



TOWN OF
Dewey-Humboldt
TRANSPORTATION STUDY



Final Report and
Executive Summary



MAY 2012
Task Assignment MPD 17-11
Prepared By  Kimley-Horn
and Associates, Inc.



Town of Dewey- Humboldt PARA Transportation Study

ADOT MPD Task Assignment 17-11
PGTD 0717
Contract # T08-49-U0001

EXECUTIVE SUMMARY

Prepared by:



In association with:
Field Data Services of Arizona, Inc.
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Prepared for:
ARIZONA DEPARTMENT OF TRANSPORTATION
TOWN OF DEWEY-HUMBOLDT

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1 INTRODUCTION

The Arizona Department of Transportation (ADOT) awarded funding for the Town of Dewey-Humboldt Transportation Study through the Planning Assistance for Rural Areas (PARA) program. The purpose of the PARA program is to assist rural counties, cities, towns, and tribal communities in conducting multimodal transportation planning.

The Dewey-Humboldt PARA Transportation Study (study) identifies the transportation needs within the Town of Dewey-Humboldt (Town). The study area is all of the land within the Dewey-Humboldt town limits, as well as the southern tip of Prescott Valley, as shown in **Figure ES-1**.

For purposes of this study, needs are defined as unmet demand for transportation facilities or services. The study recommends planning-level improvements to help meet the identified transportation needs over the next 20 years. These recommendations serve as a guide for future community development, project funding applications, capital improvement programming, and project implementation.

The executive summary of the study provides a brief summary of current and future conditions, transportation needs and issues, recommended improvements, and the implementation plan. More detailed information can be found in the final report.

2 CURRENT CONDITIONS

2.1 Land Uses, Ownership, Environment, and Socioeconomic Data

The study area is primarily comprised of residential land uses with commercial land uses along State Route (SR) 69 and SR 169. Low density residential areas are the most predominant land use, comprising 71.2 percent of the study area. Medium density residential areas are located adjacent to commercial areas along SR 69. Most of the commercial areas within the study limits are primarily within the Town of Prescott Valley. Commercial activity within the Town of Dewey-Humboldt is located in the community core along Main Street and Prescott Street east of SR 69. Mortimer Family Farms represents the primary agricultural land use in the study area. Open space and recreational land uses are dispersed throughout the study area on Bureau of Land Management (BLM) and Arizona State Land Department (ASLD) Trust lands. Zoning within the study area is generally consistent with existing land use.

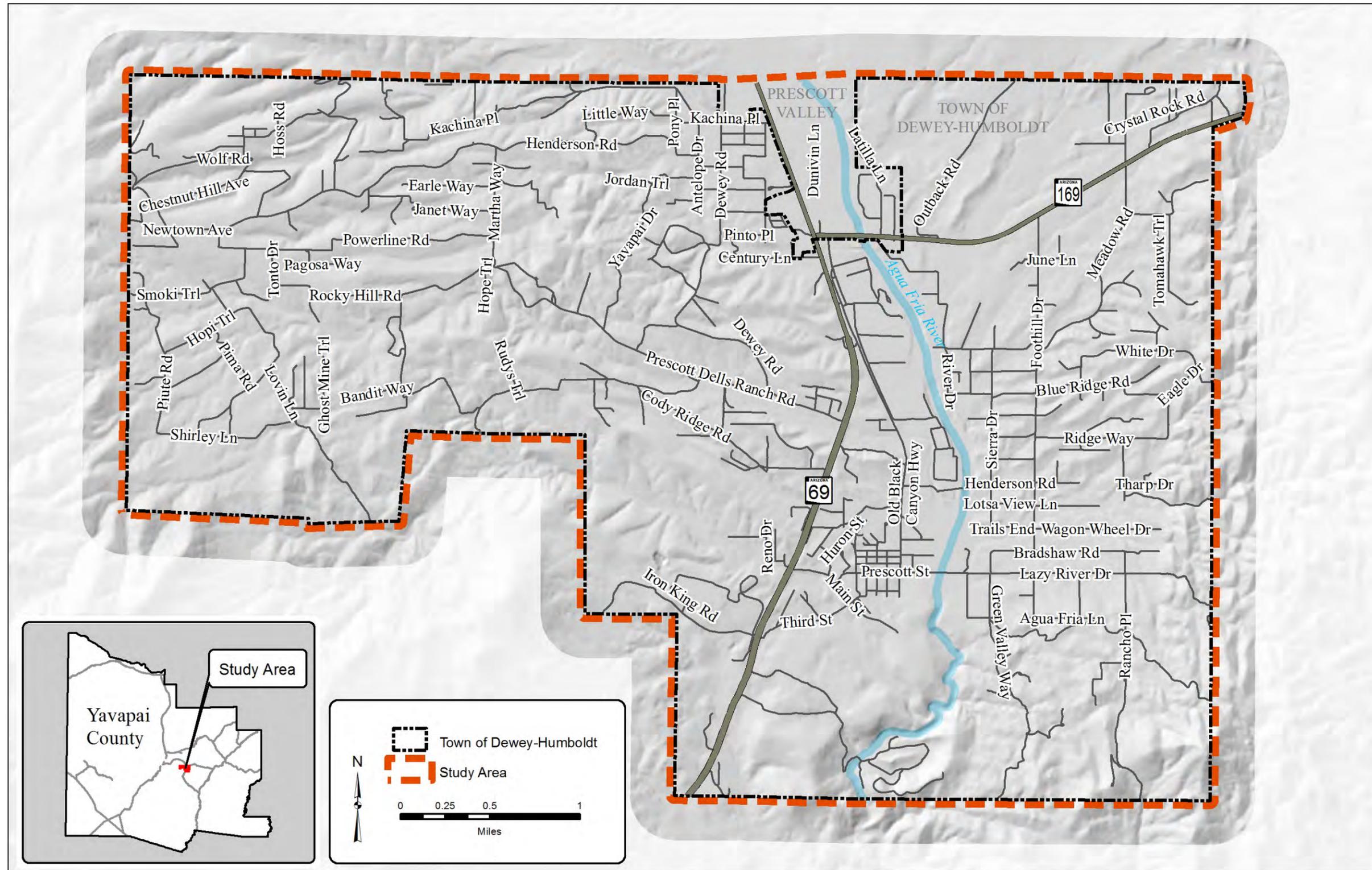
Most of the land in the study area is privately-owned. Public owners within the study area include the Town of Dewey-Humboldt, BLM, and ASLD. Many of the existing roadways within the study area are located on private land.

The study area terrain is primarily comprised of rolling hills with grass and shrub vegetation. The Town is flanked by the Bradshaw Mountains on the west and Mingus Mountain on the east, both of which are part of the Prescott National Forest. The Agua Fria River flows through Town on the east side of SR 69 from north to south.

There are two U.S. Environmental Protection Agency (EPA) Superfund remediation sites located within the study area at the Iron King Mine and Humboldt Smelter. These sites are being studied by EPA to determine how best to remediate them.

Per the 2010 Census, the current population of Dewey-Humboldt is 3,894 persons, with approximately 2.45 persons per households in the 1,589 occupied housing units in the Town.

Most Town residents commute to work outside of the Town, which is consistent with the small amount of current commercial and industrial land uses within Dewey-Humboldt.



Source: Town of Dewey-Humboldt

Figure ES-1 – Study Area Map

2.2 Roadways

The existing roadway network in the study area is comprised of state highways and non-state roadways owned by the Town or by private owners. The existing state highways are SR 69 and SR 169. The primary Town-owned paved roadways in the study area are Newtown Avenue/Henderson Road/Kachina Place, Prescott Street, and Foothill Drive. The street network west of SR 69 is primarily comprised of unpaved roads. While most of the existing paved local roadways are located within dedicated public right-of-way, a large percentage of the unpaved roadways in the study area are currently located on private right-of-way.

There are numerous existing access points along SR 69 and SR 169, particularly in the vicinity of the SR 69/SR 169 intersection, where Old Black Canyon Highway and several driveways join SR 169. ADOT has indicated there is a need to better manage access along SR 69 and SR 169.

Currently, there is an at-grade low flow crossing of the Agua Fria River on Prescott Street. During high water events, this roadway is not passable, which limits circulation and emergency vehicle access.

Two signalized intersections exist within the study area at SR 69/SR 169 and SR 69/Kachina Place. The ADOT Traffic Signal Needs Study completed in June 2011 for the intersection of SR 69/Main Street determined that a traffic signal is not warranted at SR 69/Main Street at this time.

2.2.1 Traffic Volumes

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. Available traffic volume data was reviewed to ascertain the volume of traffic on study area roadways.

Available average daily traffic (ADT) volumes from 2010 (the most recently available year) were obtained from ADOT for SR 69 and SR 169. Daily traffic volume counts were conducted for 18 selected study area roadways by Field Data Services of Arizona, Inc. on August 2, 2011. The highest ADT volume in the study area is 24,200 vehicles per day (vpd) on SR 69 north of SR 169. Most study area roadways have ADT volumes of less than 2,000 vpd.

2.2.2 Levels of Service

Roadway traffic operations are defined and categorized by the average amount of delay experienced by drivers. The operations are categorized by a grading system called level of service (LOS), which has a letter designation ranging from A (no delay) to F (severe congestion).

All study area roadway segments for which current traffic volume data was available provide LOS C or better except for the segment of SR 69 north of SR 169, which provides LOS D. Roadway segments providing LOS C likely do not currently need additional through capacity. For roadway segments providing LOS D, additional through capacity may be needed. Once roadway segments reach LOS E, they likely need additional through capacity.

2.2.3 Crash Analysis

Crash data was obtained from ADOT and from Yavapai County for a five-year analysis period from December 1, 2005 through November 30, 2010. There were a total of 115 crashes in the study area during the analysis period with three fatalities.

The location and frequency of crashes is generally correlated to the magnitude of traffic volumes, with the highest number of crashes occurring along SR 69. The largest cluster of crashes is at the SR 69/SR 169 intersection.

At the SR 69/SR 169 intersection, the ADOT SR 69 Road Safety Assessment (RSA) completed in October 2009 recommended providing additional signal heads for the SR 69 approaches to improve visibility, and converting the SR 69 southbound left-turn phasing to protected-only phasing to promote safety. The ADOT SR 69 RSA also noted that future consideration could be given to roundabouts replacing the traffic signals.

2.2.4 Pavement Conditions

A roadway pavement condition inventory was conducted in August and September 2011 for the paved roadway segments owned by the Town. A pavement rating system was developed to evaluate the Town's roadways. Factors used in the rating system include pavement distress types and general site conditions. The primary distress types considered were longitudinal and transverse cracking, alligator cracking, block cracking, edge cracking, patching, potholes, weathering and raveling, rutting, and lane/shoulder drop off. Site conditions considered were washboard effect, erosion, poor drainage, and failing surface conditions.

Based on the severity of distresses and site conditions that were observed, an overall pavement rating between 1 and 5 was given to each paved roadway segment that was inventoried. Descriptions of the rating system levels are as follows:

- **Excellent (1)** – Minimal deterioration requiring no maintenance;
- **Good (2)** – Minor deterioration that could benefit from maintenance activities;
- **Fair (3)** – Moderate deterioration that would benefit from aggressive maintenance activities;
- **Poor (4)** – Significant deterioration that would benefit from surface rehabilitation and overall general site improvements; and
- **Failed (5)** – Major deterioration that would benefit from surface reconstruction and overall general site improvements.

Overall, most of the roadways within the Town are in Fair condition. The roadway segments rated as Poor are distributed throughout the roadway network and include significant portions of Henderson Road, River Road, and Meadow Road. The roadway segments rated as Failed are generally located in the vicinity of Prescott Street/Old Black Canyon Highway and Kachina Place/SR 69. According to Town staff, Kachina Place and the roadway segments in the vicinity of Prescott Street are scheduled for pavement surface rehabilitation by the end of 2012.

2.3 Other Modes of Travel

2.3.1 Public Transit

Daily public transit services currently do not exist within the study area or anywhere else in the Central Yavapai Metropolitan Planning Organization (CYMPO) region except in Chino Valley. Lack of available funding and low estimated public transit demand limit the potential for the development of public transit in Dewey-Humboldt.

2.3.2 Private Transit

For-profit and non-profit private sector transit providers currently offer transportation services within the study area, but often at a higher price when compared to typical public transit rates. Many of the private transit operators utilize Federal Transit Administration Section 5310 (Elderly Individuals and Individuals with Disabilities Transportation Program) grants or Section 5317 (New Freedom Program that serves the disabled) grants to help fund their operations.

Territorial Transit, a non-profit organization, recently secured a Section 5310 grant for mobility management efforts to better coordinate the various private transit providers in the Prescott area. The objective of mobility management is to meet individual transportation needs through a wide range of transportation options and service providers. Mobility management also focuses on coordinating transportation options and service providers to achieve a more efficient transportation system.

The Northern Arizona Council of Governments (NACOG) manages a transportation voucher program for residents of the Prescott area. This program offers regional travel to qualifying residents at a low rate negotiated with a specific group of private transit providers. Dewey-Humboldt had been participating in the voucher program but in June 2011 opted to no longer participate in the voucher program due to funding issues, lack of rider participation, and inaccuracies in assigning voucher usage to the respective participating jurisdictions.

2.3.3 Bicycle, Pedestrian, and Recreational Travel

Bicycle and pedestrian facilities are an important part of the multimodal transportation network in that they provide various options for travel (which is especially critical for travelers who cannot drive).

Facilities that make up bicycle networks can include designated bike routes, striped bike lanes, paved shoulders along roadways, wide curb lanes, shared-use paths, and sidewalks. There are no existing designated bicycle facilities in the study area. SR 69 and SR 169 do, however, both have paved shoulder widths of four feet or greater that can be traveled on by bicyclists. The remainder of the roadway network within the study area is available to bicyclists, but deteriorating pavement surfaces and the prevalence of steep hills and challenging terrain can make bicycle travel difficult.

Pedestrian networks are typically comprised of sidewalks, trails, and shared-use paths. Existing sidewalks within the study area are located intermittently along Main Street and at Humboldt Elementary School. Very few of the existing sidewalks comply with the Americans with Disabilities Act (ADA).

Recreational travelers have limited existing travel options in the study area. There are existing regional recreational trails in the Prescott National Forest and BLM lands adjacent to the Town but no official recreational trails in the study area. There are several informal trails along the shoulders of many of the study area roadways, but the shoulders are narrow and terrain is challenging. Off-highway vehicles frequently use unpaved roads but must be registered and street legal to travel on any portion of the Town's right-of-way.

3 CURRENT NEEDS

3.1 Roadways

The following current study area roadway segment and intersection needs were identified:

- Acquiring right-of-way for, realigning, and/or paving existing unpaved roadways;
- Traffic signal modifications at the SR 69/SR 169 and SR 69/Kachina Place intersections;
- Access management of existing access points along SR 69 and SR 169;
- Federal functional reclassification of several roadway segments;
- All-weather access across the Agua Fria River;
- Improved circulation and better emergency vehicle access west of SR 69; and
- Rehabilitation of roadway segments with pavement conditions rated as Failed or Poor.

3.2 Other Modes of Travel

The following current study area needs were identified for other modes of travel:

- Transit availability for disadvantaged populations;
- Mobility management to better coordinate existing private transit services;
- Clearly-defined, continuous bicycle, pedestrian, and recreational trail networks; and
- ADA-compliant facilities in the community core and near Humboldt Elementary School.

4 FUTURE CONDITIONS

4.1 Anticipated Land Uses

The main land use goals discussed in the Dewey-Humboldt General Plan are preservation of the low density small town character, preservation of the residential living quality, and a focus on meeting the needs and desires of the present without compromising the ability of future generations to meet their own needs. These goals indicate the future land uses of the study area will remain predominantly low density residential with some growth of commercial uses along SR 69 and SR 169.

Residential land uses are expected to increase in dwelling density throughout the study area. Existing commercial land uses along SR 69 and SR 169 are anticipated to remain commercial land uses in the future. Additional commercial land uses are generally expected to occur along SR 69 and SR 169 and within the community core. The Mortimer Family Farms property will likely be converted from agricultural to low density residential and community core land uses per the Town's General Plan. A significant portion of the study area is anticipated to remain as open space and has been planned for recreational use according to the Dewey-Humboldt Open Space and Trails (OSAT) Plan completed in August 2010. Industrial land uses are expected to remain limited in the future.

Two commercial retail developments are planned north of SR 169 and east of SR 69 within the Prescott Valley portion of the study area. These developments will require zoning changes to allow for the planned commercial land uses.

4.2 Socioeconomic Data Projections

Based on historical average annual growth rates, the depth and breadth of the current economic downturn, and the Town's low growth policies, goals, and land use designations, it is anticipated that the Town's population will grow over the next 20 years at an average annual growth rate of somewhere between one percent and three percent.

Table ES-1 shows the current 2010 population and the projected 2016, 2021, and 2031 populations for average annual growth rate scenarios of one, two, and three percent. For purposes of this study, the two percent growth rate is assumed, resulting in a future 2031 population projection for Dewey-Humboldt of 5,902 persons.

Table ES-1 – Future Dewey-Humboldt Population Projections

Growth Scenario	2010 Population	2016 Population	2021 Population	2031 Population
1% growth rate	3,894	4,134	4,334	4,799
2% growth rate	3,894	4,385	4,842	5,902
3% growth rate	3,894	4,649	5,390	7,244

Sources: 2010 Census and Kimley-Horn and Associates, Inc.

In the future build-out condition, when all developable land is developed per the Town's land use plan, the population for Dewey-Humboldt is projected to be approximately 15,000 persons. This build-out population projection was calculated based on the acreage and the maximum allowable densities for low density and medium density residential land uses in the Town, assuming the Town's household size remains 2.45 persons per household. There is no specific year assigned to build-out as it is highly dependent on how quickly land develops.

The Town's focus on preservation of open space and a rural residential lifestyle will likely deter major future commercial and industrial development and limit the creation of new employment opportunities. Employment growth within the study area will likely be limited to the land near SR 69 and SR 169 over the next 20 years.

4.3 Roadways

4.3.1 Anticipated Improvement Projects

The Dewey-Humboldt Capital Improvement Program (CIP) includes several study area transportation projects, improvements to community facilities, and general government initiatives, all of which could have an effect on travel patterns. Due to the uncertainty of funding sources and amounts, the projects shown in the CIP are subject to change.

The Prescott Valley General Plan identifies the Prescott Country Club Bypass as a future roadway just north of the study area. This conceptual roadway alignment intersects SR 69 near the Bradshaw Mountain Middle School and runs westward around the Prescott Country Club, curving north to intersect Old Black Canyon Highway. A new north-south roadway is planned through the commercial developments on the northeast corner of SR 69/SR 169 to provide local access and circulation.

ADOT and CYMPO are in the planning stages of developing a limited access roadway that will ultimately go between Interstate 17 and Fain Road, effectively replacing SR 69 as the primary route between the Phoenix area and the Prescott area. The existing SR 69 roadway would then likely become a secondary route between Phoenix and Prescott and could experience a reduction in traffic volumes.

4.3.2 Traffic Control

Based on the assumed growth rates for SR 69 and Main Street, the SR 69/Main Street intersection may warrant a traffic control change within the next 5-10 years.

As traffic volumes increase over time, the existing signalized intersections of SR 69/SR 169 and SR 69/Kachina Place will likely need to be monitored regularly to determine if adjustments are needed to the traffic signal timing, phasing, or coordination with adjacent signalized intersections.

The planned commercial developments on the northeast corner of SR 69/SR 169 include a proposed new traffic signal at the intersection of the planned new north-south roadway with SR 169 just west of the Agua Fria River. This new intersection would also serve as a signalized access point to the Mortimer Family Farms property and any future developments on the southeast corner of SR 69/SR 169.

4.3.3 Traffic Volume Projections

ADOT provided traffic projections for the study area segments of SR 69 and SR 169. Average annual growth rates range from 0.5 percent to 1.9 percent. The 2010 and projected 2031 ADT volumes for SR 69 and SR 169 are shown in **Table ES-2**.

Table ES-2 – Future State Highway ADT Volumes

Count Location	2010	2031	Annual Growth Rate
SR 69, south of Main Street	12,700	18,900	1.9%
SR 69, Main Street to SR 169	15,700	22,900	1.8%
SR 69, north of SR 169	24,200	27,100	0.5%
SR 169, east of SR 69	9,500	12,100	1.2%

Sources: Dewey-Humboldt General Plan, ADOT, and Kimley-Horn and Associates, Inc.

For other roadways in the study area, it is assumed that traffic volumes will grow at an average annual growth rate of two percent. This two percent growth rate is generally consistent with the anticipated study area population growth rate and growth rates for SR 69 and SR 169. It should be noted, however, that a significant change in land use – such as the planned commercial development on the northeast corner of SR 69/SR 169 or the redevelopment of the Mortimer Family Farm property into high density residential or commercial land uses – would likely result in higher growth rates on certain roadways.

4.3.4 Levels of Service

All study area roadway segments are anticipated to provide LOS C or better through 2031 except for SR 169, which provides LOS E, and the segment of SR 69 north of SR 169, which provides LOS D. It should be noted that the 2031 projected volume for the segment of SR 69 north of SR 169 is very close to the LOS E threshold, so this segment of SR 69 could need additional capacity by 2031 to maintain an acceptable LOS.

If implemented, the planned new roadway between Interstate 17 and Fain Road would likely reduce or possibly eliminate the need for additional capacity on SR 169 and on SR 69 north of SR 169 because it would likely divert some traffic that would otherwise travel on SR 169 and on SR 69 between SR 169 and Fain Road.

4.4 Other Modes of Travel

4.4.1 Public Transit

There are currently no funded or committed projects for future public transit facilities or services in the study area. Public transit demand in the study area is anticipated to grow at a rate similar to the projected Town population growth rate. It is anticipated that lack of available funding and low estimated public transit demand will continue to limit the potential for the development of public transit in Dewey-Humboldt.

4.4.2 Private Transit

Private transit operators are anticipated to continue to operate in the study area in the future, and could potentially expand their service areas and frequency of service as the overall population and population segments likely to use transit increase. Continued mobility management could further improve the efficiency of the private transit system.

4.4.3 Bicycle, Pedestrian, and Recreational Travel

At the national level, there is an emphasis on providing more bicycle and pedestrian facilities along roadways to create “complete streets” that are also ADA-compliant. Complete streets are designed to function safely and effectively for all users.

Elements of a complete street in an urban area include sidewalks, bike lanes (or wide shoulders), comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. A complete street in a rural area may have different elements, but should achieve the same goal.

5 FUTURE NEEDS

5.1 Roadways

The following future study area roadway segment and intersection needs were identified:

- Acquiring right-of-way for, realigning, and/or paving existing unpaved roadways;
- Further study to alleviate congestion on SR 169 and on SR 69 north of SR 169;
- Access management of new access points along SR 69 and SR 169;
- Federal functional reclassification of several roadway segments;
- Further study to determine if intersection traffic control modifications are needed; and
- Rehabilitation of roadway segments with pavement condition rated as Failed or Poor.

5.2 Other Modes of Travel

The following future study area needs were identified for other modes of travel:

- Transit availability for disadvantaged populations;
- Identification of stable long-term funding sources for public transit;
- Continued mobility management to better coordinate private transit services;
- Evaluation of expanding CYMPO’s planned regional transit system into Dewey-Humboldt; and
- Additional bicycle, pedestrian, and recreational trail facilities.

6 EVALUATION CRITERIA

The following evaluation criteria were considered in the analysis of proposed improvement projects to identify potential benefits, impacts, and priorities:

- Meets identified need;
- Safety;
- Total estimated cost;
- Impacts to right-of-way;
- Impacts to existing businesses/residences;
- Engineering issues;
- Level of service/delay;
- Accessibility/mobility;
- Network continuity;
- Environmental impacts; and
- Multimodal compatibility.

7 IMPROVEMENT CONSIDERATIONS

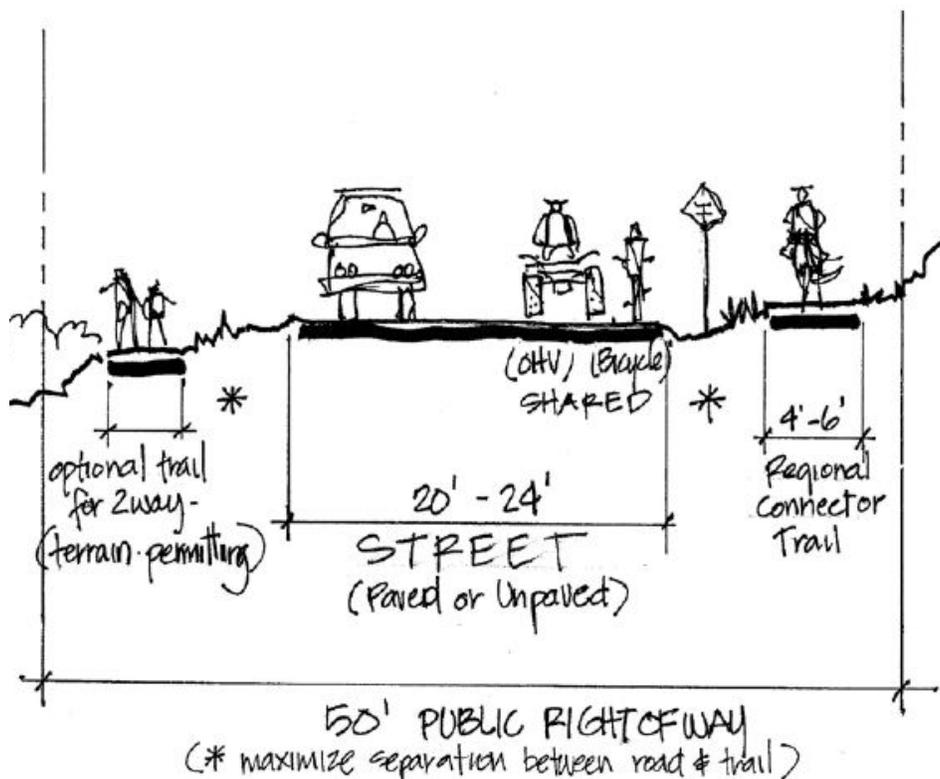
7.1 Functional Classification Considerations

Functional classification defines the hierarchy of streets in a roadway system according to the character of service they provide as it relates to mobility, access, and trip length. Functional classification groups include principal arterials, minor arterials, collectors, and local roads. In general, principal and minor arterials provide a high level of mobility for the traveling public with minimal allowance for access, while the collectors and local roads provide for residential and non-residential access.

To utilize federal funding on roadway improvements, a roadway must have a functional classification. Most federal funding can only be used on roadways classified as rural major collectors or higher.

7.2 Complete Street Cross-Sections

The Town's OSAT Plan provides several roadway cross-sections that include elements of complete streets. One of these cross-sections in particular, the Regional Connector Trail Cross-Section (see **Figure ES-2**), shows adequately-sized elements of a complete street within 50 feet of right-of-way. This cross-section includes one travel lane for motorized vehicles in each direction that is ten feet to twelve feet wide and shared-use paths for other modes of travel that are four feet to six feet wide.



Source: Town of Dewey-Humboldt Open Space and Trails Plan

Figure ES-2 – Regional Connector Trail Cross-Section

7.3 Roadway Network Alternatives

Roadway network needs include better network continuity, safety, emergency vehicle access, and dust control by means of an interconnected and continuous all-weather roadway network. Three potential improvement alternatives were developed to address roadway network needs in nine Areas within the study area, as shown in **Figure ES-3**. A comparative analysis of the network alternatives, along with a no-build alternative, was conducted using the aforementioned evaluation criteria.

7.4 Pavement Maintenance

Pavement generally deteriorates over time regardless of the level of traffic and maintenance activities. Pavement typically performs well over the first 75 percent of the pavement's life, but deterioration rapidly accelerates during the final 25 percent of the pavement's life. Taking a proactive approach in managing the overall condition of the pavement network and applying maintenance and rehabilitation activities at the appropriate time will allow the Town to make cost-effective decisions and protect their investment in the roadway network.

8 RECOMMENDED IMPROVEMENTS

Based on the evaluation criteria and considerations described previously, recommended improvements have been developed to address the study area's identified current and future needs. General improvement recommendations are described below, with individual improvement project recommendations provided in the next section of the executive summary.

It should be noted that all recommended improvements are preliminary and subject to change or refinement. No funding has been identified for further study, the purchase of right-of-way, or the implementation, of any improvements.

8.1 Roadways

Roadway improvements should incorporate complete streets concepts and be constructed in conjunction with multimodal improvements wherever feasible. The recommended roadway improvements are grouped into categories by type of roadway improvement and discussed in more detail below.

8.1.1 Roadway Network Improvements

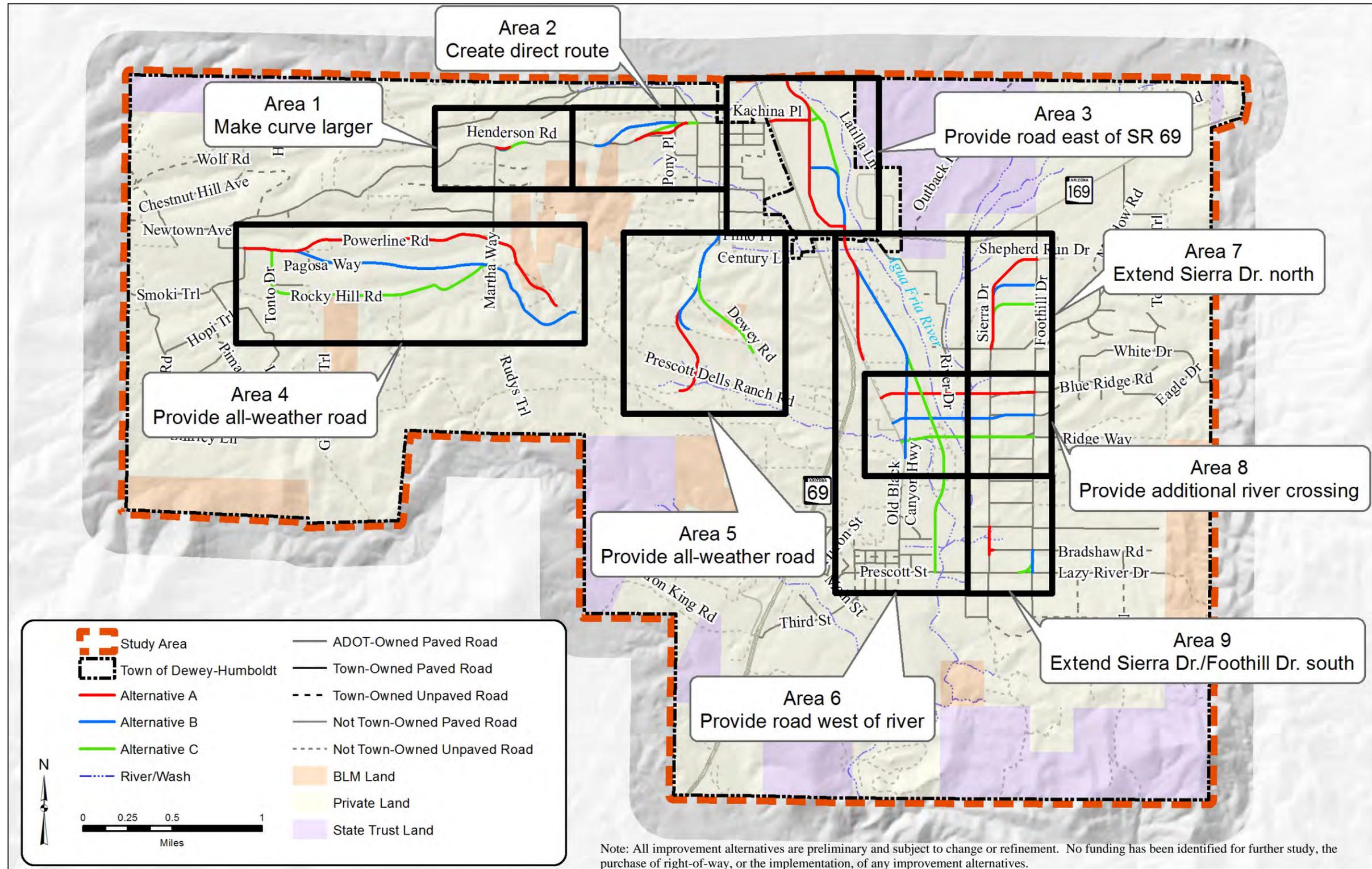
For purposes of this study, no recommendation for roadway network improvements will be made. The roadway network alternatives developed as part of this study provide a series of network improvement options for more detailed consideration in the future by the Town.

8.1.2 Safety

To promote safety and driver comfort, it is recommended that spot improvements, including signing, striping, and minor reconstruction, be implemented along curved roadways as funding becomes available.

8.1.3 Improving Existing Unpaved Roadways

Existing unpaved roadways should be improved to all-weather roadways as funding becomes available. All-weather roadway surfaces can be developed by upgrading the existing unpaved surface, installing chip seal, or installing asphalt pavement. Graded shoulders and minor drainage improvements should also be included in the unpaved roadway improvements.



Source: Kimley-Horn and Associates, Inc.

Figure ES-3 – Roadway Network Issue Areas and Alternatives

8.1.4 Pavement Maintenance and Rehabilitation Plan

Two types of recommended activities, preventive maintenance and rehabilitation, will provide the Town with the framework and general guidelines to follow when making decisions regarding the maintenance of pavement infrastructure. It is recommended that the Town initially consider preventive maintenance when a roadway reaches a pavement condition rating of Good. Major rehabilitation activities should be considered necessary for a roadway with a rating of Poor or Failed.

8.1.5 Intersection Traffic Control Improvements

The following improvements are recommended for consideration by ADOT:

- Provide additional signal heads for the SR 69 approaches at the SR 69/SR 169 intersection;
- Convert the SR 69 southbound left-turn phasing to protected-only phasing at the SR 69/SR 169 intersection;
- Regularly monitor the SR 69/SR 169 and SR 69/Kachina Place intersections and make adjustments as needed to maintain acceptable operations;
- Regularly monitor the SR 69/Main Street and SR 69/Foothill Drive intersections to identify when conditions warrant a traffic control change; and
- Require large-scale developments proposed near the SR 69/SR 169 intersection to prepare a traffic signal warrant study.

8.1.6 Federal Functional Classification Changes

It is recommended that the following changes be made to the federal functional classification of roadways in the existing roadway network:

- Reclassify as Rural Major Collectors the existing Rural Minor Collectors east of SR 69 and south of SR 169;
- Reclassify as Rural Major Collectors the existing Rural Minor Collectors west of SR 69 and east of Martha Way; and
- Classify as a Rural Minor Collector the segment of Henderson Road/Newtown Avenue between Wicklow Place and Martha Way.

As roadway network improvements are implemented and traffic patterns change, the federal functional classification of roadway segments should be reviewed and updated as appropriate. When the Town reaches a population of 5,000, it is recommended that the roadways with federal functional classifications be reclassified as “urban” instead of “rural” roadways to be consistent with federal guidelines.

8.1.7 Agua Fria River All-weather Crossing

Construction of an all-weather crossing of the Agua Fria River is recommended at the location of the existing low-flow at-grade crossing along Prescott Street to improve circulation and emergency vehicle access. In January 2008, the Town completed the Report on Agua Fria River Crossing at Prescott Street. This report presented the following six potential improvement alternatives for crossing the Agua Fria River at Prescott Street and provided construction cost estimates that do not include design costs:

- *Alternative A* – Bridge: 48,600 cubic feet per second (cfs) (capable of handling a 100-year flood event) and an approximate construction cost estimate of \$3,500,000;
- *Alternative B* – Reinforced concrete box culvert: 39,000 cfs (capable of handling a 50-year flood event) and an approximate construction cost estimate of \$2,300,000;
- *Alternative C* – Reinforced concrete box culvert: 20,160 cfs (capable of handling a 10-year flood event) and an approximate construction cost estimate of \$900,000;

- *Alternative D* – Box culvert: 4,020 cfs (capable of handling a 2-year flood event) and an approximate construction cost estimate of \$575,000;
- *Alternative E* – Corrugated metal pipe culvert: 4,000 cfs (capable of handling a 2-year flood event) and an approximate construction cost estimate of \$400,000; and
- *Alternative F* – Corrugated metal pipe culvert: 2,240 cfs (capable of handling a 1-year flood event) and an approximate construction cost estimate of \$350,000.

For purposes of this study, Alternative C (the reinforced concrete box culvert that handles a 10-year flood event) is recommended for inclusion in the study's improvement plan as the preliminary recommended alternative because it is the least expensive alternative that still addresses the need for reliable circulation and emergency vehicle access. It is recommended that the Town consider conducting a more detailed alternatives analysis as part of the project design that includes input from the Yavapai County Flood Control District and the public regarding the advantages and disadvantages of providing for the 50-year flood or the 100-year flood instead of the 10-year flood before determining the final recommended alternative.

8.1.8 Traffic Impact Study Guidelines

It is recommended that traffic impact study guidelines be developed by the Town. The purpose of a traffic impact study is to assist the Town in understanding the demands and impacts placed on the Town's transportation network by proposed development. Development, such as new subdivisions and businesses, generate traffic. The traffic impact study should determine if additional investments in the transportation network are required as a result of the development, including new roads, traffic signals, or turn lanes.

8.1.9 Access Management

Access management refers to managing where and how often driveways and cross-streets can access a particular roadway as well as where and in what direction drivers can turn into or out of access points. Access management recommendations are summarized as follows:

- The policies and procedures outlined in the ADOT SR 69 and SR 169 Access Management Plans (completed in 1997) should be implemented; and
- The Town should develop access management guidelines for Town-owned local roads and collector streets.

8.1.10 Roadway Improvement Easements or Dedications

Roadway improvement easements or dedications are recommended as an interim right-of-way ownership solution in areas where roadways are privately owned and in need of maintenance but private landowners do not have the ability to maintain or improve the roads. A voluntary roadway easement or dedication would allow the Town to implement roadway network improvements without having to purchase the privately-owned right-of-way where many of the existing unpaved roadways are located.

8.2 Other Modes of Travel

The recommendations for other modes of travel focus on providing a safe and efficient environment for transit and non-vehicular (e.g., bicycle and pedestrian) travel. The implementation of complete streets concepts will help provide the necessary facilities for these other modes of travel.

8.2.1 Transit

Private transit providers should be encouraged to continue serving the area, particularly disadvantaged populations. Mobility management coordination with CYMPO and other regional transit representatives is recommended to ensure that available transit options are known to the Town and its residents.

It is recommended that the Town coordinate with NACOG to determine if the voucher program's administrative issues can be resolved such that the voucher program can be reinstated in the Town.

If a regional transit system operated by CYMPO is created in the future, it is recommended that the Town actively support the system.

8.2.2 Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are recommended along existing and new roadways in the study area, where feasible. Any new facilities that are constructed should comply with the latest ADA requirements.

8.2.3 Trail Facilities

Unpaved shared-use trails or paths are recommended along existing and new roadways in the study area, particularly in rural areas. These facilities should accommodate pedestrians, bicyclists, and recreational travelers (e.g., hikers and equestrians) and should be completed in conjunction with roadway improvement projects where feasible.

8.2.4 Safe Routes to School

The federal Safe Routes to School (SRTS) Program makes federal funding available with no local funding match required for a wide variety of programs and projects – from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle safely to school. It is recommended that the Town coordinate with the Humboldt School District to examine conditions in the vicinity of school facilities and submit applications for SRTS funding as appropriate.

9 PLAN FOR IMPROVEMENTS

An implementation plan has been developed to prioritize the recommended improvements into near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) timeframes. The actual phasing of implementation of the recommended improvements will be determined by a variety of factors, including funding availability, development activity, traffic patterns, and private participation. The need for improvements should be re-evaluated each year as part of the Town's budget processes or as needed if conditions and travel patterns change significantly.

Table ES-3, Table ES-4, and Table ES-5 present the implementation plan, split into near-term, mid-term, and long-term timeframes. The cost estimates in 2012 dollars are:

- Near-term: \$3.3-\$3.8 million;
- Mid-term: \$16.5-\$23.3 million;
- Long-term: \$9.2-\$15.2 million; and
- Total implementation plan cost: \$29.0-\$42.3 million.

These costs include design, construction, and right-of-way costs. Ranges are provided for the construction costs to reflect the likely low-end and high-end cost options, which will depend on what alignment and/or level of improvement is implemented (e.g., for roadway surface improvements, providing an unpaved roadway surface with improved grading and minor drainage improvements would be at the low end of the cost range while providing a paved asphalt roadway surface would be at the high end of the cost range). Ranges are also provided for right-of-way costs where it appears right-of-way

could either be purchased or obtained at no cost via voluntary easement or dedication. Partnering between agencies to share costs and responsibilities may be appropriate for certain improvements.

The overall transportation improvement plan, combining the near-term, mid-term, and long-term elements, is shown in **Figure ES-4**.

9.1 Revenue

The Town has traditionally used the Arizona Highway User Revenue Fund (HURF), developer impact fees, and grants to fund transportation improvements in the study area. HURF can be used for capital improvements or for operations and maintenance while impact fees and grants can typically only be used for capital improvements. The Town also has a local general fund that can be utilized for transportation improvements and operations.

Based on revenue projections and identified transportation needs, it is apparent that the Town likely will not have sufficient revenue to complete all of the recommended improvements in this study. Additional revenue sources will need to be secured if the recommended improvements are to be constructed within the recommended timeframes.

9.2 Title VI Impacts

The U.S. Department of Transportation regulations related to disadvantaged, or Title VI, populations (i.e., minority, low-income, and elderly) state that in determining the site or location of transportation facilities, selection cannot be made with the purpose or effect of excluding persons from, denying them the benefits of, or subjecting them to discrimination under, any program to which this regulation applies. According to the regulations, a project using federal funds cannot be implemented that will cause disproportionately high and adverse impacts to disadvantaged populations.

The Dewey-Humboldt PARA Transportation Study is a long-range multimodal planning study. The recommended improvements are expected to improve the overall transportation system of the study area and benefit the study area as a whole. Recommended improvement projects were not selected based on the population that would be impacted, but rather were selected to address an identified transportation need. More detailed analysis will be needed for individual design projects that are federally-funded to ensure that there are no disproportionately high and adverse impacts to disadvantaged populations.

Table ES-3 – Recommended Near-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$)	Construction Cost (\$)	Total Cost (\$)
<i>Roadway Projects</i>				
Area 1 Henderson Road/Martha Way Curve	Install curve warning signs with 10 mph plaque	-	1,000	1,000
Antelope Dr.: Kachina Pl.-Deerpath Rd.	Rehabilitate roadway pavement	-	106,000	106,000
Deerpath Rd.: Dewey Rd.-Manzanita Blvd.	Rehabilitate roadway pavement	-	82,000	82,000
Hill St.: Kloss Ave.-end of Hill St.	Rehabilitate roadway pavement	-	44,000	44,000
Humboldt St.: Huron St.-Hill St.	Rehabilitate roadway pavement	-	20,000	20,000
Huron St.: Main St.-end of Huron St.	Rehabilitate roadway pavement	-	67,000	67,000
Jones St.: Prescott St.-Wells St.	Rehabilitate roadway pavement	-	21,000	21,000
Kachina Pl.: SR 69-Nancy Ln.	Rehabilitate roadway pavement	-	328,000	328,000
McAllister Dr.: Dewey Rd.-Manzanita Blvd.	Rehabilitate roadway pavement	-	51,000	51,000
Sunhill Trail: Cherry Siding Ln.-end of Sunhill Trail	Rehabilitate roadway pavement	-	14,000	14,000
Tanya Blvd.: Clearview Dr.-end of Tanya Blvd.	Rehabilitate roadway pavement	-	51,000	51,000
Valley High Dr.: Antelope Dr.-Pony Pl.	Rehabilitate roadway pavement	-	54,000	54,000
Wells St.: Old Black Canyon Hwy.-end of Wells St.	Rehabilitate roadway pavement	-	39,000	39,000
Yavapai Dr.: Antelope Dr.-Manzanita Blvd.	Rehabilitate roadway pavement	-	107,000	107,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	1,000,000	1,000,000
SR 69/SR 169 intersection	Add signal heads & protected left-turn phasing	-	5,000	5,000
SR 169/Kachina Pl. intersection	Modify traffic signal as needed	-	5,000	5,000
Segments of Main St., Prescott St., Green Valley Way, Bradshaw Rd., Foothill Dr., Newtown Ave., Henderson Rd., Pony Pl., Horseshoe Ln., Kachina Pl., Prescott Dells Ranch Rd., Rocky Hill Rd., Tonto Dr., Cranberry Rd., Wicklow Pl., and Dewey Rd.	Update federal functional classification	-	-	-
Town-wide	Coordinate with private roadway owners, as appropriate, on potential roadway easements or right-of-way dedications where roadway improvements are needed	-	-	-
Town-wide	Develop and adopt traffic impact guidelines and development policies	-	-	-

Table ES-3 – Recommended Near-term Improvement Projects (continued)

Project Location	Improvement Description	Right-of-Way Cost (\$)	Construction Cost (\$)	Total Cost (\$)
<i>Other Modes of Travel Projects</i>				
Town-wide	Develop and adopt access management guidelines	-	-	-
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Corral St.: Prescott St.-Humboldt Elementary School	Construct sidewalk along roadway ¹	-	110,000 - 180,000	110,000 - 180,000
Hecla St.: Prescott St.-Humboldt Elementary School	Construct sidewalk along roadway ¹	-	110,000 - 170,000	110,000 - 170,000
Huron St.: Main St.-end of Huron St.	Construct sidewalk along roadway ¹	-	200,000 - 310,000	200,000 - 310,000
Main St.: SR 69-Third St.	Construct sidewalk along roadway ¹	-	260,000 - 410,000	260,000 - 410,000
Prescott St.: Main St.-Old Black Canyon Highway	Construct sidewalk along roadway ¹	-	250,000 - 380,000	250,000 - 380,000
Vicinity of Humboldt Elementary School	Apply for Safe Routes to School grant	-	400,000	400,000
Subtotal Near-term Projects Cost Estimate = \$3,325,000 – \$3,845,000		-	3,325,000 - 3,845,000	3,325,000 - 3,845,000

1: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Source: Kimley-Horn and Associates, Inc.

