Labor. Transit projects undertaken through Title 49 Section 5310, Enhanced Mobility of Seniors and Individuals with Disabilities, and Section 5311, Rural Area Formula Grants, will be selected by the State in consultation with local officials. Projects funded from Federal Transit Act funds will be selected by the State in cooperation with the appropriate affected local officials and transit operators.

Transit funds are also available for tribes through the Federal Transit Administration's Tribal Transit Program. Tribes may use the funding for capital, operating, planning, and administrative expenses for public transit projects that meet the needs of rural tribal communities.

Potential Nonmotorized Project Funding Sources

Various phases of this project qualify for at least two federal funding programs. These programs fund annually, which is beneficial for the applicant. If an application is rejected on the first attempt, updates to better qualify for funding in the next round are simpler than preparing a new application.

Transportation Alternatives Program

With the passage of MAP-21, the Transportation Enhancement (TE) Funds were replaced by the Transportation Alternatives Program (TAP). TAP expands the eligibilities from strictly enhancing the transportation system to include planning, construction, and design related to compliance with existing federal regulations.

A reservation of funds for Transportation Alternatives is approximately 2 percent of MAP-21 funding (determined by a formula), with the (local) state share apportioned based upon the state's TE proportion of all TE funds in FY 2009. The Transportation Alternatives program will require 20 percent local match funding.

Safe Routes for Non-drivers

A new activity, providing "safe routes for non-drivers," is established by MAP-21, and distributed as part of the Transportation Alternatives Program (see above).

Other Resources

The FHWA Office of Planning has developed a funding resources module in cooperation with BIA, the Tribal Technical Assistance Program, other FHWA offices, and the Federal Transit Administration Office of Planning and Environment. The module identifies funding programs and strategies to assist tribal governments with transportation planning and contains detailed information on 36 federal funding programs and the eligibility criteria for each. The resource, Tribal Transportation Funding Resources, is available online at <www.tribalplanning.fhwa.dot.gov/ttfundresource_a.aspx>.

An additional resource available at ADOT is the Arizona Tribal Transportation website, <http://www.aztribaltransportation.com/aztt/funding.asp>. This page does a nice job of summarizing the available funding for tribes, as well as providing other resources for tribal transportation planning.

Additional Considerations

The Nation should ensure that it has some projects "ready to go" to take advantage of subsequent rounds of federal financing. In addition, the Nation should begin public involvement and determine conformity and other planning process steps that are required for a new recommended project.

"Ready to go" project examples include chip seal and dust suppression projects, traffic signal upgrades, dynamic message signs, road striping, guardrail replacement, and traffic sign upgrades. Many of these projects require limited or no environmental review time; thus, they can be developed quickly. Numerous funding opportunities present themselves annually, such as the Transportation Investment Generating Economic Recovery grants, which were a part of the economic stimulus package. A second stimulus package focusing on infrastructure is possible within the next 12 months. For stimulus funding, much of the data contained in this report can be used for the application. Additional data such as employment and economic benefit are required for this particular application.

ENVIRONMENTAL CONSIDERATIONS

Social and Economic Factors

Title VI and Environmental Justice

The U.S. Environmental Protection Agency and FHWA define environmental justice as "fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations, and policies." Environmental justice principles and procedures are followed to improve all levels of transportation decision making. Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin. The 1994 Executive Order 12898 on environmental justice addresses minority and low-income populations. The rights of women, the elderly, and the disabled are protected under related statutes. This Presidential Executive Order and other related statutes fall under the umbrella of Title VI. The Nation is characterized as

a minority population, with minorities making up over 97 percent of the reservation's population.

The Study recommendations primarily occur within the existing rights-of-way. While implementation of the recommendations may have an adverse effect on environmental justice populations, primarily during construction, the impacts would be temporary and would not create undue hardship or be disproportionately high compared with projected impacts on all populations in the area. The Nation's members would benefit from implementation of the recommendations through improved mobility and enhanced traffic operations. Therefore, because the proposed improvements would not cause disproportionately high and adverse effects on any environmental justice populations, no environmental justice or Title VI mitigation would be required.

The mid- and long-term projects occurring outside the right of way, notably the north–south connector proposed between Mohave to Su Rama Roads and the Usery Pass Road connection to Mesa would require additional evaluation and community input to ensure that protected populations are engaged in the process and do not bear an undue burden as a result of their implementation and construction.

