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.
### PROGRAM OF PROJECTS

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Description</th>
<th>Estimated Total Cost</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LONG-TERM PROJECTS (10 TO 20 YEARS)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>North of Village Land Shoppe, Parking Improvements (20-space paved parking lot)</td>
<td>$54,564</td>
<td>Undetermined</td>
</tr>
</tbody>
</table>
| 8              | East of Pumphouse Wash
Pavement Improvements (15-space unpaved parking lot)                                    | $34,145              | Undetermined |
| 9              | South of the Village Land Shoppe, Parking Improvements (10-space unpaved parking lot)                   | $34,145              | 2.46 acres |
| 10             | Tovani Trail
Tow the Kachina Trail
Construct 4 Shoulders                                                                            | $198,747             | 0.4 miles |
| 11             | Kachina Trail
Tovani Trail to Kachina Trail
Construct 4 Shoulders                                                                            | $133,434             | 0.5 miles |
| 12             | Pimoon Trail
Kachina Trail to Pinion Trail
Construct 4 Shoulders                                                                            | $400,522             | 1.5 miles |
| 13             | Tovani Trail
Pimoon Trail to Kachina Trail
Construct 4 Shoulders                                                                            | $373,615             | 1.4 miles |
| 14             | Kachina Trail at Kachina Blvd,
Intersection of Kachina Trail and Kachina Blvd Construct a single lane
maniculated with pedestrian refuge                                                                | $290,000             |         |
| 15             | Kachina Trail
Kachina Blvd to Pimoon Trail
Construct 4 Shoulders                                                                            | $183,600             | 0.33 miles |
| **TOTAL COST** |                                                                                                         | **$1,876,543**       |        |

### SHORT-TERM PROJECTS (0-5 YEARS)

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Description</th>
<th>Estimated Total Cost</th>
<th>Length</th>
</tr>
</thead>
</table>
| 1              | Harrenburg Wash
Off of Pinion Trail
Construct a single lane roundabout at Oraibi Over Pinion Trail                                      | $14,665              | 0.2 miles |
| 2              | Tower Trail
Tovani Trail to Kachina Blvd
Construct a single lane roundabout from the roadway                                                 | $80,766              | 0.11 miles |
| 3              | Unauthorized social trail
Kachina Trail to Harrenburg Wash
Construct a single lane roundabout from the roadway                                                  | $29,377              | 0.4 miles |
| 4              | Connection to Flagstaff Urban Trail System (FUTS)
Kachina Village to FUTS
Construct a single lane roundabout from the roadway                                                  | $110,195             | 1.5 miles (path is undetermined) |
| 5              | Pinion Trail
Kachina Blvd to Starkie Trail
Construct a single lane roundabout from the roadway                                                  | $36,722              | 0.5 miles |
| 6              | Kachina Trail
Pinion Trail to Kachina Trail
Construct 6 Sidewalk                                                                                   | $40,449              | 0.2 miles |

**NOTE:**

All lengths are in miles.

### Mid-Term Projects (5-10 Years)

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Description</th>
<th>Estimated Total Cost</th>
<th>Length</th>
</tr>
</thead>
</table>
| 1              | Harrenburg Wash
Off of Pinion Trail
Construct a single lane roundabout at Oraibi Over Pinion Trail                                      | $14,665              | 0.2 miles |
| 2              | Tower Trail
Tovani Trail to Kachina Blvd
Construct a single lane roundabout from the roadway                                                  | $80,766              | 0.11 miles |
| 3              | Unauthorized social trail
Kachina Trail to Harrenburg Wash
Construct a single lane roundabout from the roadway                                                  | $29,377              | 0.4 miles |
| 4              | Connection to Flagstaff Urban Trail System (FUTS)
Kachina Village to FUTS
Construct a single lane roundabout from the roadway                                                  | $110,195             | 1.5 miles (path is undetermined) |
| 5              | Pinion Trail
Kachina Blvd to Starkie Trail
Construct a single lane roundabout from the roadway                                                  | $36,722              | 0.5 miles |
| 6              | Kachina Trail
Pinion Trail to Kachina Trail
Construct 6 Sidewalk                                                                                   | $40,449              | 0.2 miles |

**NOTE:**

All lengths are in miles.