Table ES-4 – Recommended Mid-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Roadway Projects				
Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve ²	0 - 9,000	50,000 - 150,000	50,000 - 150,000
Area 2 Alternatives: Henderson Rd./Pony Pl./Horseshoe Ln.	Connect Henderson Rd. to Horseshoe Ln. ²	0 - 190,000	520,000 - 820,000	520,000 - 1,010,000
Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and upgrade to all-weather roadway ^{2,3}	0 - 520,000	2,300,000 - 3,900,000	2,300,000 - 4,380,000
Area 5 Alternatives: Dewey Rd.	Realign and upgrade to all-weather roadway ^{2,3}	0 - 340,000	790,000 - 2,500,000	790,000 - 2,840,000
Cranberry Rd.: Smoki Trail-Tonto Dr.	Upgrade to all-weather roadway ³	0 - 5,000	80,000 - 120,000	80,000 - 125,000
Dewey Rd.: 500' east of Stump Rd.-Prescott Dells Ranch Rd.	Upgrade to all-weather roadway ³	0 - 170,000	460,000 - 650,000	460,000 - 820,000
Martha Way: 350' north of Rocky Hill Rd.-Rocky Hill Rd.	Upgrade to all-weather roadway ³	0 - 20,000	30,000 - 50,000	30,000 - 70,000
Prescott Dells Ranch Rd.: Rocky Hill Rd.-SR 69	Upgrade to all-weather roadway ³	0 - 220,000	170,000 - 420,000	170,000 - 640,000
Rocky Hill Rd.: 0.5 miles east of Martha Way-Prescott Dells Ranch Rd.	Upgrade to all-weather roadway ³	0 - 210,000	590,000 - 830,000	590,000 - 1,040,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	1,000,000	1,000,000
SR 69/Main St. intersection	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
Prescott St. at the Agua Fria River	Construct an all-weather river crossing	0 - 15,000	1,080,000	1,080,000 - 1,095,000
Segments of Green Valley Way, Bradshaw Rd., Foothill Dr., Prescott Dells Ranch Rd., Rocky Hill Rd., Tonto Dr., Cranberry Rd., Wicklow Pl., and Dewey Rd.	Update federal functional classification after recommended roadway improvements have been constructed	-	-	-

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

4: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Table ES-4 – Recommended Mid-term Improvement Projects (continued)

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Other Modes of Travel Projects				
Prescott St.: Old Black Canyon Hwy-Green Valley Way/Sierra Dr.	Construct sidewalk along roadway ⁴	-	320,000 - 500,000	320,000 - 500,000
Lazy River Dr.: Sierra Dr.-east Town boundary	Construct shared-use trail along roadway	-	1,040,000	1,040,000
Newtown Ave./Henderson Rd./Horseshoe Ln./Kachina Pl.: west Town boundary-SR 69	Construct shared-use trail along roadway	-	3,110,000	3,110,000
Rocky Hill Rd./Tonto Dr.: Newtown Ave.-SR 69	Construct shared-use trail along roadway	-	3,950,000	3,950,000
Martha Way: Rocky Hill Rd.-Henderson Rd.	Construct shared-use trail along roadway	-	540,000	540,000
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Subtotal Mid-term Projects Cost Estimate = \$16,530,000 - \$23,310,000		0 - 1,699,000	16,530,000 - 21,660,000	16,530,000 - 23,310,000

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

4: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Source: Kimley-Horn and Associates, Inc.

Table ES-5 – Recommended Long-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Roadway Projects				
Area 3 Alternatives: Prescott Valley New Development Connection	Construct new all-weather roadway ^{2,3}	0 - 820,000	800,000 - 1,240,000	800,000 - 2,060,000
Area 6 Alternatives: New Road West of Agua Fria River	Construct new all-weather roadway ^{2,3}	0 - 720,000	460,000 - 2,000,000	460,000 - 2,720,000
Area 7 Alternatives: Sierra Dr. North Extension	Construct new all-weather roadway ^{2,3}	0 - 180,000	240,000 - 580,000	240,000 - 760,000
Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new low-flow river crossing ^{2,3}	0 - 140,000	800,000 - 1,100,000	800,000 - 1,220,000
Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new all-weather roadway ^{2,3}	0 - 150,000	80,000 - 180,000	80,000 - 300,000
Meadow Rd.: Meadow Ranch Pl.-Tanya Blvd.	Upgrade to all-weather roadway ³	0 - 120,000	230,000 - 360,000	230,000 - 480,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	2,000,000	2,000,000
SR 169/future development intersection	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
SR 169/Foothill Dr.	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
All functionally classified roadways	Update federal functional classification from rural to urban when the Town reaches a population of 5,000	-	-	-

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

Table ES-5 – Recommended Long-term Improvement Projects (continued)

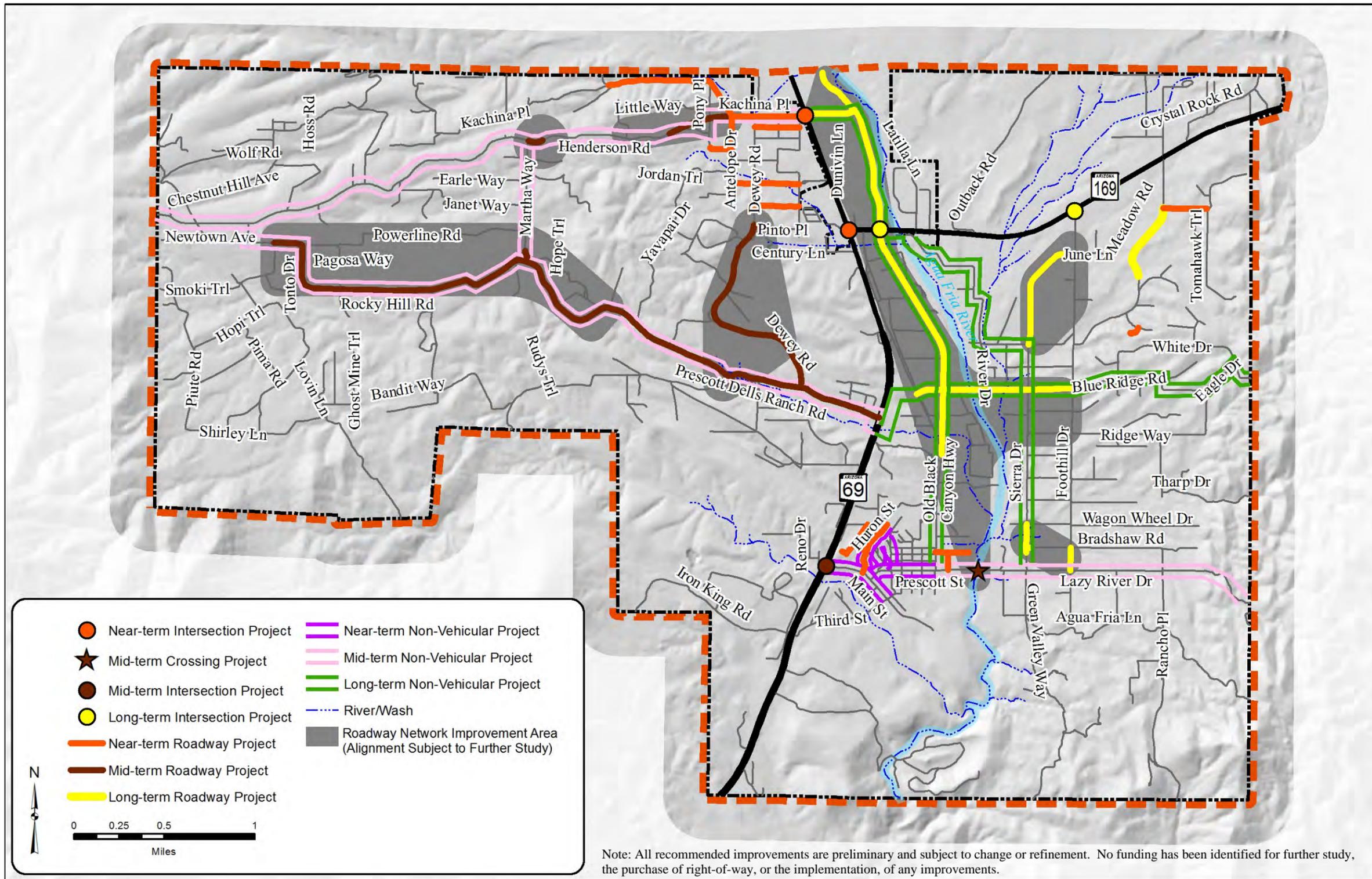
Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Other Modes of Travel Projects				
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Blue Ridge Rd.: Sierra Dr.-east Town boundary	Construct shared-use trail along roadway	-	430,000	430,000
Deer Pass Rd.: SR 69-Sierra Dr.	Construct shared-use trail along roadway	0 - 20,000	340,000	340,000 - 360,000
Old Black Canyon Hwy./New Roadway: Prescott St.-SR 169	Construct shared-use trail along roadway	-	620,000	620,000
Quarterhorse Ln.: River Dr.-Meadow Rd.	Construct shared-use trail along roadway	-	470,000	470,000
River Dr.: SR 169-Quarterhorse Ln.	Construct shared-use trail along roadway	-	300,000	300,000
SR 169: New Roadway East of Old Black Canyon Hwy.-River Dr.	Construct shared-use trail along roadway	-	40,000	40,000
Agua Fria River: SR 169-Kachina Pl.	Construct shared-use trail along river	0 - 38,000	230,000	230,000 - 268,000
Kachina Pl.: SR 69-Agua Fria River	Construct shared-use trail along roadway	0 - 20,000	120,000	120,000 - 140,000
Sierra Dr.: Lazy River Dr.-Quarterhorse Ln.	Construct shared-use trail along roadway	-	1,000,000	1,000,000
Subtotal Long-term Projects Cost Estimate = \$9,160,000 - \$15,168,000		0 - 2,208,000	9,160,000 - 13,010,000	9,160,000 - 15,168,000
Total of Near-term, Mid-term, and Long-term Project Cost Estimates = \$29,015,000 - \$42,323,000				

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

Source: Kimley-Horn and Associates, Inc.



Projects not shown in Improvement Plan (Figure ES-4)

Near-term Timeframe

- Install curve warning signs with 10 mph plaque at Henderson Rd/Martha Way Curve
- Update federal functional classifications
- Develop and adopt traffic impact guidelines and development policies
- Develop and adopt access management guidelines
- Coordinate with regional transit representatives on transit opportunities
- Apply for Safe Routes to School grant
- Coordinate with private roadway owners, as appropriate, on potential roadway easements or right-of-way dedications where roadway improvements are needed

Mid-term Timeframe

- Maintain existing paved roads
- Update federal functional classifications after recommended roadway improvements have been constructed
- Coordinate with regional transit representatives on transit opportunities

Long-term Timeframe

- Maintain existing paved roads
- Update federal functional classifications from rural to urban when the Town reaches a population of 5,000 persons
- Coordinate with regional transit representatives on transit opportunities

Source: Kimley-Horn and Associates, Inc.

Figure ES-4 – Improvement Plan



Town of Dewey- Humboldt PARA Transportation Study

ADOT MPD Task Assignment 17-11
PGTD 0717
Contract # T08-49-U0001

FINAL REPORT

Prepared by:



In association with:
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TOWN OF DEWEY-HUMBOLDT

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1 INTRODUCTION

The Arizona Department of Transportation (ADOT) awarded funding for the Town of Dewey-Humboldt Transportation Study through the Planning Assistance for Rural Areas (PARA) program. The purpose of the PARA program is to assist rural counties, cities, towns, and tribal communities in conducting multimodal transportation planning.

1.1 Study Purpose

The Dewey-Humboldt PARA Transportation Study (study) identifies the roadway, transit, bicycle, and pedestrian needs within the Town of Dewey-Humboldt (Town). For purposes of this study, needs are defined as unmet demand for transportation facilities or services. The study recommends improvements to help meet the identified transportation needs over the next 20 years. These recommendations serve as a guide for future community development, project funding applications, capital improvement programming, and project implementation.

1.2 Study Objectives

Objectives of the Dewey-Humboldt PARA Study are:

- Develop a multimodal transportation plan containing near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) improvements that address identified transportation needs for roadways and other modes of travel;
- Develop conceptual alignments for new/improved roadway corridors that improve local circulation and provide viable alternate routes to State Route (SR) 69 and SR 169;
- Create a framework for developing a pavement management program with annual recommendations that can be incorporated into the Town's Capital Improvement Program (CIP);
- Determine the potential demand for, and feasibility of, providing local transit service; and
- Preserve the rural character of the Town.

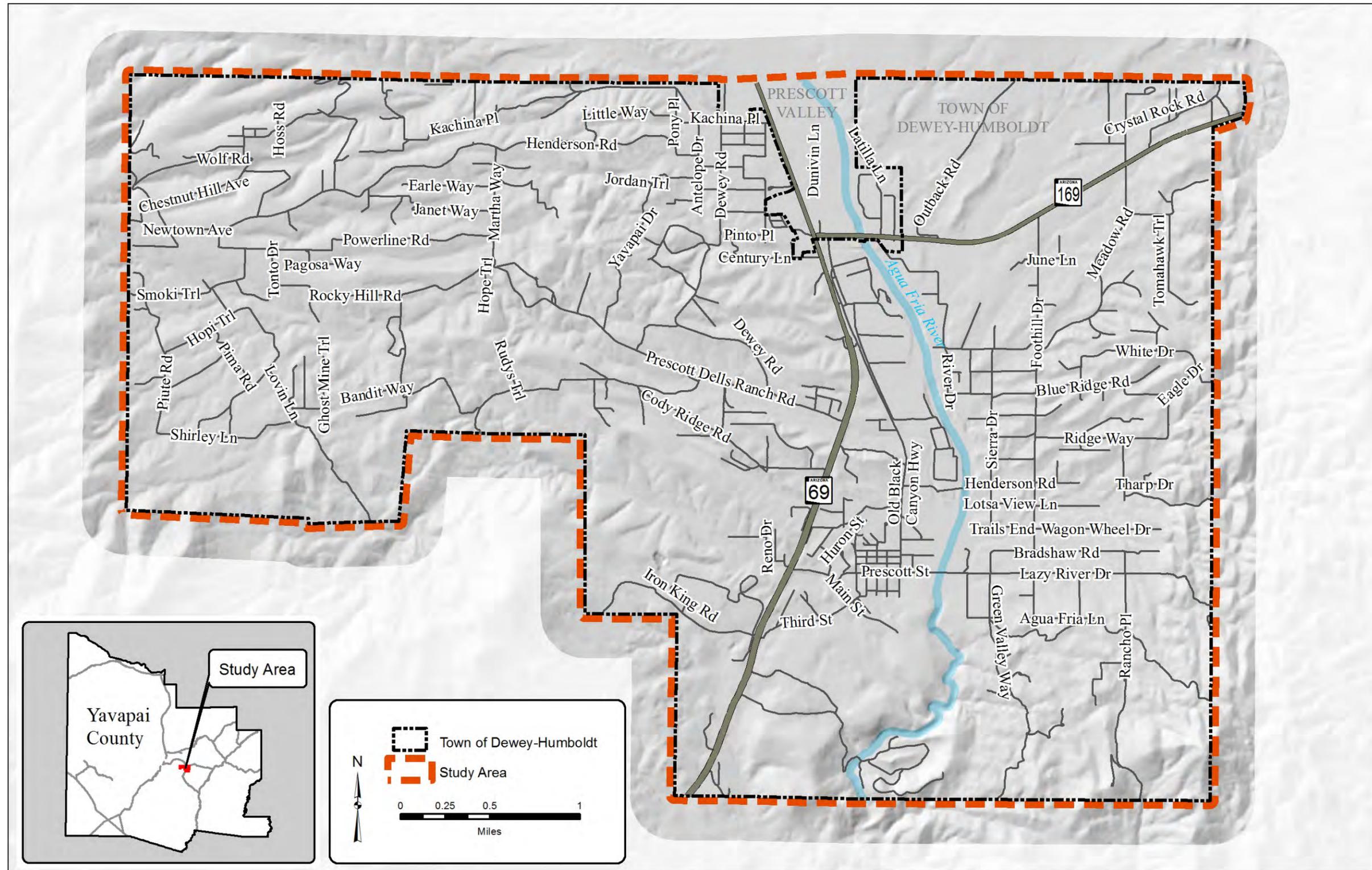
1.3 Study Area

The study area is all of the land within the Dewey-Humboldt town limits, as well as the southern tip of Prescott Valley, as shown in **Figure 1**. The study area measures approximately 12,322 acres, or 19.25 square miles.

1.4 Summary of Relevant Plans, Documents, and Studies

A number of plans and studies were reviewed in the preparation of this study, including the following:

- Dewey-Humboldt Open Space and Trails Plan (August 2010);
- Dewey-Humboldt Capital Improvement Program (January 2010);
- Dewey-Humboldt 2009 General Plan (May 2009);
- CYMPO Coordinated Public Transit-Human Services Transportation Plan (January 2011);
- CYMPO SR 169 to Fain Road Planning Study (February 2009);
- CYMPO Transit Implementation Plan (February 2009);
- CYMPO Regional Transit Needs Study (April 2007);
- CYMPO Regional Transportation Plan (October 2006);
- ADOT Traffic Signal Needs Study (June 2011);
- ADOT Speed Study (June 2011);
- ADOT Five Year Transportation Facilities Construction Program (June 2011);



Source: Town of Dewey-Humboldt

Figure 1 – Study Area Map

- ADOT Interstate 17 to Fain Road Connector Corridor Location Study & Environmental Overview (December 2010);
- ADOT Statewide Transportation Planning Framework Study (March 2010);
- ADOT Road Safety Assessment SR 69, MP 278.5 to 282 (October 2009);
- ADOT State Route 69 Access Management Plan (June 1997);
- ADOT State Route 169 Access Management Plan (June 1997);
- Town of Prescott Valley Draft General Plan 2025 (November 2025);
- Arizona Trails 2010: A Statewide Motorized & Non-Motorized Trails Plan (July 2010); and
- BLM Bradshaw-Harquahala Resource Management Plan (April 2010).

1.5 Technical Advisory Committee and Stakeholders

Key stakeholders for this study include members of the Transportation Advisory Committee (TAC), who represent the following agencies:

- ADOT Multimodal Planning Division (MPD);
- ADOT Communication and Community Partnerships;
- ADOT Environmental Group;
- ADOT Prescott District;
- ADOT Traffic Group;
- Arizona Game and Fish Department (AZGFD);
- Arizona State Land Department (ASLD);
- Central Yavapai Fire District;
- Central Yavapai Metropolitan Planning Organization (CYMPO);
- Town of Dewey-Humboldt;
- Town of Prescott Valley;
- U.S. Forest Service – Prescott National Forest;
- Yavapai County Public Works; and
- Yavapai County Sheriff's Office.

Other stakeholders for the study include representatives from the following entities:

- Arizona Public Service (APS);
- Black Canyon Trails Coalition;
- Bureau of Land Management (BLM);
- Cable One;
- CenturyLink (formerly Qwest);
- Elected Officials;
- Environmental Protection Agency (EPA);
- Humboldt Elementary School;
- Humboldt Unified School District;
- Mortimer Family Farms (formerly Young's Farm);
- Northern Arizona Council of Governments;
- Prescott Transit Authority;
- Sierra Club – Grand Canyon Chapter;
- Sky Island Alliance;
- Town of Dewey-Humboldt Open Space and Trails Committee;
- Unisource;
- U.S. Army Corps of Engineers;

- U.S. Fish and Wildlife Service; and
- Yavapai Trails Association.

Three TAC meetings were held throughout the course of the study. Material from the draft deliverables Working Paper 1 – *Current and Future Conditions* and Working Paper 2 – *Evaluation Criteria and Plan for Improvements* was presented at the TAC meetings for review and comment by the TAC.

Interviews were conducted with several of the TAC members and stakeholders to obtain their input on current and future transportation needs and potential improvements. Summaries of the material presented and input obtained at the interviews are provided in **Appendix A**.

1.6 Public Involvement

Two public meetings were held during the study to obtain input from the general public, business leaders, and elected officials. The first public meeting was held on October 25, 2011 from 4:30 p.m. to 6:30 p.m. at Humboldt Elementary School. Information on current and future conditions and needs was presented. The second public meeting was held on February 28, 2012 from 4:30 p.m. to 6:30 p.m. at the Dewey-Humboldt Town Library. Information on potential improvement projects was presented. Each meeting included a brief presentation followed by a question-and-answer session.

The meetings were staffed by Town, ADOT, and consultant personnel who were available to provide information, answer questions, and obtain input. Study exhibits were displayed on large boards. Comments forms were made available for the attendees to use in submitting written comments. Summaries of the material presented and input obtained at the public meetings are provided in **Appendix B**.

1.7 Town Council Involvement

The Town Council was briefed on the study at work sessions held on October 11, 2011 and February 14, 2012. Each work session included a brief presentation followed by a question-and-answer period. These work sessions were held in advance of the public meetings to provide the Town Council with the opportunity to provide input on what material would be presented at the public meetings.

A final presentation of the study's findings and recommendations will be made to the Town Council at a Town Council meeting scheduled for May 15, 2012.

2 CURRENT CONDITIONS

This section summarizes data obtained on current conditions to help identify current transportation needs within the study area.

2.1 Land Uses

An understanding of land uses is important because land uses influence travel patterns. The study area is primarily comprised of residential land uses with commercial land uses along SR 69 and SR 169. The existing land uses within the study area, per the Town's General Plan, are shown in **Figure 2**. The area and percentage of each land use type are shown in **Table 1**.

Table 1 – Dewey-Humboldt Land Uses

Land Use	Acres	Percent
Commercial	255	2.1%
Community Core	300	2.4%
Prescott Valley Planned Area Development	361	2.9%
Medium Density Residential	510	4.1%
Special Study Area	522	4.2%
Open Space/Recreation	1,596	13.0%
Low Density Residential	8,778	71.2%
Total	12,322	100%

Source: Town of Dewey-Humboldt, calculations by Kimley-Horn and Associates, Inc.

Low density residential areas are the most abundant land use designation, comprising 71.2 percent of the study area. Medium density residential areas are located adjacent to commercial areas along SR 69.

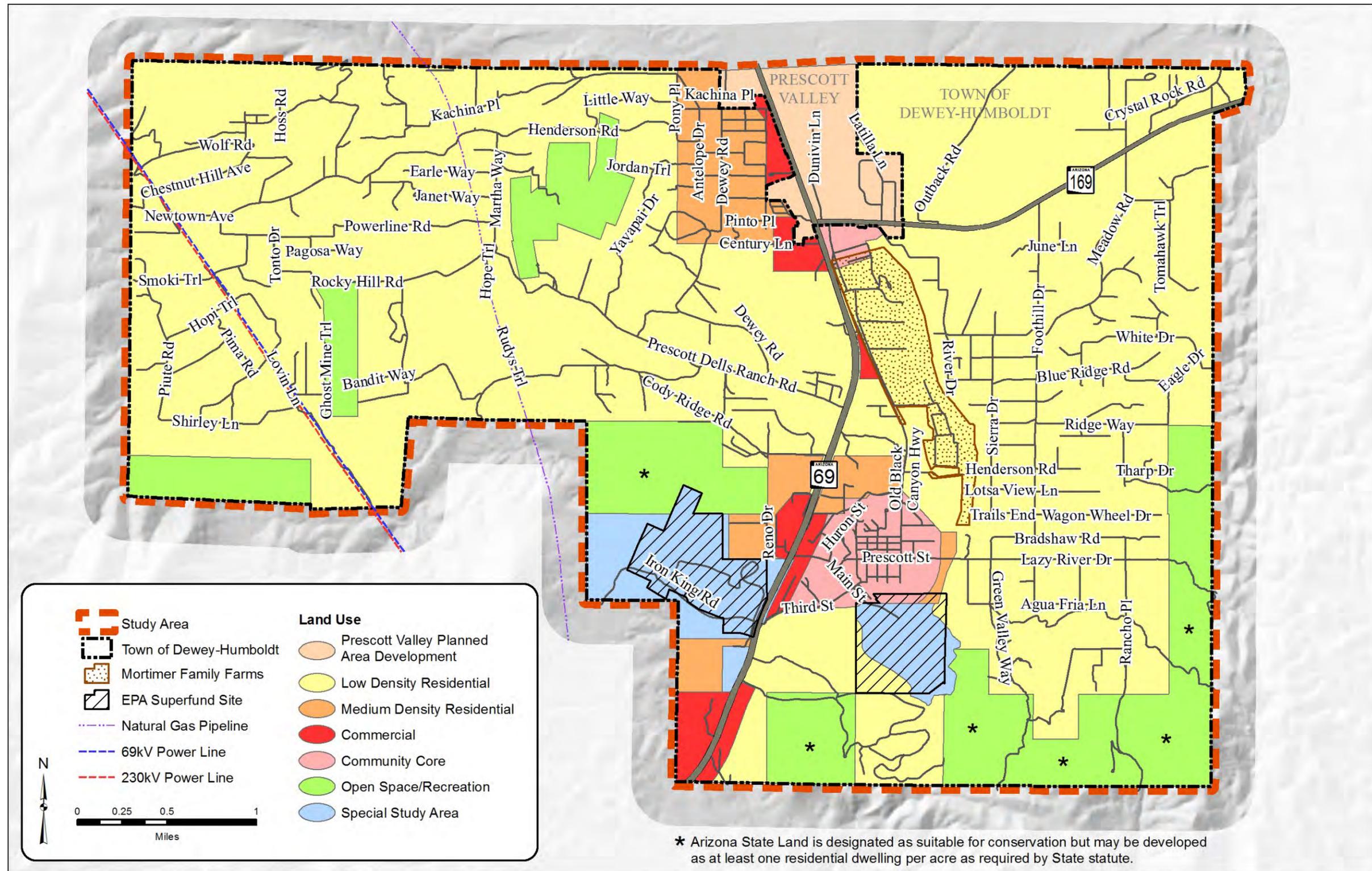
Most of the commercial areas within the study limits are primarily within the Town of Prescott Valley. The commercial activity within the Town of Dewey-Humboldt is located in the area considered the community core along Main Street and Prescott Street east of SR 69.

Mortimer Family Farms represents the primary agricultural land use in the study area, although the General Plan designates this area as low density residential land use. There have been plans to develop this area but currently it remains agricultural.

There are two EPA Superfund remediation sites located within the study area at the Iron King Mine and Humboldt Smelter.

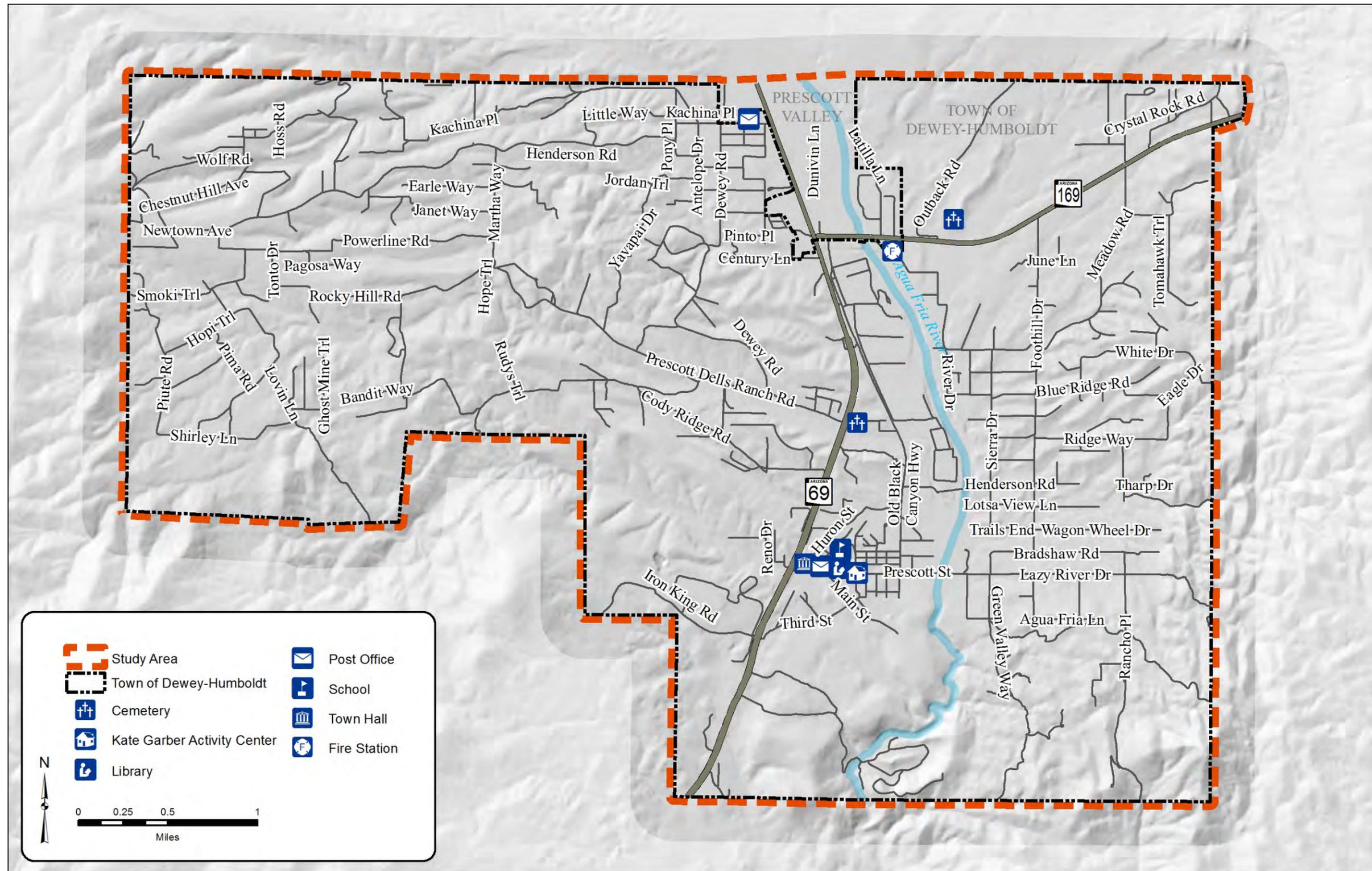
Several public community activity centers exist in the study area. As shown in **Figure 3**, these include the Kate Garber Activity Center, a library, two post offices, two cemeteries, Humboldt Elementary School (K-5), and the Town Hall complex.

Two major utility corridors cross the study area. Overhead APS power lines cross the western portion of the study area diagonally, generally following the alignment of Lovin Lane. An underground Transwestern/El Paso Natural Gas pipeline crosses the western portion of the study area in a north-south direction, roughly following the alignment of Rudy's Trail.



Source: Town of Dewey-Humboldt

Figure 2 – Land Use



Source: Town of Dewey-Humboldt

Figure 3 – Public Community Activity Centers

Open space and recreational land uses are dispersed throughout the study area. These land uses occur on BLM and Arizona State Trust lands. There are no existing public parks within the study area. The preservation of open space has been noted as an important factor in the quality of life of residents of Dewey-Humboldt per the Town's General Plan.

The General Plan also indicates that the Town intends to petition ASLD to designate most of the State Trust land in the study area as "suitable for conservation" and to petition BLM to designate the BLM land in the study area for "recreation and public purposes".

2.2 Land Ownership

The existing land ownership within the study area is shown in **Figure 4**. Most of the land in the study area is privately-owned. Public owners within the study area include the Town of Dewey-Humboldt, BLM, and ASLD. Many of the existing roadways within the study area are located on private land.

2.3 Zoning

The existing zoning within the study area is shown in **Figure 5**. The majority of the land within the study area is zoned as residential. Single family residential is the most abundant zoning type although rural residential, multi-sectional manufactured homes, and residential and service zones exist. There are also some commercial, industrial, and planned development areas within the study area. Zoning within the study area is generally consistent with existing land use.

The zoning designations within the Town of Dewey-Humboldt portion of the study area include:

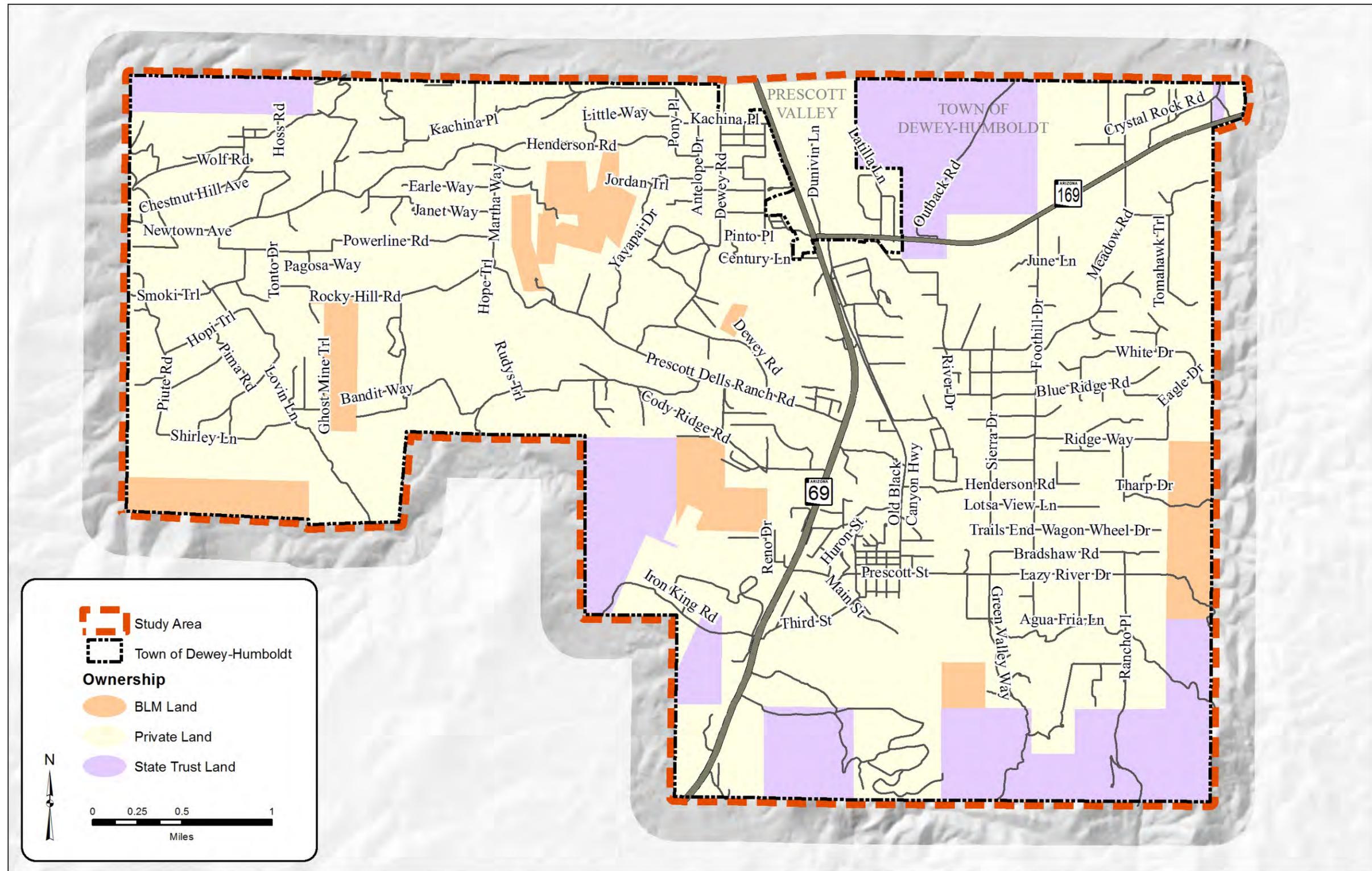
- Commercial – neighborhood sales and services (C-1);
- Commercial – general sales and services (C-2);
- Commercial and minor industrial (C-3);
- Industrial – general limited (M1);
- Industrial – heavy (M2);
- Planned area development (PAD);
- Residential – single family (R1);
- Residential – single family limited (R1L);
- Residential – rural (RCU);
- Residential – multi-sectional manufactured homes (RMM); and
- Residential and services (RS).

The zoning designations within the Town of Prescott Valley portion of the study area include:

- Commercial – minor industrial (C3);
- Industrial – heavy (M2);
- Parking (P1);
- Residential – single family limited (R1L);
- Residential – multiple dwelling units (R2); and
- Residential and services (RS).

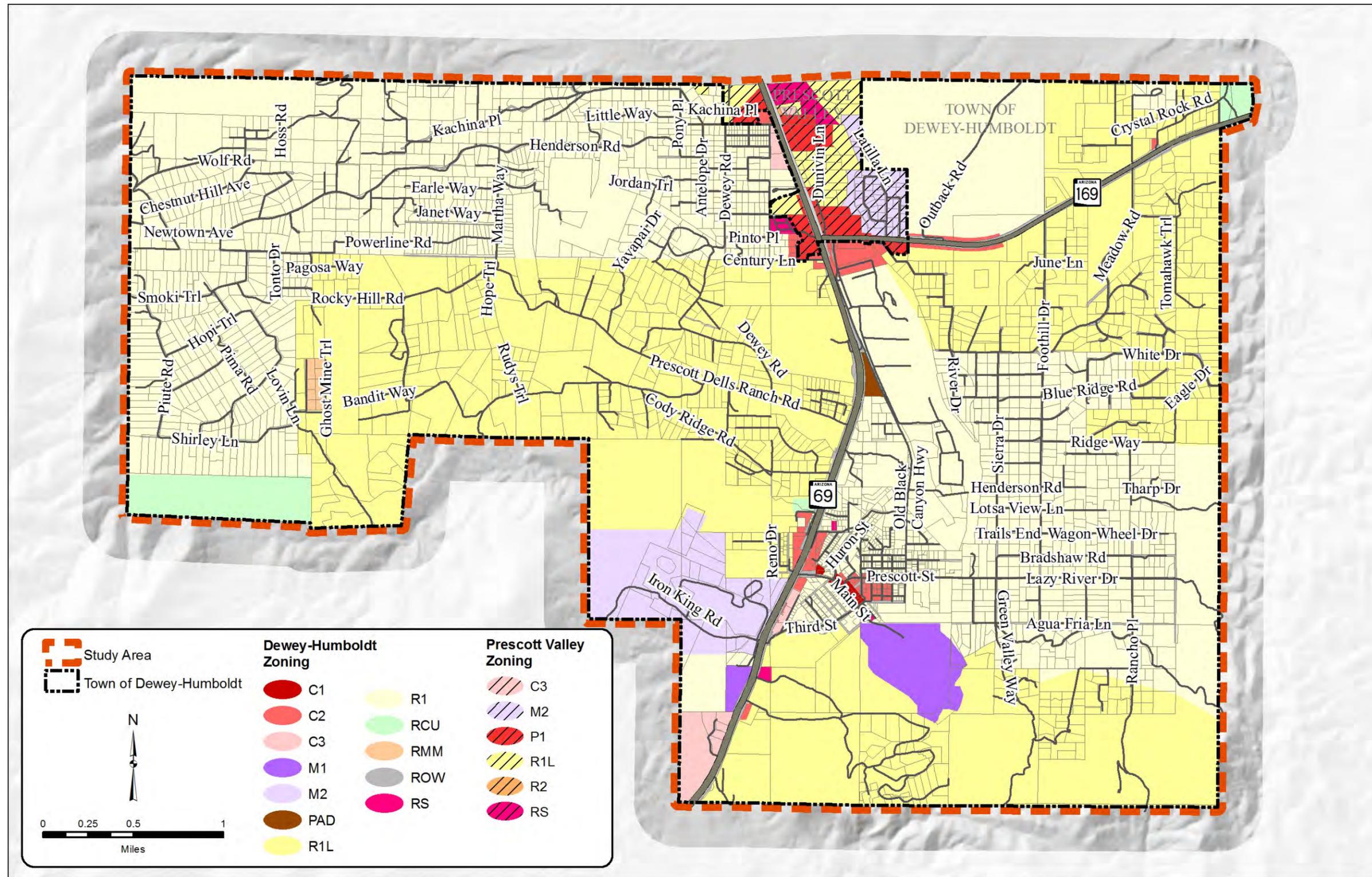
2.4 Environment

The features of the study area environment are shown in **Figure 6**. The study area is primarily comprised of rolling hills with grass and shrub vegetation. The Town is flanked by the Bradshaw Mountains on the west and Mingus Mountain on the east, both of which are part of the Prescott National Forest.



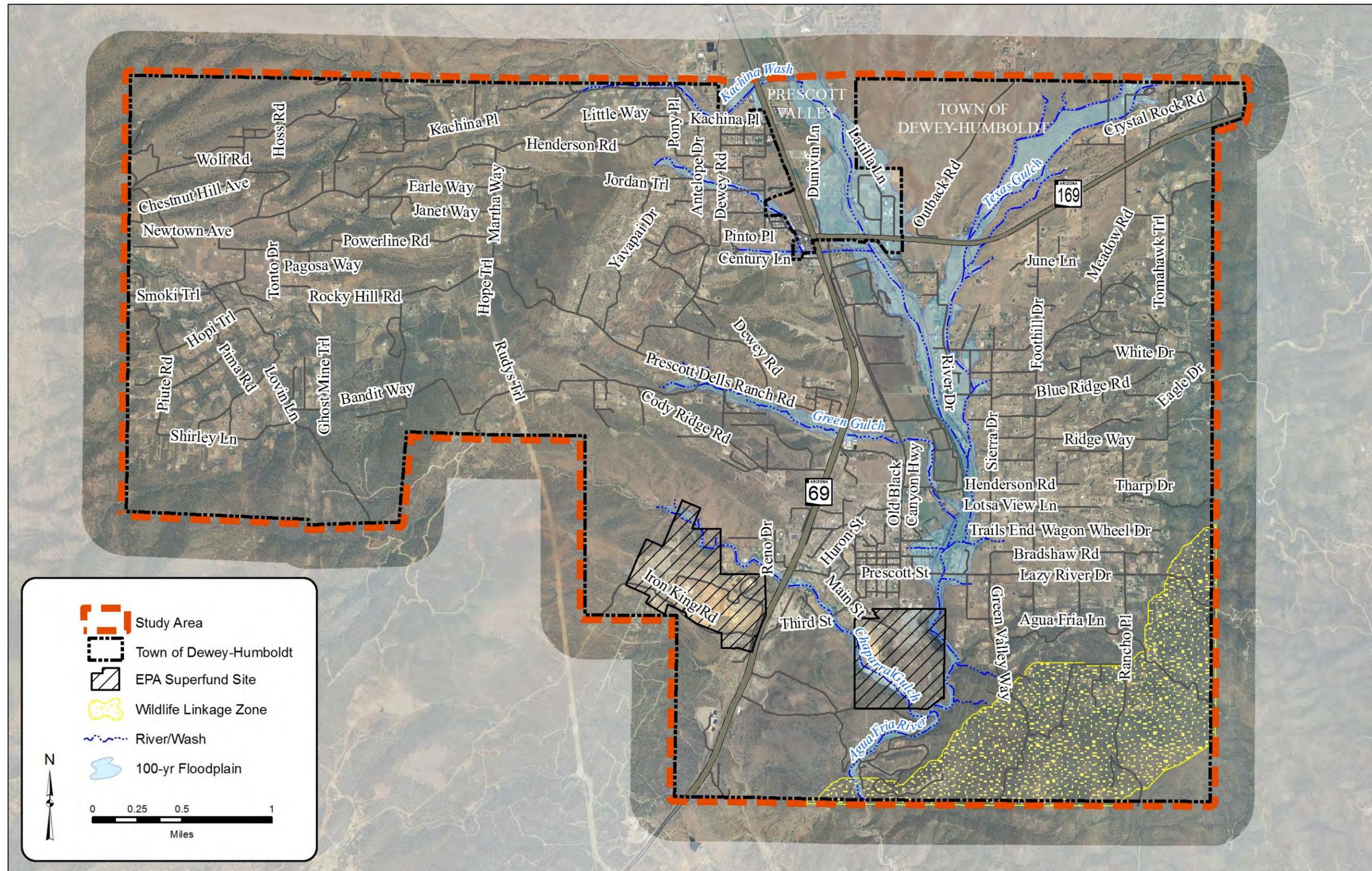
Source: Town of Dewey-Humboldt

Figure 4 – Land Ownership



Source: Town of Dewey-Humboldt

Figure 5 – Existing Zoning



Source: Town of Dewey-Humboldt

Figure 6 – Environmental Features

The Agua Fria River flows through Town on the east side of SR 69 from north to south. There are washes that drain from the surrounding hills into the Agua Fria River, including Chaparral Gulch, Green Gulch, and Texas Gulch. These washes are often dry but can experience higher water levels during heavy rain and snow melt. The riparian habitat along the riverbed includes cottonwood and willow trees.

The Town has recognized environmental quality and open space as important features for residents in the Dewey-Humboldt General Plan. Environmental quality issues for the town include air and water quality, cultural resources, dark sky protection, prevention of noise pollution, and preservation of wildlife corridors.

Per the Dewey-Humboldt Open Space and Trails (OSAT) Plan, five threatened and endangered species have suitable habitat within the study area and the Granite Mountain-Black Hills Wildlife Linkage Zone was identified as existing in the southeast part of the study area. The OSAT Plan also indicates that thirty-eight known cultural sites exist within the study area, some of which are archeological and mining sites.

The Town goals for water resource management include: maintaining a supply of good quality water, development of water conservation policies, monitoring of the regional water resources, and the preservation of the viability of the Agua Fria River. Floodplains exist in the study area along the Agua Fria River and some of the washes. Drinking water is provided by two local companies to a limited area near the intersection of SR 69/Kachina Place but a majority of the residential drinking water is supplied through privately-owned wells. Residents also use septic systems as the Town does not have a sanitary sewer system.

The Humboldt Smelter and Iron King Mine EPA Superfund sites are being studied by EPA to determine how best to remediate them. The Humboldt Smelter site covers approximately 182 acres. The smelter was active from the late 1800s to the early 1960s. The EPA has noted that the site is covered with tailings, ash, and slag. The Iron King Mine area is a Superfund site that covers 153 acres. The mine was active from 1904 until 1969. The site contains mine tailings, rock piles, five retention ponds, at least five mine shafts, a collapsed mine shaft, and areas of stained soil. These two Superfund sites contain contaminated groundwater, surface water, air, as well as soil and sludge. The contaminants of concern are arsenic, lead, and sulfate.

