EXCLUSIVE SUMMARY
Doney Park
MULTIMODAL TRANSPORTATION STUDY

NOVEMBER 2011 | PREPARED FOR:
Coconino County Community Development
Coconino County Public Works Department
Arizona Department of Transportation

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1 INTRODUCTION

The Arizona Department of Transportation (ADOT), through the Planning Assistance for Rural Areas (PARA) program, awarded funding to Coconino County for the Doney Park Multimodal Transportation Study (study). The study identifies needs and deficiencies for multimodal travel within Doney Park and recommends a program of projects to address multimodal transportation needs. The Study serves as a guide for community development, project funding applications, and project implementation.

Projects recommended in this study may be constructed incrementally over a considerable period of time as opportunities arise and funding becomes available. Projects may be initiated at any time after completion of the study, and full implementation of all the projects may not occur for 10 to 20 years or longer. There is no guarantee that all projects will be completed and some may be eliminated from consideration due to lack of funding or other unforeseen circumstances.

1.1 Doney Park Residents Value a Rural Lifestyle

Many who live in the Doney Park area value a rural lifestyle and environment. They enjoy convenient access to open space and recreational opportunities. During plan development, many expressed concern that pathways and bicycle lanes would detract from a rural environment. Many others expressed strong support for the improvements. As concisely and clearly explained by a study stakeholder:

“Proper planning for multimodal transportation is not counter to rural values. The ability to travel on foot, bicycle, or horse is part of a long-standing rural tradition in our country. Providing pathways to allow the safe and desirable use of foot, bicycle, or horse is just good, responsible community planning.”

1.2 Doney Park Timberline Fernwood Area Plan

Recommendations of the Doney Park Multimodal Transportation Study build upon concepts originally proposed in the Doney Park Timberline Fernwood Area Plan (Plan). A goal of the Plan is to provide a non-motorized trail system to provide access between neighborhoods and schools, public lands, and other trail systems. The study serves to advance many of these concepts.

2 PROPOSED PROJECTS

Proposed multimodal transportation projects in the Doney Park area are depicted in Figure 1. Proposed multimodal projects consist of the following project elements:

» Roadway connections
» Shared-use paths to accommodate pedestrians, bicyclists, and other users
» Equestrian paths constructed of soft surface materials suitable for equestrian use
» Sidewalks
» Paved shoulders
» Bike lanes and signing
» Transit service

2.1 Roadway Connectivity

Roadway projects that are needed to improve connectivity, mobility, and emergency response include:
Doney Park Transportation Study

Proposed Projects Map

LEGEND
- Intersection Activity Centers
- Existing Trailhead/Access Point
- Existing Paths and Trails
- Study Area Boundary
- Fire Stations
- School
- Peaks View Park
- Railroad
- Interstate
- Other Roads
- Coconino N.F.
- Private
- State Trust
- Walnut Can. N.M.

PROPOSED PROJECTS
- Soft Surface Pedestrian/Equestrian Path
- Paved Shared Use Path (SUP)
- Paved SUP with Separated Equestrian Path
- Roadway Connection
- Bike Route and Signing
- Sidewalk
- Proposed Connections to FUTS
- Striped Shoulder
- Trail Access Improvements

Figure 1 – Proposed Projects
» Improve the existing Neptune Lane from Lunar Drive to Stardust Trail to County standards. This road is currently unpaved and requires grading and paving to Coconino County standards. These improvements would likely require formation of an improvement district.

» Construct a new road that extends Burris Lane from its current terminus at Pine Country Lane to Koch Field Road.

2.2 Shared-Use Paths
A network of shared-use paths is proposed in Doney Park and the surrounding areas, including along US 89, Townsend-Winona Drive, Cosnino Drive, and Silver Saddle Road. The proposed pathway network will be comprised of paved paths as well as soft surface/natural surface paths for both pedestrians and equestrians. Figure 1 reflects the proposed locations of each type of path. Please note that ADOT does not allow equestrian use within ADOT right-of-way.

2.2.1 SHARED-USE PATH COURTESY
Shared-use paths will attract a variety of user groups including bicyclists, walkers, strollers, and equestrians. Each user group often has conflicting needs. For example, pedestrians are impacted by other trail users including bicyclists who travel at high speeds, horses are sensitive to sudden movements or unexpected noises, and users with disabilities are unable to react quickly to hazards. While the Doney Park Multimodal Transportation Study recommendations include separate facilities for each user group where feasible, in some cases user groups will utilize a common space and must learn to respect one another.