Tribal Enterprises

Fort McDowell Casino and Resort and Conference Center

The Fort McDowell Casino and Resort and Conference Center is located along SR 87, with access at Toh Vee Circle and Fort McDowell Road. Both intersections are currently signalized. The casino is developing a new facility, currently planned within Toh Vee Circle. While the facility would not require additional access, there are planned improvements that would support this enterprise operation. Refer to the previous discussion of near-term priorities.

Fort McDowell Adventures

Fort McDowell Adventures is located on North Hiawatha Road on the east side of the Verde River. North Hiawatha Road also provides access to Yavapai Materials sand and gravel operations along the Verde River. While there is a recommendation to improve North Hiawatha Road north of SR 87, the improvements should extend only to East Hillside Road, allowing North Hiawatha Road to maintain a more rural look leading to Fort McDowell Adventures.

Eagle's View RV Park

The Eagle's View RV Park is well-served by Fort McDowell Road, south of SR 87, and the signalized access to SR 87. There are no recommendations for improvements at this time.

We-Ko-Pa Golf Club

The We-Ko-Pa Golf Club is accessed from Toh Vee Circle, adjacent to the Fort McDowell Casino and Resort and Conference Center (refer to discussion in that section).

Fort McDowell Farms

The Fort McDowell Farm's operation is located within the floodplain of the Verde River from the northern end of the reservation south to approximately Aha Jeewa Road. The farm office is located on Mustang Way, approximately 1.5 miles north of the downtown.

Mustang Way is the only road access point to much of the farm operation. The roadway was last improved approximately 15 years ago, and the farm has been maintaining it since then. North of the farm office, the road is unpaved and the aggregate surface has been largely degraded (either driven into the subgrade, or pushed to the side).

The road can become almost impassable during storms, when water pools on the roadway. When development activity was greater in Rio Verde, traffic (primarily construction vehicles) used Mustang Way as a route through the community to access Rio Verde. With the decrease in development activity in Rio Verde, this traffic has largely subsided, although vehicles still travel on Fort McDowell Road through downtown to Mustang Way on their way to Rio Verde. Paving of this road is not locally supported out of concern of increasing traffic through the downtown area. The community of Rio Verde is also opposed to paving this route (according to Doris Findling, representing the Rio Verde community on the project Technical Advisory Committee).

Yavapai Materials

Yavapai Materials operates several sand and gravel operations on the reservation. One active operation is accessed using Yavapai Coral Road from SR 87, and the other off of North Hiawatha Road, north of SR 87. It is anticipated that the operation on Yavapai Coral Road will cease in several years, and this site will be redeveloped for another use (not determined at this time, although a spring training facility for baseball has been suggested as one possible use).

At such time as sand and gravel operations on Yavapai Coral Drive cease, future access to the redeveloped site should be improved, including improvements to this route. Additional information is required about the timing of closure of the current operation, and mitigation of the site, before improvements can be planned.

Improvements to access to the Yavapai Materials sand and gravel operations off of Hiawatha Road north of SR 87 are discussed under Fort McDowell Adventures, above. These improvements would improve access and safety for both the Yavapai Materials operations and Fort McDowell Adventures. Once past Hillside Road, it is recommended that the road be maintained as an unpaved route.

Impacts to Nontribal Travel Routes

The recommended changes or improvements will not have a detrimental effect on nontribal traffic, although if any of the recommendations for traffic calming are instituted, travel time through the reservation may increase.

Importance as Service Routes

SR 87 provides the primary connection for the tribe to the greater metropolitan area. School buses (from Mesa and the Salt River Pima-Maricopa Indian Community), mail, and general services use this route to access the community.

Fort McDowell Road serves as the major collector route for the Nation. It is the only north–south route through the reservation, and all other collector roads feed into it. In the downtown area, Fort McDowell Road provides access to the Nation's activity centers. Mohave and Yavapai Roads, which terminate at Fort McDowell Road, provide the only other through connections to destinations outside the community (besides Mustang Way—the northern 4 miles of which are unpaved leading to Rio Verde).

Environment

Most of the recommendations identify improvements located within the existing right of way, and as such will have little environmental effect. Exceptions to this in the near term include the addition of trails (multiple locations) and sidewalks (Fort McDowell Road). Mid- and long-term improvements outside of the existing right of way requiring additional environmental consideration include the new north–south connector proposed between Mohave to Su Rama Roads, intersection realignment at Hillside and Mohave Roads, and the Usery Pass Road connection to Mesa. These projects would require additional evaluation to determine environmental impacts and necessary mitigation.