2.5 Socioeconomic Data

The existing socioeconomic data (i.e., population and employment) for the study area is summarized in this section. Some 2010 Census data has recently become available, but because it does not include all of the socioeconomic data needed for this document, socioeconomic data from the 2000 Census has been used where 2010 Census data is not available.

2.5.1 Current Population and Employment

The population for the study area is comprised of the population within the Town of Dewey-Humboldt portion of the study area. No population information for the Town of Prescott Valley portion of the study area was available, although there are few residents in this portion of the study area.

Population estimates for the Town of Dewey-Humboldt were obtained from the CYMPO Regional Transportation Plan (RTP) and the 2010 Census. Historical population data for Dewey-Humboldt is limited due to its recent incorporation in 2004. Census data from 2000 was collected for the Dewey-Humboldt Census Designated Place (CDP). The Dewey-Humboldt town limits, as established in 2004, were smaller than the CDP boundary that was used prior to 2004, so the CYMPO RTP estimated how much population within the CDP corresponded to being within the Dewey-Humboldt town limits.

Population data gathered from the CYMPO RTP and the 2010 Census are summarized in **Table 2**. The population of Dewey-Humboldt is 3,894 persons per the 2010 Census. The average annual growth rate from 2000 to 2010 was calculated to be 1.7 percent. Per the 2010 Census, there are 1,888 housing units in the Town, with 1,589 of those considered occupied. This results in a household size of approximately 2.45 persons per household.

Table 2 – Population Estimates within Dewey-Humboldt

2000	2004	2010
3,302	3,629	3,894

Sources: CYMPO RTP and 2010 Census Data

The location of employment in the study area generally corresponds to the commercial community core and Prescott Valley Planned Area Development land uses.

The CYMPO Regional Transit Needs Study (RTNS) conducted in 2007 estimated that 31 percent of Dewey-Humboldt’s estimated 2,251 working residents work in Prescott, 24 percent work in Prescott Valley, 17 percent work in Dewey-Humboldt, and 28 percent work in other locations. This rate of residents commuting to work outside of the Town is consistent with the small amount of current commercial and industrial land uses within Dewey-Humboldt.

2.5.2 Title VI Populations

Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not subjected to discrimination on the basis of race, color, national origin, age, sex, or disability. In February 1994, President Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The purpose of the order was to focus attention on the “environmental and human health conditions in minority communities and low income communities with the goal of achieving environmental justice.” The Executive Order does not supersede existing laws or regulations; rather, it requires consideration and inclusion of these targeted populations as mandated in previous legislation including:

- Title VI of the Civil Rights Act of 1964;
- National Environmental Policy Act of 1969 (NEPA);
- Section 309 of the Clean Air Act; and
- Freedom of Information Act.

The U.S. Department of Transportation issued its final order to implement the provisions of Executive Order 12898 on April 15, 1997. This final order requires that information be obtained concerning the race, color or national origin, and income level of populations served or affected by proposed programs, policies, and activities. It further requires that steps be taken to avoid disproportionately high and adverse impacts on these populations. One of the first steps in assuring environmental justice is the identification of those populations specifically targeted by the Executive Order – minority and low-income populations.

According to the 2010 Census, the racial composition of the Town of Dewey-Humboldt is predominantly white, with about eight percent minorities, as shown in **Table 3**.

Table 3 – Racial Demographic Percentages in the Town of Dewey-Humboldt

White	African American	Native American	Asian	Other
92%	0.3%	1%	0.2%	6%

Source: 2010 Census

The Executive Order also requires the consideration of persons older than 65 years of age. Approximately 21 percent of the population in Dewey-Humboldt is 65 years or older. In addition, the Executive Order mandates that impacts on low-income people must also be considered. Approximately 9 percent of all people in Dewey-Humboldt are estimated to be living below the poverty level. Title VI population percentages for the Town of Dewey-Humboldt and Yavapai County are shown in **Table 4**.

Table 4 – Title VI Population Percentages

Population Category	Town of Dewey-Humboldt	Yavapai County
Females	49%*	51%*
Males	51%*	49%*
Minority Races	8%*	11%*
Persons with Disability (per 2000 Census CDP)	26%**	20%**
Persons over age 65	21%*	24%*
Persons living below the poverty level (per 2000 Census CDP)	9%**	12%**
Households without access to automobiles	4%***	5%***
Persons between the ages of 10 to 19	12%*	11%*

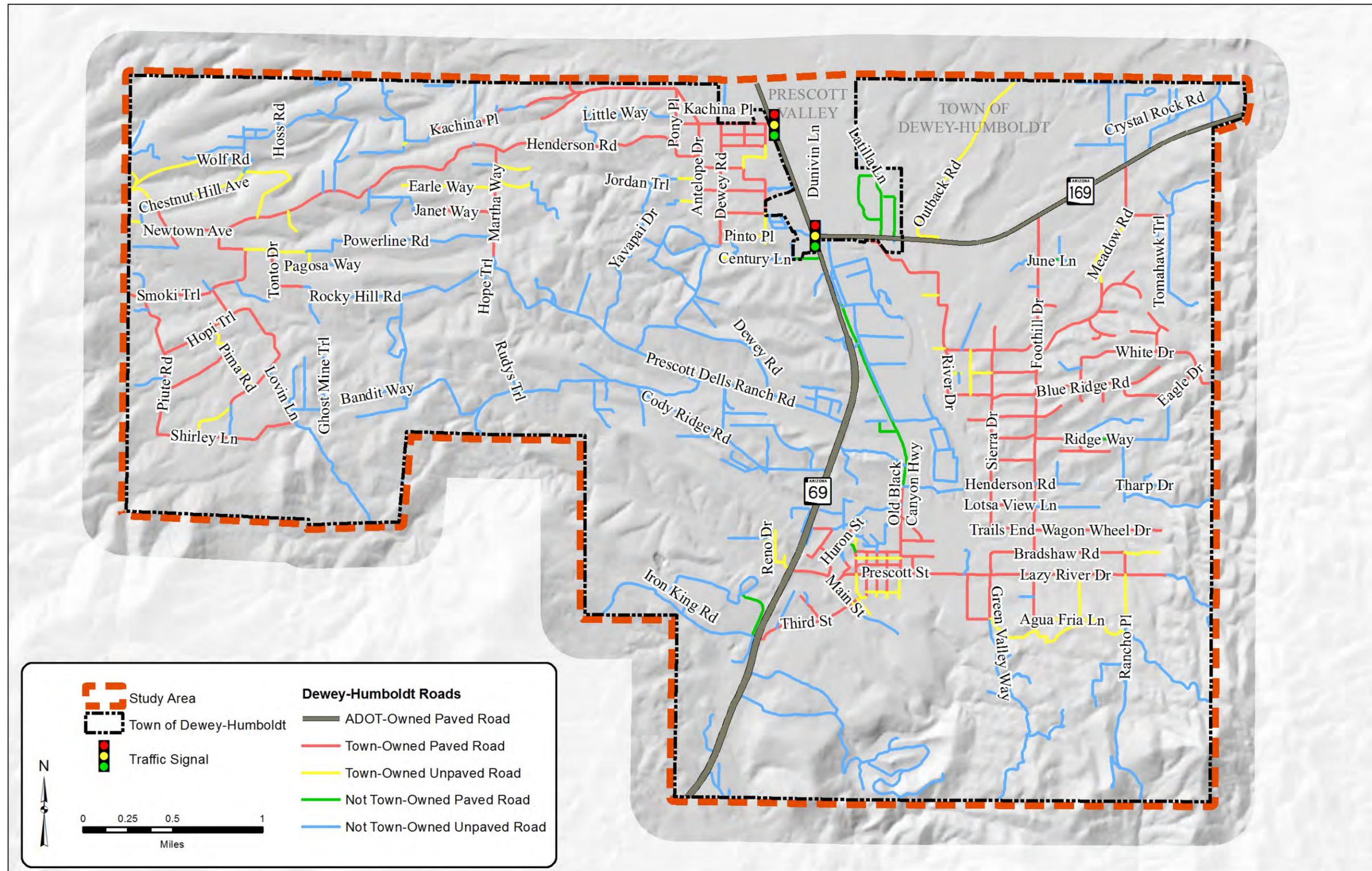
Source: 2010 Census*, 2000 Census**, CYMPO Regional Transportation Plan for 2000***

2.6 Roadways

The existing roadway network in the study area is shown in **Figure 7** and is comprised of state highways and non-state roadways owned by the Town or by private owners. The major existing roadways are:

- **SR 69** – SR 69 is a north-south state highway that runs from its junction with Interstate 17 (I-17) at Cordes Junction to its junction with SR 89 in Prescott. SR 69 has four through lanes and is classified as a rural principal arterial. The four-lane highway is divided by a two-way left-turn lane north of milepost (MP) 280.5 and by a wide dirt median south of MP 280.5. The posted speed limit is 55 miles per hour (mph) north of MP 280.7 and 65 mph south of MP 280.7; and
- **SR 169** – SR 169 is an east-west state highway that runs from its junction with I-17 to its junction with SR 69. SR 169 has two through lanes and is classified as a rural minor arterial. The two-lane highway is divided by a double yellow pavement marking throughout the study area. The posted speed limit is 45 mph west of MP 0.3 and 55 mph east of MP 0.3.

Per Town staff, the Town of Dewey-Humboldt maintains approximately 38 miles of paved roadways, most of which are double chip sealed. The primary Town-owned paved roadways are Newtown Avenue/Henderson Road/Kachina Place, Prescott Street, and Foothill Drive. There are approximately 90 miles of unpaved roadways within the Town's limits. These unpaved roadways are typically graveled or dirt-surfaced roadways. The street network west of SR 69 is primarily comprised of unpaved roads. While most of the existing paved local roadways are located within dedicated public right-of-way, a large percentage of the unpaved roadways in the study area are currently located on private right-of-way.



Source: Town of Dewey-Humboldt

Figure 7 – Existing Roadway Network

2.6.1 Access

There are several existing access points along SR 69 and SR 169, particularly in the vicinity of the SR 69/SR 169 intersection, where Old Black Canyon Highway and several driveways join SR 169. ADOT staff has indicated there is a need to better manage access along SR 69 and SR 169.

Currently, there is an at-grade low-flow crossing of the Agua Fria River on Prescott Street. During high water events, this roadway is not passable, which limits circulation and emergency vehicle access.

2.6.2 Traffic Control

Two signalized intersections exist within the study area at SR 69/SR 169 and SR 69/Kachina Place. The ADOT Traffic Signal Needs Study completed in June 2011 for the intersection of SR 69/Main Street determined that a traffic signal is not warranted at SR 69/Main Street at this time.

For the SR 69/SR 169 intersection, the ADOT SR 69 Road Safety Assessment (RSA) completed in October 2009 recommended providing additional signal heads for the SR 69 approaches to improve visibility, and converting the SR 69 southbound left-turn phasing to protected-only phasing to promote safety. The ADOT SR 69 RSA also noted that future consideration could be given to roundabouts replacing the traffic signals.

2.6.3 Federal Functional Classifications

Functional classification defines the hierarchy of streets in a roadway system according to the character of service they are intended to provide as it relates to mobility, access, and trip length. The roles and standards for each type of roadway must be established in order to plan an efficient and effective system. Most travel involves movement through a network of roadways of varying functional classification.

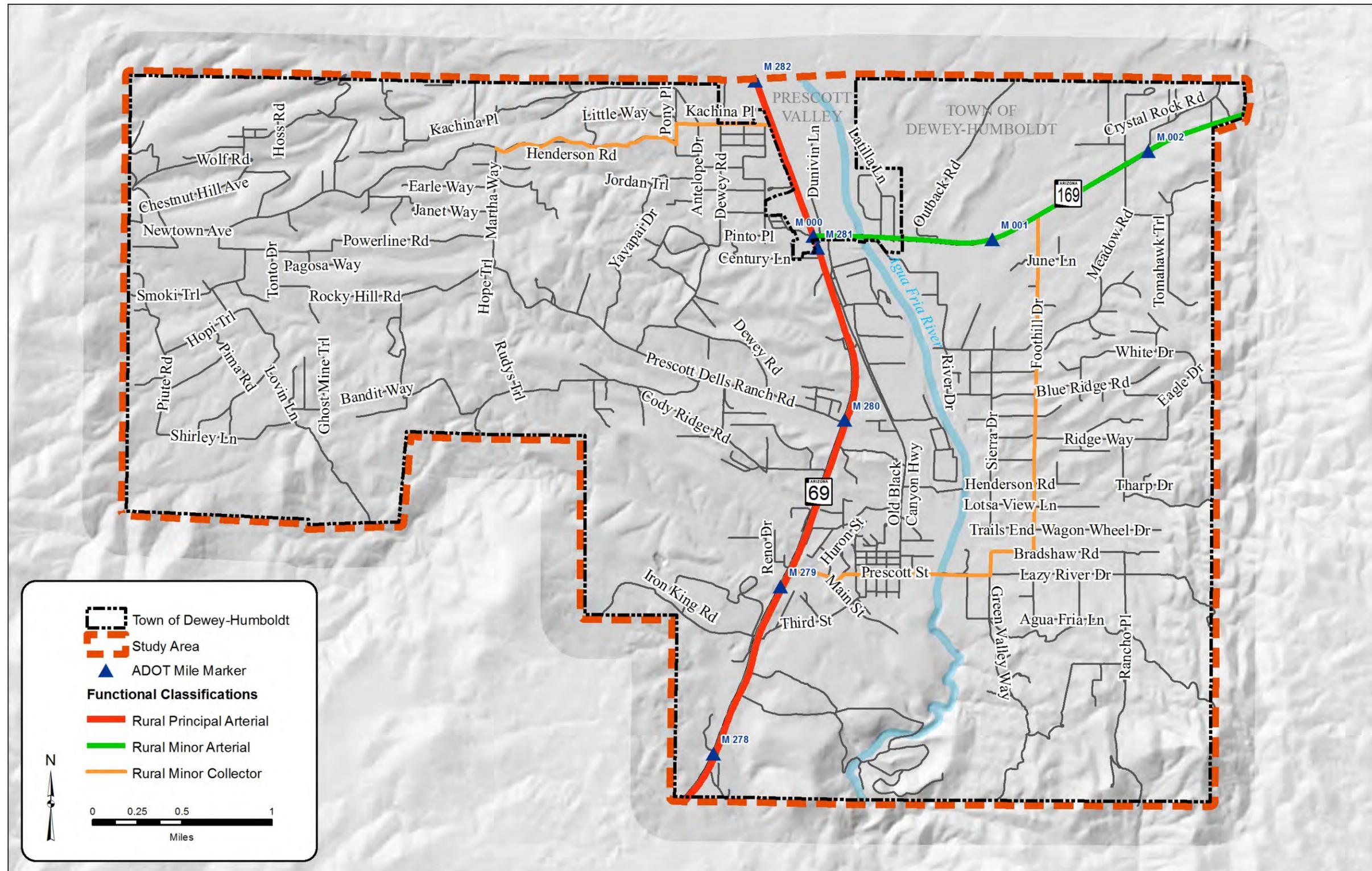
The Federal Highway Administration (FHWA) has developed guidelines for federal functional classification of roadways. The federal functional classification groups include principal arterials, minor arterials, collectors, and local roadways. In general, the principal and minor arterials provide a high level of mobility for the traveling public with minimal allowance for access, while the collectors and local roads provide for residential and non-residential access. The FHWA guidelines also distinguish between rural roadways (in areas with a population less than 5,000) and urban roadways (in areas with a population greater than 5,000). To utilize federal funding on roadway improvements, the roadway must have a federal functional classification. Most federal funding can only be used on roadways classified as rural major collectors or higher.

The study area roadways that currently have federally recognized functional classifications are shown graphically in **Figure 8**.

2.6.4 Traffic Volumes

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. Available traffic volume data was reviewed to ascertain the volume of traffic on study area roadways. Available average daily traffic (ADT) volumes from 2000, 2004, and 2010 (the most recently available year) were obtained from ADOT MPD traffic data collection staff for SR 69 and SR 169 (see **Appendix C** for detailed daily traffic volume data). Daily traffic volume counts were conducted for 18 selected study area roadways by Field Data Services of Arizona, Inc. on August 2, 2011 (see **Appendix C** for detailed daily traffic volume data). Corresponding ADT volumes from 2000 and 2004 for these same roadways were obtained from the Town's General Plan.

The most current daily traffic volumes are shown in **Figure 9**. The highest ADT volume in the study area is 24,200 vehicles per day (vpd) on SR 69 north of SR 169. Most study area collector and local roadways have ADT volumes of less than 2,000 vpd.



Source: ADOT

Figure 8 – Federal Functional Classifications

Tables comparing the most recently available ADT volumes with available historical 2000 and 2004 ADT volumes are shown in **Table 5** and **Table 6**. A comparison of the 2000, 2004, and 2010/2011 volumes generally shows an increase in volumes between 2000 and 2004 followed by a decrease in volumes between 2004 and 2010/2011. This traffic volume growth pattern is consistent with the area's regional economic growth pattern. There are some locations, however, that do not follow this growth pattern. These anomalies could be due to changes in circulation patterns as new roadways were built or unpaved roadways were paved.

Table 5 – Historical State Highway ADT Volumes

Count Location	2000	2004	2010
SR 69, south of Main Street	11,800	11,600	12,700
SR 69, Main Street to SR 169	13,200	16,000	15,700
SR 69, north of SR 169	21,200	27,100	24,200
SR 169, east of SR 69	7,900	9,500	9,500

Source: ADOT

Table 6 – Historical Dewey-Humboldt ADT Volumes

Count Location	2000	2004	2011
Foothill Drive, 0.25 mi. north from Antelope Way	897	1,106	903
Foothill Drive, 0.062 mi. from SR 169	1,135	1,505	1,021
Foothill Drive, 1.790 mi. from SR 169	506	604	358
Henderson Road, 0.042 mi. west from Martha Way	1,039	1,149	1,025
Henderson Road, 0.136 mi. from Pony Place	1,598	1,578	1,441
Horseshoe Lane, 0.088 mi. from Antelope Drive	1,677	1,684	1,537
Kachina Place, 0.24 mi. from SR 69	Not Counted	2,685	2,507
Main Street, 0.059 mi. from SR 69	2,186	1,931	1,782
Old Black Canyon Highway, 0.057 mi. from SR 169	108	149	79
Old Black Canyon Highway, 1.629 mi. from SR 169	331	402	465
Outback Rd, 0.05 mi. from SR 169	192	154	88
Prescott Street, 0.031 mi. from Main Street	1,786	1,617	1,348
Prescott Street, 0.057 mi. east from Jones Street	Not Counted	995	907
River Drive 0.081 mi. from SR 169	607	593	554
Third Street, 0.05 mi. from SR 69	117	108	145
Lazy River Drive, 0.10 mi. east from Green Valley Way	Not Counted	Not Counted	283
Dewey Road, 0.05 mi. from Prescott Dells Ranch Road	Not Counted	Not Counted	61
Prescott Dells Ranch Road, 0.05 mi. from SR 69	Not Counted	Not Counted	307

Sources: Dewey-Humboldt General Plan and Field Data Services of Arizona, Inc.

2.6.5 Levels of Service

Roadway traffic operations are defined and categorized by the average amount of delay experienced by drivers. The operations are categorized by a grading system called level of service (LOS), which has a letter designation ranging from A (no delay) to F (severe congestion). The LOS definitions for each letter designation are given in **Table 7** and are based on LOS definitions provided in the Highway Capacity Manual 2010 (HCM).

Table 7 – LOS Definitions

LOS	Definition
A	Primarily free-flow operation; virtually no delay.
B	Reasonably unimpeded operation; the presence of other users in the traffic stream begins to be noticeable.
C	Stable operation; marks the beginning of the range in which the operation of individual users becomes significantly affected by others.
D	Somewhat stable operation; represents operating conditions near capacity. Small increases in flow may cause substantial increases in delay and decreases in travel speed.
E	Unstable operation and significant delay; represents operating at or almost at capacity level. All speeds are reduced to a low but relatively uniform value.
F	Severe congestion; represents operating conditions over capacity and extremely low travel speed.

Source: Highway Capacity Manual (2010)

The CYMPO RTP provides daily volume capacities and indicates how volume-to-capacity ratios correspond to the LOS letter designations. Daily volume thresholds for the LOS letter designations have been developed for the functionally classified study area roadways and are shown in **Table 8**.

Table 8 – Level of Service Daily Volume Thresholds

Functional Classification	Number of Through Lanes	Under Capacity (LOS A–C)	Near Capacity (LOS D)	At Capacity (LOS E)	Over Capacity (LOS F)
Rural Major Arterial	4	< 23,400	23,400 – 28,100	28,100 – 31,200	> 31,200
Rural Minor Arterial	2	< 9,800	9,800 – 11,700	11,700 – 13,000	> 13,000
Rural Minor Collector	2	< 5,500	5,500 – 6,700	6,700 – 7,400	> 7,400

Source: CYMPO Regional Transportation Plan

Roadway segments below the maximum daily volume threshold for LOS C likely do not currently need additional through capacity while roadway segments above the minimum daily volume threshold for LOS E likely do currently need additional through capacity. For roadway segments between the daily volume thresholds for LOS D, more detailed analysis should be conducted to evaluate roadway geometry, traffic control conditions, and number and spacing of driveways to determine if additional through capacity is needed.

Based on the daily volume thresholds in **Table 8** and the daily volumes in **Figure 9**, all study area roadway segments for which current traffic volume data was available provide LOS C or better except for the segment of SR 69 north of SR 169, which provides LOS D.

LOS and daily volume thresholds for local roadways are not provided in the CYMPO RTP. Industry practice suggests that when local roadways reach daily traffic volumes of 400 vpd – 1,000 vpd, those roadways are typically functioning more like minor collectors and should be evaluated to determine if reclassification is needed. Of the study area roadway segments for which current traffic volume data was available, the only local roadways with daily volumes within the 400 vpd – 1,000 vpd range are Old Black Canyon Highway, Henderson Road west of Martha Way, and River Drive.

2.6.6 Crash Analysis

Crash data was obtained from ADOT’s Safety Data Mart and from Yavapai County for a five-year analysis period from December 1, 2005 through November 30, 2010. Average ADT volumes during the analysis period were derived from 2008 volume data provided by ADOT’s Highway Performance Monitoring System (HPMS). There were a total of 115 crashes in the study area during the analysis period. The collision manner of the crashes is shown in **Table 9**. Crash data for the primary study area intersections is shown in **Table 10** while crash data for the functionally classified roadway segments is shown in **Table 11**. The locations and severity of these crashes are shown in **Figure 10**. Detailed crash data is provided in **Appendix D**.

Table 9 – Crashes by Collision Manner

Collision Manner	Crashes
Angle	10
Left Turn	4
Right Turn	4
Head On	4
Rear End	22
Sideswipe Same Direction	12
Sideswipe Opposite Direction	6
Single Vehicle	46
Backing	1
Other	3
Unknown	3
TOTAL	115

Sources: ADOT and Yavapai County

Table 10 – Crash Data for Primary Study Area Intersections

Intersection	Average ADT (Street 1)	Average ADT (Street 2)	Number of Crashes	Crash Rate (per million entering vehicles)
SR 69 at Kachina Place	29,361	2,094	5	0.09
SR 69 at SR 169	23,532	3,628	15	0.30
SR 69 at Main Street	15,478	1,224	9	0.30

Sources: ADOT, Yavapai County, and Kimley-Horn and Associates, Inc.

Table 11 – Crash Data for Functionally Classified Study Area Roadway Segments

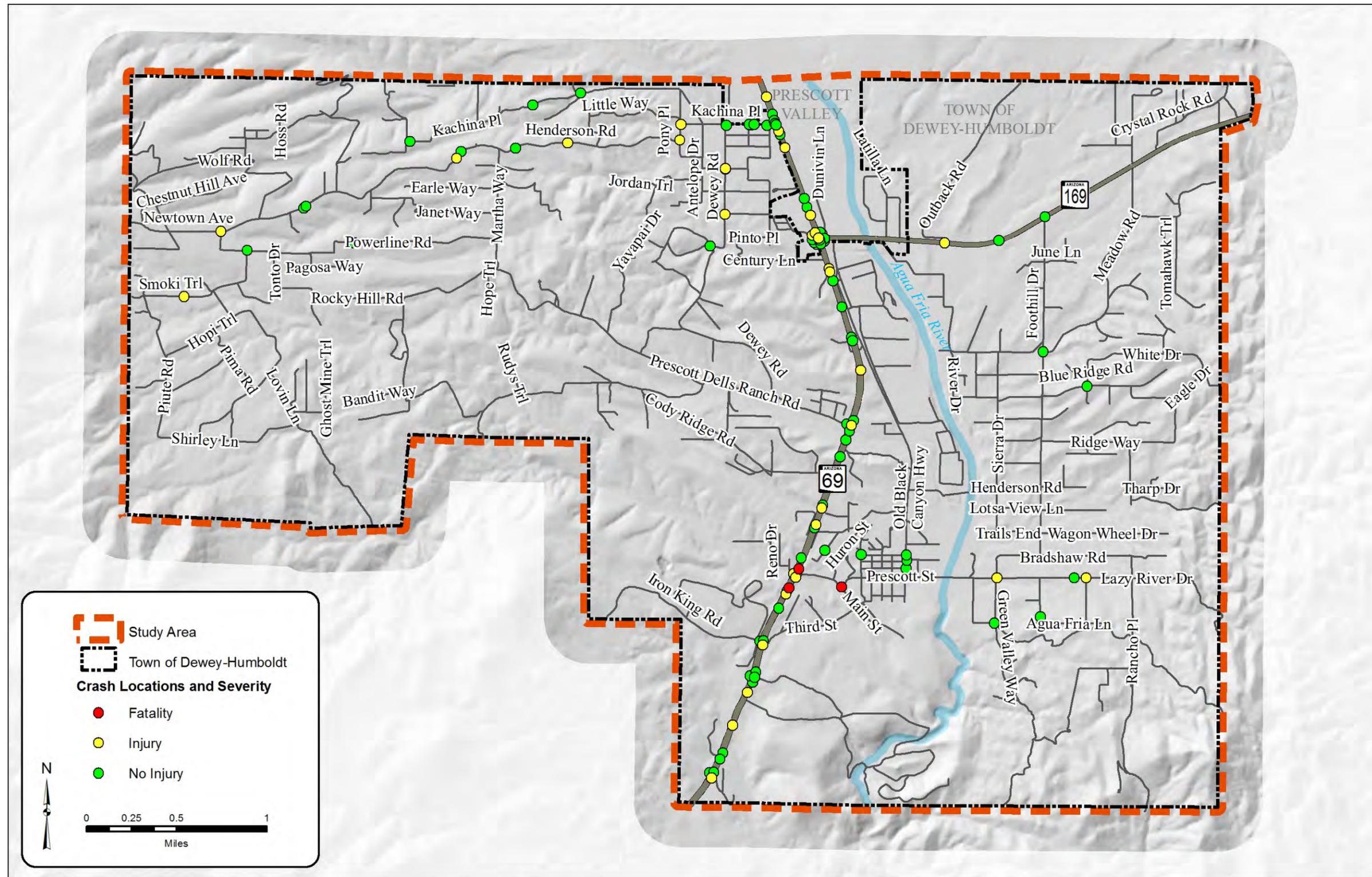
Segment	Average ADT	Number of Crashes Excluding Intersection Crashes	Number of Crashes Including Intersection Crashes	Segment Length (miles)	Crash Rate Excluding Intersection Crashes (per million vehicle miles traveled)	Crash Rate Including Intersection Crashes (per million vehicle miles traveled)
SR 69 between southern study boundary and milepost 280.4	15,478	28	44	2.93	0.34	0.53
SR 69 between milepost 280.4 and northern study boundary	25,475	11	31	1.57	0.15	0.42
SR 169 between SR 69 and eastern study boundary	7,257	4	4	2.61	0.12	0.12
Kachina Place/Henderson Road between Martha Way and Antelope Drive	1,226	4	4	1.32	1.35	1.35
Kachina Place between Antelope Drive and SR 69	4,188	5	5	0.41	1.60	1.60
Foothill Drive between SR 169 and Bradshaw Road	723	1	1	1.87	0.41	0.41
Main Street/Prescott Street between SR 69 and Foothill Drive (including curve at Green Valley Way)	1,308	2	2	1.52	0.55	0.55

Sources: ADOT, Yavapai County, and Kimley-Horn and Associates, Inc.

There were three fatal crashes within the analysis period. The first fatal crash occurred at the SR 69/Main Street intersection and involved two vehicles. The left-turning vehicle failed to yield right-of-way and the other unit had no improper action. The second fatal crash occurred at MP 279 of SR 69 and involved a single vehicle. The vehicle was travelling northbound and went off the road to the right and rolled over. The vehicle involved was speeding and the driver was under the influence of alcohol and failed to use a safety belt. The third fatal crash occurred at the Prescott Street/Main Street intersection and involved two vehicles. The crash was determined to be an angle crash.

Two crashes involving a pedestrian occurred within the analysis period. The first occurred near Dewey Road/Deer Path Road where alcohol was a factor and there was one injury. The second occurred near Kachina Place/Graham Drive where no injury was reported.

The location and frequency of crashes is generally correlated to the magnitude of traffic volumes, with the highest number of crashes occurring along SR 69. The largest cluster of crashes is at the SR 69/SR 169 intersection. As was recommended in the ADOT SR 69 RSA for the SR 69/SR 169 intersection, providing additional signal heads for the SR 69 approaches to improve visibility and converting the SR 69 left-turn phasing to protected-only phasing would better promote safety at the intersection.



Sources: ADOT and Yavapai County

Figure 10 – Crash Locations and Severity

According to crash rate data provided by ADOT, typical crash rates in the U.S. are in the range of 0.8–0.9 crashes per million entering vehicles at rural intersections, 0.67-0.89 crashes per million vehicle miles traveled (MVMT) on rural arterial roadway segments, and 1.40-1.50 crashes per MVMT on rural collector roadway segments.

All study area intersections and roadway segments evaluated as part of the crash analysis have crash rates below the aforementioned typical crash rates except for the segment of Kachina Place between Antelope Drive and SR 69, which has a crash rate of 1.60 crashes per MVMT (compared to a typical crash rate of 1.40-1.50 crashes per MVMT). No crash patterns were identified for the segment of Kachina Place between Antelope Drive and SR 69, but the high frequency of driveways along this roadway segment could be a contributing factor to the higher than typical crash rate.

2.6.7 Pavement Conditions

A roadway pavement condition inventory was conducted via visual windshield surveys in August and September 2011 for the paved roadway segments owned by the Town.

Existing conditions include rolling terrain, numerous low-water crossings, and inadequate edge drainage, all which lend themselves to pavement deterioration. Additionally, only a few roadways have curb and gutter to control water run-off and drainage. Ditch erosion and loss of subgrade support are common issues throughout the study area.

A modified version of the visual evaluation technique outlined in ASTM D6433-03 “*Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys*” was utilized to evaluate the current condition of the pavement infrastructure. The ASTM procedure provides a systematic method for identifying the current condition of asphalt paved roadways. However, in the case of Dewey-Humboldt’s paved roadway infrastructure, most roadways do not have a conventional asphalt pavement section but rather have been chip sealed. A user specific pavement rating system using many elements of the ASTM procedure was developed to evaluate the roadways. Primary factors used in the development of the rating system include type of pavement distress present and general site conditions. The primary distress types considered were longitudinal and transverse (L&T) cracking, alligator cracking, block cracking, edge cracking, patching, potholes, weathering and raveling, rutting, and lane/shoulder drop off. Site conditions considered were washboard effect, erosion, poor drainage, and failing surface conditions.

Based on the severity of distresses and site conditions that were observed, an overall pavement rating between 1 and 5 was given to each paved roadway segment that was inventoried. Descriptions of the rating system levels are described below:

- **Excellent (1)** – The roadway segment is exhibiting minimal visual signs of deterioration and no maintenance is currently required.
- **Good (2)** – The roadway segment is exhibiting minor signs of deterioration, including age- or climate-related distresses, and no structural deterioration is visually evident. The distresses observed are primarily limited to low-severity levels (L&T cracks less than ¼ inches in width) although isolated areas of medium-severity may be present. The roadway segment could benefit from minimal maintenance activities including crack sealing or patching for isolated areas of deterioration.
- **Fair (3)** – The roadway segment is exhibiting a moderate amount of deterioration including both age- or climate-related distresses as well as structural deterioration. Generally, the distresses present are low- to medium-severity levels. The rideability is likely deteriorated and there are often isolated areas of high-severity pavement deterioration and poor site conditions. The roadway segment would benefit from aggressive maintenance activities including crack sealing and patching.
- **Poor (4)** – The roadway segment is exhibiting a significant amount of deterioration including both age- or climate-related distresses as well as structural deterioration. The evidence of structural deterioration (e.g., alligator cracking, rutting, and potholes) is more evident. The distresses observed

are likely present at all severity levels with areas of high-severity distress more frequently present. General site conditions are more significantly deteriorated and are likely attributing to the level of deterioration being exhibited. The roadway segment would benefit from surface rehabilitation and overall general site improvements.

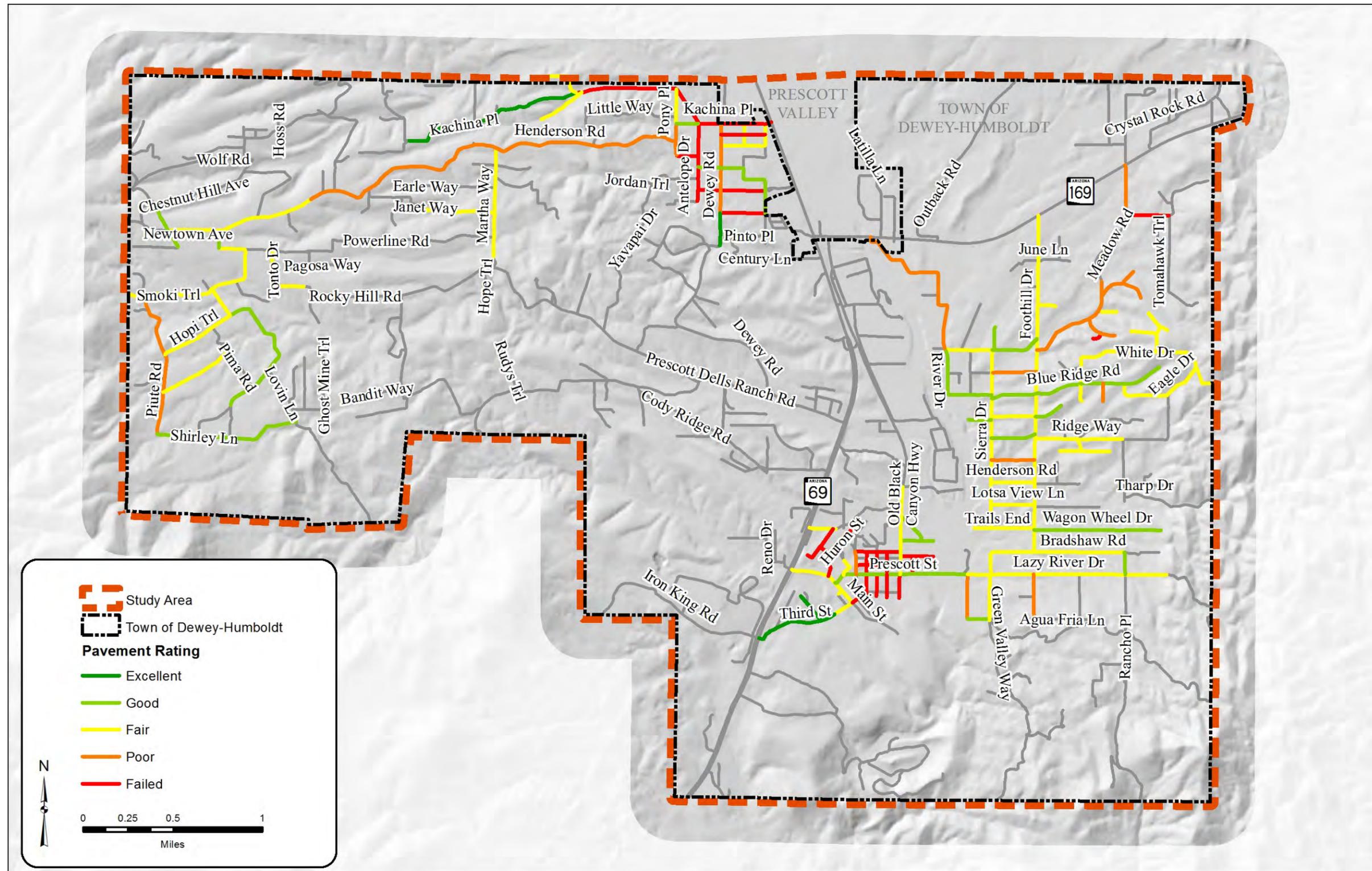
- **Failed (5)** – The roadway segment is exhibiting a significant amount of deterioration, including both age- or climate-related distresses as well as structural deterioration. The primary distresses observed are structural-related distresses. Typical distress levels observed are medium-severity to high-severity. General site conditions are significantly deteriorated and likely attributing to the level of deterioration being exhibited. Although useable, the roadway segment is considered failed and should be considered for surface reconstruction along with improvement to general site conditions.

The pavement condition ratings for the inventoried roadway segments are shown in **Figure 11**. More detailed information on pavement conditions is provided in **Appendix E**. Overall, most of the roadways within the Town are in Fair condition with the most common distresses observed being age- or climate-related distress such as L&T cracking, edge cracking, weathering, and raveling.

The roadway segments rated as Poor or Failed generally exhibit a significant amount of structural deterioration – specifically alligator cracking – and have poor site conditions such as numerous low-flow water crossings, edge drainage, poor edge support, and overall poor drainage conditions given the Town’s hilly topography.

The roadway segments rated as Poor are distributed throughout the roadway network and include significant portions of Henderson Road, River Road, and Meadow Road. The roadway segments rated as Failed are generally located in the vicinity of Prescott Street/Old Black Canyon Highway and Kachina Place/SR 69.

According to Town staff, Kachina Place is scheduled for pavement surface rehabilitation by the end of 2012. The community core (in the vicinity of Prescott Street) is also scheduled for pavement surface rehabilitation in the area bounded by McCabe Street on the north, Hecla Street on the west, Third Street on the south, and Azurite Street on the east.



Source: Kimley-Horn and Associates, Inc.

Figure 11 – Pavement Condition Ratings

2.7 Other Modes of Travel

2.7.1 Public Transit

Public transit data collected for use in this study was extracted from the CYMPO RTNS or obtained through stakeholder interviews. The CYMPO RTNS analyzed the existing transit conditions, demand for a public transit system, and potential alternatives for a public transit system within the region.

Daily public transit services currently do not exist within the study area or anywhere else in the CYMPO region except in Chino Valley. Public transit has existed in the Prescott area in different forms in the past. The most recent large-scale public transit provider within the Prescott area was Tri-City Transit, which was operated by the Four County Conference on Developmental Disabilities (4CCDD) in partnership with Yavapai County from January 1995 until September 1996. While this program was considered an overall success, lack of participating county and local agencies prevented the continuation of the public transit system.

Daily public transit demand can be estimated by analyzing user characteristics and demographic patterns. According to the CYMPO RTNS, the Dewey-Humboldt population by segment is 16 percent ages 65 and over, 8 percent younger adults, 6 percent income below \$15,000, 6 percent with disabilities, 3 percent with no vehicle access, and 62 percent other residents. Each of these population segments has a different likelihood to use public transit.

According to the CYMPO RTNS, “mode share assumptions for Dewey-Humboldt range from a low of 0.5 percent among the general public to a high of 5.0 percent among older adults. The resulting population considered likely to use public transit is estimated in the range of 41 to 82 persons, which represents between 1.1 percent and 2.1 percent of the estimated 2004 population of 3,948 persons”. The corresponding low and high transit demand projections are shown in **Table 12** and **Table 13**.

Table 12 – Current Daily Public Transit Demand, Low Ridership Estimates

Youth 13-17 years	Older Adults	Persons w/ disabilities	Persons w/ no vehicle	Low Income	General Public	Total
1	16	4	2	5	12	41

Source: CYMPO RTNS

Table 13 – Current Daily Public Transit Demand, High Ridership Estimates

Youth 13-17 years	Older Adults	Persons w/ disabilities	Persons w/ no vehicle	Low Income	General Public	Total
3	32	9	4	9	25	82

Source: CYMPO RTNS

Considering the estimated 2004 population of 3,948 assumed by the CYMPO RTNS is roughly equivalent to the 2010 Census population of 3,894, for purposes of this study, the CYMPO RTNS population range of 41 to 82 persons considered likely to use public transit if it is implemented is assumed to still be valid.

The study area’s activity centers are located in the vicinity of the Main Street/Prescott Street intersection and the SR 69/SR 169 intersection. Near these activity centers is likely where the highest density of public transit demand exists, with the remaining public transit demand distributed fairly evenly throughout the rest of the study area.

2.7.2 Private Transit

For-profit and non-profit private sector transit providers currently offer transportation services within the study area, but often at a higher price when compared to typical public transit rates. Many of the private transit operators utilize Federal Transit Administration Section 5310 (Elderly Individuals and Individuals with Disabilities Transportation Program) grants or Section 5317 (New Freedom Program that serves the disabled beyond Americans with Disabilities Act (ADA) requirements) grants to help fund their operations.

Territorial Transit, a non-profit organization, recently secured a Section 5310 grant for mobility management efforts to better coordinate the various private transit providers in the Prescott area. The objective of mobility management is to meet people's individual transportation needs through a wide range of transportation options and service providers. Mobility management also focuses on coordinating transportation options and service providers to achieve a more efficient transportation system.

Territorial Transit has developed a mobility management table (see **Appendix F**) that lists the various private transit providers in the Prescott area and describes the services they offer as well as any restrictions they have on the use of their services. The table indicates there are more than 20 different private transit providers that include Dewey-Humboldt within their service areas. Many of these private transit providers have restrictions on ridership eligibility, times of operation, and origins/destinations.

The Northern Arizona Council of Governments (NACOG) manages a transportation voucher program for residents of the Prescott area. This program offers regional travel to qualifying residents at a low rate negotiated with a specific group of private transit providers. Upon receiving a voucher, these vendors are then reimbursed by NACOG for their expenses. Each jurisdiction provides NACOG a lump sum fee to operate the voucher program for riders within their jurisdiction. Dewey-Humboldt had been participating in the voucher program but in June 2011 opted to no longer participate in the voucher program due to funding issues, lack of rider participation, and inaccuracies in assigning voucher usage to the respective participating jurisdictions.

2.7.3 Bicycle, Pedestrian, and Recreational Travel

Bicycle and pedestrian facilities are an important part of the multimodal transportation network in that they provide various options for travel (which is especially critical for travelers who cannot drive).

Facilities that make up bicycle networks can include designated bike routes, striped bike lanes, paved shoulders along roadways, wide curb lanes, shared-use paths, and sidewalks. There are no existing designated bicycle facilities in the study area. SR 69 and SR 169 do, however, both have paved shoulder widths of four feet or greater that can be traveled on by bicyclists. The remainder of the roadway network within the study area is available to bicyclists, but deteriorating pavement surfaces and the prevalence of steep hills and challenging terrain can make bicycle travel difficult.

Pedestrian networks are typically comprised of sidewalks, trails, and shared-use paths. Existing sidewalks within the study area are located intermittently along Main Street and at Humboldt Elementary School. Very few of the existing sidewalks are ADA-compliant.

Recreational travelers have limited existing travel options in the study area. There are existing regional recreational trails in the Prescott National Forest and BLM lands adjacent to the Town but no official recreational trails in the study area. There are several informal trails along the shoulders of many of the study area roadways, but the shoulders are narrow and terrain is challenging. Off-highway vehicles (OHVs) frequently use unpaved roads but must be registered and street legal to travel on any portion of the Town's right-of-way.

3 CURRENT NEEDS

Based on the analysis of current conditions and input provided by the TAC and stakeholders, the following current transportation-related needs within the study area have been identified.

3.1 Roadways

Improving (e.g., paving and/or realigning) existing unpaved roadways is needed to improve circulation, provide better emergency vehicle access, improve drainage, reduce dust, improve driver comfort, and provide a more reliable all-weather roadway surface. Prescott Dells Road, Dewey Road, Rocky Hill Road, Shirley Lane, Cranberry Road, and Agua Fria Lane are all candidates for improvements because they are regularly travelled unpaved roadways. Right-of-way would need to be acquired for roadways that are not currently within public right-of-way.

SR 69 north of SR 169 is currently functioning at LOS D, indicating this roadway segment is near capacity. The ADOT Prescott District has indicated it does not see a need to provide additional capacity on SR 69 north of SR 169 in the near future because planned traffic signal modifications will help alleviate congestion on SR 69 north of SR 169.

Per the ADOT SR 69 RSA, the SR 69/SR 169 intersection needs additional signal heads for the SR 69 approaches to improve visibility and the SR 69 southbound left-turn phasing needs to be converted to protected-only phasing. ADOT staff has indicated there is also a need at the SR 69/Kachina Place intersection to convert the SR 69 southbound left-turn phasing to protected-only phasing.

ADOT staff has indicated there is a need to better manage existing access points along SR 69 and SR 169, particularly in the vicinity of the SR 69/SR 169 intersection, where Old Black Canyon Highway and several driveways join SR 169.

A roadway within the study area that needs to be considered for functional classification change is Newtown Avenue/Henderson Road/Kachina Place. This roadway collects traffic from adjoining local roadways, connects to higher classified roadways, and has relatively high traffic volumes for a local roadway.

All-weather access across the Agua Fria River and on many of the unpaved roadways on the west side of SR 69 is needed to improve circulation and provide better emergency vehicle access.

Roadway segments whose pavement condition is rated as Poor or Failed need to be rehabilitated to prevent further deterioration and to improve circulation, emergency vehicle access, and drainage.

