

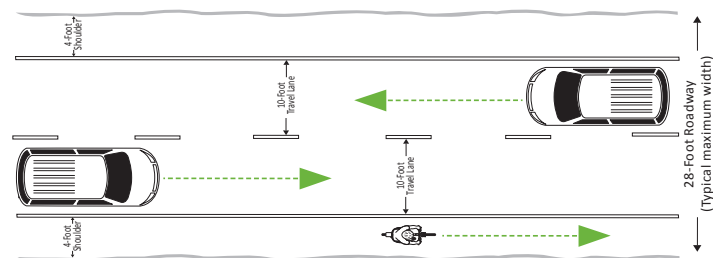
As a result of all the input received, the study recommends the use of snowplows as an efficient means to remove snow from the roads. An additional recommendation includes identifying feasible techniques to remove roadside cinders to help prevent accumulated cinders from entering the wetlands. The use of street sweepers or graders could potentially be effective in helping to address Kachina Village stakeholders' concerns about significant cinder accumulation occurring throughout the course of the winter.

The study also recommends conducting a drainage study to determine how the drainage system is impacted by cinders and runoff. As part of the proposed drainage study, a trap drainage system should be considered at all major roadside drainage locations to capture cinders before they enter local drainages.



PROGRAM OF PROJECTS. As summarized in the Program of Projects table (on Page 2), 15 multimodal improvement projects were identified for Kachina Village through the needs analysis, stakeholder input, and public involvement activities. These projects have been divided into short-, mid-, and long-term categories based on their complexity, community perspectives, and cost/funding. Estimates of probable cost have been developed for each of the 15 projects. The location of the projects, identified by Project No., are shown on the map provided. They can be grouped into five major types of projects: shoulder improvements, sidewalks, unpaved trails, intersection improvements, and parking and pullout improvements.

→ **SHOULDER IMPROVEMENTS**—The study recommends four-foot shoulders on both sides of selected streets (as identified in the Project Map), delineated by a solid white stripe. These improvements are intended to allow pedestrians and bicyclists to use this space without conflicting with vehicular traffic. This may require roadway widening in selected locations. However, it is recommended that the roadway be widened to no more than 28 feet, unless otherwise required. A 28-foot roadway will accommodate two, 10-foot travel lanes and a four-foot shoulder, as illustrated in the graphic to the right.



→ **SIDEWALK IMPROVEMENTS**— While the community generally does not support an extensive network of sidewalks in Kachina Village, the program of projects recommends extension of existing sidewalks in selected locations to improve pedestrian safety in areas of steep grades and higher traffic volumes.

→ **UNPAVED TRAILS**—The study recommends developing a network of unpaved trails that will allow users to walk and experience nature while maintaining the characteristics of the natural surroundings. Trail locations were identified through the public involvement process.

→ **INTERSECTION IMPROVEMENTS**—The study recommends consideration of a roundabout/traffic circle at the intersection of Kachina Boulevard and Kachina Trail. The roundabout/traffic circle should be designed with pedestrian features so that conditions for pedestrians are improved at this wide intersection. Landscape treatments could incorporate elements that establish the traffic circle as a gateway monument into Kachina Village.

→ **PARKING AND PULLOUT IMPROVEMENTS**—Through the public involvement process, the study also identified areas where pullouts or parking areas are needed to allow people to pull off the road to safely view wildlife along the community's major roadways.

The Kachina Village Multimodal Transportation Study Final Report document provides additional details on the study's objectives and findings. The Final Report also provides further information about the proposed program of projects and identifies potential funding sources, including federal and state programs.



KACHINA VILLAGE MULTIMODAL TRANSPORTATION STUDY EXECUTIVE SUMMARY

DECEMBER 2009

TASK ASSIGNMENT MPD 27-09

PG TD0262

CONTRACT # T08-49-00001



PREPARED FOR ADOT AND COCONINO COUNTY



KACHINA VILLAGE MULTIMODAL TRANSPORTATION STUDY

Executive Summary

Located approximately six miles south of Flagstaff, Arizona, Kachina Village is an unincorporated community in Coconino County. Following the County's application for funding from the Planning Assistance for Rural Areas (PARA) Program, the Arizona Department of Transportation (ADOT) initiated the **Kachina Village Multimodal Transportation Study**. The purpose of the study was to document current and future multimodal mobility needs, recommended winter maintenance best management practices, and recommend a program of projects that will improve multimodal mobility and safety in **Kachina Village**.

The Kachina Village Multimodal Transportation Study resulted in the development of two working papers, a public involvement summary report, a final report, and an executive summary. A key part of the study process included establishing a Technical Advisory Committee (TAC), consisting of significant stakeholder agencies such as ADOT's Multimodal Planning Division, Office of Environmental Services, Communication and Community Partnerships; Coconino County Community Development, Parks and Recreation, and Public Works; the Flagstaff Metropolitan Planning Organization; and the Northern Arizona Intergovernmental Public Transit Authority (NAIPTA). TAC meetings that included representatives from these agencies were held at key milestones and/or decision points during the study to communicate study progress, provide opportunities for discussion, and present study documents for review and comment.