2.2.2 PAVED SURFACE SHARED-USE PATH
Paved shared-use paths will accommodate pedestrians, slow-speed bicyclists (e.g., children riding to and from school), and wheeled devices such as strollers. Where paved shared-use paths are proposed, an equestrian path is proposed on the opposite side of the roadway, with exception to US 89 where stakeholder input indicated that traffic volumes and speeds are not conducive to equestrians. Furthermore, ADOT does not allow equestrians within ADOT right-of-way. A typical section of a paved shared-use path, with an accompanying equestrian path on the opposite side of the road, is shown in Figure 2.

Paved paths along major roadways such as Townsend-Winona Road are proposed to be 10 feet wide, as illustrated in Figure 3. Paved shoulders and bicycle lanes are also proposed on higher volume and higher speed roadways such as Townsend-Winona Road.

2.2.3 SOFT SURFACE PATH FOR EQUESTRIANS AND PEDESTRIANS
The Doney Park area is home to an active equestrian community. To address the needs of the equestrian community, a network of soft surface paths are proposed.
throughout Doney Park. Where sufficient right-of-way exists, a soft path and a paved path are proposed. Soft paths and paved paths are proposed on Koch Field Road, Townsend-Winona Road, Silver Saddle Road, Skeet Drive, and Neptune Drive. The soft path is proposed to be located on the opposite side of the street as the paved path. The soft paths along these roads will be as natural as possible; they may be described as an ‘equestrian realm’ with minimal improvements such as minor clearing or covering of culverts.

Right-of-way limitations in some areas may preclude the development of a paved path and a soft path. Soft paths only are proposed on Stardust Trail, Slayton Ranch Road, and Cosnino Road. Soft paths along these roads should be constructed so that they are suitable for equestrians and pedestrians and surface treatments should consider the needs of both user groups.

A cross section is illustrated in Figure 4 on the next page.

### 2.3 Sidewalks

Sidewalks are proposed in areas with existing curb and gutter, or in areas with physical features, constrained right-of-way, or access considerations that prohibit construction of a shared-use path separated from the roadway. Within the Doney Park area, proposed sidewalks are limited to Burris Lane (due to limited right-of-way and drainage constraints) and along US 89 south of Townsend-Winona Road to connect to existing sidewalks. No other sidewalk segments are proposed in the study area.

Sidewalks along Burris Lane may be five feet wide. Sidewalks along high volume streets (US 89) should be six feet wide.

### 2.4 Paved Shoulders

Paved shoulders along low traffic volume streets can provide a suitable pedestrian facility. Providing paved shoulders does not always require roadway widening. In many cases, paved shoulders can be achieved through reallocating pavement width by narrowing the travel lanes and striping or restriping the existing roadway. Reducing lane widths may allow for a paved shoulder to be added to a roadway without adding additional pavement.

Existing roadways within Doney Park typically consist of a 28-foot-wide pavement width, consisting of two 14-foot travel lanes. To provide wide paved shoulders suitable for pedestrian and bicycle use, lane widths can be reduced and the roadway can be striped to consist of two 10-foot travel lanes and two four-foot shoulders.
Reducing the width of travel lanes to 10 feet not only allows enough room for a paved, striped shoulder to be added to the street cross-section, but narrower travel lanes also have a tendency to slow vehicle speeds.

Safety is a common concern regarding lane width reduction. However, recent research demonstrates that travel lanes on arterial and collector roadways with 10- and 11-foot travel lanes do not increase the frequency of crashes.

### 2.5 Bicycle Lanes

Bicycle lanes serve to delineate road space for preferential use by bicyclists and motorists and to provide more predictable movements by each. Bicycle lanes are proposed on Townsend-Winona and Leupp Road. Paved shoulders are also proposed on Silver Saddle and Koch Field Road, which may also be designated as bicycle lanes.

The recommended minimum width of a bicycle lane is four feet to five feet. Generally, existing shoulder widths on Townsend-Winona Road and on Leupp Road are sufficient to accommodate a bicycle lane, but some spot improvements may be required.

### 2.6 Paved Shoulder Maintenance and Sweeping

Debris on paved shoulders and on bicycle lanes is a concern voiced by stakeholders. Routinely removing debris from the paved shoulder and bicycle lanes will improve the safety and comfort of bicyclists.