3.2 Other Modes of Travel

Disadvantaged populations such as low income and disabled residents often need affordable and convenient access to transportation options other than the automobile.

There is currently no public transit system operating within Dewey-Humboldt. Lack of available funding and low estimated public transit demand limit the potential for the development of public transit in Dewey-Humboldt.

While private transit operators provide some transportation services for Dewey-Humboldt residents, particularly disadvantaged populations, there are often restrictions on ridership eligibility, times of operation, and origins/destinations. Dewey-Humboldt's recent withdrawal from the NACOG voucher program and the uncertain funding outlook of the NACOG voucher program means private transit services may become cost-prohibitive for Dewey-Humboldt's disadvantaged populations.

More mobility management is needed to better coordinate the existing private transit services so that they provide disadvantaged populations with the transportation services they need, when and where they need them, and at a reasonable cost.

There are no existing designated bicycle facilities in the study area, although bicyclists can travel on the paved shoulders of SR 69 and SR 169. There is a need for a clearly-defined, continuous bicycle network to accommodate bicycle travel throughout the study area.

There are very limited pedestrian facilities in the study area, and those that do exist generally are not ADA-compliant. ADA-compliant sidewalks and ADA-accessible facilities are needed in the community core and adjacent to Humboldt Elementary School. Sidewalks are needed on more roadways to provide better pedestrian mobility. There is a need for a clearly-defined, continuous pedestrian network to connect activity centers and residential areas.

There are no designated recreational trails in the study area. There is a need for a clearly-defined, continuous trail network to accommodate recreational travel throughout the study area and to connect to the existing regional trails adjacent to the study area.

4 FUTURE CONDITIONS

This section summarizes data obtained on planned or anticipated future conditions to help identify future transportation needs within the study area. The study horizon year is 2031.

4.1 Anticipated Land Uses

The growth objective stated in the Dewey-Humboldt General Plan establishes the intent to retain a land use strategy that preserves the current spacious and uncongested land use patterns. The main land use goals discussed in the General Plan are preservation of the low density small town character, preservation of the residential living quality, and a focus on meeting the needs and desires of the present without compromising the ability of future generations to meet their own needs. These goals indicate the future land uses of the study area will remain predominantly low density residential with some growth of commercial uses along SR 69 and SR 169.

Residential land uses are expected to increase in dwelling density throughout the study area in the future, up to the maximum allowable density of one dwelling per 70,000 square feet (0.6 dwelling units per acre) for low density residential and one dwelling per 35,000 square feet (1.2 dwelling units per acre) for medium density residential per the General Plan. Areas further from SR 69 and SR 169 are anticipated to remain low density residential with smaller pockets of medium density residential close to the highways.

Existing commercial land uses along SR 69 and SR 169 are anticipated to remain commercial land uses in the future. Additional future commercial land uses are generally expected to occur along SR 69 and SR 169 and within the community core.

The Mortimer Family Farms property will likely be converted from agricultural to low density residential and community core land uses per the Town's General Plan land use map.

A significant portion of the study area is anticipated to remain as open space and has been planned for recreational use according to the Dewey-Humboldt OSAT Plan.

Industrial land uses are expected to remain limited in the future.

Two commercial retail developments are planned north of SR 169 and east of SR 69 within the Prescott Valley portion of the study area. These developments will require zoning changes to allow for the planned commercial land uses. See **Appendix G** for further information on these planned future developments.

The special study areas that encompass the EPA Superfund sites of Iron King Mine and the Humboldt Smelter are currently under study and cleanup. The future land use classification of these areas will likely be addressed upon completion of the Superfund site cleanup.

4.2 Socioeconomic Data

The socioeconomic data (i.e., population and employment) for the study area's future conditions are summarized in this section.

4.2.1 Future Population and Employment Projections

The CYMPO RTP projected the 2030 population for the Town of Dewey-Humboldt to be 29,545 persons, which, when compared to a 2004 population estimate of 3,629 persons, represents an average annual growth rate of 8.4 percent.

The actual average annual growth rate between the Town's 2004 population of 3,629 persons and the 2010 population of 3,894 persons is 1.2 percent, which is significantly lower than the 8.4 percent

projected in the CYMPO RTP. Other jurisdictions in the CYMPO region have similar discrepancies between actual growth rates and the growth rates projected in the CYMPO RTP. CYMPO has embarked on a study to update the RTP population projections based on the newly available 2010 Census data and the likelihood of muted growth over the next several years due to the current economic downturn. Based on historical average annual growth rates, the depth and breadth of the current economic downturn, and the Town’s low growth policies, goals, and land use designations, it is anticipated that the Town’s population will grow over the next 20 years at an average annual growth rate of somewhere between one percent and three percent.

Future population projections for Dewey-Humboldt have been made for near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) timeframes. Future population growth in the portion of the study area outside of the Town limits is anticipated to be minimal as most of this land is projected to remain non-residential in land use.

Table 14 shows the current 2010 population and the projected 2016, 2021, and 2031 populations for average annual growth rate scenarios of one, two, and three percent. For purposes of this study, the two percent growth rate is assumed, resulting in a future 2031 population projection for Dewey-Humboldt of 5,902 persons.

Table 14 – Future Dewey-Humboldt Population Projections

Growth Scenario	2010 Population	2016 Population	2021 Population	2031 Population
1% growth rate	3,894	4,134	4,334	4,799
2% growth rate	3,894	4,385	4,842	5,902
3% growth rate	3,894	4,649	5,390	7,244

Sources: 2010 Census and Kimley-Horn and Associates, Inc.

In the future build-out condition, when all developable land is developed per the Town’s land use plan (see **Figure 2**), the population for Dewey-Humboldt is projected to be approximately 15,000 persons. This build-out population projection was calculated based on the acreage and the maximum allowable densities for low density and medium density residential land uses in the Town, assuming the Town’s household size remains 2.45 persons per household as per the 2010 Census. There is no specific year assigned to build-out as it is highly dependent on how quickly land develops.

The Town’s focus on preservation of open space and a rural residential lifestyle will likely deter major future commercial and industrial development and limit the creation of new employment opportunities. Employment growth within the study area will likely be limited to the land near SR 69 and SR 169 over the next 20 years.

4.2.2 Title VI Populations

Future Title VI populations in the study area are expected to grow at roughly the same rate as the overall population of the Town. It should be noted, however, that significant changes in Town policies, land uses, zoning, or transportation options could alter the growth rates of Title VI populations.

4.3 Roadways

4.3.1 Anticipated Improvement Projects

The Dewey-Humboldt CIP includes the following transportation projects, improvements to community facilities, and general government initiatives, all of which could have an effect on travel patterns.

The Town has historically financed projects through a combination of Highway User Revenue Fund (HURF) revenues, General Fund revenues, and federal or state grants. Specific funding sources are not indicated for the projects in the CIP, but according to Town staff, there are not sufficient anticipated Town revenues to fund all projects shown in the CIP. Due to the uncertainty of funding sources and amounts, the projects shown in the CIP are subject to change.

Transportation:

- **Dewey Road** – pave between Pinto Place and Prescott Dells Ranch Road and along Prescott Dells Ranch Road between Dewey Road and SR 69;
- **Rocky Hill Road** – pave between Tonto Drive and Prescott Dells Ranch Road and along Prescott Dells Ranch Road between Rocky Hill Road and Dewey Road;
- **Prescott Dells Ranch Road** – pave between the two places where Prescott Dells Ranch Road intersects Rocky Hill Road;
- **SR 69/Main Street** – update traffic control at intersection;
- **Shirley Lane** – pave between Lovin Lane and Prescott Dells Ranch Road;
- **Cranberry Road** – pave between Merrill Road and Wicklow Place, and between Smoki Trail and Seminole Creek; and
- **Agua Fria Lane** – pave between Sleepy Acres Lane and Beverly Hills Drive.

Community Features:

- **Open Space Preservation** – acquire land for open space from BLM, and acquire land for open space from ASLD in accordance with Arizona Revised Statutes (ARS) 9-461.06N and 37-311 through 37-317 (ARS 9-461.06N restricts the designation of open space without the written approval of the property owner, while ARS 37-311-317 describe the process for the classification of land for preservation per the Arizona Preserve Initiative. It should be noted this classification is good for a fixed period of time, and if the property is not purchased for open space within that time period, the State Land Commissioner may rescind this classification);
- **Prescott Street to Chaparral Gulch Multi-use Trail** – develop multi-use trail along Agua Fria River between Prescott Street and Chaparral Gulch;
- **Chaparral Gulch Junction (Smelter Parcel)** – redevelop smelter parcel for recreational uses;
- **Agua Fria River to East Boundary of Town Multi-use Trail** – develop multi-use trail along Lazy River Drive between the Agua Fria River and the eastern boundary of the Town;
- **Agua Fria River to Chaparral Gulch at 3rd Street Multi-use Trail** – develop multi-use trail between the Agua Fria River and Chaparral Gulch near 3rd Street;
- **Chaparral Gulch Multi-use Trail** – develop multi-use trail along Chaparral Gulch between 3rd Street and the BLM parcel north of the Iron King Mine;
- **Blue Ridge Road Multi-use Trail** – develop multi-use trail between Foothill Drive and the eastern boundary of the Town near Blue Ridge Road; and
- **Blue Hills Picnic and Parking Area** – develop picnic and parking area on the north side of Henderson Road west of Pony Place.

General Government:

- **Land Banking** – purchase land for a future Core Community Center; and
- **New Town Hall** – construct a new Town Hall as part of the Core Community Center.

The Prescott Valley General Plan identifies the Prescott Country Club Bypass as a future roadway just north of the study area. This conceptual roadway alignment intersects SR 69 near the Bradshaw Mountain Middle School and runs westward around the Prescott Country Club, curving north to intersect

Old Black Canyon Highway. In addition, the General Plan identifies a new north-south roadway through the planned commercial developments on the northeast corner of SR 69/SR 169 to provide local access and circulation. This roadway would likely reduce traffic congestion on SR 69 and 169.

ADOT and CYMPO are in the planning stages of developing a limited access roadway that will ultimately go between I-17 and Fain Road, effectively replacing SR 69 as the primary route between the Phoenix area and the Prescott area. The existing SR 69 roadway would then likely become a secondary route between Phoenix and Prescott and could experience a reduction in traffic volumes.

The CYMPO SR 169 to Fain Road Planning Study developed a preliminary alignment for the SR 169 Fain Road segment of this new roadway. The ADOT Interstate 17 to Fain Road Connector Corridor Location Study & Environmental Overview is currently developing the preliminary alignment for the I-17-SR 169 segment of this new roadway and is refining the alignment of the SR 169-Fain Road segment.

4.3.2 Access

The locations of new access points along SR 69 and SR 169 – such as for the planned commercial developments on the northeast corner of SR 69/SR 169 – will need to be coordinated with ADOT staff to ensure access is properly managed, particularly in the vicinity of signalized intersections.

If/when the Mortimer Family Farms property is developed, traffic volumes on Old Black Canyon Highway will likely increase significantly. This increase in volumes could result in access-related circulation and safety issues because of Old Black Canyon Highway's proximity to SR 69 and to the SR 69/SR 169 intersection.

4.3.3 Traffic Control

Based on the assumed growth rates for SR 69 and Main Street, the SR 69/Main Street intersection may warrant a traffic control change within the next 5-10 years.

As traffic volumes increase over time, the existing signalized intersections of SR 69/SR 169 and SR 69/Kachina Place will likely need to be monitored regularly to determine if adjustments are needed to the traffic signal timing, phasing, or coordination with adjacent signalized intersections.

The planned commercial developments on the northeast corner of SR 69/SR 169 include a proposed new traffic signal at the intersection of the planned new north-south roadway with SR 169 just west of the Agua Fria River. This new intersection would also serve as a signalized access point to the Mortimer Family Farms property and any future developments on the southeast corner of SR 69/SR 169.

4.3.4 Federal Functional Classifications

Traffic patterns will be impacted by future population growth. Roadways that are anticipated to begin operating more like collector roadways in the future include Rocky Hill Road and Prescott Dells Ranch Road and the planned new roadway through the planned commercial developments on the northeast corner of SR 69/SR 169.

Also, if/when the Town reaches a population of 5,000, it will no longer be considered “rural”, and instead will be considered “urban” from a functional classification standpoint. At that point the functional classification of all study area roadways would need to be reviewed as there are some differences between how urban and rural roadways are functionally classified.

4.3.5 Traffic Volume Projections

ADOT MPD staff provided traffic projections for the study area segments of SR 69 and SR 169 for the year 2030. Traffic volume projections for 2031 – the study horizon year – have been calculated by

applying the 2010-2030 average annual growth rate specific to each roadway segment for an additional year. These growth rates range from 0.5 percent to 1.9 percent. The 2010 and 2031 ADT volumes for SR 69 and SR 169 are shown in **Table 15**.

Table 15 – Future State Highway ADT Volumes

Count Location	2010	2031	Annual Growth Rate
SR 69, south of Main Street	12,700	18,900	1.9%
SR 69, Main Street to SR 169	15,700	22,900	1.8%
SR 69, north of SR 169	24,200	27,100	0.5%
SR 169, east of SR 69	9,500	12,100	1.2%

Sources: Dewey-Humboldt General Plan, ADOT, and Kimley-Horn and Associates, Inc.

For other roadways in the study area, it is assumed that traffic volumes will grow at an average annual growth rate of two percent. This two percent growth rate is generally consistent with the anticipated study area population growth rate and traffic growth rates for SR 69 and SR 169. It should be noted that a significant change in land use – such as the planned commercial development on the northeast corner of SR 69/SR 169 or the redevelopment of the Mortimer Family Farm property into high density residential or commercial land uses – would likely result in higher growth rates on certain roadways. The 2011 and 2031 ADT volumes for the 18 study area roadway segments identified previously are shown in **Table 16**.

Table 16 – Future Dewey-Humboldt ADT Volumes

Count Location	2011	2031	Annual Growth Rate
Foothill Drive, 0.25 mi. north from Antelope Way	903	1,342	2.0%
Foothill Drive, 0.062 mi. from SR 169	1,021	1,517	2.0%
Foothill Drive, 1.790 mi. from SR 169	358	532	2.0%
Henderson Road, 0.042 mi. west from Martha Way	1,025	1,523	2.0%
Henderson Road, 0.136 mi. from Pony Place	1,441	2,141	2.0%
Horseshoe Lane, 0.088 mi. from Antelope Drive	1,537	2,284	2.0%
Kachina Place, 0.24 mi. from SR 69	2,507	3,725	2.0%
Main Street, 0.059 mi. from SR 69	1,782	2,648	2.0%
Old Black Canyon Highway, 0.057 mi. from SR 169	79	117	2.0%
Old Black Canyon Highway, 1.629 mi. from SR 169	465	691	2.0%
Outback Rd, 0.05 mi. from SR 169	88	131	2.0%
Prescott Street, 0.031 mi. from Main Street	1,348	2,003	2.0%
Prescott Street, 0.057 mi. east from Jones Street	907	1,348	2.0%
River Drive 0.081 mi. from SR 169	554	823	2.0%
Third Street, 0.05 mi. from SR 69	145	215	2.0%
Lazy River Drive, 0.10 mi. east from Green Valley Way	283	421	2.0%
Dewey Road, 0.05 mi. from Prescott Dells Ranch Road	61	91	2.0%
Prescott Dells Ranch Road, 0.05 mi. from SR 69	307	456	2.0%

Sources: Dewey-Humboldt General Plan, Field Data Services of Arizona, and Kimley-Horn and Associates, Inc.

4.3.6 Levels of Service

Based on the daily volume thresholds shown previously in **Table 8** and the projected 2031 future daily volumes in **Table 15** and **Table 16**, all study area roadway segments are anticipated to provide LOS C or better through 2031 except for SR 169, which provides LOS E, and the segment of SR 69 north of SR 169, which provides LOS D. It should be noted that the 2031 projected volume for the segment of SR 69 north of SR 169 is very close to the LOS E threshold, so this segment of SR 69 could need additional capacity by 2031 to maintain an acceptable LOS.

If implemented, the planned new roadway between I-17 and Fain Road would likely reduce or possibly eliminate the need for additional capacity on SR 169 and on SR 69 north of SR 169 because it would likely divert some traffic that would otherwise travel on SR 169 and on SR 69 between SR 169 and Fain Road.

4.4 Other Modes of Travel

4.4.1 Public Transit

There are currently no funded or committed projects for future public transit facilities or services in the study area.

Public transit demand in the study area is anticipated to continue to grow as the overall population and population segments likely to use public transit increase. **Table 17** and **Table 18** show the low and high 2031 daily transit demand projections for Dewey-Humboldt, assuming a two percent average annual growth rate from the current daily transit demand shown previously in **Table 12** and **Table 13**.

Table 17 – 2031 Daily Transit Demand Projections, Low Ridership Estimates

Youth 13-17 years	Older Adults	Persons w/ disabilities	Persons w/ no vehicle	Low Income	General Public	Total
2	25	6	3	7	18	61

Source: Kimley-Horn and Associates Inc.

Table 18 – 2031 Daily Transit Demand Projections, High Ridership Estimates

Youth 13-17 years	Older Adults	Persons w/ disabilities	Persons w/ no vehicle	Low Income	General Public	Total
5	48	13	6	13	37	122

Source: Kimley-Horn and Associates Inc.

The CYMPO RTNS evaluated the demand and feasibility of a regional transit service for Prescott, Prescott Valley, Chino Valley, and Dewey-Humboldt. The study proposed the following four service alternatives:

- **Alternative 1** – Alternative 1 is a plan for improvements to the NACOG voucher program. Changes to the program would include removing the current co-pay per ride and giving the vouchers cash value to be purchased at a discounted rate. Vendor certification would be regularly evaluated for continued certification to ensure high quality service.
- **Alternative 2** – Alternative 2 is a plan for the voucher program to receive federal assistance and a local public shared taxi system. The voucher program would be revised to include the general public, who could purchase vouchers at cash value. This option would allow the flexibility of a flat rate per zone with a voucher and per mile rate for cash depending on the preference of the user.

- **Alternative 3** – Alternative 3 is a plan for a limited service fixed route bus system with a paratransit voucher program. This alternative includes a bus system with three fixed routes: one regional route between Prescott and Prescott Valley; one local route in Prescott; and one local route in Prescott Valley. Paratransit would be available outside of the fixed route service zone.
- **Alternative 4** – Alternative 4 (shown in **Figure 12**) is a plan for a full service fixed route bus system with a paratransit voucher program. This alternative includes the routes described in Alternative 3 plus three additional routes: one local route in north Prescott/Willow Creek; one regional route between Dewey-Humboldt and Prescott Valley; and one local route serving Prescott Valley.

After the completion of the CYMPO RTNS, each participating jurisdiction reviewed the findings of the CYMPO RTNS and selected a preferred alternative as indicated below:

- **Yavapai County** – Preferred Alternative 4 as their first choice with Alternative 3 as their second choice.
- **Prescott** – Preferred Alternative 3 being managed by CYMPO, including service to Chino Valley.
- **Prescott Valley** – Supported the alternatives for development of service to meet Prescott Valley transit needs and explore regional service in conjunction with partners.
- **Chino Valley** – Preferred Alternative 2.
- **Dewey-Humboldt** – Preferred to continue with the voucher program.

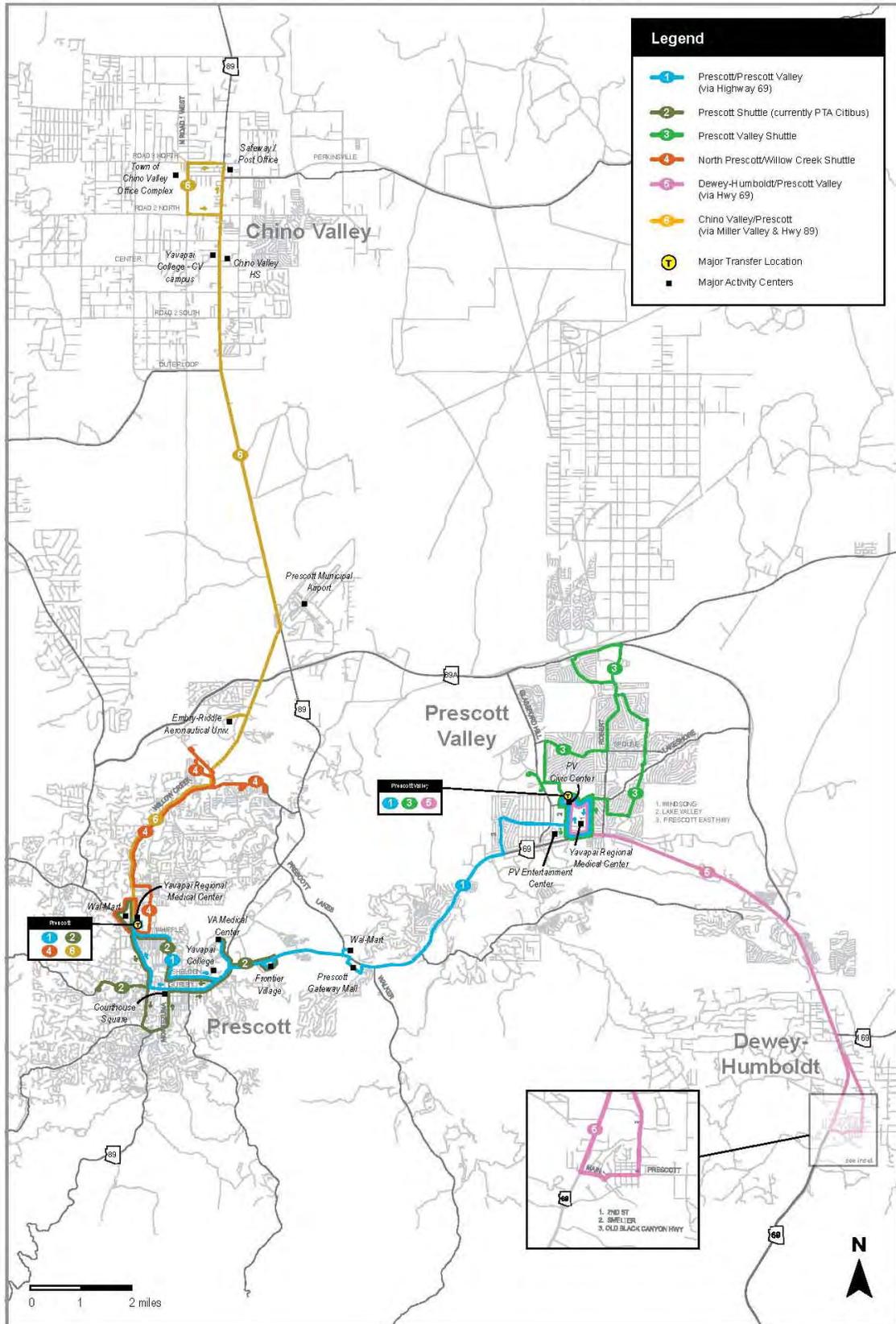
The City of Prescott, Town of Prescott Valley, and Yavapai County subsequently conducted the CYMPO Transit Implementation Plan (TRIP) to help them plan for the implementation of public transit. The Towns of Chino Valley and Dewey-Humboldt opted not to participate in the development of the CYMPO TRIP.

The CYMPO TRIP explored potential implementation strategies and funding sources for a public transit system in the Prescott region. The selected service plan alternative utilizes fixed and flexible routes that operate on hourly headways, ADA paratransit services, continuation of the NACOG voucher program in areas with no services, and a mileage reimbursement program for volunteer drivers.

Based on the evaluation of service alternatives, a preferred service alternative was developed. The preferred transit service alternative selected is a combination of various alternatives broken up into phases of initial, initial plus, and expanded services as shown below:

- **Initial** – The initial services include revisions to the voucher program, development of governing oversight of the transit system, establishment of financing, and development of the mileage reimbursement program for volunteer drivers.
- **Initial Plus** – The initial plus services include implementation of fixed and flexible route services with hourly headways. These routes include a regional fixed route between Prescott and Prescott Valley, a local flex route in Prescott, and a local flex route in Prescott Valley. Initiation of a paratransit system is also a service of this phase.
- **Expanded** – The expanded services include implementation of a northern expansion to the Prescott flex route.

The preferred transit service alternative could be further expanded into Dewey-Humboldt should the Town choose to participate in the future (see Alternative 4 of the CYMPO RTNS as shown in **Figure 12**).



Source: CYMPO

Figure 12 – CYMPO RTNS Alternative 4

In December 2010, CYMPO solicited proposals to implement the preferred transit service alternative from the CYMPO TRIP and received one proposal from a private transit operator. The private transit operator proposed utilizing Section 5307 (Urbanized Area Transit) grant money to provide a fixed route public transit service between Prescott, Prescott Valley, and Dewey-Humboldt. In April 2011, CYMPO decided not to implement the proposed transit service. The short- and long-range transit improvements described in the CYMPO TRIP are on hold indefinitely.

It is anticipated that lack of available funding and low estimated public transit demand will continue to limit the potential for the development of public transit in Dewey-Humboldt.

4.4.2 Private Transit

Private transit operators are anticipated to continue to operate in the study area in the future, and could potentially expand their service areas and frequency of service as the overall population and population segments likely to use transit increase. Continued mobility management could further improve the efficiency of the private transit system.

A recent ruling on a lawsuit regarding the State legislature's reallocation of the Local Transportation Assistance Fund (LTAF) indicates LTAF will likely not be restored for local jurisdictions to fund transit services. The NACOG voucher program, which has historically been funded in part by LTAF, has an uncertain future funding outlook.

4.4.3 Bicycle, Pedestrian, and Recreational Travel

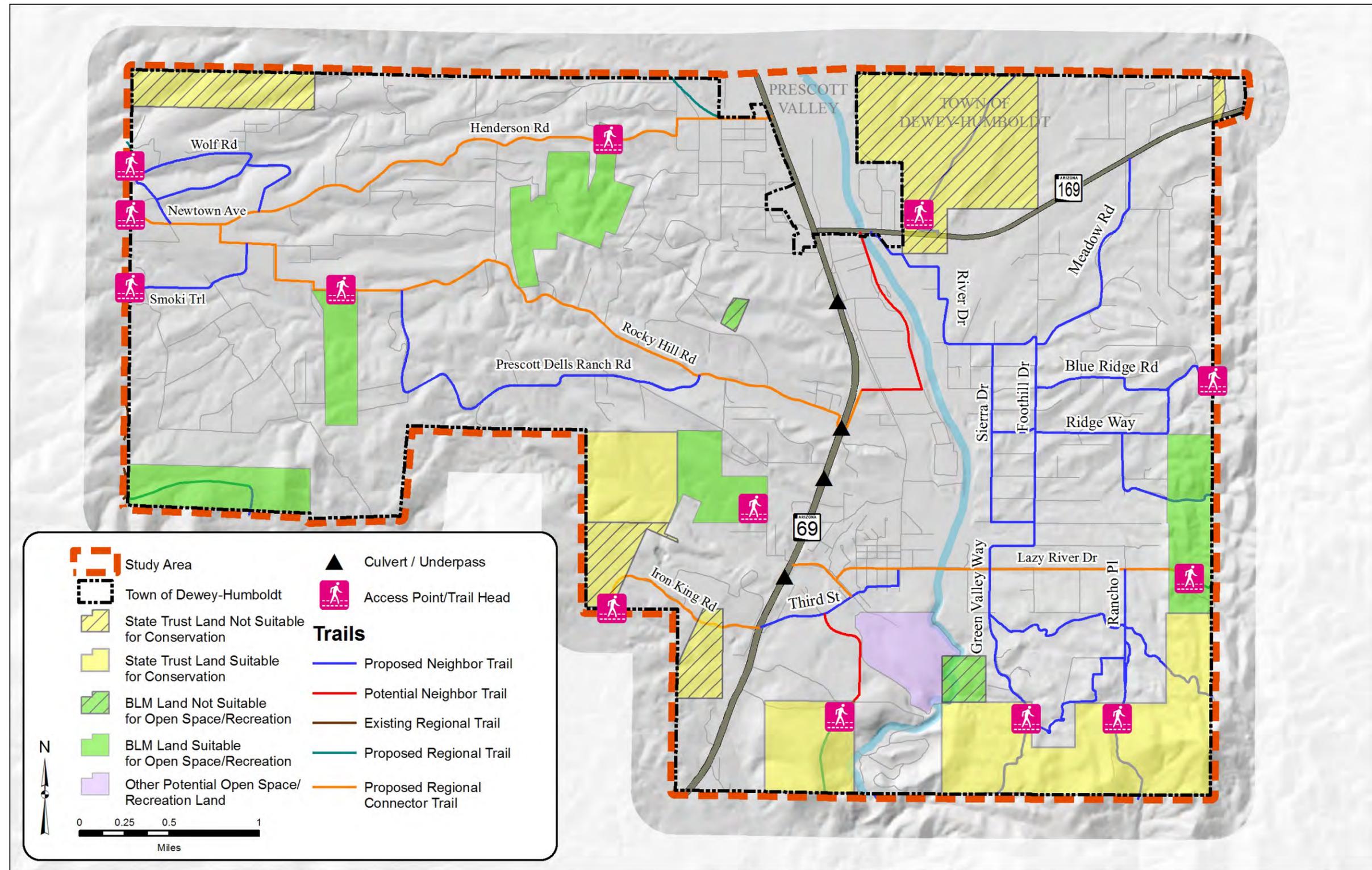
At the national level, there is an emphasis on providing more bicycle and pedestrian facilities along roadways to create "complete streets" that are also ADA-compliant. Complete streets are designed to function safely and effectively for all users. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities should be able to safely move along and across a complete street.

Elements of a complete street in an urban area can include sidewalks, bike lanes (or wide shoulders), comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. A complete street in a rural area may have different elements, but both achieve the same goal.

A significant portion of the study area is anticipated to remain as open space and has been planned for recreational use according to the Dewey-Humboldt OSAT Plan (see **Figure 13**). The OSAT Plan proposes an outline for a network of new recreational trails that would link new trailheads within the Town to adjacent regional trails. Eight trail parks have been identified in this plan that accommodates a variety of trail types for recreational opportunities. Trail parks are considered open space that has been preserved to protect wildlife, cultural/historic sites, drainage corridors, and motorized/non-motorized linkages between destinations around the town. The trail network will include signing and grade-separated crossings (e.g., utilizing existing drainage culverts to cross under SR 69). The different types of planned trails and trailheads proposed by the OSAT Plan are described in the following bullets and their planned locations are shown in **Figure 13**.

Trail Types:

- **Regional Connector Trails** – four-foot-wide to six-foot-wide unpaved paths primarily adjacent to roadways that connect to regional trails at the Town's border or destinations within the Town;
- **Neighborhood Trails** – two-foot-wide to four-foot-wide unpaved paths primarily adjacent to roadways that are more localized and are for shorter trips than Regional Connector Trails;
- **Backcountry Trails (within trail parks)** – one and a half-foot-wide to two-foot-wide paths located within preserved open space or trail parks;



Source: Town of Dewey-Humboldt

Figure 13 – Planned Open Space and Trails

- **Accessible Trails (within trail parks)** – four-foot-wide to six-foot-wide paths that accommodate people with lessened physical abilities and mobility, and also meet ADA requirements;
- **OHV Trails** – five-foot-wide to eight-foot-wide paths primarily adjacent to roadways that provide direct access to areas with more OHV opportunities;
- **Interpretive Trails (within trail parks)** – five-foot-wide to eight-foot-wide paths that present information on natural, historical, and pre-historical features conveyed through signs and other displays;
- **Multi-use Paths** – ten-foot-wide to twelve-foot-wide concrete or asphalt paths; and
- **Bicycle Routes** – paved roadway shoulders with a five-foot minimum width.

Trailhead Types:

- **Standard Trailheads** – entry point locations to trail parks that offer various features such as signing, regulations, and parking;
- **Trailheads with Equestrian Facilities or OHV Staging** – offer the same features as Standard Trailheads with room for equestrian or OHV trailers; and
- **Walk-in/Ride-in Trailheads** – offer a simple entry point to trails without parking or other features.

5 FUTURE NEEDS

Future needs indicate transportation-related issues that are anticipated to develop by 2031 if no additional improvements are implemented. The following future needs are in addition to the current needs identified in Section 3.

5.1 Roadways

Improvements to the roadway network will be needed that are commensurate with the level and distribution of growth. The acquisition of right-of-way, paving, and/or realigning unpaved streets will continue to be needed to improve circulation and emergency vehicle access. Rocky Hill Road and Prescott Dells Ranch Road will likely be viable future candidates for roadway improvements and potential classification as rural minor collectors.

The LOS of SR 169 will likely be LOS E and the LOS of SR 69 north of SR 169 will likely be approaching LOS E by 2031. These roadway segments will need further study to determine how best to provide additional capacity.

If the planned Fain Road connector is constructed between SR 169 and Fain Road, it will likely divert some traffic away from SR 169 and from SR 69 north of SR 169, potentially reducing or eliminating the need for additional capacity on SR 169 and SR 69. If the planned Fain Road connector is extended all the way to I-17, it will likely divert additional traffic away from SR 69. Further analysis of SR 169 and SR 69 north of SR 169 will be needed as part of the Fain Road connector development process to determine the proper level of investment in these corridors.

The locations of new access points along SR 69 and SR 169 – such as for the planned commercial developments on the northeast corner of SR 69/SR 169 – will need to be coordinated with ADOT staff to ensure access is properly managed, particularly in the vicinity of signalized intersections. If/when the Mortimer Family Farms property is developed, traffic volumes on Old Black Canyon Highway will likely increase significantly. If access is not managed well, this increase in volumes could result in access-related circulation and safety issues because of Old Black Canyon Highway's close proximity to SR 69 and to the SR 69/SR 169 intersection.

As roadway network improvements are implemented and traffic patterns change over time, the federal functional classification of roadway segments will need to be reviewed and updated as appropriate. When the Town reaches a population of 5,000 persons, the Town's roadways will likely need to be reclassified as "urban" instead of "rural" roadways to be consistent with federal guidelines.

The SR 69/Main Street intersection may warrant a traffic signal in the next 5-10 years if traffic volumes increase as projected. As traffic volumes increase over time, the existing signalized intersections of SR 69/SR 169 and SR 69/Kachina Place will need to be monitored regularly to determine if adjustments are needed to the traffic signal timing, phasing, or coordination. The intersection of SR 169/Foothill Drive will likely need a signal warrant study by 2031. If/when the planned commercial developments on the northeast corner of SR 69/SR 169 are constructed, a new traffic signal will likely be needed at the intersection of the planned new north-south roadway through the developments with SR 169.

While the Town's CIP includes pavement rehabilitation projects that will address many of the roadway segments rated as having Failed or Poor pavement conditions, funding still needs to be identified for these projects. Additional pavement rehabilitation projects are needed for the Failed or Poor roadway segments not already included in the CIP. Because pavement conditions generally deteriorate over time, roadways rated as Excellent, Good, or Fair today will require investments in periodic maintenance over the next 20 years.

5.2 Other Modes of Travel

Disadvantaged populations such as low income and disabled residents will continue to need more affordable and convenient access to transportation options other than the automobile. This need is anticipated to grow as the number and density of population groups likely to use transit increases.

Stable long-term funding sources will be needed if public transit is to be provided in Dewey-Humboldt in the future. If the planned regional transit system described in the CYMPO TRIP is implemented, the Town will need to evaluate if, when, and how the transit system should be expanded to Dewey-Humboldt.

Private transit operators are anticipated to continue to operate in the study area in the future, and could potentially expand their service areas and frequency of service as the overall population and population segments likely to use transit increase. Continued mobility management will be needed to better coordinate private transit services so that they continue to provide disadvantaged populations with the transportation services they need, when and where they need them, and at a reasonable cost.

As population and employment grow and sustainable transportation becomes a higher priority, additional bicycle, pedestrian, and recreational trail facilities will likely be needed.

6 EVALUATION CRITERIA

Evaluation criteria are factors that are considered in the analysis of a proposed improvement project to identify potential benefits, impacts, and relative priorities. The following is a description of the evaluation criteria used in this study.

6.1 Meets Identified Need

Potential improvement projects should meet an identified need. This criterion helps ensure that staff and financial resources are spent on projects that address identified needs rather than on extraneous improvements.

6.2 Safety

This is a qualitative assessment that considers the impact a potential improvement may have on safety. Factors considered include current design standards for roadway, transit, bicycle, and pedestrian facilities.

6.3 Total Estimated Cost

Total estimated cost consists of planning level right-of-way acquisition and construction cost estimates in 2012 dollars.

Right-of-way cost estimates are based on a unit cost of \$1.00 per square foot of vacant land for partial parcel acquisitions and the current Yavapai County Assessor's website full cash value assessment for full acquisition of parcels containing residential structures.

Planning-level construction cost estimates are based on unit costs for each project type. Construction cost estimates include design and construction management costs unless otherwise noted and are based on per-mile unit costs developed from historical bid prices for similar projects. Construction unit costs were developed for three types of terrain: level, rolling, and steep. The construction unit costs used in the evaluation process are shown in **Table 19**. Construction cost estimate details are shown in **Appendix H**.

Table 19 – Construction Unit Costs

Construction Description	Unit	Unit Cost Level Terrain	Unit Cost Rolling Terrain	Unit Cost Steep Terrain
Upgrade existing unpaved roadway to all-weather roadway	mile	\$200,000	\$520,000	\$740,000
Pave existing unpaved roadway using chip seal	mile	\$440,000	\$760,000	\$980,000
Pave existing unpaved roadway using asphalt	mile	\$500,000	\$820,000	\$1,040,000
Realign and upgrade to all-weather roadway	mile	\$640,000	\$1,370,000	\$2,010,000
Realign and upgrade to all-weather roadway using chip seal	mile	\$900,000	\$1,630,000	\$2,270,000
Realign and upgrade to all-weather roadway using asphalt	mile	\$970,000	\$1,700,000	\$2,340,000
Construct 6' sidewalk with curb and gutter	mile	\$980,000	-	-
Construct 6' sidewalk without curb and gutter	mile	\$630,000	-	-
Construct 6' unpaved shared-use path/trail	mile	\$310,000	\$800,000	\$1,190,000
Install traffic signal	each	\$500,000	-	-
Install roundabout	each	\$1,000,000	-	-

Source: Kimley-Horn and Associates, Inc.

Some individual improvement cost estimates are more specific because of available information. More detailed improvement costs will need to be developed during the scoping phase of each project and included in the Town's CIP and the CYMPO Transportation Improvement Program (TIP) where applicable.

6.4 Impacts to Right-of-Way

This is a quantitative measure that identifies if and how much right-of-way is anticipated to be needed. It does not include right-of-way for easements or construction activities.

6.5 Impacts to Existing Residences/Businesses

This is a quantitative measure that documents the number of residential and business buildings expected to be acquired as part of a potential improvement. The number is a conservative estimate at the planning level.

6.6 Engineering Issues

Engineering issues require special design features in order to make a potential improvement feasible. Engineering issues could include bridges, drainage, terrain, and utilities.

6.7 Level of Service/Delay

Level of service and delay are quantitative measures for how much traffic congestion occurs. These measures give an indication of the overall impact of a potential improvement on the efficiency of the transportation system.

6.8 Accessibility/Mobility

This is a qualitative measure of a potential improvement's ability to improve the overall transportation system in terms of accessibility and mobility.

6.9 Network Continuity

This is a qualitative measure to assess a potential improvement's impact on providing a continuous transportation system by eliminating gaps that may exist in the current system.

6.10 Environmental Impacts

This is a qualitative measure that notes potential environmental issues. At the planning level, it is a visual observation of possible environmental constraints such as impacts to air quality, adjacent schools, parks, or natural habitat. Air quality impacts include vehicle emissions corresponding to the vehicular level of service/delay and dust emissions corresponding to vehicular travel on unpaved roadways.

6.11 Multimodal Compatibility

This is a qualitative measure that considers whether a potential improvement addresses multiple modes of travel by providing transit, bicycle, or pedestrian facilities.

7 IMPROVEMENT CONSIDERATIONS

The considerations described below guided the development and analysis of potential improvements.

7.1 Functional Classification Considerations

Functional classification defines the hierarchy of streets in a roadway system according to the character of service they provide as it relates to mobility, access, and trip length. The roles and standards for each type of roadway must be established in order to plan an efficient and effective system. Most travel involves movement through a network of roadways of varying functional classification.

The Federal Highway Administration (FHWA) has developed guidelines for functional classification. The federal functional classification groups include principal arterials, minor arterials, major collectors, minor collectors, and local roads. In general, principal and minor arterials provide a high level of mobility for the traveling public with minimal allowance for access while the collectors and local roads provide for residential and non-residential access. The FHWA guidelines also distinguish between rural roadways (in areas with a population less than 5,000 persons) and urban roadways (in areas with a population greater than 5,000 persons).

The proper classification of roadways is important because classification indicates roadway function, and different roadway design guidelines and standards apply to each classification. In addition, FHWA distributes federal aid funding based in part on functional classification. To be eligible for most federal funding programs, roadways need to have a functional classification of a rural major collector or higher.

The following describe the general characteristics associated with the different functional classifications.

Principal Arterials

- Include freeways and major highways;
- Provide regional connectivity;
- Mobility is the primary objective;
- Serve the highest volume generators;
- Usually carry regional bus routes; and
- Limited access with capability of moving high volumes at high speeds.

Minor Arterials

- Include other highways;
- Higher speed than collector or local;
- Longer trip length compared to collector and local;
- Usually carry local bus routes; and
- Do not usually connect through neighborhoods.

Major Collectors

- Distribute traffic to/from arterials;
- Collect traffic from minor collectors and local streets;
- Serve traffic generators of intra-county importance;
- May carry local bus routes; and
- May access neighborhoods.

Minor Collectors

- Distribute traffic to/from arterials and major collectors;

- Collect traffic from local streets;
- Serve traffic generators of intra-community importance;
- May carry local bus routes; and
- May access neighborhoods.

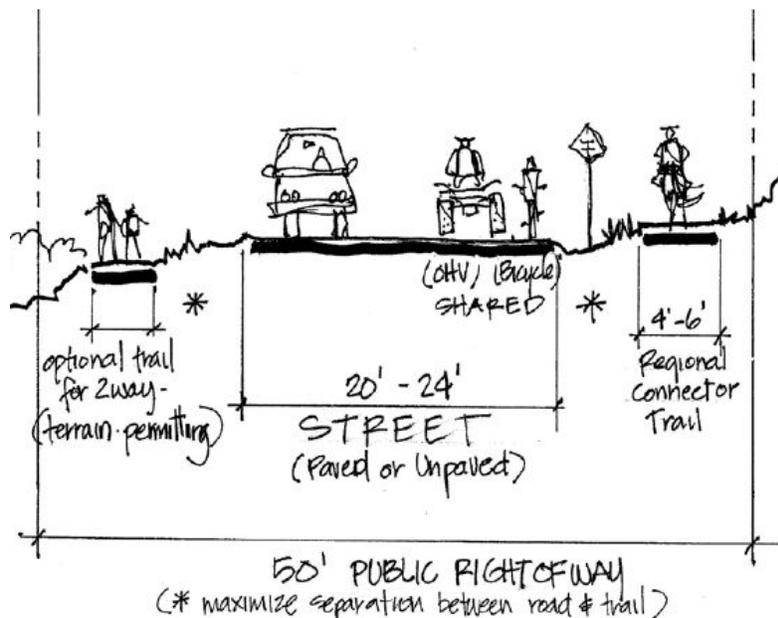
Local Roads

- Provide direct access to abutting land;
- Discourage through traffic; and
- Lower speed limit than other classifications.

7.2 Complete Street Cross-Sections

The Town's OSAT Plan provides several roadway cross-sections that include elements of complete streets. One of these cross-sections in particular, the Regional Connector Trail Cross-Section (see **Figure 14**), shows adequately-sized elements of a complete street within 50 feet of right-of-way. This cross-section includes one travel lane for motorized vehicles in each direction that is ten feet to twelve feet wide and shared-use paths for other modes of travel that are four feet to six feet wide. A natural planter strip/drainage area separates the motorized travel lanes from the shared-use paths for other modes of travel. Bicycles can use either the travel lanes or the shared-use paths.

Most of the Town's existing roadways have 50 feet of right-of-way and one travel lane in each direction for motorized vehicles (similar to the Regional Connector Trail Cross-Section) but they generally do not provide facilities for other modes of travel. In rural areas, the Town's existing roadways could be converted into complete streets by providing unpaved shared-use paths that are separated from the motorized travel lanes by a buffer that also acts as a drainageway. The shared-use paths should be four feet to six feet wide and the buffers should be four feet to eight feet wide, depending on the terrain. In urban areas, the buffer could be comprised of an eight-foot-wide parallel parking area and the shared-path could be replaced by a sidewalk, if desired. New roadways could be built to match the rural or urban versions of the Regional Connector Trail Cross-Section, as appropriate.



Source: Town of Dewey-Humboldt Open Space and Trails Plan

Figure 14 – Regional Connector Trail Cross-Section

7.3 Roadway Network Alternatives

The roadway network needs identified as part of this study include better network continuity, safety, emergency vehicle access, and dust control by means of an interconnected and continuous all-weather roadway network. Existing roadway network issues were identified in the following areas (see **Figure 15**) by comparing anticipated desired travel paths between origins and destinations with actual available travel paths:

- Area 1: Henderson Road/Martha Way Curve;
- Area 2: Henderson Road/Pony Place/ Horseshoe Lane;
- Area 3: Prescott Valley New Development Connection;
- Area 4: Powerline Road/Rocky Hill Road/Martha Way;
- Area 5: Dewey Road;
- Area 6: New Road West of Agua Fria River;
- Area 7: Sierra Drive Extension North;
- Area 8: Additional Agua Fria River Crossing; and
- Area 9: Sierra Drive and Foothill Drive Connections.