By including valuable input gained from TAC meetings and public open houses, the study team was able to successfully develop summary recommendations for each of the Kachina Village Multimodal Transportation Study's objectives.

PEDESTRIANS, BICYCLES, AND TRANSIT MOBILITY. The study identified a general need to improve bicycle and pedestrian accommodation on Kachina Village roadways, although sidewalks are generally not desired by the community. The study also identified a need for improved pedestrian connectivity throughout Kachina Village, which may include formalization and construction of trails that are properly designed and located to minimize erosion and ecological damage to the surrounding environment.

From a public transit perspective, members of the public identified a need for transit service to Flagstaff from Kachina Village. NAIPTA operates the regional transit agency. Provision of transit service to Kachina Village is subject to identification of funding. If funding is identified and provided by NAIPTA, the public expressed support for construction of park and ride lots in Kachina Village.

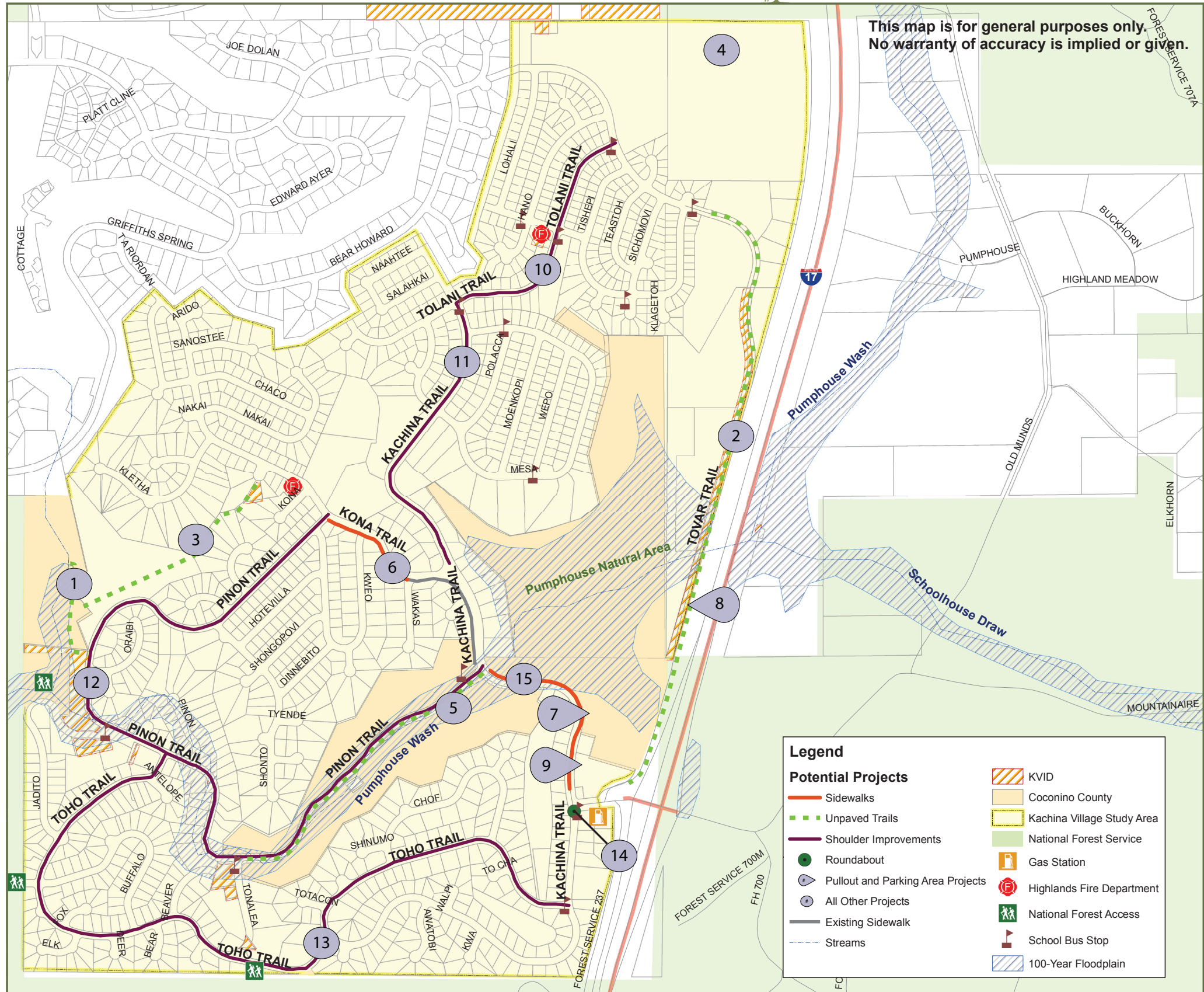


WINTER MAINTENANCE BEST MANAGEMENT PRACTICE RECOMMENDATIONS. At public open house meetings held in May and September of 2009, community members expressed their preference for the continued use of snowplowing and cinders, as compared to the use of chemical additives that may pose a greater threat to the wetland system. *(please continue to page 4)*