PUBLIC INVOLVEMENT

A driving force behind the plan for improvements is the public outreach that has been conducted, and the ideas and suggestions offered by the study team in response to issues identified through the outreach efforts. These efforts have included meeting with the project management team and Technical Advisory Committee convened for this study, interviewing project stakeholders, meeting with the Planning Advisory Board, holding public outreach events (including per capita day, elders' lunch, and a public meeting), and reviewing completed planning documents and studies.

Each of these activities is further described below. Additional information on the public involvement activities may be found on the project website, under Public Involvement and Meetings (see <www.azdot.gov/fmyn>).

Outreach Activities

Project Stakeholders Interviews

Stakeholder interviews were held with ten different tribal departments or tribal enterprise operations, as well as the Nation's Planning Advisory Board and the U.S. Department of Agriculture Forest Service between December 19, 2011, and February 23, 2012. These interviews (the results of which may be found in *Working Paper 1 – Existing and Future Conditions*) provided insight into the issues and opportunities regarding the transportation system on the reservation and how it relates to the greater metropolitan area.

Per Capita Day (March 7, 2012)

As part of the public outreach process, the study team set up a display at the monthly per capita distribution day at the Tribal Center. Members of the community visiting the facility were provided information about the project and asked to provide input in response to three questions through a feedback form or in general discussion with the consultant. A total of 12 feedback forms were completed and several others participated through informal discussion.

Elders' Lunch (April 17, 2012)

Michael LaBianca, HDR project manager, presented the Study to the elders at the April 17 lunch at the elders' center. Following a presentation on the Study, a period of questions and answers was held.

Public Open House (August 16, 2012)

At the August 16 public open house, the study team presented exhibits showing the plan for improvements and provided an 11 x 17 handout summarizing the recommended improvements. A PowerPoint presentation provided participants an overview of the planning process and recommendations. The open house was attended by four people.

Planning Advisory Board (September 12, 2012)

At the September 12, 2012, Planning Advisory Board meeting, the study team made a presentation on the draft plan and provided an 11 x 17 handout summarizing the recommended improvements.

APPENDIX A

TRIBAL TRANSPORTATION PROGRAM FUNCTIONAL CLASSIFICATIONS*

* The Bureau of Indian Affairs is currently revising their Tribal Transportation Program functional classifications to be more consistent with the Federal Highway Administration's functional classification system. It is recommended that the BIA's website be consulted for the latest information.

Class	Description
1	Major arterial roads providing an integrated network with characteristics for serving traffic between large population centers, generally without stub connections and having average daily traffic volumes of 10,000 vehicles per day or more with more than two lanes of traffic.
2	Rural minor arterial roads providing an integrated network having the characteristics for serving traffic between large population centers, generally without stub connections. May also link smaller towns and communities to major resort areas that attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement. Generally provide for at least inter-county or inter-State service and are spaced at intervals consistent with population density. This class of road will have less than 10,000 vehicles per day.
3	Streets that are located within communities serving residential areas.
4	Rural Major Collector Road is a collector to rural local roads.
5	Rural Local Road that is either a section line and/or stub type roads that collect traffic for arterial type roads, make connections within the grid of the IRR System. This class of road may serve areas around villages, into farming areas, to schools, tourist attractions, or various small enterprises. Also included are roads and motorized trails for administration of forest, grazing, mining, oil, recreation, or other use purposes.
6	City Minor Arterial Streets that are located within communities, and serve as access to major arterials.
7	City Collector Streets that are located within communities and serve as collectors to the city local streets.
8	This classification encompasses all non-road projects such as paths, trails, walkways, or other designated types of routes for public use by foot traffic, bicycles, trail bikes, snowmobile, all terrain vehicles or other uses to provide for the general access of non-vehicular traffic.
9	This classification encompasses other transportation facilities such as public parking facilities adjacent to IRR routes and scenic byways, rest areas, and other scenic pullouts, ferry boat terminals, and transit terminals.
10	This classification encompasses airstrips that are within the boundaries of the IRR System grid and are open to the public. These airstrips are included for inventory and maintenance purposes only.
11	This classification indicates an overlapping of a previously inventoried section or sections of a route and is used to indicate that it is not to be used for accumulating needs data. This class is used for reporting and identification purposes only.