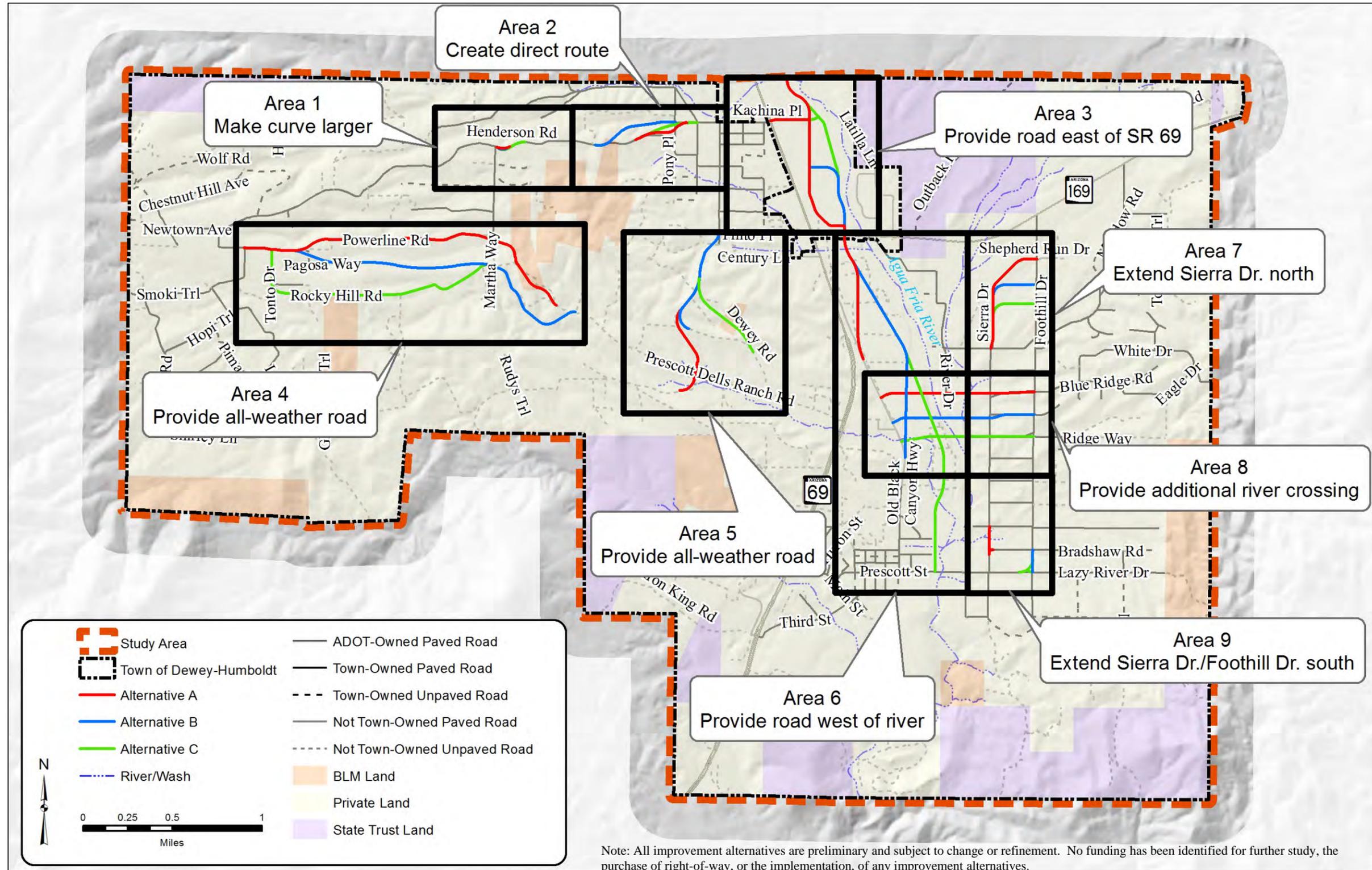
Three potential improvement alternatives were developed to address roadway network needs in each area. Each alternative has advantages and disadvantages. A comparative analysis of the potential improvement alternatives, along with a no-build alternative, was conducted using the aforementioned evaluation criteria. The no-build alternative represents the do-nothing approach where no improvements are made to existing conditions.

Planning-level construction cost estimates were calculated for each potential roadway network improvement alternative for three all-weather roadway surface types: upgraded unpaved (i.e., improved grading and minor drainage improvements), chip seal, and asphalt pavement.

Roadway easements or dedications, a lower-cost option to right-of-way acquisition, could be a viable solution in certain circumstances. For example, some of the roadway network improvement alternatives follow the same alignment as existing unpaved roadways that are privately-owned. These privately-owned roadways are often not well-maintained and may not be traversable during adverse weather conditions. If the owners of these private roadways are interested in improving these roadways to be all-weather roadways but do not have the financial resources to make the necessary improvements, the Town could potentially offer to make the desired improvements and provide ongoing maintenance on the roadways in exchange for voluntary roadway easements or dedications that would effectively convert the private roadways to public roadways without the Town having to purchase the right-of-way.

It should be noted that all improvement alternatives are preliminary and subject to change or refinement. No funding has been identified for further study, the purchase of right-of-way, or the implementation, of any improvement alternatives.

The following subsections discuss each of the areas in more detail. Figures are provided that show the potential improvement alternatives developed for each area. Tables are provided that summarize the comparative analysis of the potential improvement alternatives and the no-build alternative.



Source: Kimley-Horn and Associates, Inc.

Figure 15 – Network Continuity Issue Areas and Alternatives

7.3.1 Area 1: Henderson Road/Martha Way Curve

The sharpest curve along Henderson Road exists just east of the Henderson Road/Martha Way intersection and has a radius of 150 feet. To further promote safety and driver comfort at this curve, three potential roadway improvement alternatives have been developed. The alternatives are shown in **Figure 16** and are described more fully as follows:

- *Alternative 1A* – This alternative provides a new curved roadway segment along Henderson Road that has a radius of 465 feet. This larger curve impacts the existing adjacent parcel on the north side of Henderson Road;
- *Alternative 1B* – This alternative provides a new curved roadway segment along Henderson Road that has a radius of 250 feet. This alternative has a smaller radius and less right-of-way impact to the parcel on the north side of Henderson Road compared to Alternative 1A; and
- *Alternative 1C* – This alternative provides a new curved roadway segment along Henderson Road that has a radius of 250 feet that stays within the Town’s existing right-of-way and ties back in with existing Henderson Road farther to the east. This alternative has a similar curve radius to Alternative 1A but requires more new roadway construction.

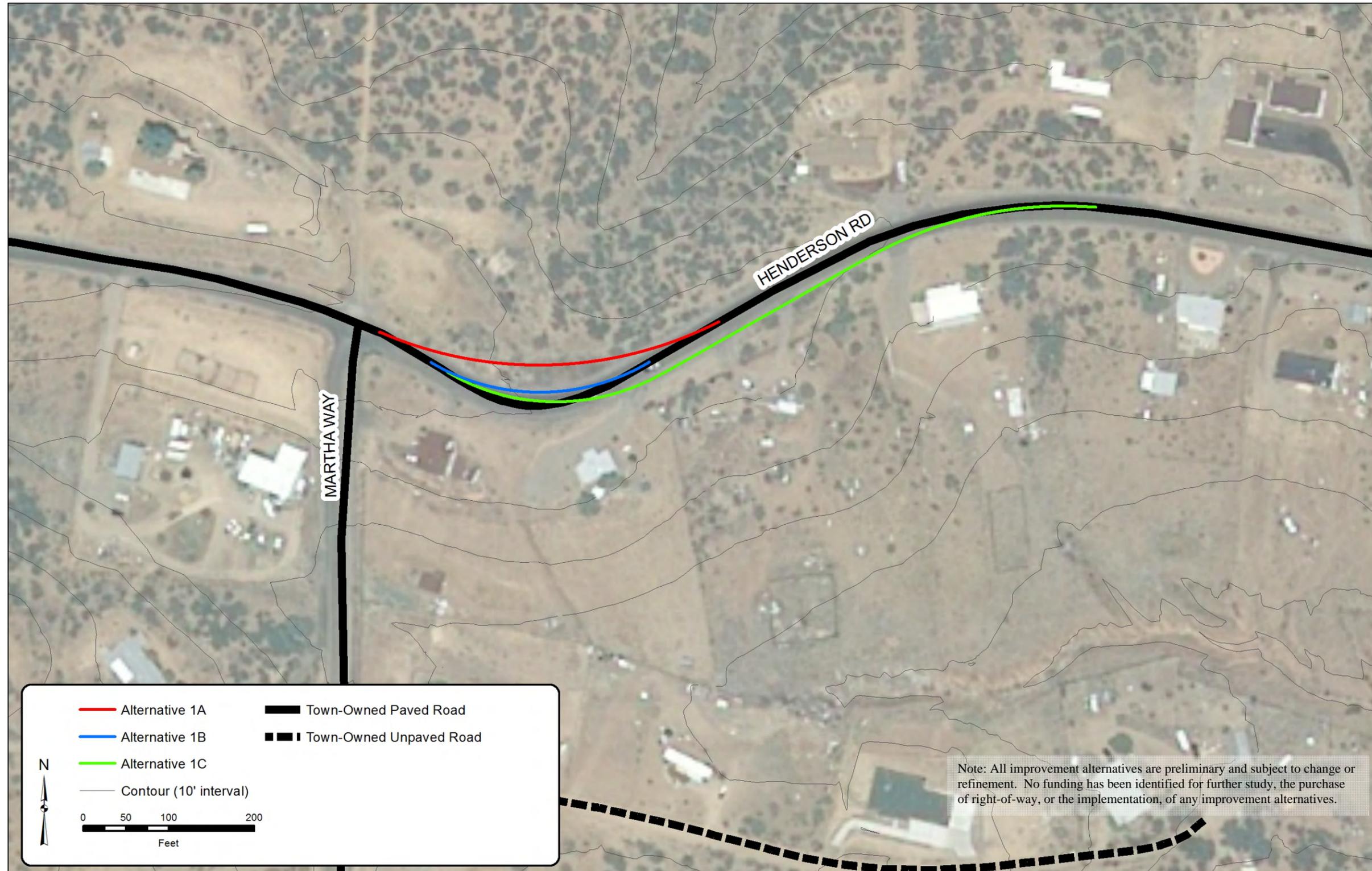
A low-cost interim option to the three alternatives mentioned above would be to post “Curve Ahead” warning signs with a speed advisory plaque of 10 mph along Henderson Road on either side of the curve just east of the Henderson Road/Martha Way intersection.

Table 20 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 20 – Evaluation of Area 1 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 1A	Alternative 1B	Alternative 1C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	Potential safety issue	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$9,000	\$0 - \$2,000	\$0
<i>Construction Cost</i>	None	\$76,000	\$50,000	\$150,000
<i>Total Estimated Cost</i>	None	\$76,000 - \$85,000	\$50,000 - \$52,000	\$150,000
<i>Impacts to Right-of-Way</i>	None	Yes (1 parcel)	Yes (1 parcel)	No impacts
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	No impacts
<i>Engineering Issues</i>	None	None	None	None
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	No impacts	No impacts	No impacts
<i>Network Continuity</i>	No impacts	No impacts	No impacts	No impacts
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 16 – Area 1: Henderson Road/Martha Way Curve Alternatives

7.3.2 Area 2: Henderson Road/Pony Place/Horseshoe Lane

There is currently an offset in the rural minor collector comprised of Henderson Road, Pony Place, and Horseshoe Lane. While the roadway is continuous, it requires two turns in a short distance and is not direct. The existing roadway has an estimated maximum grade of six percent and crosses a parcel owned by BLM. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 17** and are described more fully below:

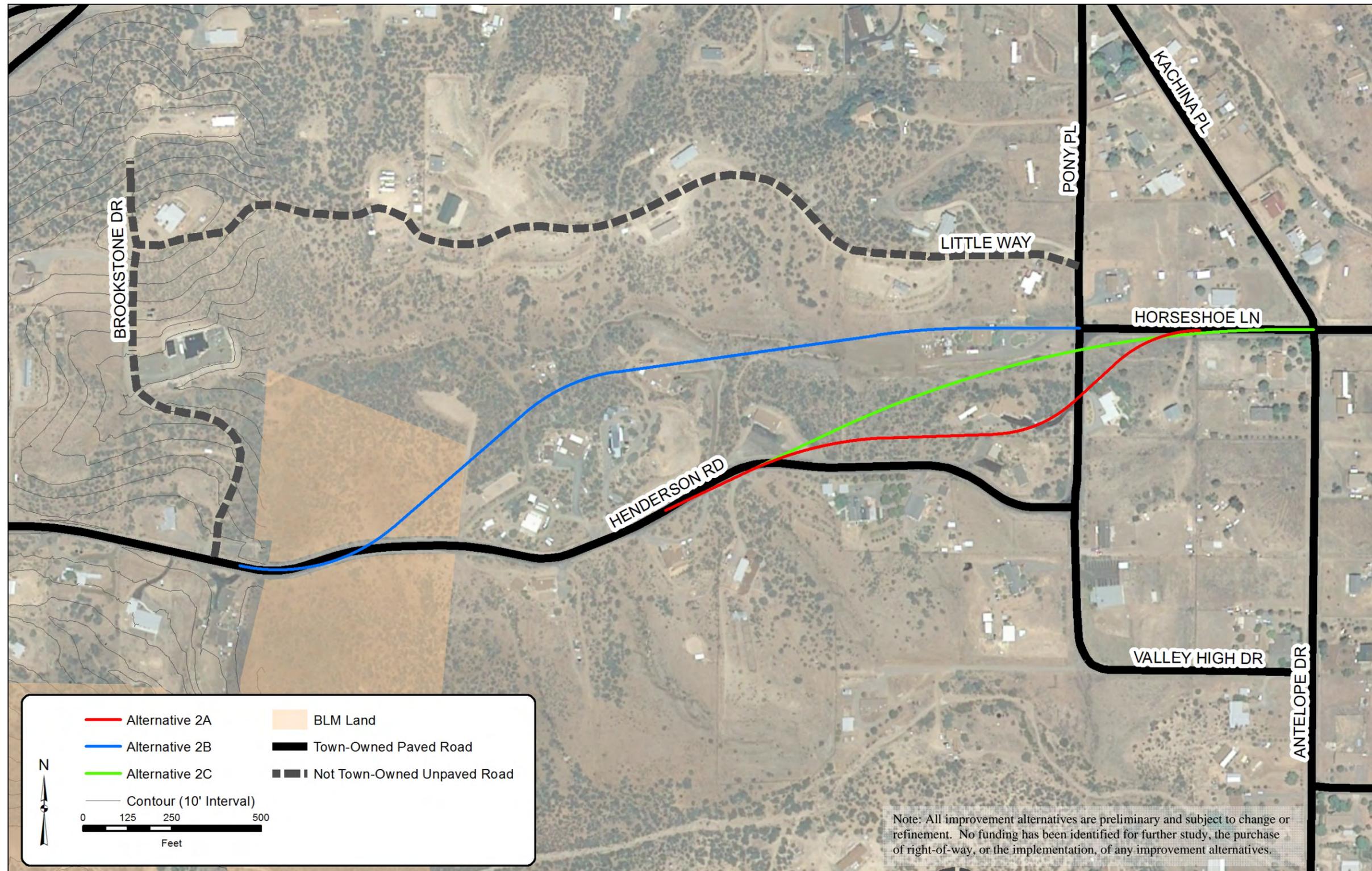
- *Alternative 2A* – This alternative provides a new reverse curve roadway segment that connects Henderson Road to Horseshoe Lane with the least deviation from the existing roadways while still providing appropriate minimum curve radii for a 20 mph posted speed limit. Pony Place intersects the reverse curve roadway segment at a skewed angle. This alternative has an estimated maximum grade of ten percent and impacts ten parcels and one existing residence;
- *Alternative 2B* – This alternative provides a new reverse curve roadway segment that connects Henderson Road to the west leg of the Pony Place/Horseshoe Lane intersection. This alternative has an estimated maximum grade of ten percent and impacts eight private parcels, one BLM parcel, and one existing residence; and
- *Alternative 2C* – This alternative provides a new curved roadway segment that connects Henderson Road to Horseshoe Lane with a single large curve. Pony Place intersects the reverse curve roadway segment at a slightly skewed angle. This alternative has an estimated maximum grade of ten percent and impacts eleven parcels.

Table 21 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 21 – Evaluation of Area 2 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 2A	Alternative 2B	Alternative 2C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$140,000	\$0 - \$190,000	\$0 - \$100,000
<i>Construction Cost</i>	None	\$520,000	\$820,000	\$620,000
<i>Total Estimated Cost</i>	None	\$520,000 - \$660,000	\$820,000 - \$1,010,000	\$620,000 - \$720,000
<i>Impacts to Right-of-Way</i>	None	Yes (10 parcels)	Yes (8 parcels & 1 BLM parcel)	Yes (11 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	Yes (1 residence)	Yes (1 residence)	No impacts
<i>Engineering Issues</i>	None	Steep terrain	Steep terrain	Steep terrain
<i>Level of Service/Delay</i>	No Impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No Impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No Impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 17 – Area 2: Henderson Road/Pony Place/Horseshoe Lane Alternatives

7.3.3 Area 3: Prescott Valley New Development Connection

There is currently no all-weather north-south roadway east of SR 69 and north of SR 169. If the northeast corner of the SR 69/SR 169 intersection is developed as has been proposed by developers, an all-weather north-south roadway will likely be needed to provide access to the developments. This new north-south roadway would also provide an alternate route that could be utilized if the SR 69/SR 169 intersection is blocked due to a crash or other emergency situation. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 18** and are described more fully below:

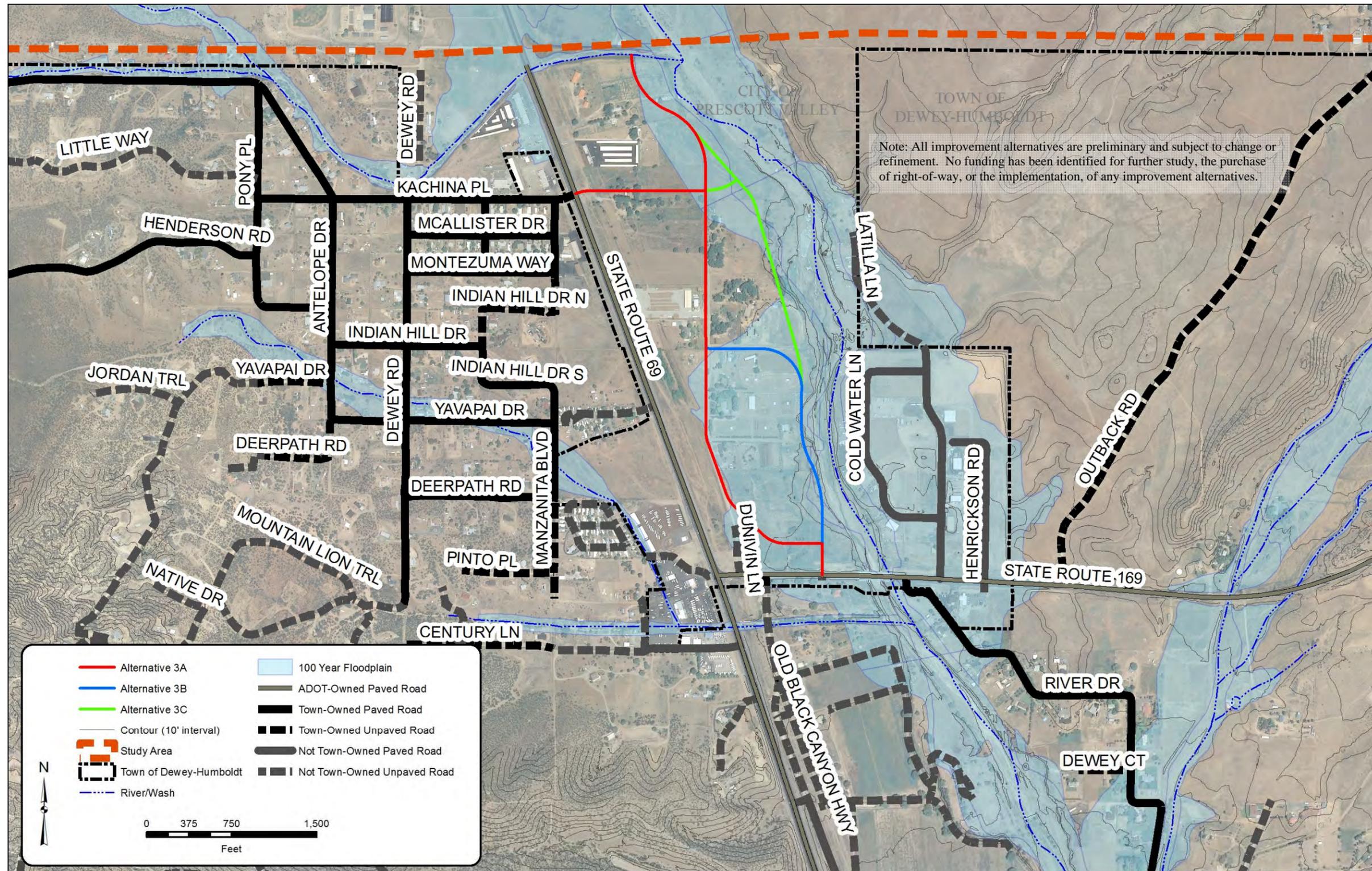
- *Alternative 3A* – This alternative begins at an ADOT-approved planned access point on SR 169 and heads north for approximately 300 feet before bending west to follow Dunivin Lane north out of the study area. Kachina Place extends east from SR 69 and connects to this alternative. This alternative generally is congruent with the conceptual roadway layout from the Prescott Valley Crossing and Headwaters proposed development site plans;
- *Alternative 3B* – This alternative begins at the ADOT-approved planned access point on SR 169 and heads north parallel to the Agua Fria River for approximately 1,500 feet before bending west into Alternative 3A. This alternative also generally is congruent with the conceptual roadway layout from the Prescott Valley Crossing and Headwaters proposed development site plans; and
- *Alternative 3C* – This alternative begins at the ADOT-approved planned access point on SR 169 and heads north parallel to the Agua Fria River until it converges with Alternative 3A. This alternative generally matches the north-south roadway alignment shown in this area in the draft Prescott Valley 2025 General Plan.

Table 22 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 22 – Evaluation of Area 3 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 3A	Alternative 3B	Alternative 3C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$810,000	\$0 - \$820,000	\$0 - \$810,000
<i>Construction Cost</i>	None	\$810,000 - \$1,220,000	\$820,000 - \$1,240,000	\$800,000 - \$1,210,000
<i>Total Estimated Cost</i>	None	\$810,000 - \$2,030,000	\$820,000 - \$2,060,000	\$800,000 - \$2,020,000
<i>Impacts to Right-of-Way</i>	None	Yes (22 parcels)	Yes (19 parcels)	Yes (17 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	Yes (2 residences)	Yes (2 residences)	Yes (2 residences)
<i>Engineering Issues</i>	None	Agua Fria River floodplain	Agua Fria River floodplain	Agua Fria River floodplain
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 18 – Area 3: Prescott Valley New Development Connection Alternatives

7.3.4 Area 4: Powerline Road/Rocky Hill Road/Martha Way

The roadway network near the Powerline Road/Martha Way intersection and Rocky Hill Road/Martha Way intersection includes steep grades, narrow unpaved roads, and indirect traffic flow. Access to this area from Rocky Hill Road is difficult without a four-wheel-drive vehicle as the existing roadway has an estimated maximum grade of sixteen percent. Powerline Road and Rocky Hill Road both cross the Transwestern natural gas transmission pipeline. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 19** and are described more fully below:

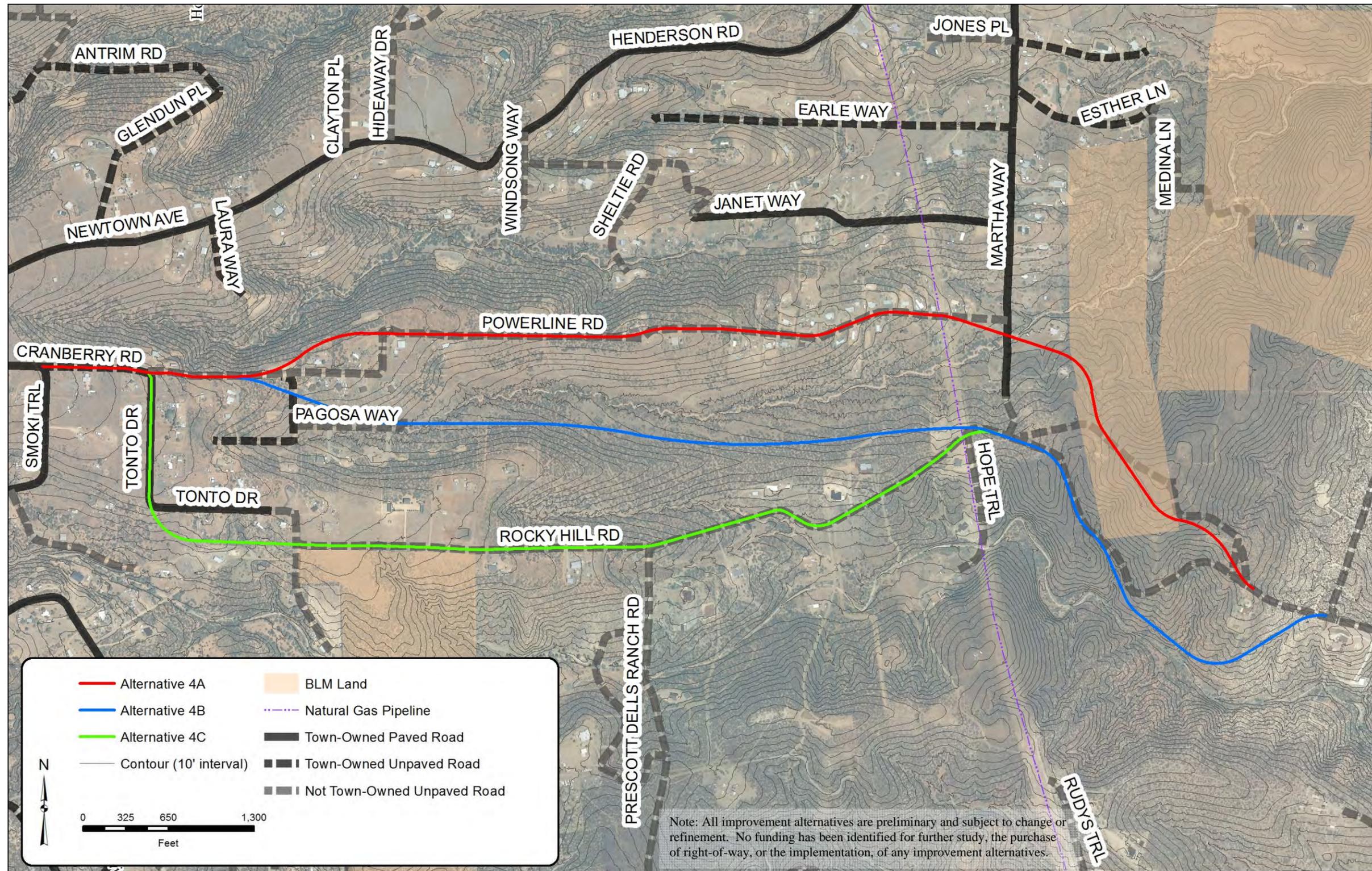
- *Alternative 4A* – This alternative provides a new reverse curve roadway segment that connects Cranberry Road to Powerline Road. The improvement alternative generally follows the existing Powerline Road alignment until it diverges south just west of the Powerline Road/Martha Way intersection and ultimately ties into Rocky Hill Road. This alternative has an estimated maximum grade of thirteen percent and generally utilizes existing unpaved roadway alignments. The improvement alternative impacts 59 private parcels and one BLM parcel;
- *Alternative 4B* – This alternative provides a new reverse curve roadway segment that connects Cranberry Road to Pagosa Way. The improvement alternative generally continues east-west until it intersects Rocky Hill Road just west of Martha Way. The alternative bends southeast of Martha Way to achieve a more gradual roadway grade and to avoid the BLM parcel, ultimately tying back into Rocky Hill Road. This alternative has an estimated maximum grade of twelve percent and generally consists of new roadway alignment. The improvement alternative impacts 24 private parcels; and
- *Alternative 4C* – This alternative ties into the north-south portion of Tonto Drive and curves east to tie into existing Rocky Hill Road. The improvement alternative generally follows the existing Rocky Hill Road alignment until it ties in with Alternative 3B. This alternative has an estimated maximum grade of thirteen percent and generally utilizes existing unpaved roadway alignments. The improvement alternative impacts 35 private parcels.

Table 23 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 23 – Evaluation of Area 4 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 4A	Alternative 4B	Alternative 4C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$440,000	\$0 - \$480,000	\$0 - \$520,000
<i>Construction Cost</i>	None	\$2,300,000 - \$2,800,000	\$3,300,000 - \$3,900,000	\$2,400,000 - \$3,000,000
<i>Total Estimated Cost</i>	None	\$2,300,000 - \$3,240,000	\$3,300,000 - \$4,380,000	\$2,400,000 - \$3,520,000
<i>Impacts to Right-of-Way</i>	None	Yes (59 parcels & 1 BLM parcel)	Yes (24 parcels)	Yes (35 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	No impacts
<i>Engineering Issues</i>	None	Steep terrain and gas pipeline crossing	Steep terrain and gas pipeline crossing	Steep terrain and gas pipeline crossing
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Improved air quality if paved	Improved air quality if paved	Improved air quality if paved
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 19 – Area 4: Powerline Road/Rocky Hill Road/Martha Way Alternatives

7.3.5 Area 5: Dewey Road

Dewey Road is currently an unpaved roadway with sharp turns that provides an indirect north-south connection between Prescott Dells Ranch Road and Kachina Place. This existing roadway has an estimated maximum grade of thirteen percent. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 20** and are described more fully below:

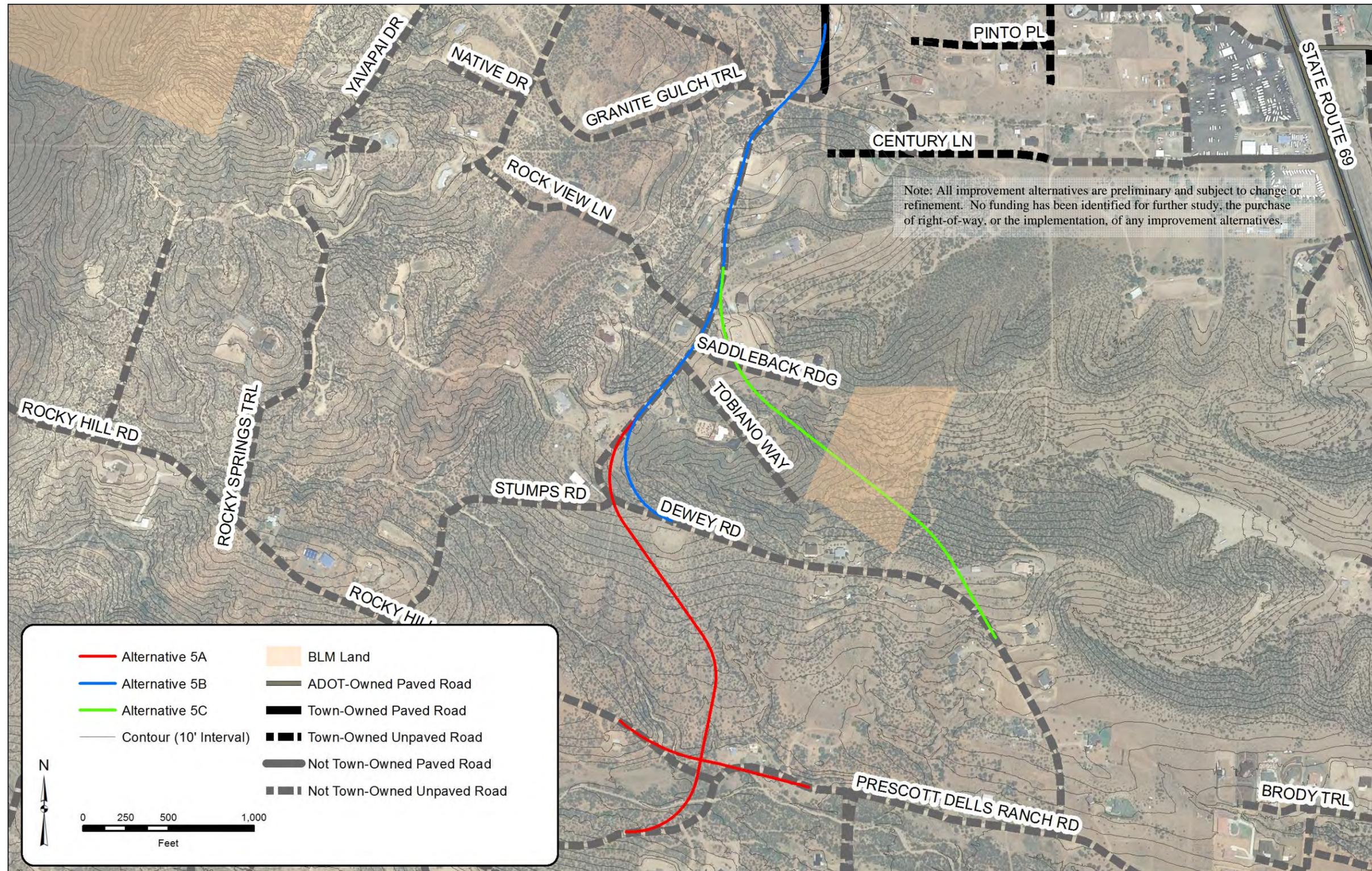
- *Alternative 5A* – This alternative relocates the existing Rocky Hill Road/Prescott Dells Ranch Road three-legged intersection and ties in Dewey Road as a north leg of a four-way intersection. The Dewey Road leg then continues up the hill to the north and ties in with the existing Dewey Road alignment north of Stumps Road. This alternative has an estimated maximum grade of thirteen percent and provides an improved intersection layout at the Rocky Hill Road/Prescott Dells Ranch Road intersection. The improvement alternative impacts 36 private parcels and one BLM parcel;
- *Alternative 5B* – This alternative generally follows the existing alignment of Dewey Road but utilizes larger curve radii near Stumps Road and Granite Gulch Trail. This alternative has an estimated maximum grade of ten percent and primarily utilizes the existing Dewey Road alignment. The improvement alternative impacts 22 private parcels; and
- *Alternative 5C* – This alternative provides a new reverse curve roadway segment that connects existing north-south segments of Dewey Road to create a more direct route. This alternative has an estimated maximum grade of thirteen percent. The improvement alternative impacts 23 private parcels and one BLM parcel.

Table 24 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 24 – Evaluation of Area 5 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 5A	Alternative 5B	Alternative 5C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$340,000	\$0 - \$120,000	\$0 - \$220,000
<i>Construction Cost</i>	None	\$2,100,000 - \$2,500,000	\$790,000 - \$990,000	\$1,680,000 - \$1,950,000
<i>Total Estimated Cost</i>	None	\$2,100,000 - \$2,840,000	\$790,000 - \$1,110,000	\$1,680,000 - \$2,170,000
<i>Impacts to Right-of-Way</i>	None	Yes (36 parcels)	Yes (22 parcels)	Yes (23 parcels & 1 BLM parcel)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	No impacts
<i>Engineering Issues</i>	None	Steep terrain	Steep terrain	Steep terrain
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Improved air quality if paved	Improved air quality if paved	Improved air quality if paved
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 20 – Area 5: Dewey Road Alternatives

7.3.6 Area 6: New Road West of Agua Fria River

Old Black Canyon Highway is currently the only existing north-south route between SR 69 and the Agua Fria River. While much of Old Black Canyon Highway is paved, the segments north of Green Gulch Drive are privately owned. Old Black Canyon Highway connects to SR 169 near the SR 169/SR 69 intersection. If the Mortimer Family Farms parcel is developed, additional north-south circulation routes may be necessary, particularly ones that connect to SR 169 further east from where Old Black Canyon Highway currently connects to SR 169. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 21** and are described more fully below:

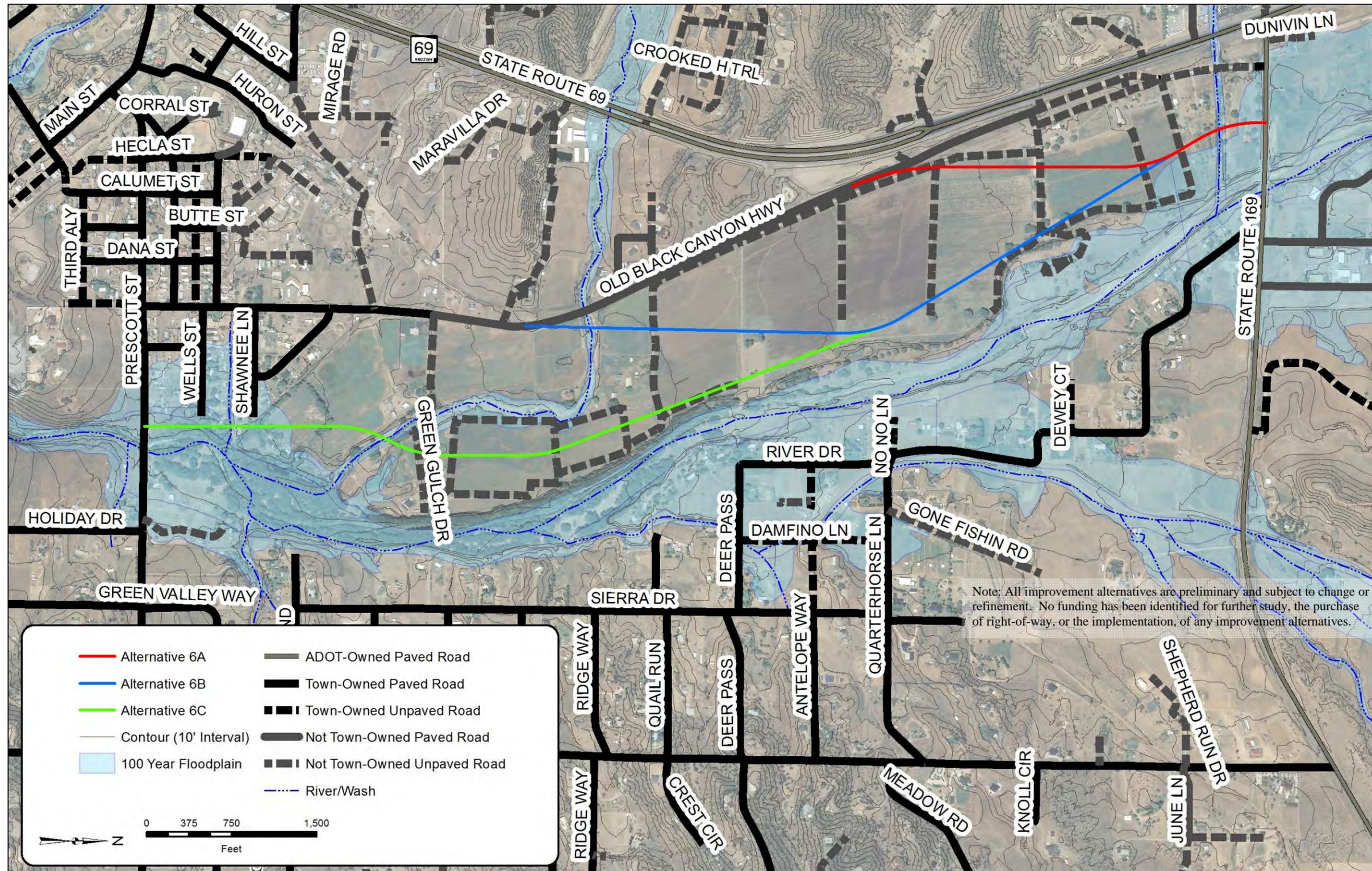
- *Alternative 6A* – This alternative diverges from Old Black Canyon Highway at roughly the theoretical intersection of No No Lane and Hecla Street and continues north and intersects SR 169 at an ADOT-approved planned access point. Other existing roadways currently intersecting SR 169 in the vicinity of this alternative should be considered for rerouting to tie into the new road west of the Agua Fria River so that intersections with SR 169 can be consolidated to the ADOT-approved planned access point along SR 169. The improvement alternative impacts five private parcels;
- *Alternative 6B* – This alternative diverges from Old Black Canyon Highway north of Green Gulch Drive and continues north parallel to the Agua Fria River until it joins with Alternative 5A just south of SR 169. The improvement alternative impacts five private parcels; and
- *Alternative 6C* – This alternative starts at the theoretical intersection of River Drive and Prescott Street and continues north parallel to the Agua Fria River until it joins with Alternative 5B. The improvement alternative impacts ten private parcels and two existing residences.

Table 25 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 25 – Evaluation of Area 6 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 6A	Alternative 6B	Alternative 6C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$190,000	\$0 - \$360,000	\$0 - \$720,000
<i>Construction Cost</i>	None	\$460,000 - \$690,000	\$900,000 - \$1,300,000	\$1,300,000 - \$2,000,000
<i>Total Estimated Cost</i>	None	\$460,000 - \$880,000	\$900,000 - \$1,660,000	\$1,300,000 - \$2,720,000
<i>Impacts to Right-of-Way</i>	None	Yes (5 parcels)	Yes (5 parcels)	Yes (10 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	Yes (2 residences)
<i>Engineering Issues</i>	None	None	None	Floodplain
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 21 – Area 6: New Road West of Agua Fria River Alternatives

7.3.7 Area 7: Sierra Drive Extension North

There is currently an offset in the Sierra Drive/Quarterhorse Lane/Cherry Circle intersection. Sierra Drive is not continuous between the Cherry Circle cul-de-sac and Foothill Drive. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 22** and are described more fully below:

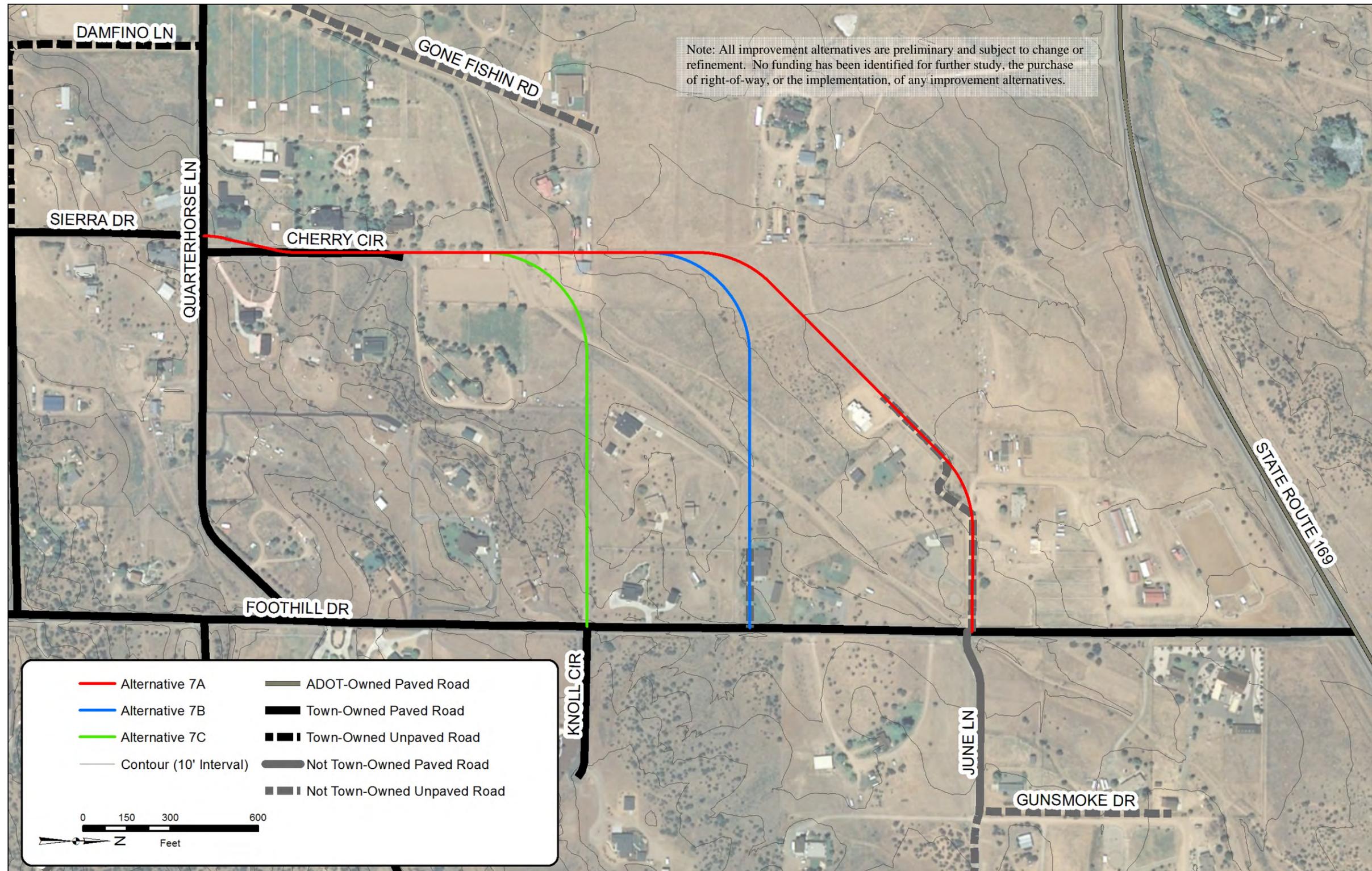
- *Alternative 7A* – This alternative begins at the Sierra Drive/Quarterhorse Lane intersection and provides a reverse curve that connects Sierra Drive to Cherry Circle and then continues north before bending east to intersect Foothill Drive at June Lane. The improvement alternative impacts eight private parcels;
- *Alternative 7B* – This alternative is similar to Alternative 6A except that it bends east to intersect Foothill Drive between Knoll Circle and June Lane. The improvement alternative impacts five private parcels; and
- *Alternative 7C* – This alternative is similar to Alternative 6A except that it bends east to intersect Foothill Drive at Knoll Circle. The improvement alternative impacts four private parcels.