Understanding that maintenance funds are limited, it is recommended that Coconino County, at a minimum, sweep cinder and debris from shoulders and bicycle lanes after winter maintenance practices have ceased for the season. As funding becomes available, it is recommended that a regular sweeping program consist of the following:

» Major arterials and streets with bicycle lanes: once per month

» Collector and residential streets (shared roadways and bicycle lanes): twice per year

### 2.7 Project Phasing

Each proposed multimodal project is categorized into one of three phases: Phase I, Phase II, or Phase III. Project phases were developed considering the project need, anticipated benefit of the project, relative cost and complexity of the project, and relationship to other projects.
Specific timeframes are not assigned to the three project phases. It is expected that the projects will be constructed incrementally over a considerable period of time as opportunities arise and funding becomes available. Individual projects are also not locked into the phase in which they are listed, but may be constructed out of order as conditions warrant or priorities change over time. Projects may be initiated at any time after completion of the study, and full implementation of all the projects may not occur for 10 to 20 years or longer.

Phase I includes projects that could potentially be included within currently programmed projects, projects

<table>
<thead>
<tr>
<th>PHASE 1 PROJECTS</th>
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</thead>
<tbody>
<tr>
<td><strong>PHASE</strong></td>
</tr>
<tr>
<td>Cosnino-1</td>
</tr>
<tr>
<td>Cosnino-2</td>
</tr>
<tr>
<td>Cosnino-3</td>
</tr>
<tr>
<td>Koch Field-1</td>
</tr>
<tr>
<td>Koch Field-2</td>
</tr>
<tr>
<td>Leupp-1</td>
</tr>
<tr>
<td>Silver Saddle-1</td>
</tr>
<tr>
<td>Townsend-Winona-1</td>
</tr>
<tr>
<td>Townsend-Winona-2</td>
</tr>
<tr>
<td>US 89-1</td>
</tr>
<tr>
<td>US 89-2</td>
</tr>
<tr>
<td>US 89-3</td>
</tr>
<tr>
<td>US 89-4</td>
</tr>
<tr>
<td>US 89-6</td>
</tr>
<tr>
<td><strong>TOTAL PHASE 1 PROJECTS</strong></td>
</tr>
</tbody>
</table>
that are needed to complete existing gaps, and projects that serve to establish a “trunk” for the ultimate Doney Park path system. Phase I projects are summarized in Table 1 on the previous page.

Phase II projects will fill in gaps in the path system in more developed areas. Phase II projects are summarized in Table 2.

Phase III projects are typically in less developed areas but will provide needed links for a complete path system. These projects also include higher cost projects that may need significant lead time to obtain funding. Phase III projects are summarized in Table 3.

Note that cost estimates for some very large projects (e.g., crossings of US 89) are not included, as additional planning and engineering effort is required to determine approximate costs. Crossings of US 89 are likely to cost several million dollars.