PROGRAM OF PROJECTS

Proj. No.	Road Name/ Location/ Type of Work	Estimate of Probable Cost	Project Purpose	Length
SHORT-TERM PROJECTS (0-5 YEARS)				
1	Harrenburg Wash Off of Pinon Trail 6' Unpaved Trail	\$14,689	Trail improvements to create a trail around the Harrenburg Wash, beginning and ending at existing KVID parking area at Oraibi Ovi / Pinon Trail.	0.2 miles
MID-TERM PROJECTS (5-10 YEARS)				
2	Tovar Trail Tishepi Trail to Kachina Blvd. 6' Unpaved Trail	\$80,788	Easement acquisition to create an unpaved multi-use pathway separated from the roadway.	1.1 miles
3	Unauthorized social trail Kona Trail to the Harrenburg Wash 6' Unpaved Trail	\$29,377	Trail improvements and easement acquisition to formalize existing unauthorized social trail and connect trail to proposed trail along Harrenburg Wash (Improvement #1).	0.4 miles
4	Connection to Flagstaff Urban Trail System (FUTS) Kachina Village to FUTS 6' Unpaved Trail	\$110,166	Trail improvements to connect Kachina Village to the FUTS. Requires coordination with landowners as plans are developed for existing 40-acre parcel located east of KVID Wetlands.	~1.5 miles (path is undetermined)
5	Pinon Trail Kachina Trail to Tonalea Trail 6' Unpaved Trail	\$36,722	Trail improvements to construct an unpaved path north of the Pumphouse Wash, along Pinon Trail.	0.5 miles
6	Kona Trail Pinon Trail to Wakas Trail Construct 6' Sidewalk	\$45,449	Extend the existing sidewalk up Kona Trail to Pinon Trail.	0.2 miles
LONG-TERM PROJECTS (10 TO 20 YEARS)				
7	Kachina Trail North of the Village Land Shoppe Parking Improvements (20-space paved parking lot)	\$54,863	Improve the existing space into a paved parking area to view wildlife in the Pumphouse Natural Area and to access Raymond County Park.	Undetermined
8	Tovar Trail East of Pumphouse Wash Natural Area Pullout Improvements (10-space unpaved parking lot)	\$34,145	Construct pullouts for motor vehicles to pull out of travel lanes to view wildlife in the Pumphouse Natural Area.	Undetermined
9	Kachina Trail South of the Village Land Shoppe Parking Improvements (10-space unpaved parking lot)	\$34,145	Improve the existing space into a parking area. Cost estimate assumes that the unpaved parking lot will consist of approximately 10 spaces.	2.46 acres
10	Tolani Trail Tovar Trail to Kachina Trail Construct 4' Shoulders	\$106,747	Improve the roadway to a total of 28' wide to accommodate 10' travel lanes and a 4' white striped shoulder.	0.4 miles
11	Kachina Trail Tolani Trail to Kona Trail Construct 4' Shoulders	\$133,434	Improve the roadway to a total of 28' wide to accommodate 10' travel lanes and a 4' white striped shoulder.	0.5 miles
12	Pinon Trail Kona Trail to Kachina Trail Construct 4' Shoulders	\$400,302	Improve the roadway to a total of 28' wide to accommodate 10' travel lanes and a 4' white striped shoulder.	1.5 miles
13	Toho Trail Pinon Trail to Kachina Trail Construct 4' Shoulders	\$373,615	Improve the roadway to a total of 28' wide to accommodate 10' travel lanes and a 4' white striped shoulder.	1.4 miles
14	Kachina Trail at Kachina Blvd. Intersection of Kachina Trail and Kachina Blvd. Construct a single lane roundabout with pedestrian refuges	\$250,000	Construct a single lane roundabout at the intersection of Kachina Blvd. and Kachina Trail.	-
15	Kachina Trail Kachina Blvd. to Pinon Trail Construct 4' Shoulders Construct 6' Sidewalk	\$163,058	Improve the roadway to include a 4' white-striped shoulder, a possible two-way center left turn lane, and a side pathway or sidewalk along Kachina Trail.	0.33 miles
TOTAL COST		\$1,876,543		

AREA MAP



KACHINA VILLAGE
MULTIMODAL TRANSPORTATION STUDY