Table 26 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 26 – Evaluation of Area 7 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 7A	Alternative 7B	Alternative 7C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$180,000	\$0 - \$160,000	\$0 - \$130,000
<i>Construction Cost</i>	None	\$370,000 - \$580,000	\$310,000 - \$470,000	\$240,000 - \$370,000
<i>Total Estimated Cost</i>	None	\$370,000 - \$760,000	\$310,000 - \$630,000	\$240,000 - \$500,000
<i>Impacts to Right-of-Way</i>	None	Yes (8 parcels)	Yes (5 parcels)	Yes (4 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	No impacts
<i>Engineering Issues</i>	None	None	None	None
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 22 – Area 7: Sierra Drive Extension North Alternatives

7.3.8 Area 8: Additional Agua Fria River Crossing

There are currently only two crossings of the Agua Fria River in the study area: a bridge on SR 169 and a low-flow at-grade crossing on Prescott Street. To improve circulation and access, three potential improvement alternatives have been developed to provide an additional at-grade crossing of the Agua Fria River. These alternatives are shown in **Figure 23** and are described more fully below:

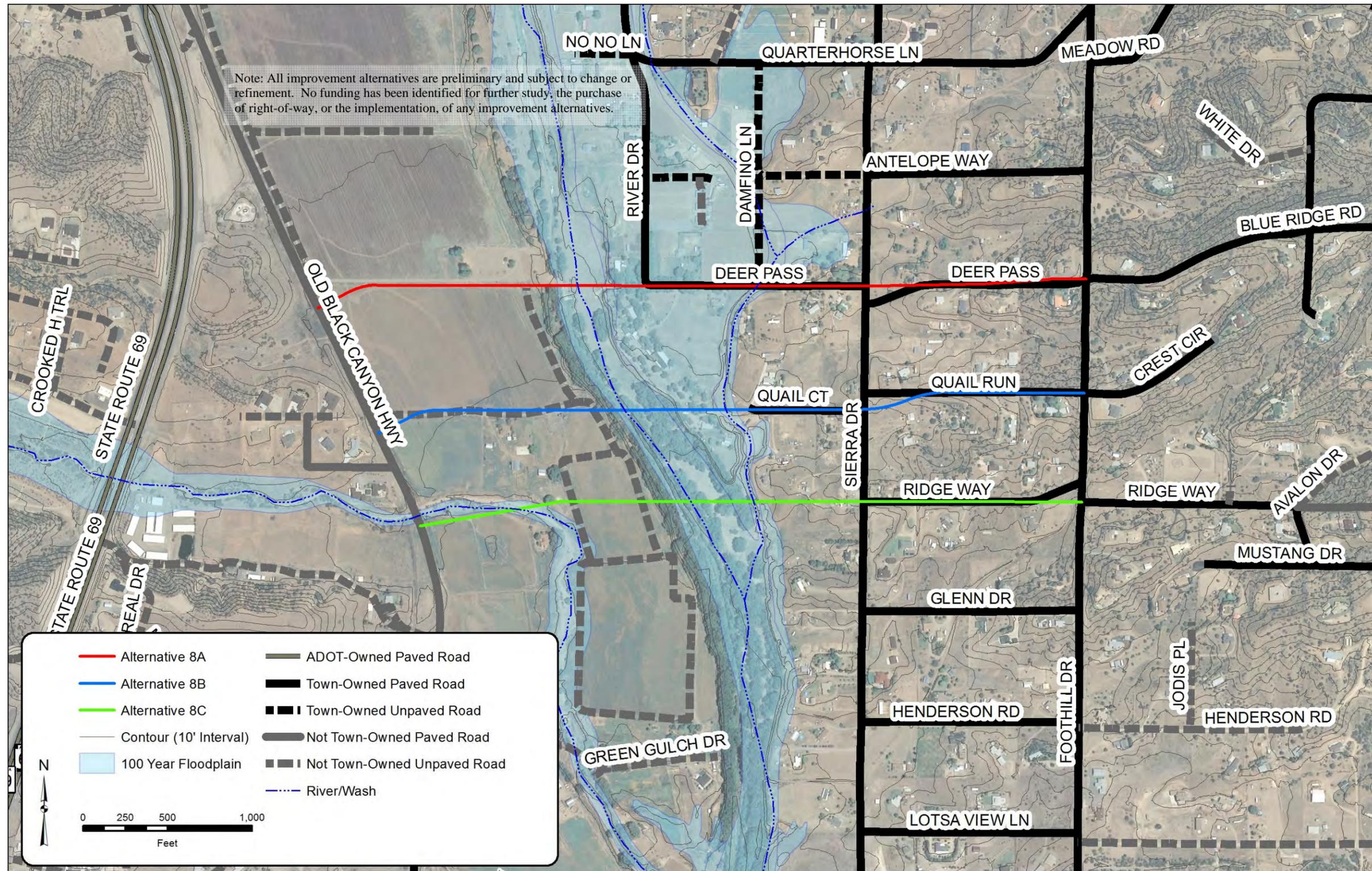
- *Alternative 8A* – This alternative provides a crossing of the Agua Fria River along the Deer Pass alignment that connects Old Black Canyon Highway and Foothill Drive. This alternative includes a realignment of Deer Pass where it approaches Sierra Drive from the east. The floodplain for the river is wide along the Deer Pass alignment. The improvement alternative impacts four private parcels;
- *Alternative 8B* – This alternative provides a crossing of the Agua Fria River along the Quail Run alignment that connects Old Black Canyon Highway and Foothill Drive. This alternative includes a realignment of Quail Run where it approaches Sierra Drive from the east. The improvement alternative impacts thirteen private parcels; and
- *Alternative 8C* – This alternative provides a crossing of the Agua Fria River along the Ridge Way alignment that connects Old Black Canyon Highway and Foothill Drive. This alternative includes a realignment of Ridge Way where it approaches Foothill Drive from the west. The floodplain for the river is relatively narrow along the Ridge Way alignment. The improvement alternative impacts eight private parcels.

Table 27 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 27 – Evaluation of Area 8 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 8A	Alternative 8B	Alternative 8C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$120,000	\$0 - \$130,000	\$0 - \$140,000
<i>Construction Cost</i>	None	\$800,000 - \$1,100,000	\$810,000 - \$1,060,000	\$820,000 - \$1,060,000
<i>Total Estimated Cost</i>	None	\$800,000 - \$1,220,000	\$810,000 - \$1,190,000	\$820,000 - \$1,200,000
<i>Impacts to Right-of-Way</i>	None	Yes (4 parcels)	Yes (13 parcels)	Yes (8 parcels)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	No impacts
<i>Engineering Issues</i>	None	Agua Fria River crossing	Agua Fria River crossing	Agua Fria River and wash crossing
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Improved air quality; potential adverse impacts to river	Improved air quality; potential adverse impacts to river	Improved air quality; potential adverse impacts to river
<i>Multimodal Compatibility</i>	No impacts	Improved connection across river	Improved connection across river	Improved connection across river

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 23 – Area 8: Additional Agua Fria River Crossing Alternatives

7.3.9 Area 9: Sierra Drive and Foothill Drive Connections

There is currently an offset in the rural minor collector comprised of Prescott Street, Green Valley Way, Bradshaw Road, and Foothill Drive. There is also a gap in Sierra Drive between Bradshaw Road and Trails End although there is existing Town right-of-way generally along the Sierra Drive alignment between Bradshaw Road and Trails End. While the existing roadway is continuous, it requires two turns in a short distance and is not direct. Town right-of-way generally exists along the Foothill Drive alignment between Bradshaw Road and Lazy River Drive. Three potential improvement alternatives have been developed. These alternatives are shown in **Figure 24** and are described more fully below:

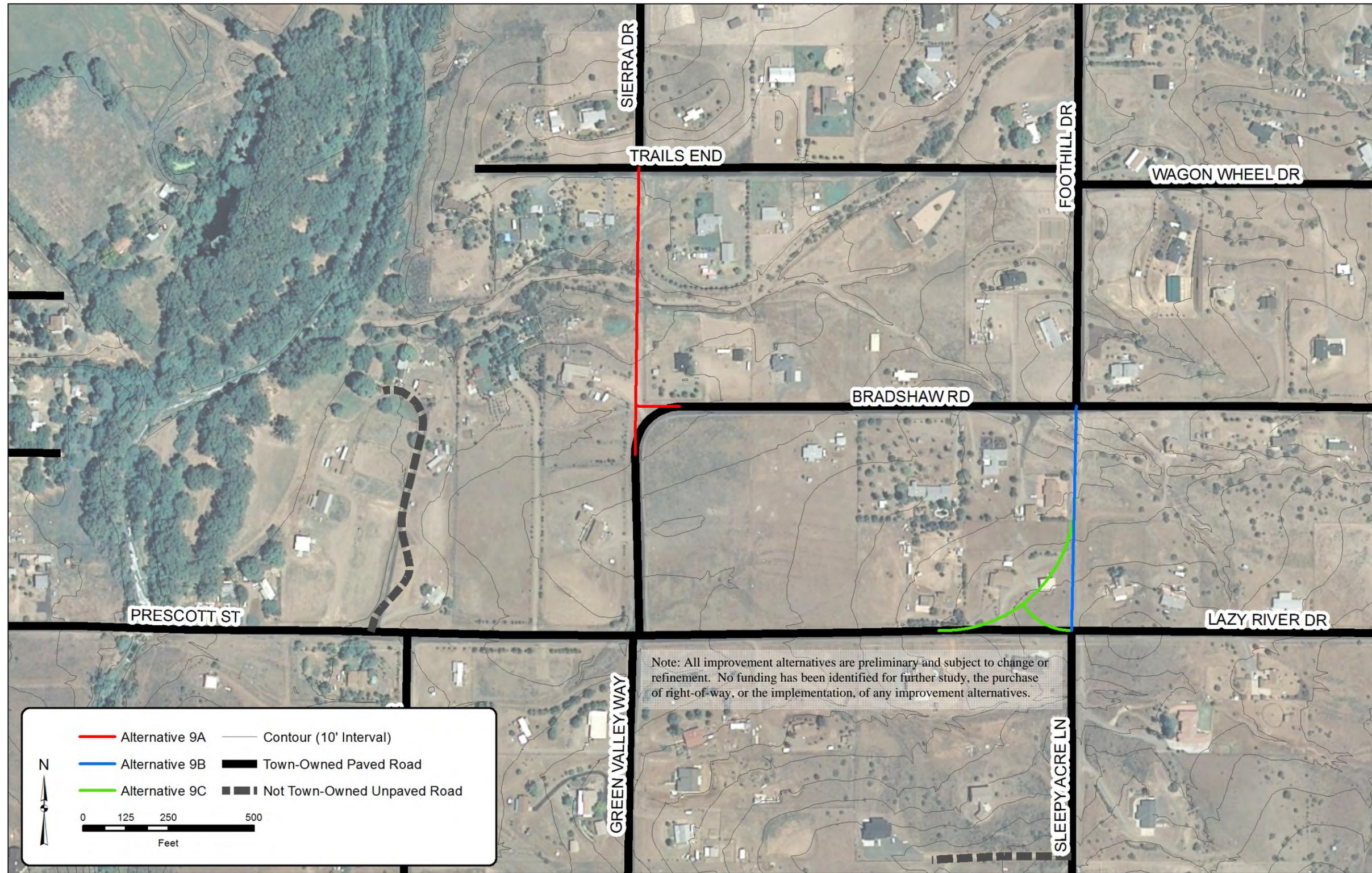
- *Alternative 9A* – This alternative begins at the Green Valley Way/Bradshaw Road intersection and continues north to intersect Sierra Drive at Trails End. The improvement alternative impacts one private parcel;
- *Alternative 9B* – This alternative begins at the Sleepy Acre Lane/Lazy River Drive intersection and continues north to the Bradshaw Road/Foothill Drive intersection. The improvement alternative impacts no private parcels; and
- *Alternative 9C* – This alternative begins west of the Sleepy Acre Lane/Lazy River Drive intersection and provides a curved roadway segment that connects to Foothill Drive south of the Bradshaw Road/Foothill Drive intersection. The improvement alternative impacts one private parcel and one residence.

Table 28 shows how the no-build alternative and the potential improvement alternatives perform in regards to the evaluation criteria.

Table 28 – Evaluation of Area 9 Alternatives

Evaluation Criteria	No-Build Alternative	Alternative 9A	Alternative 9B	Alternative 9C
<i>Meets Identified Need</i>	No	Yes	Yes	Yes
<i>Safety</i>	No impacts	Improved	Improved	Improved
<i>Right-of-Way Cost</i>	None	\$0 - \$10,000	\$0	\$0 - \$150,000
<i>Construction Cost</i>	None	\$120,000 - \$180,000	\$80,000 - \$130,000	\$100,000 - \$150,000
<i>Total Estimated Cost</i>	None	\$120,000 - \$190,000	\$80,000 - \$130,000	\$100,000 - \$300,000
<i>Impacts to Right-of-Way</i>	None	Yes (1 parcel)	No impacts	Yes (1 parcel)
<i>Impacts to Existing Businesses/Residences</i>	None	No impacts	No impacts	Yes (1 residence)
<i>Engineering Issues</i>	None	None	None	None
<i>Level of Service/Delay</i>	No impacts	Improved	Improved	Improved
<i>Accessibility/Mobility</i>	No impacts	Improved	Improved	Improved
<i>Network Continuity</i>	No impacts	Improved	Improved	Improved
<i>Environmental Impacts</i>	None	Minimal	Minimal	Minimal
<i>Multimodal Compatibility</i>	No impacts	No impacts	No impacts	No impacts

Source: Kimley-Horn and Associates, Inc.

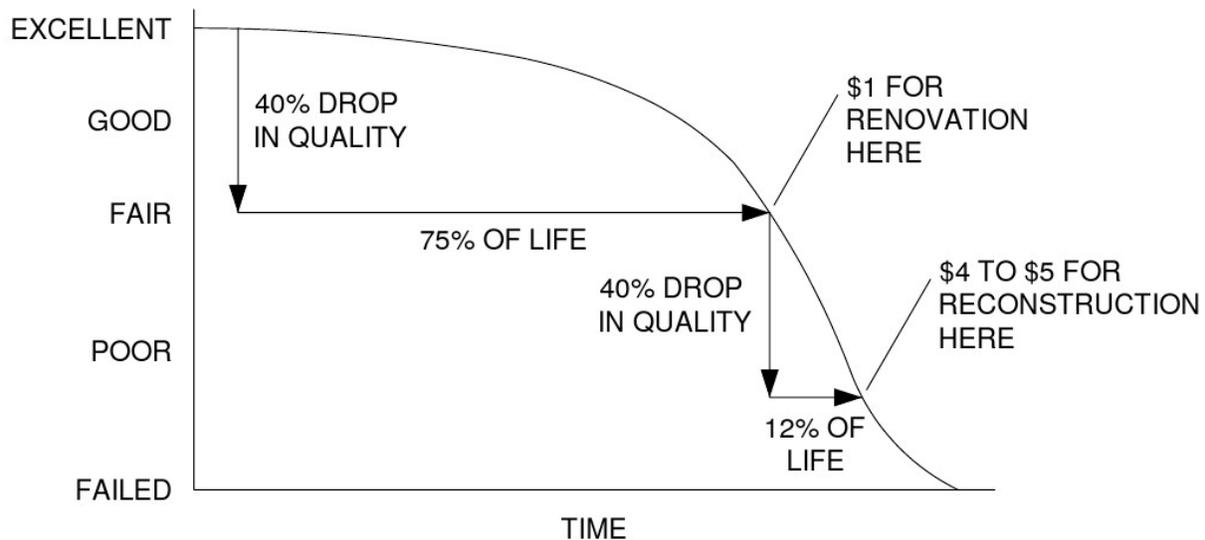


Source: Kimley-Horn and Associates, Inc.

Figure 24 – Area 9: Sierra Drive and Foothill Drive Connections Alternatives

7.4 Pavement Maintenance

Pavement generally deteriorates over time regardless of the level of traffic and maintenance activities. Pavement typically performs well over the first 75 percent of the pavement’s life, but deterioration rapidly accelerates during the final 25 percent of the pavement’s life, as shown in **Figure 25**. Although it’s difficult to determine the “positive signal” at the juncture between the first 75 percent and the final 25 percent, this point generally occurs as the pavement condition deteriorates from Fair to Poor. Proactive maintenance activities can prolong pavement life cycle spans, thus requiring less capital expenditure.



Source: Kimley-Horn and Associates, Inc.

Figure 25 – Pavement Life Cycle

The level of deterioration and resulting future pavement condition for the roadway segments identified within the Town are dependent upon various factors including climate, traffic, and general site conditions. There are many pavement sections within the Town that are in Fair condition but approaching the point at which the rate of deterioration is likely to increase more rapidly if preventive maintenance activities are not conducted in the near-term to slow the rate of deterioration. Once the pavement has deteriorated to a rating of Poor or Failed, applying preventive maintenance activities, such as crack sealing, patching, or surface treatments, is likely not cost-effective. If preventive maintenance activities are not routinely conducted, costly major rehabilitation activities such as mill/replace or reconstruction are likely to be required.

Taking a proactive approach in managing the overall condition of the pavement network and applying maintenance and rehabilitation activities at the appropriate time will allow the Town to make cost-effective decisions and protect their investment in the roadway network. It is important that the Town make maintenance and rehabilitation decisions that consider the underlying cause of the pavement deterioration so that repairs will restore the expected useful life of the pavement.

8 RECOMMENDED IMPROVEMENTS

Based on the evaluation criteria and considerations described previously, recommended improvements have been developed to address the study area's identified current and future needs. Similar individual recommended improvements are grouped by type of improvement and are discussed below.

It should be noted that all recommended improvements are preliminary and subject to change or refinement. No funding has been identified for further study, the purchase of right-of-way, or the implementation, of any improvements.

8.1 Roadways

This section discusses the roadway improvements recommended to address identified needs. Whenever feasible, these roadway improvements should incorporate complete streets concepts and be constructed in conjunction with multimodal improvements. The recommended roadway improvements are grouped in the categories below by type of roadway improvement:

- Roadway network improvements;
- Safety;
- Improving existing unpaved roadways;
- Pavement maintenance and rehabilitation plan;
- Intersection traffic control improvements;
- Federal functional classification changes;
- Agua Fria River all-weather crossing;
- Traffic impact guidelines;
- Access management; and
- Roadway improvement easements.

8.1.1 Roadway Network Improvements

Due to a lack of design-level data, anticipated difficulties in acquiring necessary right-of-way, potential engineering constraints, limited Town financial resources, and potential public opposition, additional study and public input will be necessary to determine a recommended roadway network improvement alternative in the nine aforementioned Areas. The roadway network alternatives evaluation included in the previous section of this document provides a series of network improvement options for more detailed consideration in the future.

8.1.2 Safety

To further promote safety and driver comfort, it is recommended that curve ahead warning signs with 10 mph advisory speed plaques be installed in both directions on Henderson Road approximately 100 feet in advance of the curve just east of Martha Way. The estimated sign installation cost, including the cost for each sign, post, and foundation, is \$500 on each approach, for a total estimated cost of \$1,000.

8.1.3 Improving Existing Unpaved Roadways

Improving the following existing unpaved roadways to all-weather roadways within the study area is recommended:

- Dewey Road (0.63 miles, steep terrain) – Prescott Dells Ranch Road to 500 feet east of Stump Road (the end of the Area 5 network improvement alternatives);
- Prescott Dells Ranch Road (0.84 miles, level terrain) – Rocky Hill Road to SR 69;

- Rocky Hill Road (0.80 miles, steep terrain) – 0.5 miles east of Martha Way (the end of the Area 4 network improvement alternatives) to Prescott Dells Ranch Road;
- Cranberry Road (0.15 miles, rolling terrain) – Smoki Trail to Tonto Drive (the end of the Area 4 network improvement alternatives);
- Martha Way (0.07 miles, rolling terrain) – 350 feet north of Rocky Hill Road (the end of the existing paved portion of Martha Way) to Rocky Hill Road; and
- Meadow Road (0.44 miles, rolling terrain) – Meadow Ranch Place to Tanya Boulevard.

All-weather roadway surfaces can be developed by upgrading the existing unpaved surface (i.e., improved grading), paving the surface with chip-seal, or paving the surface with asphalt. Improving the identified roadways is assumed to cover the width of the existing unpaved roadway, which is generally 18 to 24 feet wide and accommodates one travel lane in each direction. Graded shoulders and minor drainage improvements are assumed to be included in all three all-weather roadway surface options.

Right-of-way or easements will need to be secured for Dewey Road, Prescott Dells Ranch Road, and Rocky Hill Road before improving these roadways can begin.

The limits of these recommended roadway surface improvement projects tie into the roadway network improvement alternatives described in the previous section of this document. The roadway surface improvement limits and cost may vary based on the implementation of roadway network improvements.

8.1.4 Pavement Maintenance and Rehabilitation Plan

Two types of recommended activities, preventive maintenance and rehabilitation, will provide the Town with the framework and general guidelines to follow when making decisions regarding the maintenance of pavement infrastructure.

Preventive Maintenance Recommendations

Preventive maintenance recommendations are typically divided into two sub-categories that include stop-gap (safety) and preventive maintenance. Stop-gap maintenance activities address safety issues, such as high-severity potholes, for roadways that are either significantly deteriorated and funding is not available for rehabilitation, or to address localized areas of failure for roadways that are in Good condition. It is imperative that the Town have an annual budget to address stop-gap needs when necessary.

Preventive maintenance activities slow the rate of deterioration for pavement sections that are in Good condition. The application of preventive maintenance activities to deteriorated pavement sections is typically very expensive and not cost-effective. Preventive maintenance activities that should be considered by the Town include, but are not limited to, crack sealing, patching, and surface treatments. Surface treatments are typically applied on an interval basis (e.g., every five years) and each treatment results in an increase in life of the pavement section.

Surface treatments such as a fog seal or chip seal are used primarily to slow the rate of deterioration and extend the life of the pavement. These treatments are most cost-effective when applied to a pavement section that is not significantly deteriorated and is mainly exhibiting climate-related distresses such as longitudinal cracking or weathering and raveling. Applying a surface treatment to a segment of roadway pavement that is exhibiting load-related distress is not correcting the underlying deficiency in the pavement. It is strongly recommended that the existing condition and distress types present prior to the application of a surface treatment be evaluated to determine if such a treatment is a cost-effective maintenance alternative.

It is recommended that the Town initially consider preventive maintenance activities such as crack sealing and patching for pavements between three and five years old and surface treatments for pavements between six and ten years old or when a pavement reaches a condition rating of Good with the

predominate distress types being climate-related. Surface treatments can be considered for segments with a condition rating of Poor if the amount of load-related distress is limited; however, surface treatments should not be considered for segments with a condition rating of Failed. **Table 29** provides general guidelines for the application of preventive maintenance treatments and approximate unit costs.

Table 29 – Dewey-Humboldt Preventive Maintenance Strategies

Preventive Maintenance Activity	2011 Pavement Condition Rating	Approximate Age at Initial Treatment (Years)	Treatment Interval (Years)	Estimated Unit Cost
Asphalt Crack Sealing	2 or greater	3 - 5	3 - 5	\$1.00/linear foot
Asphalt Patching - As Necessary	Varies	As necessary	As necessary	\$2.00/square foot
Surface Treatment - Fog Seal	1 or greater	3 - 5	3 - 5	\$0.07/square foot
Surface Treatment - Chip Seal	2 or greater*	6 - 10 [#]	5 - 7	\$0.20/square foot

* Not to exceed a rating of 4 and consider distress types present

Age at initial treatment should be dependent on condition and distress types present

Source: Kimley-Horn and Associates, Inc.

If preventive maintenance activities are applied at the proper time, an annual preventive maintenance budget of approximately \$200,000 is anticipated to be sufficient to address the needs of the Town. These needs may fluctuate annually based on weather and traffic conditions – therefore a system-wide evaluation should be performed every three to five years.

Major Rehabilitation Recommendations

Major rehabilitation is recommended to correct or improve structural deficiencies and/or functional deterioration within a pavement network. Major rehabilitation should be considered when a segment of pavement has deteriorated to a point where preventive maintenance activities are no longer cost-effective.

For the purposes of this study, major rehabilitation activities should be considered necessary for a roadway with a rating of Poor or Failed or if the pavement is exhibiting a high percentage of load-related distress. Generally, a high percentage of load-related distress indicates that the pavement may be structurally deficient or that the traffic being applied is different than what the pavement was designed to accommodate.

In the case of Dewey-Humboldt, the rolling topography, numerous low-water crossings, poor ditch conditions, and areas of inadequate drainage can contribute to structural deterioration where water has infiltrated the underlying support soils and weakened them, resulting in a lack of subgrade support. It is recommended that the Town not only address the pavement condition during rehabilitation activities but also the surrounding site conditions, including drainage.

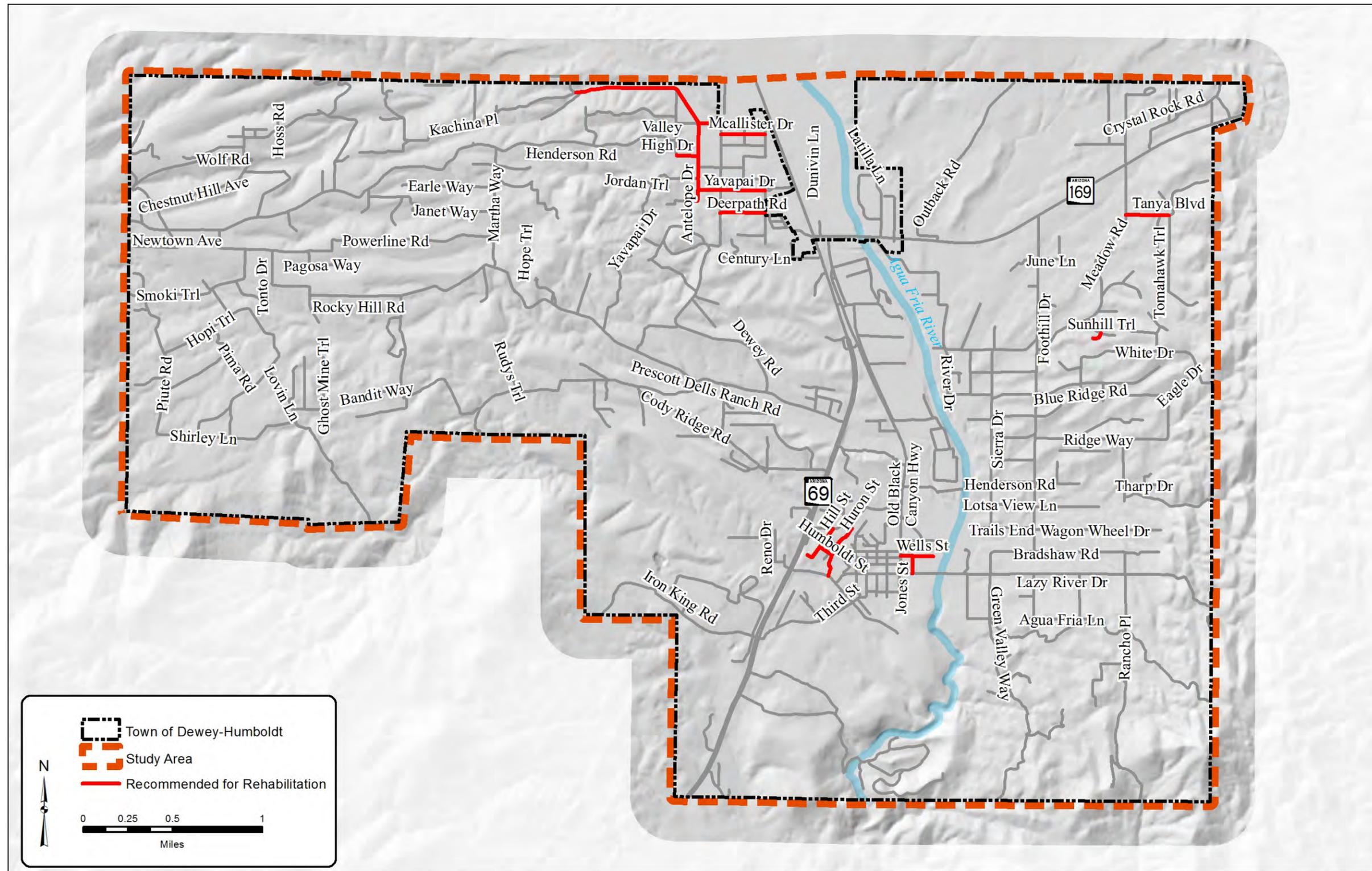
It is recommended that roadway segments with a rating of Failed be slated for rehabilitation in the near-term implementation phase. The locations, dimensions, and approximate cost of these segments are summarized in **Table 30** and their locations are shown in **Figure 26**. The Town should prioritize the rehabilitation of these roadway segments based on overall importance to the Town's roadway infrastructure. Generally speaking, all roadway segments with a current condition rating of Poor should be considered for rehabilitation in the mid-term or long-term implementation phases.

The costs presented include only those costs associated with rehabilitation and do not account for soft costs such as engineering design, administration costs, or construction administration costs. These costs should be considered separately for planning purposes.

Table 30 – Near-term Pavement Rehabilitation Recommendations

Road Name	From	To	Length (miles)	Width (ft)	Area (ft ²)	Approximate Cost of Rehabilitation (\$)
Antelope Dr.	Kachina Pl.	Deerpath Rd.	0.501	20	52,906	106,000
Deerpath Rd.	Dewey Rd.	Manzanita Blvd.	0.385	20	40,656	82,000
Hill St.	Kloss Av.	S. Sub. Bdry.	0.204	20	21,542	44,000
Humboldt St.	Huron St.	Hill St.	0.09	20	9,504	20,000
Huron St.	Main St.	End	0.316	20	33,370	67,000
Jones St.	Prescott St.	Wells St.	0.097	20	10,278	21,000
Kachina Pl.	SR 69	Nancy Ln.	1.193	26	163,775	328,000
McAllister Dr.	Dewey Rd.	Manzanita Blvd.	0.237	20	25,027	51,000
Sunhill Tr.	Cherry Siding Ln.	End	0.065	20	6,864	14,000
Tanya Blvd.	Clearview Dr.	End	0.241	20	25,422	51,000
Valley High Dr.	Antelope Dr.	Pony Pl.	0.253	20	26,717	54,000
Wells St.	Old Blk. Cyn. Hwy.	End	0.183	20	19,311	39,000
Yavapai Dr.	Antelope Dr.	Manzanita Blvd.	0.506	20	53,434	107,000
Total						984,000

Source: Kimley-Horn and Associates, Inc.



Source: Kimley-Horn and Associates, Inc.

Figure 26 – Pavement Rehabilitation Recommendations

8.1.5 Intersection Traffic Control Improvements

The SR 69 and SR 169 roadways are under ADOT jurisdiction as part of the state highway system. The following improvements are recommended for consideration by ADOT.

It is recommended that ADOT consider providing additional signal heads for the SR 69 approaches and convert the SR 69 southbound left-turn phasing to protected-only phasing at the SR 69/SR 169 intersection.

It is recommended that ADOT consider regularly monitoring the existing signalized intersections of SR 69/SR 169 and SR 69/Kachina Place and make adjustments as needed to the traffic signal timing, phasing, or coordination with adjacent signalized intersections to maintain acceptable traffic operations.

It is recommended that ADOT consider conducting a traffic signal warrant and roundabout study within the next 5-10 years at the existing SR 69/Main Street intersection if traffic volumes continue to increase. If the study determines that a traffic control change is warranted, a traffic signal or roundabout should be installed at the SR 69/Main Street intersection. If the study determines that a traffic control change is not warranted yet, the SR 69/Main Street intersection should be monitored regularly thereafter to identify when conditions warrant a traffic control change.

It is recommended that ADOT consider regularly monitoring the existing unsignalized intersection of SR 169/Foothill Drive and conduct a traffic signal warrant and roundabout study within the next 15-20 years if traffic volumes continue to increase. If the study determines that a traffic control change is warranted, a traffic signal or roundabout should be installed at the SR 169/Foothill Drive intersection. If the study determines that a traffic control change is not warranted yet, the SR 169/Foothill Drive intersection should be monitored regularly thereafter to identify when conditions warrant a traffic control change.

If large-scale development is proposed on the northeast or southeast corner of the SR 69/SR 169 intersection, it is recommended that ADOT and the Town consider requiring that the developer prepare a traffic signal warrant study, if applicable, for a potential signalized access point on SR 169 just west of the Agua Fria River.

8.1.6 Federal Functional Classification Changes

It is recommended that the following changes be made to the federal functional classification of roadways in the existing roadway network:

- Reclassify as Rural Major Collectors the existing Rural Minor Collectors east of SR 69 and south of SR 169 (i.e., segments of Main Street, Prescott Street, Green Valley Way, Bradshaw Road, and Foothill Drive);
- Reclassify as Rural Major Collectors the existing Rural Minor Collectors west of SR 69 and east of Martha Way (i.e., segments of Henderson Road, Pony Place, Horseshoe Lane, and Kachina Place); and
- Classify as a Rural Minor Collector the segment of Henderson Road/Newtown Avenue between Wicklow Place and Martha Way.

If the recommended roadway surface improvements and proposed roadway network improvements are constructed, it is recommended that the following roadway segments be functionally classified as Rural Minor Collectors:

- Prescott Dells Ranch Road between SR 69 and Rocky Hill Road;
- Rocky Hill Road between Prescott Dells Ranch Road and Tonto Drive;
- Tonto Drive between Rocky Hill Road and Cranberry Road;
- Cranberry Road between Tonto Drive and Wicklow Place;

- Wicklow Place between Cranberry Road and Newtown Avenue;
- Martha Way between Henderson Road and Rocky Hill Road; and
- Dewey Road between Prescott Dells Ranch Road and Kachina Place.

If Foothill Drive is constructed between Bradshaw Road and Prescott Street/Lazy River Drive, it is recommended that this segment of Foothill Drive, along with Prescott Street/Lazy River Drive between Green Valley Way and Foothill Drive, be classified as Rural Major Collectors because these two segments would serve as the connectors between Prescott Street and Foothill Drive. Correspondingly, the segments of Green Valley Way and Bradshaw Road that had previously served as the connectors between Prescott Street and Foothill Drive should at that time be reclassified as local roads.

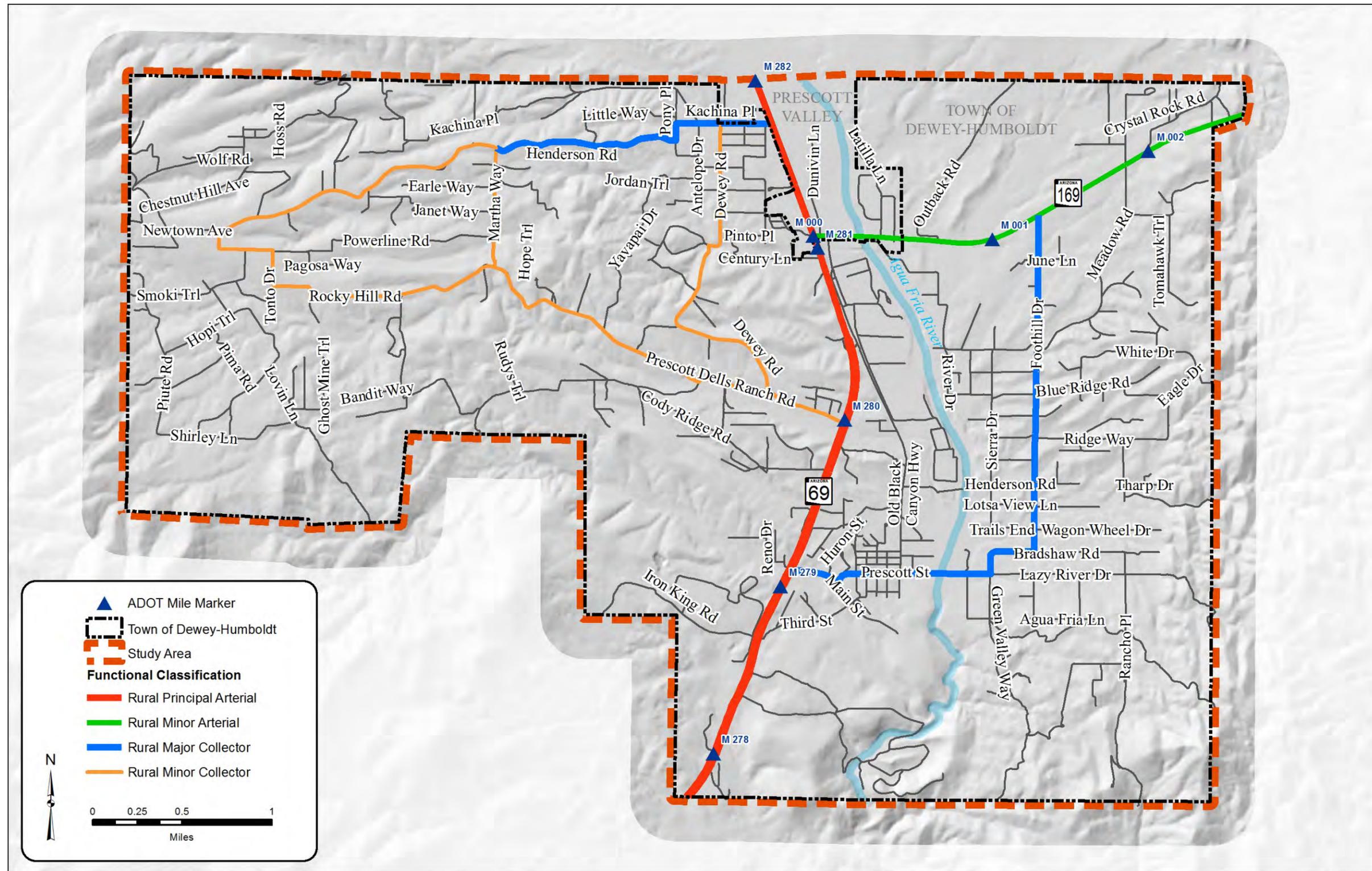
Figure 27 shows the recommended federal functional classifications for the study area roadway network, assuming the recommended roadway surface improvements and proposed roadway network improvements are constructed. When the Town reaches a population of 5,000, it is recommended that the roadways with federal functional classifications be reclassified as “urban” instead of “rural” roadways to be consistent with federal guidelines.

8.1.7 Agua Fria River All-weather Crossing

Construction of an all-weather crossing of the Agua Fria River is recommended at the location of the existing low-flow at-grade crossing along Prescott Street to improve circulation and emergency vehicle access. The current condition includes a paved roadway that crosses six 30-inch corrugated metal pipes that are often filled with silt and thus have reduced capacity. Significant rainfall can cause the pipes to reach capacity, which forces the river to flow over the roadway. The roadway is typically not traversable a few days per year due to water flowing over the pavement.

In January 2008, the Town completed the Report on Agua Fria River Crossing at Prescott Street. This report presented the following six potential improvement alternatives for crossing the Agua Fria River at Prescott Street and provided construction cost estimates that do not include design costs:

- *Alternative A* – This alternative includes a bridge crossing that has a capacity of 48,600 cubic feet per second (cfs) (capable of handling a 100-year flood event) and an approximate construction cost estimate of \$3,500,000;
- *Alternative B* – This alternative includes a reinforced concrete box culvert crossing with 7 barrels that has a capacity of 39,000 cfs (capable of handling a 50-year flood event) and an approximate construction cost estimate of \$2,300,000;
- *Alternative C* – This alternative includes a reinforced concrete box culvert crossing with 9 barrels that has a capacity of 20,160 cfs (capable of handling a 10-year flood event) and an approximate construction cost estimate of \$900,000;
- *Alternative D* – This alternative includes a box culvert crossing with 6 barrels that has a capacity of 4,020 cfs (capable of handling a 2-year flood event) and an approximate construction cost estimate of \$575,000;
- *Alternative E* – This alternative includes a corrugated metal pipe culvert crossing with 10 pipes that has a capacity of 4,000 cfs (capable of handling a 2-year flood event) and an approximate construction cost estimate of \$400,000; and
- *Alternative F* – This alternative includes a corrugated metal pipe culvert crossing with 8 pipes that has a capacity of 2,240 cfs (capable of handling a 1-year flood event) and an approximate construction cost estimate of \$350,000.



Source: Kimley-Horn and Associates, Inc.

Figure 27 – Recommended Federal Functional Classifications

The Town's report does not provide a recommendation on which alternative should be implemented, but it does note that Alternatives D, E, and F would still result in frequent overtopping of the roadway during significant rainfall events. Because of the identified need for reliable circulation and emergency vehicle access at this crossing, it is recommended that only Alternatives A, B, and C be considered acceptable improvement alternatives.

For purposes of this study, Alternative C (the reinforced concrete box culvert that handles a 10-year flood event) is recommended for inclusion in the study's improvement plan as the preliminary recommended alternative because it is the least expensive alternative that still addresses the need for reliable circulation and emergency vehicle access. It is recommended that the Town consider conducting a more detailed alternatives analysis as part of the project design that includes input from the Yavapai County Flood Control District and the public regarding the advantages and disadvantages of providing for the 50-year flood or the 100-year flood instead of the 10-year flood before determining the final recommended alternative. The estimated cost for design of Alternative C is assumed to be 20 percent of the construction cost (i.e., \$180,000).

8.1.8 Traffic Impact Study Guidelines

It is recommended that traffic impact study guidelines be developed by the Town. The purpose of a traffic impact study is to assist the Town in understanding the demands and impacts placed on the Town's transportation network by proposed development. Development, such as new subdivisions and businesses, generates traffic. The traffic impact study should determine if additional investments in the transportation network are required as a result of the development, including new roads, traffic signals, or turn lanes. A draft of possible traffic impact guidelines can be found in **Appendix I**.

8.1.9 Access Management

Access management refers to managing where and how often driveways and cross-streets can access a particular roadway as well as where and in what direction drivers can turn into or out of access points. On high-speed, high-volume roadways where the primary function is moving traffic (such as SR 69 and SR 169), access control is critical to providing safe and efficient traffic operations. On low-speed, low-volume roadways where the primary function is providing access to the adjacent land (such as the Town's roadways), access control is still important but does not have to be as stringent.

In 1997, ADOT completed access management plans (AMPs) for SR 69 and SR 169. The SR 69 AMP covers SR 69 from the SR 69/SR 89 interchange in Prescott to the I-17 Cordes Junction interchange. Relevant excerpts from the SR 69 AMP can be found in **Appendix J**. The SR 169 AMP covers SR 169 from the SR 69/SR 169 intersection in Dewey-Humboldt to the SR 169/I-17 interchange. Relevant excerpts from the SR 169 AMP can be found in **Appendix K**.

The general access management policies for SR 69 and SR 169 that are listed in the SR 69 and SR 169 AMPs include the following:

- Traffic signals will only be installed at major intersections when warranted;
- Only right-in, right-out and left-in access will be permitted at non-major intersections;
- Any median openings at other than dedicated roads would have to be applied for through the ADOT Regional Traffic Engineer;
- Exclusive left and right turn lanes will be required at all intersections;
- If needed, a local street network should be constructed to provide access to streets that have signalized intersections with SR 69 or SR 169;
- Existing driveway access points should be eliminated or consolidated as redevelopment occurs; and
- No new driveways will be permitted.

The SR 69 and SR 169 AMPs indicate that requests for new access to SR 69 or SR 169 should go through the following access application procedure:

- The County or municipality informs ADOT of pending developments as soon as possible. This should occur through written notification to the ADOT District Engineer;
- ADOT and the municipality agree on the access which will be allowed under the respective AMP;
- Following ADOT Traffic Impact Study Guidelines, a traffic impact study is prepared by the developer for the development. In addition to the information required under the guidelines, the impact study should include the type of access requested relative to the allowable access, the type of proposed traffic control, the distance to the nearest traffic signal in both directions, and alternative access available, and the need, if required, for any variances to the AMP; and
- The ADOT District Permits Engineer, in coordination with the ADOT Regional Traffic Engineer and local government, approves or denies access requests.

Other relevant recommendations pertaining to SR 69 and/or SR 169 that have been extracted from the SR 69 and SR 169 AMPs include:

- The SR 69/Main Street intersection is identified as a suitable location for a traffic signal if traffic signal warrants are met;
- Raised medians should be considered to alleviate safety concerns where applicable;
- The existing Old Black Canyon Highway driveway on SR 169 should be closed or limited to right-in/right-out access;
- SR 169 between SR 69 and just east of Foothill Drive should ultimately be improved to a four-lane divided highway with a raised median;
- SR 169 between Foothill Drive and the eastern Town limits may ultimately become a four-lane divided roadway;
- River Drive and Outback Drive should be realigned into a single access point east of the medical center on SR 169; and
- Suitable locations for future median breaks on SR 169 include the Mortimer Family Farm driveway (approximately 0.2 miles east of SR 69), the fire station (for emergency vehicle use only), the realigned River Drive, Foothill Drive and Wind River Drive/Clearview Drive.

It is recommended that the Town develop access management guidelines for Town-owned local roads and collector streets. Some policies related to access management are sprinkled throughout the Town's ordinances (such as the requirement that driveways must be located a minimum of 25 feet from the road radius for two intersecting streets), but there is no single location that provides guidance on access management. Access management guidelines should include guidance on topics such as the following:

- Consolidating driveways;
- Sight distance and corner clearance requirements for driveways and cross-streets;
- Driveway dimensions and orientations;
- Driveway and cross-street locations and spacing;
- Number of driveways per property;
- Shared driveways and cross-access;
- Raised median islands;
- Left-turn and right-turn lanes and storage lengths; and
- Traffic signal spacing.

8.1.10 Roadway Improvement Easements or Dedications

Roadway improvement easements or dedications are recommended as an interim right-of-way ownership solution in areas where roadways are privately-owned and in need of maintenance but private landowners do not have the ability to maintain or improve the roads. A voluntary roadway easement or dedication would allow the Town to implement roadway network improvements without having to purchase the privately-owned right-of-way where many of the existing unpaved roadways are located.

8.2 Other Modes of Travel

The recommendations for other modes of travel focus on providing a safe and efficient environment for transit and non-vehicular (e.g., bicycle and pedestrian) travel. The implementation of complete streets concepts will help provide the necessary facilities for these other modes of travel. Recommended improvements to serve these other modes of travel are discussed below and shown in **Figure 28**. Some of these improvements may overlap recommended roadway surface improvements and proposed roadway network improvements and should be constructed in conjunction with the roadway improvements.