Table 2 – Phase 2 Recommended Projects

<table>
<thead>
<tr>
<th>PHASE</th>
<th>PROJECT NAME</th>
<th>STREET</th>
<th>STREET SEGMENT</th>
<th>DISTANCE (MILES)</th>
<th>PROJECT DESCRIPTION</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE 2 PROJECTS</td>
<td>Burris-1</td>
<td>Burris Lane</td>
<td>US 99 to Green Prairie Lane</td>
<td>0.77</td>
<td>Sidewalk</td>
<td>$360,000</td>
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<tr>
<td></td>
<td>Burris-2</td>
<td>Burris Lane</td>
<td>Green Prairie Lane to Pine Country Lane</td>
<td>0.42</td>
<td>Sidewalk</td>
<td>$250,000</td>
</tr>
<tr>
<td></td>
<td>Burris-3</td>
<td>Burris Lane</td>
<td>Pine Country Lane to Koch Field Road</td>
<td>0.49</td>
<td>Roadway connection</td>
<td>$1,230,000</td>
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<tr>
<td></td>
<td>Campbell-1</td>
<td>Campbell Avenue</td>
<td>US 99 to USFS trailhead</td>
<td>1.09</td>
<td>Equestrian and pedestrian path</td>
<td>$135,000</td>
</tr>
<tr>
<td></td>
<td>Campbell-2</td>
<td>Campbell Avenue</td>
<td>Campbell Avenue West Trailhead</td>
<td>N/A</td>
<td>Trailhead improvements</td>
<td>$110,000</td>
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<td></td>
<td>Neptune-1</td>
<td>Neptune Drive</td>
<td>Skeet Drive to Stardust Trail</td>
<td>0.71</td>
<td>Roadway improvements Paved shared-use path Equestrian path</td>
<td>$905,000</td>
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<tr>
<td></td>
<td>Neptune -3</td>
<td>Neptune/Skeet</td>
<td>Neptune Drive/ Skeet Drive Intersection to U.S. Forest Service Boundary</td>
<td>0.5</td>
<td>Equestrian/pedestrian path on potentially existing easement</td>
<td>$75,000</td>
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<tr>
<td></td>
<td>Rio Rancho-1</td>
<td>Rio Rancho Road / April Drive</td>
<td>Townsend-Winona to Musket Trail /Autumn Drive</td>
<td>1.24</td>
<td>Paved shoulder Equestrian and pedestrian path Pedestrian crossing</td>
<td>$280,000</td>
</tr>
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<td></td>
<td></td>
<td>Stardust Trail</td>
<td>Musket Trail to Yancey Lane</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Silver Saddle-2</td>
<td>Silver Saddle Road</td>
<td>Koch Field Road to Stardust Trail</td>
<td>0.72</td>
<td>Paved shoulder Equestrian path Paved shared-use path</td>
<td>$375,000</td>
</tr>
<tr>
<td></td>
<td>Skeet-1</td>
<td>Skeet Drive</td>
<td>Silver Saddle Road to Neptune Drive</td>
<td>0.45</td>
<td>Paved shared-use path Equestrian path</td>
<td>$220,000</td>
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<tr>
<td></td>
<td>Stardust-2</td>
<td>Stardust Trail</td>
<td>Yancey Lane to Deville Lane/ McGee Road</td>
<td>1.48</td>
<td>Paved shoulder Equestrian and pedestrian path</td>
<td>$345,000</td>
</tr>
<tr>
<td></td>
<td>Townsend-Winona-3</td>
<td>Townsend-Winona Road</td>
<td>Koch Field Road to Slayton Ranch Road</td>
<td>2.72</td>
<td>Paved shared-use path Equestrian path Pedestrian crossing</td>
<td>$1,060,000</td>
</tr>
<tr>
<td></td>
<td>TOTAL PHASE 2 PROJECTS</td>
<td></td>
<td></td>
<td>10.59</td>
<td></td>
<td>$5,345,000</td>
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### Table 3 – Phase 3 Recommended Projects

<table>
<thead>
<tr>
<th>PHASE 3 PROJECTS</th>
<th>PHASE</th>
<th>PROJECT NAME</th>
<th>STREET 1</th>
<th>STREET 2</th>
<th>STREET SEGMENT 1</th>
<th>DISTANCE (MILES)</th>
<th>PROJECT DESCRIPTION 1</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neptune-2</td>
<td>Neptune-2</td>
<td>Neptune Drive</td>
<td>Stardust Trail to Slayton Ranch Road</td>
<td>0.97</td>
<td>Paved shared-use path</td>
<td>$370,000</td>
<td></td>
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<td></td>
<td>Slayton Ranch-1</td>
<td>Slayton Ranch Road</td>
<td>Townsend -Winona Road to Carl Road</td>
<td>0.80</td>
<td>Paved shoulder Equestrian path Pedestrian crossing</td>
<td>$220,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slayton Ranch-2</td>
<td>Slayton Ranch Road</td>
<td>Carl Road to Grider Road</td>
<td>1.17</td>
<td>Paved shoulder Equestrian and pedestrian path</td>
<td>$320,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slayton Ranch-3</td>
<td>Slayton Ranch Road</td>
<td>Grider Road to Neptune Drive</td>
<td>0.86</td>
<td>Paved shoulder Equestrian and pedestrian path</td>
<td>$245,000</td>
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<tr>
<td></td>
<td>Stardust-1</td>
<td>Stardust Trail</td>
<td>Deville Lane/ McGee Road to cul-de-sac at northern terminus</td>
<td>0.52</td>
<td>Paved shoulder Equestrian and pedestrian path</td>
<td>$225,000</td>
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<tr>
<td></td>
<td>Townsend-Winona-4</td>
<td>Townsend-Winona Road</td>
<td>Slayton Ranch Road to Leupp Road</td>
<td>2.85</td>
<td>Paved-shared-use path Equestrian path</td>
<td>$1,090,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Townsend-Winona-5</td>
<td>Townsend-Winona Road</td>
<td>Leupp Road to Jobe Road; consideration may given to extending the pathways east to Winona/I-40. The existing bridge on Townsend-Winona Road that connects to I-40 presents a design constraint. Alternative alignments will be required. A logical terminus for the pathway needs to be identified.</td>
<td>1.99</td>
<td>Paved shared-use path Equestrian path</td>
<td>$675,000</td>
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<tr>
<td></td>
<td>US 89-5</td>
<td>US 89 Campbell Ave and/or Copeland Ave</td>
<td>-</td>
<td>Pedestrian and equestrian crossings</td>
<td>See Note No. 1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yancey-1</td>
<td>Yancey Lane</td>
<td>Koch Field Road to Stardust Trail</td>
<td>1.07</td>
<td>Shoulder striping/widening</td>
<td>$255,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Picture Canyon Trail</td>
<td>Off-Street Pathway;</td>
<td>City of Flagstaff limits to Townsend-Winona Road, approximately along Rain Valley Road / FR 510E or Rio de Flag floodplain</td>
<td>0.3</td>
<td>Paved or soft shared-use path</td>
<td>See Note 2.</td>
<td></td>
<td></td>
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<tr>
<td>TOTAL PHASE 3 PROJECTS</td>
<td></td>
<td></td>
<td></td>
<td>10.53</td>
<td>-</td>
<td>$3,400,000</td>
<td></td>
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</tbody>
</table>