8.2.1 Transit

Private transit providers should be encouraged to continue serving the area, particularly disadvantaged populations. Mobility management coordination with CYMPO and other regional transit representatives is recommended to ensure that available transit options are known to the Town and its residents.

It is recommended that the Town coordinate with NACOG to determine if the voucher program's administrative issues can be resolved such that the voucher program can be reinstated in the Town.

If a regional transit system operated by CYMPO is created in the future, it is recommended that the Town actively support the system.

8.2.2 Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are recommended along existing and new roadways in the study area, where feasible. Any new facilities that are constructed should comply with the latest ADA requirements.

Sidewalks are recommended in urban areas near schools or other areas of pedestrian activity. Curb and gutter could be installed in conjunction with the sidewalk to further promote safety and improve drainage.

Sidewalks are recommended along the following roadway segments:

- Huron Street – Main Street to the end of the existing pavement;
- Hecla Street – Prescott Street to Humboldt Elementary School;
- Corral Street – Prescott Street to Humboldt Elementary School;
- Prescott Street – Main Street to Sierra Drive; and
- Main Street – SR 69 to Third Street.

8.2.3 Trail Facilities

Unpaved shared-use trails or paths are recommended along existing and new roadways in the study area, particularly in rural areas. These facilities should accommodate pedestrians, bicyclists, and recreational travelers (e.g., hikers and equestrians) and should be completed in conjunction with roadway improvement projects where feasible.

Trails that are at least four feet wide are recommended along the following existing roadways to create a network of trails generally consistent with the Town's OSAT Plan:

- Lazy River Drive between Sierra Drive and the eastern Town boundary;
- Newtown Avenue/Henderson Road/Horseshoe Ln/Kachina Place between the western Town boundary and SR 69;
- Rocky Hill Road/Tonto Drive between Newtown Avenue and SR 69;
- Martha Way between Rocky Hill Road and Henderson Road;
- Blue Ridge Road between Sierra Drive and the eastern Town boundary;
- Deer Pass between SR 69 and Sierra Drive;
- Old Black Canyon Highway/new roadway between Prescott Street and SR 169;
- Quarterhorse Lane between River Drive and Meadow Road;
- River Drive between SR 169 and Quarterhorse Lane;
- SR 169 between the new roadway east of Old Black Canyon Highway and River Drive;
- Agua Fria River between SR 169 and Kachina Place;
- Kachina Place between SR 69 and Agua Fria River; and
- Sierra Drive between Lazy River Drive and Quarterhorse Lane.

The proposed trails that are new recommendations beyond what it is shown in the Town's OSAT Plan are:

- Martha Way between Rocky Hill Road and Henderson Road;
- Blue Ridge Road between Sierra Drive and the eastern Town boundary;
- Deer Pass between SR 69 and Sierra Drive;
- Old Black Canyon Highway/new roadway between Prescott Street and SR 169;
- SR 169 between the new roadway east of Old Black Canyon Highway and River Drive;
- Agua Fria River between SR 169 and Kachina Place; and
- Kachina Place between SR 69 and Agua Fria River.

There are also some trails in the Town's OSAT Plan that are not listed as recommended trails herein only because they are considered lower priority trails and are likely beyond the implementation timeframe of this study.

8.2.4 Safe Routes to School

The federal Safe Routes to School (SRTS) Program makes federal funding available with no local funding match required for a wide variety of programs and projects – from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle safely to school. The maximum grant amount for individual local projects is \$400,000. It is recommended that the Town coordinate with the Humboldt School District to examine conditions in the vicinity of school facilities and submit applications for SRTS funding as appropriate.

9 PLAN FOR IMPROVEMENTS

An implementation plan has been developed to prioritize the recommended improvements into near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) timeframes. The actual phasing of implementation of the recommended improvements will be determined by a variety of factors, including funding availability, development activity, traffic patterns, and private participation. The need for improvements should be re-evaluated each year as part of the Town's budget processes or as needed if conditions and travel patterns change significantly.

Table 31, Table 32, and Table 33 present the implementation plan, split into near-term, mid-term, and long-term timeframes. The cost estimates in 2012 dollars are:

- Near-term: \$3.3-\$3.8 million;
- Mid-term: \$16.5-\$23.3 million;
- Long-term: \$9.2-\$15.2 million; and
- Total implementation plan cost: \$29.0-\$42.3 million.

These costs include design, construction, and right-of-way costs. Ranges are provided for the construction costs to reflect the likely low-end and high-end cost options, which will depend on what alignment and/or level of improvement is implemented (e.g., for roadway surface improvements, providing an unpaved roadway surface with improved grading and minor drainage improvements would be at the low end of the cost range while providing a paved asphalt roadway surface would be at the high end of the cost range). Ranges are also provided for right-of-way costs where it appears right-of-way could either be purchased or obtained at no cost via voluntary easement or dedication. Partnering between agencies to share costs and responsibilities may be appropriate for certain improvements.

The overall transportation improvement plan, combining the near-term, mid-term, and long-term elements, is shown in **Figure 29**.

Table 31 – Recommended Near-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$)	Construction Cost (\$)	Total Cost (\$)
Roadway Projects				
Area 1 Henderson Road/Martha Way Curve	Install curve warning signs with 10 mph plaque	-	1,000	1,000
Antelope Dr.: Kachina Pl.-Deerpath Rd.	Rehabilitate roadway pavement	-	106,000	106,000
Deerpath Rd.: Dewey Rd.-Manzanita Blvd.	Rehabilitate roadway pavement	-	82,000	82,000
Hill St.: Kloss Ave.-end of Hill St.	Rehabilitate roadway pavement	-	44,000	44,000
Humboldt St.: Huron St.-Hill St.	Rehabilitate roadway pavement	-	20,000	20,000
Huron St.: Main St.-end of Huron St.	Rehabilitate roadway pavement	-	67,000	67,000
Jones St.: Prescott St.-Wells St.	Rehabilitate roadway pavement	-	21,000	21,000
Kachina Pl.: SR 69-Nancy Ln.	Rehabilitate roadway pavement	-	328,000	328,000
McAllister Dr.: Dewey Rd.-Manzanita Blvd.	Rehabilitate roadway pavement	-	51,000	51,000
Sunhill Trail: Cherry Siding Ln.-end of Sunhill Trail	Rehabilitate roadway pavement	-	14,000	14,000
Tanya Blvd.: Clearview Dr.-end of Tanya Blvd.	Rehabilitate roadway pavement	-	51,000	51,000
Valley High Dr.: Antelope Dr.-Pony Pl.	Rehabilitate roadway pavement	-	54,000	54,000
Wells St.: Old Black Canyon Hwy.-end of Wells St.	Rehabilitate roadway pavement	-	39,000	39,000
Yavapai Dr.: Antelope Dr.-Manzanita Blvd.	Rehabilitate roadway pavement	-	107,000	107,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	1,000,000	1,000,000
SR 69/SR 169 intersection	Add signal heads & protected left-turn phasing	-	5,000	5,000
SR 169/Kachina Pl. intersection	Modify traffic signal as needed	-	5,000	5,000
Segments of Main St., Prescott St., Green Valley Way, Bradshaw Rd., Foothill Dr., Newtown Ave., Henderson Rd., Pony Pl., Horseshoe Ln., Kachina Pl., Prescott Dells Ranch Rd., Rocky Hill Rd., Tonto Dr., Cranberry Rd., Wicklow Pl., and Dewey Rd.	Update federal functional classification	-	-	-
Town-wide	Coordinate with private roadway owners, as appropriate, on potential roadway easements or right-of-way dedications where roadway improvements are needed	-	-	-
Town-wide	Develop and adopt traffic impact guidelines and development policies	-	-	-

Table 31 – Recommended Near-term Improvement Projects (continued)

Project Location	Improvement Description	Right-of-Way Cost (\$)	Construction Cost (\$)	Total Cost (\$)
Other Modes of Travel Projects				
Town-wide	Develop and adopt access management guidelines	-	-	-
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Corral St.: Prescott St.-Humboldt Elementary School	Construct sidewalk along roadway ¹	-	110,000 - 180,000	110,000 - 180,000
Hecla St.: Prescott St.-Humboldt Elementary School	Construct sidewalk along roadway ¹	-	110,000 - 170,000	110,000 - 170,000
Huron St.: Main St.-end of Huron St.	Construct sidewalk along roadway ¹	-	200,000 - 310,000	200,000 - 310,000
Main St.: SR 69-Third St.	Construct sidewalk along roadway ¹	-	260,000 - 410,000	260,000 - 410,000
Prescott St.: Main St.-Old Black Canyon Highway	Construct sidewalk along roadway ¹	-	250,000 - 380,000	250,000 - 380,000
Vicinity of Humboldt Elementary School	Apply for Safe Routes to School grant	-	400,000	400,000
Subtotal Near-term Projects Cost Estimate = \$3,325,000 – \$3,845,000		-	3,325,000 - 3,845,000	3,325,000 - 3,845,000

1: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Source: Kimley-Horn and Associates, Inc.

Table 32 – Recommended Mid-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Roadway Projects				
Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve ²	0 - 9,000	50,000 - 150,000	50,000 - 150,000
Area 2 Alternatives: Henderson Rd./Pony Pl./Horseshoe Ln.	Connect Henderson Rd. to Horseshoe Ln. ²	0 - 190,000	520,000 - 820,000	520,000 - 1,010,000
Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and upgrade to all-weather roadway ^{2,3}	0 - 520,000	2,300,000 - 3,900,000	2,300,000 - 4,380,000
Area 5 Alternatives: Dewey Rd.	Realign and upgrade to all-weather roadway ^{2,3}	0 - 340,000	790,000 - 2,500,000	790,000 - 2,840,000
Cranberry Rd.: Smoki Trail-Tonto Dr.	Upgrade to all-weather roadway ³	0 - 5,000	80,000 - 120,000	80,000 - 125,000
Dewey Rd.: 500' east of Stump Rd.-Prescott Dells Ranch Rd.	Upgrade to all-weather roadway ³	0 - 170,000	460,000 - 650,000	460,000 - 820,000
Martha Way: 350' north of Rocky Hill Rd.-Rocky Hill Rd.	Upgrade to all-weather roadway ³	0 - 20,000	30,000 - 50,000	30,000 - 70,000
Prescott Dells Ranch Rd.: Rocky Hill Rd.-SR 69	Upgrade to all-weather roadway ³	0 - 220,000	170,000 - 420,000	170,000 - 640,000
Rocky Hill Rd.: 0.5 miles east of Martha Way-Prescott Dells Ranch Rd.	Upgrade to all-weather roadway ³	0 - 210,000	590,000 - 830,000	590,000 - 1,040,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	1,000,000	1,000,000
SR 69/Main St. intersection	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
Prescott St. at the Agua Fria River	Construct an all-weather river crossing	0 - 15,000	1,080,000	1,080,000 - 1,095,000
Segments of Green Valley Way, Bradshaw Rd., Foothill Dr., Prescott Dells Ranch Rd., Rocky Hill Rd., Tonto Dr., Cranberry Rd., Wicklow Pl., and Dewey Rd.	Update federal functional classification after recommended roadway improvements have been constructed	-	-	-

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

4: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Table 32 – Recommended Mid-term Improvement Projects (continued)

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Other Modes of Travel Projects				
Prescott St.: Old Black Canyon Hwy-Green Valley Way/Sierra Dr.	Construct sidewalk along roadway ⁴	-	320,000 - 500,000	320,000 - 500,000
Lazy River Dr.: Sierra Dr.-east Town boundary	Construct shared-use trail along roadway	-	1,040,000	1,040,000
Newtown Ave./Henderson Rd./Horseshoe Ln./Kachina Pl.: west Town boundary-SR 69	Construct shared-use trail along roadway	-	3,110,000	3,110,000
Rocky Hill Rd./Tonto Dr.: Newtown Ave.-SR 69	Construct shared-use trail along roadway	-	3,950,000	3,950,000
Martha Way: Rocky Hill Rd.-Henderson Rd.	Construct shared-use trail along roadway	-	540,000	540,000
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Subtotal Mid-term Projects Cost Estimate = \$16,530,000 - \$23,310,000		0 - 1,699,000	16,530,000 - 21,660,000	16,530,000 - 23,310,000

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

4: Low end of construction cost is for sidewalk without curb and gutter; high end of construction cost is for sidewalk with curb and gutter.

Source: Kimley-Horn and Associates, Inc.

Table 33 – Recommended Long-term Improvement Projects

Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Roadway Projects				
Area 3 Alternatives: Prescott Valley New Development Connection	Construct new all-weather roadway ^{2,3}	0 - 820,000	800,000 - 1,240,000	800,000 - 2,060,000
Area 6 Alternatives: New Road West of Agua Fria River	Construct new all-weather roadway ^{2,3}	0 - 720,000	460,000 - 2,000,000	460,000 - 2,720,000
Area 7 Alternatives: Sierra Dr. North Extension	Construct new all-weather roadway ^{2,3}	0 - 180,000	240,000 - 580,000	240,000 - 760,000
Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new low-flow river crossing ^{2,3}	0 - 140,000	800,000 - 1,100,000	800,000 - 1,220,000
Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new all-weather roadway ^{2,3}	0 - 150,000	80,000 - 180,000	80,000 - 300,000
Meadow Rd.: Meadow Ranch Pl.-Tanya Blvd.	Upgrade to all-weather roadway ³	0 - 120,000	230,000 - 360,000	230,000 - 480,000
Various locations as needed	Maintain roadway pavement (\$200,000/year)	-	2,000,000	2,000,000
SR 169/future development intersection	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
SR 169/Foothill Dr.	Conduct traffic signal warrant study and construct signal (low end of cost range) or roundabout (high end of cost range) if warranted	-	500,000 - 1,000,000	500,000 - 1,000,000
All functionally classified roadways	Update federal functional classification from rural to urban when the Town reaches a population of 5,000	-	-	-

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

Table 33 – Recommended Long-term Improvement Projects (continued)

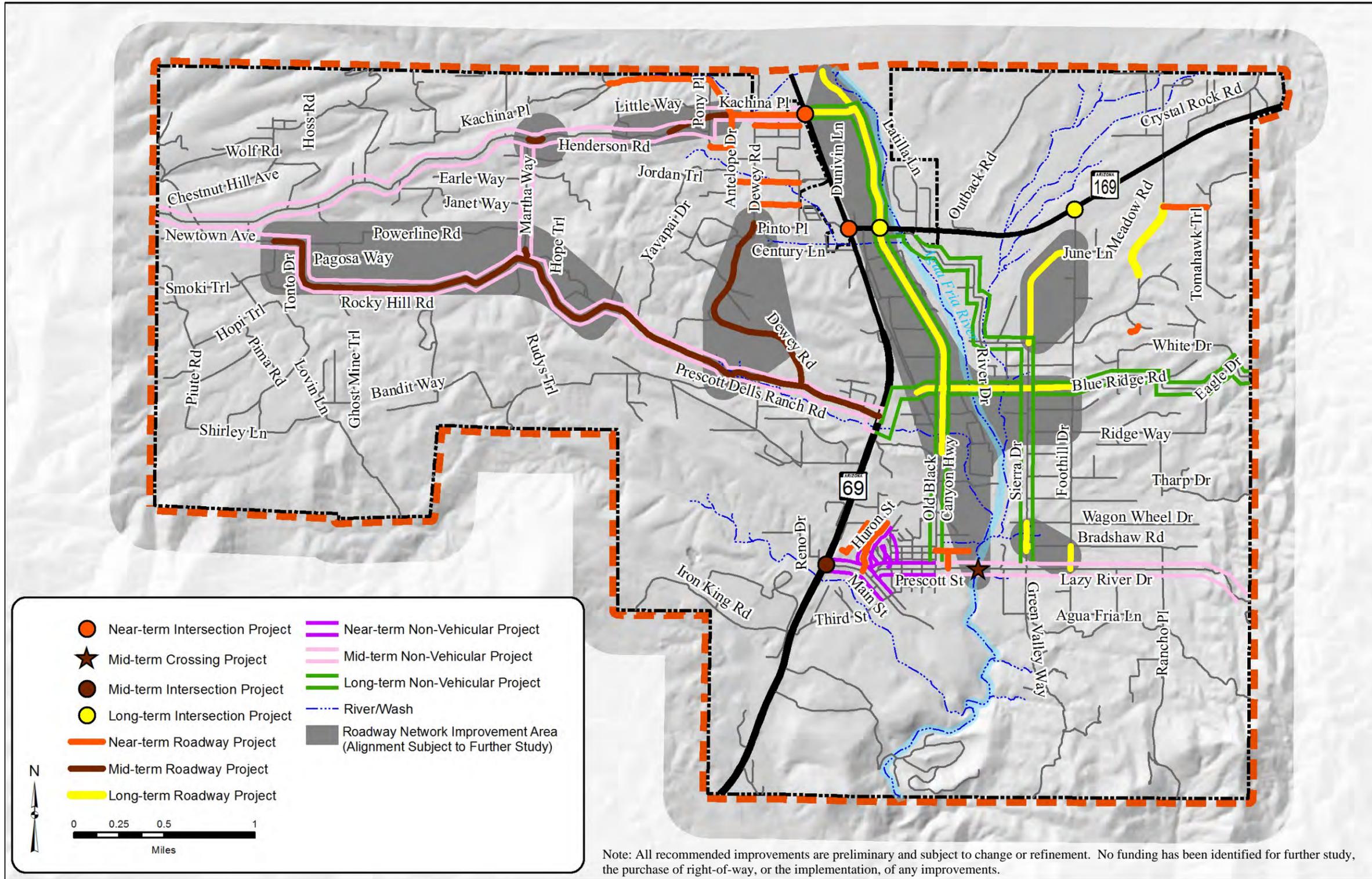
Project Location	Improvement Description	Right-of-Way Cost (\$) ¹	Construction Cost (\$)	Total Cost (\$)
Other Modes of Travel Projects				
Town-wide	Coordinate with regional transit representatives on transit opportunities	-	-	-
Blue Ridge Rd.: Sierra Dr.-east Town boundary	Construct shared-use trail along roadway	-	430,000	430,000
Deer Pass Rd.: SR 69-Sierra Dr.	Construct shared-use trail along roadway	0 - 20,000	340,000	340,000 - 360,000
Old Black Canyon Hwy./New Roadway: Prescott St.-SR 169	Construct shared-use trail along roadway	-	620,000	620,000
Quarterhorse Ln.: River Dr.-Meadow Rd.	Construct shared-use trail along roadway	-	470,000	470,000
River Dr.: SR 169-Quarterhorse Ln.	Construct shared-use trail along roadway	-	300,000	300,000
SR 169: New Roadway East of Old Black Canyon Hwy.-River Dr.	Construct shared-use trail along roadway	-	40,000	40,000
Agua Fria River: SR 169-Kachina Pl.	Construct shared-use trail along river	0 - 38,000	230,000	230,000 - 268,000
Kachina Pl.: SR 69-Agua Fria River	Construct shared-use trail along roadway	0 - 20,000	120,000	120,000 - 140,000
Sierra Dr.: Lazy River Dr.-Quarterhorse Ln.	Construct shared-use trail along roadway	-	1,000,000	1,000,000
Subtotal Long-term Projects Cost Estimate = \$9,160,000 - \$15,168,000		0 - 2,208,000	9,160,000 - 13,010,000	9,160,000 - 15,168,000
Total of Near-term, Mid-term, and Long-term Project Cost Estimates = \$29,015,000 - \$42,323,000				

1: Low end of right-of-way cost is for easement/dedication; high end of right-of-way cost is for purchase.

2: Construction cost range reflects the differing costs of alignment alternatives that were considered.

3: Low end of construction cost is for unpaved roadway with improved grading and drainage; high end of construction cost is for paved asphalt roadway.

Source: Kimley-Horn and Associates, Inc.



Projects not shown in Improvement Plan (Figure 29)

Near-term Timeframe

- Install curve warning signs with 10 mph plaque at Henderson Rd/Martha Way Curve
- Update federal functional classifications
- Develop and adopt traffic impact guidelines and development policies
- Develop and adopt access management guidelines
- Coordinate with regional transit representatives on transit opportunities
- Apply for Safe Routes to School grant
- Coordinate with private roadway owners, as appropriate, on potential roadway easements or right-of-way dedications where roadway improvements are needed

Mid-term Timeframe

- Maintain existing paved roads
- Update federal functional classifications after recommended roadway improvements have been constructed
- Coordinate with regional transit representatives on transit opportunities

Long-term Timeframe

- Maintain existing paved roads
- Update federal functional classifications from rural to urban when the Town reaches a population of 5,000 persons
- Coordinate with regional transit representatives on transit opportunities

Source: Kimley-Horn and Associates, Inc.

Figure 29 – Improvement Plan

9.1 Traditional Revenue Sources

The Town has traditionally used HURF, developer impact fees, and grants to fund transportation improvements in the study area. HURF can be used for capital improvements or for operations and maintenance while impact fees and grants can typically only be used for capital improvements. The Town also has a local general fund that can be utilized for transportation improvements and operations. These various funding sources are described in more detail below.

9.1.1 Highway User Revenue Fund

HURF is primarily derived from gasoline and vehicle license taxes. HURF is allocated by defined percentages to the State, counties, cities, and towns. The State receives 50.5 percent of the HURF dollars to be used statewide. Cities and towns receive 27.5 percent, cities with a population over 300,000 receive an additional 3 percent, and counties receive 19 percent. The city and county distribution is based on population and gasoline sales.

Per the approved fiscal year (FY) 2011-2012 Town budget, the Town anticipates receiving \$243,000 in HURF revenue in FY 2011-2012. The Town plans to apply all of its FY 2011-2012 HURF revenue to pavement preservation projects.

ADOT's Arizona HURF Process & Results FY2012-2021, published in October 2011, projects that statewide HURF revenue will increase at an average annual compound growth rate of 3.1 percent between FY 2012 and FY 2021. The Town's population is anticipated to grow at an average annual compound growth rate of 2.0 percent between 2011 and 2031. Because HURF distributions are influenced by population growth, for purposes of this study it is assumed that HURF distributions to the Town will grow at an average annual compound growth rate of 2.0 percent over the next twenty years.

9.1.2 Developer Impact Fees

Impact fee programs require developers to pay for the capital infrastructure needs of the community that are attributed to their respective proposed developments. Per the approved FY 2011-2012 Town budget, the Town anticipates receiving \$18,900 in impact fees in FY 2011-2012.

A recently enacted State law places new requirements on how impact fees can be assessed. The Town may have to modify its impact fee structure to comply with the new law, which could translate into reduced impact fee revenue for the Town.

9.1.3 Grants

The Town has historically relied heavily on competitive grant programs to secure funding for projects. Per the approved FY 2011-2012 Town budget, the Town anticipates receiving \$2.1 million in grants in FY 2011-2012 from a variety of sources.

9.1.4 Local General Funds

While the Town's local general fund can be utilized for capital improvements or operations and maintenance, the Town's policy in recent years has been to use the local general fund for expenditures such as salaries, benefits, utilities, and facilities that cannot be funded through HURF or impact fees.

9.2 Revenue Opportunities

Based on revenue projections and identified transportation needs, it is apparent that the Town likely will not have sufficient revenue to complete all of the recommended improvements in this study. Additional revenue sources will need to be secured if the recommended improvements are to be constructed within

the recommended timeframes. Public sector revenue opportunities, including existing and new revenue sources, are described in **Table 34**.

Table 34 – Local, State, and Federal Revenue Opportunities

Local	
Bonds	Municipal bonds are securities that are issued for the purpose of financing the infrastructure needs of the issuing municipality. These needs vary greatly but can include schools, streets and highways, bridges, hospitals, public housing, sewer and water systems, power utilities, and various public projects. Municipal bonds may be general obligations of the issuer or secured by specified revenue.
General Funds	In public sector accounting, the primary or catchall fund of a government. It records all assets and liabilities of the entity that are not assigned to a special purpose fund. It provides the resources necessary to sustain the day-to-day activities and thus pays for all administrative and operating expenses. General funds generally receive revenue from sources such as state-shared income and sales taxes, local sales tax, and licensing fees.
Property Tax	A municipality or county can levy a property tax for general purposes or for a specific purpose that has a time limit or can extend until rescinded or revised. The property tax amount is based on a percentage of the assessed value of the property.
Sales Tax	A municipality or county can levy a sales tax for general purposes or for a specific purpose such as transportation, it can have a time limit or can extend until rescinded or revised. A sales tax is charged at the point of purchase for certain goods and services. The tax amount is usually calculated by applying a percentage rate to the taxable price of a sale and adding the tax to the price at the point of sale.
Impact Fees	A fee imposed on property developers by municipalities for the new infrastructure that must be built or increased due to new property development. These fees are designed to offset the impact of the additional development and residents on the municipality's infrastructure and services.
Community Facilities Districts	The Arizona Community Facilities District Act addresses a critical issue for developers: the financing of increasingly costly infrastructure requirements without unduly burdening the developer. The law authorizes bonds to be issued and repaid with a mechanism that taxes (or assesses) only the lands directly benefiting from the new infrastructure. This allows community development which would otherwise be unfeasible due to the prohibitive costs. All community facilities districts are required to be included within an incorporated city or town.
Improvement Districts	An improvement district allows a local government agency to levy and collect special assessments on property that is within the boundaries of the improvement district for the purpose of making infrastructure improvements within the improvement district.
Regional Transportation Authorities	The board of supervisors of a county with a population of four hundred thousand or fewer persons but more than two hundred thousand persons may establish a regional transportation authority in the county. The membership of the authority consists of each municipality in the county, the county, and any other members of the regional council of governments. The regional transportation authority can levy a tax for regional transportation services.

Table 34 – Local, State, and Federal Revenue Opportunities (continued)

<p>Yavapai County Flood Control District</p>	<p>The Yavapai County Flood Control District (YCFCD) has levied a secondary property tax on parcels within Yavapai County. YCFCD utilizes this tax to fund projects related to flood control in the unincorporated portions of the County as well as to contribute to the funding of local municipal flood control projects in partnership with the local jurisdictions. The focus of flood control projects is on drainage improvements, but it can also include correlated transportation improvements.</p> <p>YCFCD has signed intergovernmental agreements with the local jurisdictions related to partnering on flood control projects funded in part by the YCFCD tax. The typical arrangement is for the local jurisdiction to fund the project design and be responsible for bidding, inspecting, and administering the construction of the project, with the YCFCD contributing funds to the project construction cost, but the nature of the partnership between the local jurisdiction and YCFCD is negotiable.</p> <p>YCFCD funds projects annually, so local jurisdictions need to notify YCFCD of proposed projects in the January/February timeframe in order for the proposed projects to be considered for implementation in the next fiscal year that starts July 1. YCFCD typically contributes \$75,000-\$100,000 to each approved local project, but the contribution amount is negotiable and can be stretched over several years to fund larger projects. Ideally, YCFCD would like to see a 5-year program of proposed flood control projects by each local jurisdiction so that YCFCD can better manage the programming of projects.</p>
<p>State</p>	
<p>Highway User Revenue Fund (HURF)</p>	<p>The State of Arizona taxes motor fuels and collects a variety of fees and charges relating to the registration and operation of motor vehicles on the public highways of the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license tax, motor vehicle registration fees, and other miscellaneous fees. This revenue is deposited in the Arizona HURF and then distributed to the cities, towns, counties, and the State Highway Fund.</p>
<p>Federal</p>	
<p>Surface Transportation Program (STP)</p>	<p>The Surface Transportation Program (STP) provides flexible funding that may be used by states and localities for projects on federal-aid highways (including the National Highway System, urban arterials and collectors, and rural arterials and collectors except for rural minor collectors), bridge projects on any public road functionally classified higher than a rural minor collector, transit capital projects, and intra-city and intercity bus terminals and facilities. A local funding match is typically required.</p> <p>http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm</p>
<p>State Planning and Research (SPR) - Planning Assistance for Rural Areas Program (PARA)</p>	<p>The PARA program provides funding to address a broad range of local and regional planning issues related to roadways and other modes of travel. The PARA program was developed and is managed by ADOT, but the funding for the program comes from the SPR program operated by FHWA. PARA funds are limited to planning applications and may not be used for the design or construction of transportation facilities. Eligible applicants include tribal governments and cities, towns, and counties located outside transportation management area boundaries. No local funding match is currently required.</p> <p>http://www.fhwa.dot.gov/hep/sprt.htm http://www.fhwa.dot.gov/planning/rural/ http://www.azdot.gov/mpd/systems_planning/PDF/PARA/PARAs.asp</p>

Table 34 – Local, State, and Federal Revenue Opportunities (continued)

<p>Highway Safety Improvement Program (HSIP)</p>	<p>The goal of the HSIP funding program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway safety improvements. Each state's Strategic Highway Safety Plan (SHSP) identifies the state's key safety needs and guides HSIP investment decisions.</p> <p>States with SHSPs that meet the requirements of 23 USC 148 may obligate HSIP funds for projects on any public road or publicly owned bicycle and pedestrian pathway or trail. Each state must have an SHSP to be eligible to use up to 10 percent of its HSIP funds for other safety projects under 23 USC (including education, enforcement and emergency medical services). It must also certify that it has met its railway-highway crossing and infrastructure safety needs. The core HSIP program also requires the development and implementation of a Railway-Highway Crossing Program and High Risk Rural Road Program. A local funding match is typically required.</p> <p>http://safety.fhwa.dot.gov/hsip/</p>
<p>Community Development Block Grant Program (CDBG)</p>	<p>The Arizona Department of Housing administers the federal CDBG program for non-entitlement areas (i.e., communities with a population below 50,000). Communities receiving CDBG funds from the State may use the funds for many kinds of community development activities including, but not limited to:</p> <ul style="list-style-type: none"> • acquisition of property for public purposes; • construction or reconstruction of streets, sidewalks, pathways, water and sewer facilities, neighborhood centers, recreation facilities, and other public works; • public services; and • planning activities. <p>A local funding match is typically required.</p> <p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs</p>
<p>High Risk Rural Road Program (HRRRP)</p>	<p>Each state's apportionment of HSIP funds is subject to a set-aside for construction and operational safety improvements on high-risk rural roads. A high-risk rural road is defined as any roadway functionally classified as a rural major or minor collector or rural local road on which the crash rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classes of roadways; or that will likely have increases in traffic volume that will lead to a crash rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadways. A local funding match is typically required.</p> <p>http://safety.fhwa.dot.gov/local_rural/training/fhwasa10012/chap_1.cfm</p>
<p>Highway Bridge Program</p>	<p>The Highway Bridge Program provides funding to enable states to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventive maintenance.</p> <p>Eligible activities are expanded to include systematic preventive maintenance on Federal-aid and non-Federal-aid highway systems. States may carry out projects for the installation of scour countermeasures or systematic preventive maintenance without regard to whether the bridge is eligible for rehabilitation or replacement. A local funding match is typically required.</p> <p>https://www.fhwa.dot.gov/bridge/hbrfp.htm</p>

Table 34 – Local, State, and Federal Revenue Opportunities (continued)

<p>Transportation Enhancement (TE) Program</p>	<p>The goal of this program is to strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system. A State's TE funding is derived from a set-aside from its annual STP apportionment. TE funding is eligible for use on all functionally classified roadways, including rural minor collectors and local roads.</p> <p>This funding source is designated to provide funding for capital projects that enhance existing surface transportation system. Successful projects must fulfill one of twelve specific goals. The TE Program is a reimbursement program. Project sponsors must be prepared to pay for all costs incurred and then request reimbursement for expenditures as specified. There is a required minimum 5.7 percent hard cash local match. The maximum grant amount for individual local projects is \$750,000.</p> <p>http://www.fhwa.dot.gov/environment/transportation_enhancements/</p>
<p>Federal Emergency Management Agency (FEMA) Grant Program</p>	<p>The Arizona Division of Emergency Management administers several FEMA pre-disaster and post-disaster grant programs. The goal of these programs is to prevent and mitigate hazards. Grant programs include the following:</p> <ul style="list-style-type: none"> • Pre-Disaster Mitigation Program; • Hazard Mitigation Grant Program; • Flood Mitigation Assistance Program; • Repetitive Flood Claims Program; and • Severe Repetitive Loss Program. <p>A local funding match is typically required.</p> <p>http://www.fema.gov/government/grant/index.shtm</p>
<p>Safe Routes to School (SRTS) Program</p>	<p>The goal of the SRTS Program is to enable and encourage children to walk and bicycle to school. The program accomplishes this by facilitating the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution near schools. Eligible projects must meet the following two criteria:</p> <ul style="list-style-type: none"> • Funding is only for elementary and middle schools; and • Programs and projects must be within a 2-mile radius of the school. <p>Funding is given in the form of reimbursement once a project is implemented. There is no required local match. Funding can be provided for planning assistance, non-infrastructure projects, infrastructure projects, and materials and regional support projects. The maximum grant amount for individual local projects is \$400,000.</p> <p>http://safety.fhwa.dot.gov/saferoutes/</p>
<p>Federal Transit Administration (FTA) Section 5307 Transit Program</p>	<p>The 5307 Program provides grants for urbanized areas (50,000 or greater population) for transit capital investments and operating expenses. A local funding match is typically required.</p> <p>http://fta.dot.gov/grants/13093_3561.html</p>
<p>FTA Section 5309 Transit Program</p>	<p>The 5309 Program provides funding for capital investment grants of \$75 million or less (small starts). Grants are for capital costs associated with bus corridor improvements and bus rapid transit. A local funding match is typically required.</p> <p>http://fta.dot.gov/grants/13094_3557.html</p>
<p>FTA Section 5310 Transit Program</p>	<p>The 5310 Program provides funds to transit projects for the elderly and disabled. Funds are allocated to each state on a formula basis and then the state allocates to eligible recipients, which include public bodies and private, non-profit organizations. Capital costs, as well as costs associated with contracted services, are eligible expenses. A local funding match is typically required.</p> <p>http://fta.dot.gov/grants/13093_3556.html</p>

Table 34 – Local, State, and Federal Revenue Opportunities (continued)

FTA Section 5311 Transit Program	The 5311 Program provides funds to support costs associated with public transportation in non-urbanized areas. Funds are allocated by each state to eligible recipients, which include public bodies and private, non-profit organizations. Both capital and operating costs are eligible expenses. A local funding match is typically required. http://fta.dot.gov/grants/13093_3555.html
FTA Section 5316 Transit Program	The 5316, or Job Access and Reverse Commute (JARC), Program provides federal funding for transit-related capital, operating, and planning projects. The purpose of the program is to provide new or expanded service to enable welfare recipients and low-income individuals to access places of employment. The funding from this program can be used for a variety of purposes including shuttle service, expanded fixed-route service, and guaranteed-ride-home services. A local funding match is typically required. http://fta.dot.gov/grants/13093_3550.html
FTA Section 5317 Transit Program	The 5317, or New Freedom, Program provides federal funding and is designed to create and improve transportation facilities that go beyond the ADA standards for persons with disabilities. Funds are competitively distributed based on the population of persons with disabilities, and are intended for capital and operating expenses for new public transportation services and new public transportation alternatives beyond those required by ADA. A local funding match is typically required. http://fta.dot.gov/grants/13093_3549.html

Sources: ADOT, USDOT, FTA, and FHWA

9.3 Town Development Policies

Town development policies should be adopted that spell out developers' responsibilities related to transportation and other infrastructure improvements. These policies should address topics such as roadway easements, right-of-way dedications, and the construction of half-street roadway and drainage improvements adjacent to proposed developments.

9.4 Agency Coordination and Partnering

Many of the recommended improvements cross jurisdictional boundaries or impact multiple agencies. Successful implementation of recommended improvements will require agency coordination and partnering from planning, design, construction, and funding standpoints. Agencies that should be included in the coordination and partnering efforts, as applicable, include the Town, Prescott Valley, Yavapai County, ADOT, CYMPO, Humboldt Elementary School District, BLM, ASLD, and AZGFD.

9.5 Title VI Impacts

The U.S. Department of Transportation regulations related to disadvantaged, or Title VI, populations (i.e., minority, low-income, and elderly populations) state that in determining the site or location of transportation facilities, selection cannot be made with the purpose or effect of excluding persons from, denying them the benefits of, or subjecting them to discrimination under, any program to which this regulation applies. According to the regulations, a project using federal funds cannot be implemented that will cause disproportionately high and adverse impacts to disadvantaged populations.

The Dewey-Humboldt PARA Transportation Study is a long-range multimodal planning study that addresses the transportation needs in the study area. Recommended improvements are expected to improve the overall transportation system and benefit the study area as a whole. Recommended improvement projects were not selected based on the population that would be impacted, but rather were selected to address an identified transportation need. More detailed analysis will be needed for individual design projects that are federally-funded to ensure that there are no disproportionately high and adverse impacts to disadvantaged populations.

Appendix A – Stakeholder Interview Summaries

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

See responses to next-to-last question in questionnaire.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed?
 - If you believe a public transit system will be needed, what would it consist of?
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system?
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system?
- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)?

The Yavapai County Flood Control District (YCFCD) has levied a secondary property tax on parcels within Yavapai County. YCFCD utilizes this tax to fund projects related to flood control in the unincorporated portions of the County as well as to contribute to

the funding of local municipal flood control projects in partnership with the local jurisdictions.

The focus of flood control projects is on drainage improvements, but it can also include correlated transportation improvements. For example, if a low-flow water crossing is working properly with no drainage issues, the YCFCD tax cannot be used to upgrade the low-flow water crossing to an all-weather crossing. However, if the low-flow water crossing is not working properly due to sedimentation or undersized culverts, the YCFCD tax can be used to upgrade the low-flow water crossing to an all-weather crossing as long as doing so would correct the drainage issue.

YCFCD has signed intergovernmental agreements with the local jurisdictions related to partnering on flood control projects funded in part by the YCFCD tax. The typical arrangement is for the local jurisdiction to fund the project and design and be responsible for bidding, inspecting, and administering the construction of the project, with the YCFCD contributing funds to the project construction cost, but the nature of the partnership between the local jurisdiction and YCFCD is negotiable. The Town of Dewey-Humboldt has not historically taken advantage of this potential cost-sharing partnership with YCFCD to implement flood control projects funded in part by the YCFCD tax.

YCFCD funds projects annually, so local jurisdictions need to notify YCFCD of proposed projects in the January/February timeframe in order for the proposed projects to be considered for implementation in the next fiscal year that starts July 1. YCFCD typically contributes \$75,000-\$100,000 to each approved local project, but the contribution amount is negotiable and can be stretched over several years to fund larger projects. Ideally, YCFCD would like to see a 5-year program of proposed flood control projects by each local jurisdiction so that YCFCD can better manage the programming of projects.

YCFCD is aware of the existing drainage issues at the low-flow water crossing of the Agua Fria River on Prescott Street in Dewey-Humboldt. Sand and gravel sediments build up on the upstream side of the crossing, blocking the crossing culverts if they are not regularly cleaned out. Installing a pipe arch or box culvert with a 4%-5% slope would likely resolve the sedimentation issue and would also result in an all-weather crossing on Prescott Street. These improvements would likely be eligible for the funds derived from the YCFCD tax if the Town of Dewey-Humboldt partners with YCFCD on the project. YCFCD recently partnered with Black Canyon City to complete a similar project that had a construction cost of \$100,000-\$125,000.

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways; **Access to the Blue Hills area has been improved but still needs improvements for large emergency vehicles that can get stuck in the mud. Roadway access also needs to be improved for Prescott Dells Ranch Road, especially during the wet season due to difficult terrain and water crossings. The Agua Fria River is too high to cross at Prescott Street 3-4 times per year. A bridge over the Agua Fria River is needed on Prescott Street.**
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed?
 - If you believe a public transit system will be needed, what would it consist of?
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system? **Pave more roads. Extend Foothill Drive south to Lazy River Drive. Also, add a secondary north-south road on the west side like Martha Way. All-weather crossings of washes and rivers are important for emergency vehicle access. A culvert is needed for Lazy River Drive.**
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system?

Name of Interviewee: Charlie Cook
Agency/Organization: Central Yavapai Fire District

Date: 8/24/11

- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)?

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

There are not enough calls to justify a fire station in the Blue Hills area. The fire station located on SR 169 just east of the Agua Fria River covers 35 square miles (the largest area of the District's 6 stations) and typically receives 2-3 calls per day. It can take 17 minutes for emergency vehicles to reach parts of the Blue Hills area in good driving conditions.

There are few wells in the Blue Hills area. Water must be hauled in from a tank near Kachina Place/SR 69.

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

Roadways and intersections are the primary current needs, including signage.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring? **I would envision new development occurring at the old young's Farm and for lot splitting to continue to occur throughout the town.**
 - What areas should be protected/preserved from development? **Environmentally sensitive areas. Private property cannot be restricted outside of the zoning laws.**
 - What roadway or intersection improvements will be needed? **Until the updated CYMPO model is run I cannot say at this time.**
 - If you believe a public transit system will be needed, what would it consist of? **A route between the Town and Prescott Valley that could replace the current voucher program.**
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders? **I would anticipate some sort of system of multiuse trails/paths.**

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system? **Paving roads that are currently dirt.**
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system? **I would base the response to this on the pending traffic model. This will give us the best guidance.**

Name of Interviewee: Chris Bridges

Date: 8/10/11

Agency/Organization: CYMPO

- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)? **I would leave this discussion for the Town Council. Currently any new taxes would not be looked on favorably.**

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system? **No.**

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

See comments below regarding Forest Service information. No comments regarding the local transportation system.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed?
 - If you believe a public transit system will be needed, what would it consist of?
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system?
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system?
- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)?

Name of Interviewee: Cynthia Moody
Agency/Organization: Prescott National Forest

Date: 8/9/11

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

The Forest Service has no plans for new recreational facilities or access in the area.

In case of a fire, emergency access would use existing access points.

The Forest Service does not pave their roads and would not expect the County/Dewey-Humboldt to pave any connections.

No plans or expressed needs for new trails, trails upgrades or connections.

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways: **The town's drivers are using the State highways as their main street. Local roads are needed. Improvements to circulation within local street network and improvements to access control on the State highways are needed.**
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths): **Opportunities exist to use SR 69 cross-drainage culverts for trails that accommodate quads or golf carts**
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed? **SR 169 will eventually need to be widened from two lanes to four lanes east of SR 69. The SR 169 bridge over the Agua Fria River has been built to accommodate this widening.**
 - If you believe a public transit system will be needed, what would it consist of? **It would need to be connected to a regional transit system and it would need local circulation.**
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system?
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system? **Construction of a new limited access State route from I-17 to I-40 along the east side of the Prescott area. This improvement will reduce traffic volumes and speeds on SR 69 and SR 169 and turn them into secondary roads that would act more like local streets, which is what the Town wants. SR 169 will eventually need to be widened to four lanes.**

- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)? **Grants: ADEQ – sewer/road; Transportation enhancements – one requirement is need major collector functional classification to be eligible, so may require reclassification of some roadways in study area; Consider improvement districts.**
- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

For DMS Phase 9, a potential DMS is planned on SR 69 south of SR 169.

Dewey-Humboldt has asked for streetlights at the Main Street/SR 69 intersection. ADOT has offered to install a streetlight at the intersection if the Town will pay the ongoing electrical usage costs, but so far the Town has not made a decision on whether or not to proceed with the installation of the streetlights.

Planning meetings are underway for the Fain Road extension between I-17 and SR 169. The long-term plan is to have a new limited-access State route between I-17 and the eastern side of the Prescott area, and eventually all the way up to I-40. SR 69 would then become a secondary route and could be turned back to the towns and Yavapai County.

Per the draft Open House presentation slides, for the year 2040 without the Fain Rd bypass:

- SR 69 projection of 28,000 ADT south of SR 169**
- SR 69 projection of 53,000 ADT north of SR 169**
- SR 169 projection of 11,500 ADT east of SR 69**

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

The primary current needs are roadways, intersections, public transit, recreational trails, and equestrian.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring? **There will be a lot more housing development within the town boundaries.**
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed? **We will need a circulation system that allows traffic to go through the town smoothly and allows traffic to bypass the main highway in case of an accident at the intersection of Hwy 69 & Hwy 169. An outer loop is needed.**
 - If you believe a public transit system will be needed, what would it consist of? **A public transit system will be needed at least to Prescott Valley. Shuttle busses should be sufficient.**
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders? **Users are mostly recreational and equestrians. Trails need to be developed for these users.**

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system? **We would need to acquire the right of way of Dewey Rd. through to Prescott Dells Ranch Rd. to Hwy 69. Then we would need to pave both roads to make a functional bypass around the west side of the intersection of Hwy 69 and Hwy 169.**

4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system? **We would need to acquire and pave the rest of the roads throughout the Town boundaries.**

5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)? **We will have to utilize most of the sales tax revenue as well as apply for grants. A Transportation Enhancement grant could potentially be applied for in regards to placing Town monuments along SR 69. Developer impact fees would only apply through the development in question. The Town would likely not favor a business license tax. Also, little chance for a transportation tax exists. Little support even for a sewer improvement district exists – the Town tried that and it failed. Many residents are more willing to put up with the current problems rather than pay for improvements.**

6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

The Town would like to install gateway historic monuments near Main St. and SR 69 to provide identity for the Town. One potential site is in an ADOT excess parcel along the west side of SR 69. Greg Gentsch from ADOT will look into the current ownership of the parcel.

An emphasis should be placed on the rural lifestyle and ease of use for horses and quads.

The redevelopment of the Mortimer Family Farms property is pending the economic recovery. The Mortimer Family Farms site is a good location for a regional park.

Dewey-Humboldt discovered that NACOG was inappropriately assessing the Town for many of the voucher users that lived in Prescott Valley because they had the same zip code as Dewey-Humboldt, so Dewey-Humboldt ended its participation in the program. The Town was paying \$20,000 annually for vouchers. An option for people that need a ride is a taxi ride, but that is \$35 one way up to Prescott.

A bridge over the Agua Fria River on Prescott St is needed. Some people want the bridge but others say it is a historic crossing that should be left alone. The crossing is flooded approximately 3 times per year for 6-8 hours.

Can the public access land on the edges of the Agua Fria River or are there Section 404/Navigable Waters restrictions on it?

There is controversy regarding ownership of Old Black Canyon Highway.