**Notes:**

1. Project US 89-5 has not been developed sufficiently to develop planning-level costs. Alternatives range from crossings under US 89 to crossings over US 89 that are designed to accommodate pedestrians and unmounted equestrians. Each of these alternatives is likely to cost several million dollars.

2. Picture Canyon trail has not been developed sufficiently to develop planning-level costs. The majority of the trail lies within the City of Flagstaff. Collaboration with City of Flagstaff and the Arizona State Land Department is required.
A summary of costs by phase is provided in Table 4. The total estimated cost of improvements for all phases is $14 million.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>DISTANCE (MILES)</th>
<th>COST</th>
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<tbody>
<tr>
<td>Phase I</td>
<td>29.75</td>
<td>$5,345,000</td>
</tr>
<tr>
<td>Phase II</td>
<td>10.59</td>
<td>$5,345,000</td>
</tr>
<tr>
<td>Phase III</td>
<td>10.53</td>
<td>$3,400,000</td>
</tr>
<tr>
<td><strong>TOTAL ALL PHASES</strong></td>
<td><strong>50.87</strong></td>
<td><strong>$14,090,000</strong></td>
</tr>
</tbody>
</table>

Table 4 – Summary of Costs by Phase

### 2.8 Transit Service

An unmet need in the Doney Park area is the provision of fixed route and express bus service. The Transportation Plan for Coconino County Commuter Services (September, 2009) presented three potential transit service scenarios for the Doney Park area that are shown in Figure 5. These are described as follows:

- **Scenario A** – Express bus service on US 89 and Silver Saddle Road (to Koch Field Road).
- **Scenario B** – Express bus service on US 89 to Campbell Avenue and on Silver Saddle Road (to Koch Field Road).
- **Scenario C** – Fixed route bus service on US 89, Silver Saddle Road, Koch Field Road, and Townsend-Winona Road.

Park-and-ride stops (these varied depending on the specific transit alternative) were suggested at:

- US 89 / Burris Lane
- US 89 / Silver Saddle Road (at the Country Store)
- US 89 / Campbell Avenue
- Silver Saddle Road / Koch Field Road. Suggestions by the public were east of Cromer Elementary School (a park-and-ride lot could also serve as overflow parking for the school) and at Mary’s Drive
- Townsend/Winona Road / Koch Field Road (possibly at the Calvary Bible Church lot)

It is possible that potential park-and-ride lot sites could be designated as vanpool sites prior to the start of transit service. Many of the public open house participants were supportive of extending public transit to the study area, and all the alternatives noted above received support.

Transit needs, as identified by the stakeholders and the public, will be forwarded to the Northern Arizona Inter-governmental Public Transportation Authority (NAIPTA) for their consideration for implementation as funding becomes available.

### 3 IMPLEMENTATION REVENUE SOURCES

There are various funding sources that could be considered for implementation of the proposed projects. These include:

- Transportation Enhancement (TE) Grant Funding
- Safe Routes to School Program
- Coconino Parks and Open Space Program
- Federal Recreational Trails Program
- National Park Service Rivers, Trails, and Conservation Assistance Program
Figure 5 – Transit Alternatives