Name of Interviewee: Mayor Terry Nolan and Vice Mayor Mark McBrady
Agency/Organization: Town of Dewey-Humboldt

Date: 8/24/11

Three historic properties exist in the town including the first reinforced concrete buildings in the world.

An equestrian park is potentially going to be on the west of SR 69 at Main Street.

Business licenses are planning on being introduced.

The tentative date for a presentation of this study to the Town Council is October 11.

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways: **Improvements to circulation within local street network and improvements to access control on the State highways are needed. More Agua Fria River crossings.**
 - Intersections;
 - Public transit: **people without automobiles typically need transportation for medical, shopping, and social activities, in order of priority, with medical being the highest priority.**
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

There does not seem to be much demand for public transit, bicycle, pedestrian, recreational trail, or equestrian facilities. While these would be nice, the Town would likely be better served focusing on higher-priority items like paving roads.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring? **New development could occur north of SR 169 and east of SR 69 in conjunction with the planned Fain Road industrial developments. Maybe a new car dealership near the existing car dealership on the west side of SR 69. Some new housing developments but not much. The former Young's Farm property is in a prime location for development, but so far there has not been the political will and public support there for any kind of intense development. The Mortimer Family Farms is talking about doing a pumpkin festival like what Young's Farm used to do.**
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed? **SR 169 will need to be widened to four lanes and the SR 69/SR 169 intersection will likely need dual southbound left-turn lanes. Several years ago, the County did a study on a potential Prescott Country Club Bypass, but nothing more has been done on the study since then. Mike Willett will try to get a copy of the report from the County's archives.**
 - If you believe a public transit system will be needed, what would it consist of? **It would need to be connected to a regional transit system and it would need local circulation. Right now, there is no money at the County level to support a regional transit system.**
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system? **Pave major local roads like Henderson Road to improve connectivity and circulation. Construct an all-weather Agua Fria River crossing. Conduct drainage maintenance activities like regarding ditches and cleaning out culverts. Maybe a door-to-door van shuttle would address public transit needs. Maybe a dirt path could be graded between the fence and ditch of the local roads to better accommodate alternate modes of travel – the County is constructing 10' graded dirt shoulders on many of its roads.**
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system? **Turn chip seal on local streets into asphalt pavement.**
- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)? **There likely is not the political will right now to introduce new taxes. The Town already has a developer impact fee. Getting the State to restore HURF funds to their previous level would help. Transportation Enhancement grants may be a viable option.**
- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

Contact Steve Mauk, Yavapai County Director of Development Services at (928) 771-3214 to get more information on potential planned developments in the area.

Contact Charlie Cave, Flood Control District of Yavapai County Director about potentially utilizing County Flood Control District taxes for drainage/roadway improvements in Dewey-Humboldt.

If the former Young's Farm property is developed, it would likely increase traffic volumes on Old Black Canyon Highway, which could be problematic for the SR 69/SR 169 intersection because Old Black Canyon Highway intersects SR 169 very close to the SR 69/SR 169 intersection. Contact Bob LaJeunesse at ADOT for more information on the potential access issue here.

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

Since involved in the Superfund Site Investigation, do not feel familiar with local transportation issues – see responses below on status of Superfund sites.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed?
 - If you believe a public transit system will be needed, what would it consist of?
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system?
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system?
- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)?

Name of Interviewee: Monika O' Sullivan
Agency/Organization: EPA

Date: 8/9/11

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

The status of the Superfund site assessment is that they are still relatively early in the process and have not determined the final remediation for the site. They completed an initial study in April 2010, but determined that there were additional sampling needs. They are currently conducting additional testing/ sampling that will go on for another 8 months to a year. Then EPA will identify alternatives for long-term cleanup and present them to the public. This work will actually amend an initial feasibility study.

Regarding potential reuse of the site, EPA issued a report in 6/1/10 which was entitled *Reuse Assessment for Iron King Mine- Humboldt Smelter Superfund Site*. The report identified potential uses for the site.

**All the reports are provided at
<http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/ViewByEPAID/AZ0000309013?OpenDocument>**

EPA is planning to hold a public meeting in Dewey-Humboldt on August 31st.

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways: **Additional coating and paving is required to cap dirt roads. This will eliminate some maintenance needs and make the roads more traversable after storm events. Collectors need to be developed as a network and sidewalks need to be designed to protect pedestrians.**
 - Intersections: **Most intersections in Town are local road intersections, except where they interface with the Highways. The Main Street intersection with SR 69 is an area of concern for the residents of the Town, with many thinking it is dangerous to enter the highway with highway traffic driving at high speeds. Most intersections within Town suffer from drainage issues as the biggest problem. Many intersections have silted culverts or are located at the confluence of several drainages. Some intersections have substandard sight visibility, even at low speeds. Foothills Drive is an example of this. Also, criteria need to be developed for 4-way, 2-way and signalization installations.**
 - Public transit: **Dewey-Humboldt does not have a public transit system. A regular transit route does not seem necessary, however, public transit to major destination areas is a definite need of Dewey-Humboldt.**
 - Bicycles: **The Town roadway system generally does not lend itself to bicycles due to the narrow lane widths of existing roads, as well as no defined bike lanes. Haven't personally noticed many bicycle riders on the roads.**
 - Pedestrians (sidewalks, crossings and paths): **The lack of curb gutter and sidewalk does not lend itself to the installation of ramps or ADA facilities. Given the rural low density nature of the Town, pedestrian facilities are probably only needed at locations near the school or in the older, more dense parts of the Town.**
 - Recreational trails: **No official maintained trail system.**
 - Equestrian: **No official maintained equestrian trail system as of yet.**

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring? **Do not see much in the way of residential development unless the area of Young's Farm or the mine tailings property develop. In which case the highways will probably be impacted most, and possibly Old Black Canyon Highway as an alternate route. Large scale multiform may occur which would need trails, paths, etc.**
 - What areas should be protected/preserved from development? **The Blue Hills are the nearest landscape feature besides the Agua Fria River. Do not see a need for specified protection unless the Town wished to retain views.**
 - What roadway or intersection improvements will be needed? **All major intersections with the State Highways will probably require updating. If the Town continues to**

grow through lot splits and single lot development, the intersections with the Highway will remain in their current dated configuration, without necessary access control. Interior to the Town, intersections will require additional drainage improvements to keep flooding in check and many of the intersections do not have proper sight distances even for low speeds.

- **If you believe a public transit system will be needed, what would it consist of? I believe a small system where residents call a ride when needed would probably suit Dewey-Humboldt at least for the near foreseeable future. Something similar to the Valley Metro Dial-a-ride, or teaming with a local cab company to provide assistance to elderly or disabled persons.**
- **What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders? To best serve pedestrians, sidewalks (concrete or asphalt) will need to be established in the older more dense parts of Town and the commercial areas. In the more rural areas, a maintained trail may be adequate to serve the few residents that would utilize it. In any case, a substantial effort will need to be made to identify and obtain new right-of-way. Existing right-of-way is narrow and difficult to define in the field, and the roadway itself is too narrow to add bike lanes or sidewalks. The roads are also tucked up against steep cut and fills which will sometime require large slope easements or right-of-way in order to widen the road corridor to place pedestrian facilities. The lack of curb and gutter also makes it difficult to place pedestrian facilities up against the edge of the roadway. Development of off-road bicycle paths that lead to public transit facilities is needed. Also, safe routes to schools, pick-up locations need to be addressed and defined.**

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) **If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system? Determine existing Town right-of-way and easements on paper and in the field. Exact limits of roadway are difficult to define. The second short term improvement that can be focused on is upgrading culvert and drainage facilities. Many culverts are undersized or incorrectly designed, and can greatly improve function with additional sizing, headwalls and grading.**
- 4) **If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system? With unlimited dollars I would recommend complete reconstruction and improvement (widening) to Prescott Dells Ranch Road, Main Street, Prescott Street, Kachina Place, and Foothill Drive as some of the main access point collectors for the Town. I would also reconstruct the older parts of Town, namely the area between Highway 69 and Dewey Road on the west side of Highway 69 and the area between Old Black Canyon Highway and Highway 69 on the east side of Highway 69. Improvements to these areas would include pedestrian facilities.**

Name of Interviewee: Nick Bernoski

Date: 8/15/11

Agency/Organization: Willdan Engineering, Acting Town Engineer

- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)? **Grants and developer impact fees may be the only options for major improvements to the Town. Many residents are not in favor of development or change to the rural character and would probably not be in favor of additional tax or bonding. Dewey-Humboldt also does not have a large commercial or gas station base, so sales tax and gas tax will probably not provide much of a gain.**

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system? **Overall, the Town could use upgrades to the roadway system in terms of updated geometry, all-weather surfaces and drainage improvement, however the residents would like to keep their rural character and low density development. Curb and gutter should probably be limited to the older dense parts of the Town if introduced at all. Pedestrian facilities should be looked at, but mostly in relation to the school and post office for children, elderly and disabled residents to access services.**

Town of Dewey-Humboldt Transportation Study Stakeholder Questionnaire

- 1) What do you believe are the current transportation needs/issues in the Dewey-Humboldt area, considering the following categories?
- Roadways;
 - Intersections;
 - Public transit;
 - Bicycles;
 - Pedestrians (sidewalks, crossings and paths);
 - Recreational trails; and
 - Equestrian.

Please feel free to mark and label the needs/issues you have identified on the attached map.

See responses to last question in questionnaire.

- 2) What do you believe will be the future transportation needs/issues in the Dewey-Humboldt area over the next 20 years, considering the following questions?
- What types of new development do you envision and where do you anticipate it occurring?
 - What areas should be protected/preserved from development?
 - What roadway or intersection improvements will be needed?
 - If you believe a public transit system will be needed, what would it consist of?
 - What improvements will be needed to serve pedestrians, bicyclists, recreational users, and equestrian riders?

Please feel free to mark and label the needs/issues you have identified on the attached map.

- 3) If funding were unlimited, what improvements should be made in the near-term (0-5 years) to improve Dewey-Humboldt's transportation system?
- 4) If funding were unlimited, what improvements should be made in the long-term (10-20 years) to improve Dewey-Humboldt's transportation system?
- 5) What funding sources should the Town of Dewey-Humboldt pursue to address current and future transportation needs/issues (e.g., property tax, sales tax, gas tax, bonds, grants, developer impact fees, others)?

- 6) Do you have any other input or questions regarding Dewey-Humboldt's transportation system?

Prescott Transit Authority provides dial-a-ride services to/from Dewey-Humboldt and any other destination statewide. There is an initial pick-up charge and then per mile charges. The dial-a-ride is door-to-door service, meaning the pick-up/drop-off point is wherever the rider requests. The driver can also assist riders with limited mobility in getting into and out of the vehicle. Dial-a-ride is utilized regularly by a few Dewey-Humboldt residents.

Prescott Transit Authority also operates a shuttle to Phoenix Sky Harbor Airport 16 times daily in each direction. The shuttle will pick up Dewey-Humboldt residents along SR 69 upon request but does not do door-to-door service. There are typically 5-7 Dewey-Humboldt residents per week that utilize the airport shuttle.

Prescott Transit Authority utilizes FTA Section 5316 and Section 5317 grants to help fund its services.

Prescott Transit Authority submitted a proposal to CYMPO to provide a fixed route service between Prescott, Prescott Valley, and Dewey-Humboldt. Within Dewey-Humboldt, the route was proposed to be a small loop with stops at activity centers such as the post offices and larger trailer parks. Prescott Transit Authority proposed utilizing FTA Section 5307 grant money to fund the service and offered to provide the required local match, but CYMPO decided not to implement the proposal.

People are getting to where they need to go, whether they utilize their own vehicles, get rides from family or friends, or call a private transit provider.

There is no local money available for a public transit system, and there likely won't be any available in the near future as the local jurisdictions are dealing with funding issues.

Appendix B – Public Involvement Summaries



Meeting date: Tuesday, October 25, 2011
4:30 p.m. to 6:30 p.m.

Meeting Location: Humboldt Elementary School, 2750 S. Corral Street, Humboldt, AZ 86329

Participants: 7 participants signed in

Project Overview

The Arizona Department of Transportation is conducting a long-range transportation study for the Town of Dewey-Humboldt. The study will recommend improvements to meet the community's roadway, transit, bicycle and pedestrian needs over the next 20 years. The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas (PARA) Program.

The purpose of the study is to identify the most critical transportation needs and recommend a program of improvements that address those needs. The study will serve as a guide for future community development, project funding applications, and project implementation.

The public's input is essential to the study results. The first of two public open houses was held on Tuesday, October 25, at Humboldt Elementary School. Project team members presented information related to the existing and future conditions, and identified needs of Dewey-Humboldt's transportation system. A second open house will be held at a later date to present the study's recommended plan for improvements.

Public Meeting Notification

Efforts were made to notify the Dewey-Humboldt community. Team members used a variety of methods to announce the study and public open house.

Prior to the open house, ADOT:

- Distributed emails to a list of approximately 450 individuals on Thursday, October 13, 2011.
- Distributed notification posters to seven locations throughout town including:
 - Bradshaw Mountain Middle School
 - Chevron Gas Station
 - Community board on SW corner of SR 169/SR 69
 - Dewey-Humboldt Town Hall
 - Dewey Post Office
 - Humboldt Post Office
 - Humboldt Public Library
 - Humboldt Senior Center
 - Humboldt Elementary School

Public Meeting Overview

ADOT Multimodal Planning Division Project Manager, Dianne Kresich welcomed and thanked the participants for attending, provided a brief overview of the PARA program, and explained the study objectives and timeline. Michael Grandy, Kimley-Horn and Associates Project Manager, presented the study objectives, schedule, study area, as well as the current and future transportation needs of the area. At the conclusion of the presentation, the floor was opened for discussion. Below is a summary of the discussion.



Open Discussion

Questions

Question: Where is the junior high school and high school for this area?

Answer: The junior high school for this area is Bradshaw Mountain. The high school is Prescott Valley High school.

Question: What is the percentage of the population under 18 years old?

Answer: That information will be available once the Census data for this area has been released. (Note: The 2010 Census estimates that 12% of Dewey-Humboldt residents are aged 10 through 19. Persons aged 65 and above represent 21% of the total population.)

Verbal Comments

Comment: Be mindful that trail connectivity often leads to property being surrendered. Many times the only way to get connectivity to many of the area's trails is through ADOT roads. People often use the shortest path from ADOT roads to trails, even if that means crossing private property. This cannot happen.

Response: Thank you for your comment.

Comment: There is a major problem turning left onto SR 69 from Humboldt. There needs to be a frontage road system built to solve this problem or the speed limit needs to be reduced on SR 69. We could also use a "slow down" or "caution" sign.

Response: It is a constant battle to get drivers to slow down on a state highway when going through a community. ADOT has an access management plan for SR 69 that identifies the locations of existing access points and future access points. ADOT adheres to half-mile spacing standards between access points, and one-mile spacing between traffic signals. The intersection of Main Street and SR 69 has been identified as a potential location for a traffic signal; however, at this time there is not enough traffic to warrant a signal. ADOT has conducted traffic counts every year for the past five years at this intersection. Results from these studies have not warranted a signal.

Comments Received in Writing

Participants were given a comment form as they signed in. No completed comment forms were submitted.

Arizona Department of Transportation
Town of Dewey-Humboldt Transportation Study
Public Meeting 1 - Summary
November 28, 2011



Appendix: Publicity and Meeting Materials

Town of

DEWEY-HUMBOLDT

Transportation Study



PUBLIC OPEN HOUSE

We want
your input!

Your input is requested to help identify transportation needs in the Dewey-Humboldt area.

The Town of Dewey-Humboldt is working with ADOT to develop a plan for future transportation improvements. The study, once completed will recommend projects to meet the community's roadway, transit, bicycle, and pedestrian needs over the next 20 years.

The plan will:

- Develop conceptual alignments to improve local circulation and provide alternatives to SR 69 and SR 169.
- Create a framework for developing a pavement management program.
- Determine the feasibility of local transit service.

Please take a meeting reminder.

Town of Dewey-Humboldt Transportation Study

PUBLIC OPEN HOUSE

Tuesday, October **25**
4:30 p.m. to 6 p.m.

Humboldt Elementary School Library
2750 S. Corral Street, Humboldt, AZ 86329

Brief presentation to begin at 4:45 p.m.

www.azdot.gov/dewey-humboldt

For More Information:

Contact **Tricia Lewis**
tlewis@azdot.gov
928.606.2420



Visit www.azdot.gov/dewey-humboldt





Arizona Department of Transportation and the Town of Dewey-Humboldt
Town of Dewey-Humboldt Transportation Study

Public Meeting Scheduled

Tuesday, October 25, 2011
4:30 p.m. to 6 p.m.

Humboldt Elementary School Library
2750 S. Corral Street
Humboldt, AZ 86329
(Brief presentation to begin at 4:45 p.m.)

The Arizona Department of Transportation is conducting a long-range transportation study for the Town of Dewey-Humboldt. The study will recommend improvements to meet the community's roadway, transit, bicycle and pedestrian needs over the next 20 years. The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas program.

The principal purpose of this study will be to identify the most critical transportation needs and recommend a program of improvements that addresses those needs. The study will serve as a guide for future community development, project funding applications, and project implementation.

Participants of the public meeting will be given the opportunity to provide input on the study's findings to date. Comments and questions received from participants will help the study team understand and identify the transportation needs of the community.

For more information contact Tricia Lewis, ADOT Communication and Community Partnerships, at tlewis@azdot.gov, 928.606.2420, or visit the study website at www.azdot.gov/dewey-humboldt.

<http://www.azdot.gov/Dewey-Humboldt>



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Town of

DEWEY-HUMBOLDT

Transportation Study



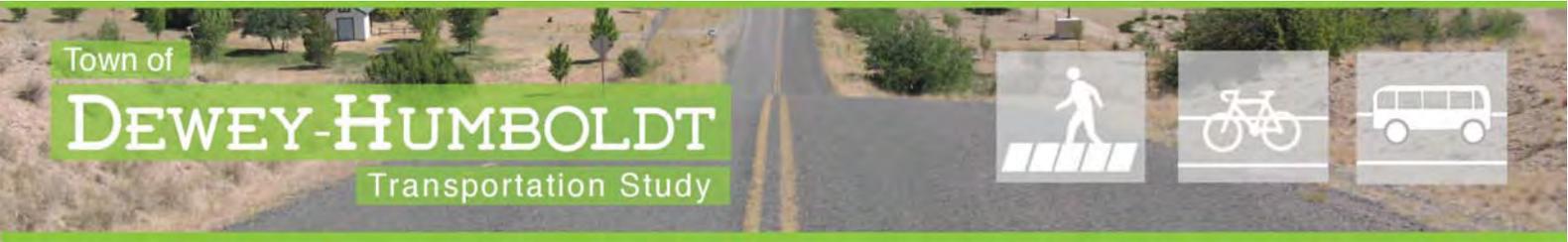
Public Meeting 1: Comment Form
October 25, 2011

1. What do you see as the biggest transportation issue right now in and around the Dewey-Humboldt area?

2. What transportation issues do you think we will face 20 years from now in and around the Dewey-Humboldt area?

What can be done now to prepare for the future (20 years from now)?

- OVER -



Public Meeting 1: Comment Form
October 25, 2011

Additional comments:

Thank you for coming this evening!

Name: _____

Address: _____

City: _____ Zip: _____

Email Address: _____

Completed comment forms can be submitted to the project team at the completion of the public meeting or mailed/faxed/mailed to the project team no later than Friday, November 11.

Mail: Dianne Kresich
c/o KDA Creative
4545 E. Shea Blvd., Ste 210
Phoenix, AZ 85028

Fax: 602-368-9645
Email: dkresich@azdot.gov

More information can be found by visiting: www.azdot.gov/dewey-humboldt

Completion of this comment sheet is completely voluntary. All comments provided will become part of the study's documentation.



TOWN OF Dewey-Humboldt

TRANSPORTATION STUDY

Task Assignment MPD 17-11

Public Meeting 1

October 25, 2011

Prepared For



Prepared By



Kimley-Horn
and Associates, Inc.



Agenda

- ❖ Introduction
- ❖ Working Paper 1 – Current and Future Conditions
 - ❖ Data collected
 - ❖ Current (2011) needs
 - ❖ Future (2031) needs
- ❖ Next steps

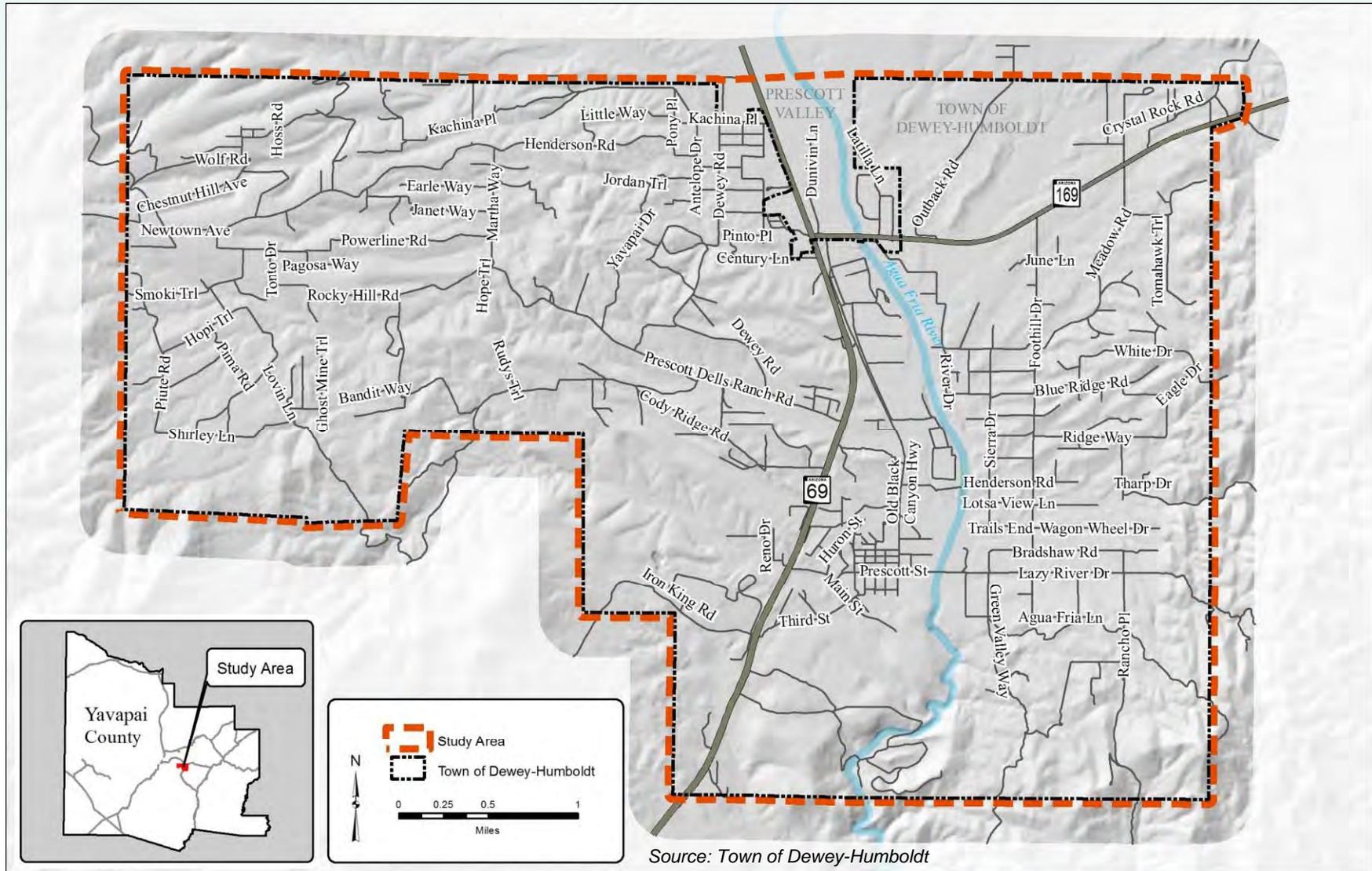


Study Objectives

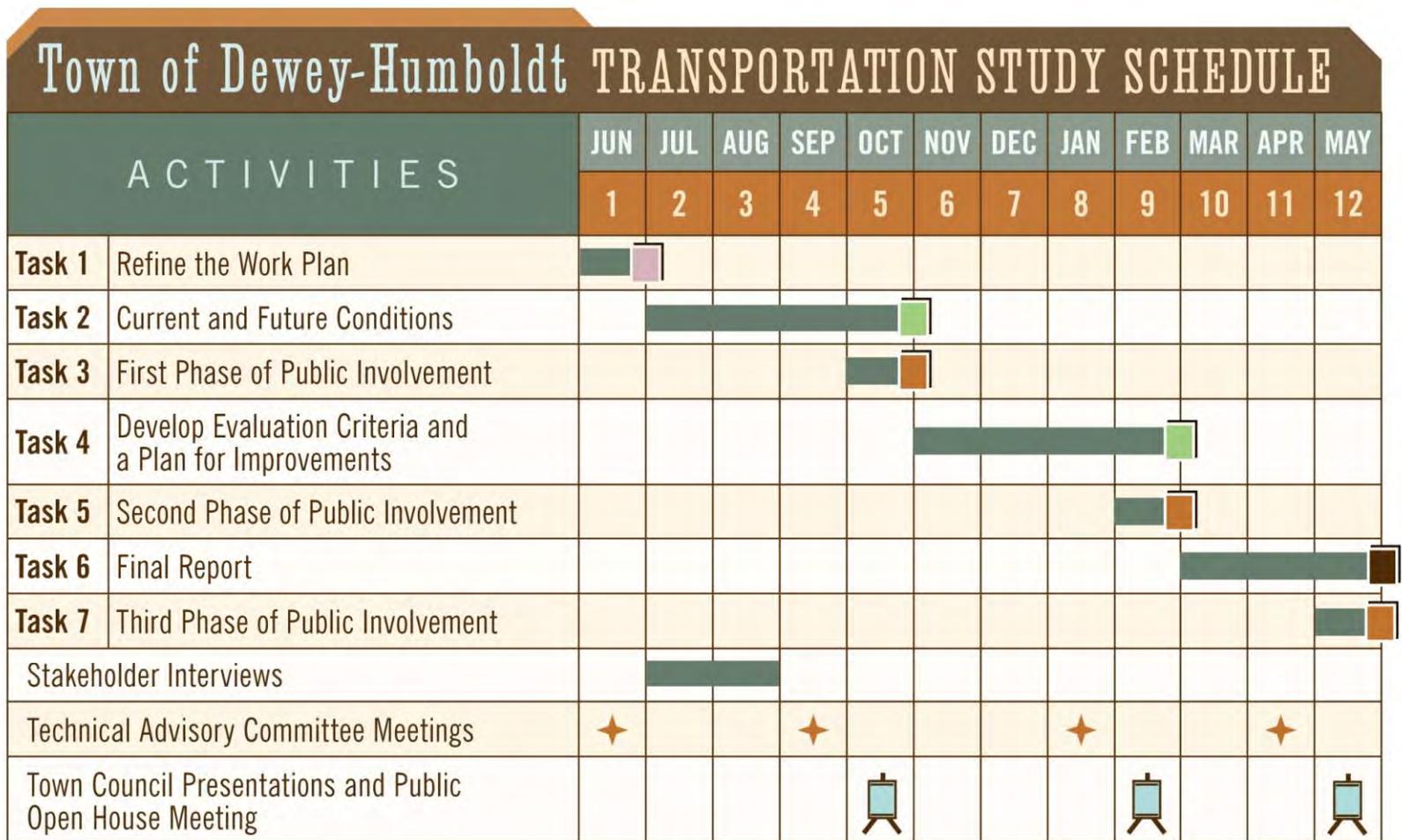
- ❖ **Develop a Multimodal Transportation Plan**
 - ❖ Current (2011) and future (2031) conditions and needs
 - ❖ Roadways, transit, and other modes
 - ❖ Short-, mid-, and long-range improvements
- ❖ **Major priorities**
 - ❖ Network of paved roadways
 - ❖ Pavement maintenance program
 - ❖ Demand and feasibility for transit
 - ❖ Preservation of Town's rural character



Study Area



Study Schedule



KEY FOR DELIVERABLES

- Technical Memorandum
- Working Paper
- Summary Report
- Final Report



Working Paper 1 – Current and Future Conditions

- ❖ Data collected for Working Paper 1
 - ❖ Relevant plans/studies
 - ❖ Stakeholder interviews
 - ❖ Traffic volume counts
 - ❖ Crash data
 - ❖ Pavement condition inventory
 - ❖ Private transit operator data
- ❖ Current conditions and needs
- ❖ Future conditions and needs



Dewey-Humboldt Population

Historical Population Estimates

2000	2004	2010
3,302	3,629	3,894

2000-2010: 1.7% annual growth rate

Sources: 2010 Census and CYMPO RTP

Future Population Projections

Growth Scenario	2010 Population	2016 Population	2021 Population	2031 Population
1% growth rate	3,894	4,134	4,334	4,799
2% growth rate	3,894	4,385	4,842	5,902
3% growth rate	3,894	4,649	5,390	7,244

Sources: 2010 Census and Kimley-Horn and Associates, Inc.

- ❖ Average annual growth rate of 2% assumed for this study
- ❖ Build-out population estimate = 15,000 people



Current Needs

❖ Roadways

- ❖ More paved roads – may need to acquire right-of-way
- ❖ Improved circulation and access management
- ❖ Review traffic operations on SR 69 north of SR 169
- ❖ SR 69/SR 169 signal modifications
- ❖ Functional classification changes to better reflect how roads function
- ❖ All-weather emergency vehicle access
- ❖ Maintaining existing paved roads



Current Needs

❖ Transit

- ❖ Disadvantaged populations exist in study area that need public or private transit services
- ❖ Mobility management to better coordinate private transit services
- ❖ Stable funding for transit services

❖ Other modes of travel

- ❖ Clearly-defined and continuous bicycle, pedestrian, and recreational trail networks



Future Needs

❖ Roadways

- ❖ Additional paved roads and new roads
- ❖ Additional capacity on SR 69 north of SR 169 and on SR 169 if Fain Road connector not constructed
- ❖ Continued access management as new development occurs
- ❖ Assess need for traffic control change at SR 69/Main Street, SR 169/Foothill Drive, and planned developments
- ❖ Potential additional functional classification changes
- ❖ Additional maintenance of existing paved roads



Future Needs

❖ Transit

- ❖ Disadvantaged populations will still need public or private transit services
- ❖ Potential expansion of CYMPO regional public transit system to Dewey-Humboldt if regional public transit system is implemented
- ❖ Continued mobility management to better coordinate private transit
- ❖ Stable funding for transit services

❖ Other modes of travel

- ❖ Clearly-defined and continuous bicycle, pedestrian, and recreational trail networks



Next Steps

- ❖ Evaluation Criteria and Plan for Improvements (November 2011-February 2012)
- ❖ Town Council presentation 2 (February 2012)
- ❖ Public meeting 2 (February 2012)



Discussion

Project website: <http://www.azdot.gov/dewey-humboldt>





Meeting date: Tuesday, February 28, 2012
4:30 p.m. to 6:30 p.m.

Meeting Location: Dewey-Humboldt Town Library, 2735 S. Corral Street, Humboldt, AZ 86329

Participants: 15 participants signed in

Project Overview

The Arizona Department of Transportation is conducting a long-range transportation study for the Town of Dewey-Humboldt. The study will recommend improvements to meet the community's roadway, transit, bicycle and pedestrian needs over the next 20 years. The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas (PARA) Program.

The purpose of the study is to identify the most critical transportation needs and recommend a program of improvements that address those needs. The study will serve as a guide for future community development, project funding applications, and project implementation.

The public's input is essential to the study results. The second public meeting was held on Tuesday, February 28, at the Dewey-Humboldt Town Library. Project team members presented information related to the existing and future conditions and needs of Dewey-Humboldt's transportation system. A proposed list of improvement projects for near-, mid-, and long-term timeframes was also presented.

Public Meeting Notification

Efforts were made to notify the Dewey-Humboldt community. Team members used a variety of methods to announce the study and public open house.

Prior to the open house, ADOT:

- Distributed emails on Wednesday, February 15, 2012 to a list of approximately 450 individuals through Constant Contact and approximately 750 individuals, media, and stakeholders through ADOT GovDelivery.
- Placed notification in the January and February edition of the Town's monthly newsletter.
- Placed notification on the Town's website
- Distributed notification posters to ten locations throughout town including:
 - Blue Hills Cafe
 - Bradshaw Mountain Middle School
 - Chevron Service Station
 - Dewey-Humboldt Town Hall
 - Dewey Post Office
 - Humboldt Post Office
 - Humboldt Public Library
 - Humboldt Senior Center
 - Humboldt Elementary School
 - Texaco Plaza Main Message Board



Public Meeting Overview

ADOT Multimodal Planning Division Project Manager, Dianne Kresich welcomed and thanked the participants for attending, provided a brief overview of the Planning Assistance for Rural Areas (PARA) program, and the study's background and purpose. Michael Grandy, Kimley-Horn and Associates Project Manager, reviewed the study area's current and future needs, and recommended near-, mid-, and long-term improvements. At the conclusion of the presentation, the floor was opened for discussion. Below is a summary of the discussion.

Open Discussion

Questions

Question: Who administers the Safe Routes to School program?

Answer: ADOT works with regional planning organizations to complete applications. The application in this area would go through the Central Yavapai Metropolitan Planning Organization (CYMPO).

Verbal Comments

Comment: I used to live where Prescott Street is and only on a rare occasion would the water level rise high enough to provide challenges for emergency service vehicles to get through, especially fire engines. The fire district would need a bridge in that area that can hold the weight of a fire engine. There is not enough money in the estimate that you provided to build a bridge to accommodate a fire engine.

Response: Thank you for your comment. The team will reevaluate that cost.

Comment: Fire engine access in that area is valuable; however, there are far more issues that would benefit more of the community that would need to be addressed first. We need safe access for kids to get to and from school and paving of dirt roads to reduce dust and health issues. The money could be spent elsewhere.

Response: Thank you for your comment. The team will reevaluate the proposed phasing of recommended improvements.

Comments Received in Writing

Participants were given a comment form as they signed in. No completed comment forms were submitted.

Arizona Department of Transportation
Town of Dewey-Humboldt Transportation Study
Public Meeting 2 - Summary
March 16, 2012



Appendix: Publicity and Meeting Materials

Town of

DEWEY-HUMBOLDT

Transportation Study



PUBLIC OPEN HOUSE

We want
your input!

Review the Draft Program of Transportation Improvements!

What is this study about?

The Arizona Department of Transportation (ADOT) is conducting a long-range transportation study for the Town of Dewey-Humboldt. The study will identify the town's roadway, transit, bicycle, and pedestrian needs, and recommend improvements to help meet those needs over the next 20 years. These recommendations will serve as a guide for future community development, project funding applications, and project implementation. The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas program.

What will happen at the meeting?

The public meeting will provide an opportunity for the community to review and comment on the draft program of improvements. Study team members will be available to answer questions and discuss the study with participants. Comments received will help guide the development of the final recommended program of improvements.

Please take a meeting reminder.

Town of Dewey-Humboldt Transportation Study
PUBLIC OPEN HOUSE

Tuesday, February **28**

4:30 p.m. to 6 p.m.

Dewey-Humboldt Town Library
2735 S. Corral Street, Humboldt, AZ 86329

Brief presentation to begin at 4:45 p.m.

www.azdot.gov/dewey-humboldt

For More Information:

Contact **Tricia Lewis**
tlewis@azdot.gov
928.606.2420

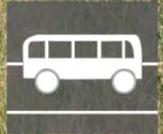
Visit www.azdot.gov/dewey-humboldt



Town of

DEWEY-HUMBOLDT

Transportation Study



Arizona Department of Transportation and the Town of Dewey-Humboldt

Town of Dewey-Humboldt Transportation Study

Public Meeting Scheduled

Tuesday, February 28, 2011

4:30 p.m. to 6 p.m.

Town of Dewey Humboldt Town Library

2735 S. Corral Street

Humboldt, AZ 86329

(Brief presentation to begin at 4:45 p.m.)

The Arizona Department of Transportation (ADOT) is conducting a long-range transportation study for the Town of Dewey-Humboldt. The study will identify the town's roadway, transit, bicycle, and pedestrian needs, and recommend improvements to help meet those needs over the next 20 years. These recommendations will serve as a guide for future community development, project funding applications, and project implementation.

A public meeting is scheduled to provide an opportunity for the community to review and comment on the draft program of improvements. Study team members will be available to answer questions and discuss the study with participants. Comments received will help guide the development of the final recommended program of improvements.

The study is funded by the Federal Highway Administration through ADOT's Planning Assistance for Rural Areas program.

For more information regarding the study contact Tricia Lewis, ADOT Prescott District Senior Community Relations Officer, at tlewis@azdot.gov, 928.606.2420, or visit the study website at www.azdot.gov/dewey-humboldt.

For more information contact Tricia Lewis, ADOT Communication and Community Partnerships, at tlewis@azdot.gov, 928.606.2420, or visit the study website at www.azdot.gov/dewey-humboldt.

<http://www.azdot.gov/Dewey-Humboldt>



Town of

DEWEY-HUMBOLDT

Transportation Study



Public Meeting 2: Comment Form
February 28, 2012

Please provide us with your comments

Thank you for coming this evening!

Name: _____

Address: _____

City: _____ Zip: _____

Email Address: _____

Completed comment forms can be submitted to the project team at the completion of the public meeting or mailed/faxed/mailed to the project team no later than Friday, March 9, 2012.

Mail: Dianne Kresich
c/o KDA Creative
4545 E. Shea Blvd., Ste 210
Phoenix, AZ 85028

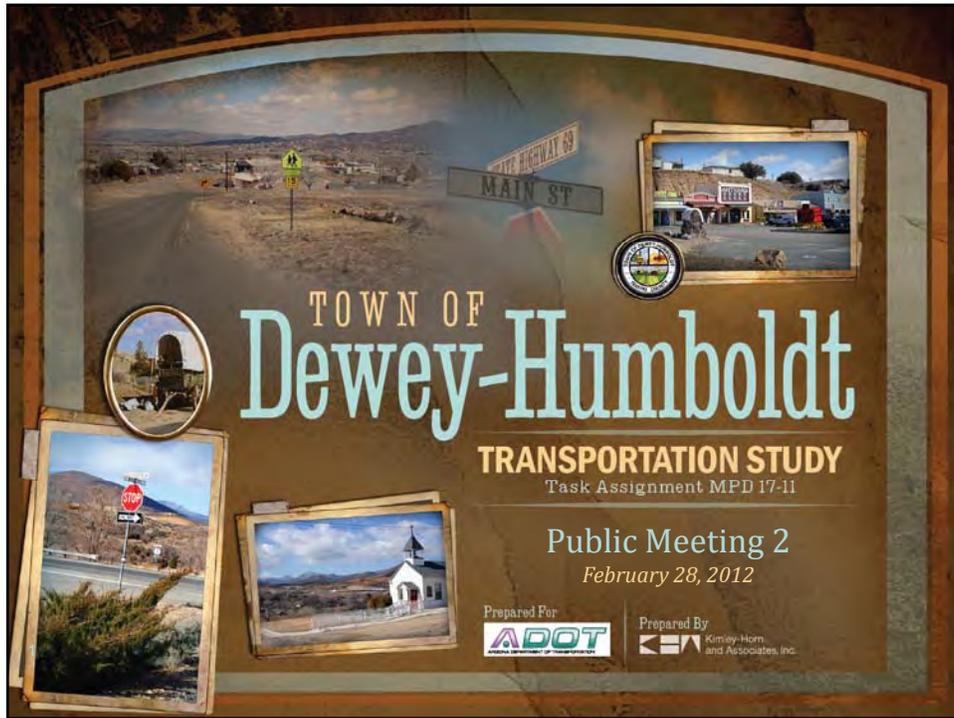
Fax: 602-368-9645
Email: dkresich@azdot.gov

More information can be found by visiting: www.azdot.gov/dewey-humboldt

Completion of this comment sheet is completely voluntary. All comments provided will become part of the study's documentation.

<http://www.azdot.gov/Dewey-Humboldt>



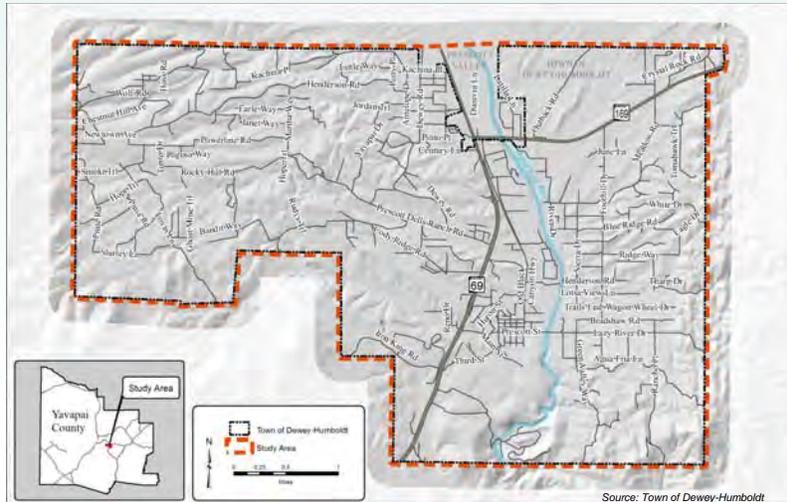


Study Purpose

- ❖ Identify the Town's transportation needs (unmet demand for facilities or service)
- ❖ Recommend improvements to meet identified needs
 - ❖ Guide for future community development
 - ❖ Guide for project funding applications
 - ❖ Guide for project implementation



Study Area



3

TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

ADOT

Barney Stern and Associates, Inc.

Study Process

- ❖ Identify current conditions
 - ❖ Population, employment, traffic volumes, environmental conditions, etc.
- ❖ Forecast future conditions (20 years)
- ❖ Identify unmet transportation needs
 - ❖ Roads, transit, bicycle, pedestrian, and trail facilities
- ❖ Recommend planning-level improvements to meet needs

Throughout process, work collaboratively with stakeholders from Town and other agencies, elected officials, and the public

4

TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

ADOT

Barney Stern and Associates, Inc.

Keep in mind . . .

- ❖ All draft improvements are conceptual only
- ❖ Detailed engineering studies are needed to determine the exact location of potential improvements
- ❖ No funding has been identified for further study, the purchase of right-of-way, or the construction of any improvements



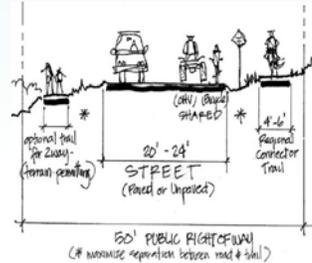
Current/Future Needs

- ❖ **Roadways**
 - ❖ Provide paved roads, network continuity, signal modifications, all-weather Agua Fria River crossing, access management
- ❖ **Other Modes of Travel**
 - ❖ Serve disadvantaged populations with coordinated transit service
 - ❖ Provide pedestrian, bicycle, and trail networks



Complete Streets

- ❖ Safe access for all users of all modes of travel
- ❖ Focus on promoting transit & non-vehicular travel
- ❖ Regional connector trail cross-section
 - ❖ Rural: multi-use paths & buffer
 - ❖ Urban: sidewalks & parking



Source: Town of Dewey-Humboldt Open Space and Trails Plan



Near-term Draft Recommendations

- ❖ Reconstruct roads where pavement is failing
- ❖ Modify SR 69 traffic signals at Kachina Pl. & SR 169
- ❖ Improve Prescott St. river crossing
- ❖ Construct sidewalks/trails in downtown Humboldt
- ❖ Update road classifications
- ❖ Develop and adopt traffic impact and access management guidelines
- ❖ Coordinate with regional transit representatives on transit opportunities
- ❖ Apply for Safe Routes to School grant



Mid-term Draft Recommendations

- ❖ Maintain existing paved roads
- ❖ Evaluate need for signal or roundabout at SR 69/Main St.
- ❖ Provide all-weather road network west of SR 69
- ❖ Develop trail network west of SR 69
- ❖ Update road classifications
- ❖ Coordinate with regional transit representatives on transit opportunities



Long-term Draft Recommendations

- ❖ Maintain existing paved roads
- ❖ Evaluate need for signal or roundabout on SR 169 at Foothill Dr. & at planned access point west of river
- ❖ Expand road network east of SR 69
- ❖ Develop trail network east of SR 69
- ❖ Update road classifications
- ❖ Coordinate with regional transit representatives on transit opportunities



Keep in mind . . .

- ❖ All draft improvements are conceptual only
- ❖ Detailed engineering studies are needed to determine the exact location of potential improvements
- ❖ No funding has been identified for further study, the purchase of right-of-way, or the construction of any improvements

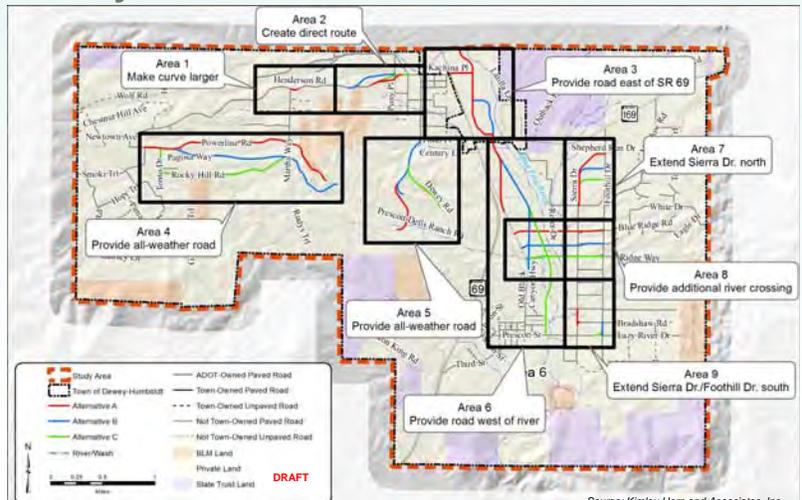
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TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

ADOT

Kimley-Horn and Associates, Inc.

Draft Recommended Improvements Roadway Alternatives



12

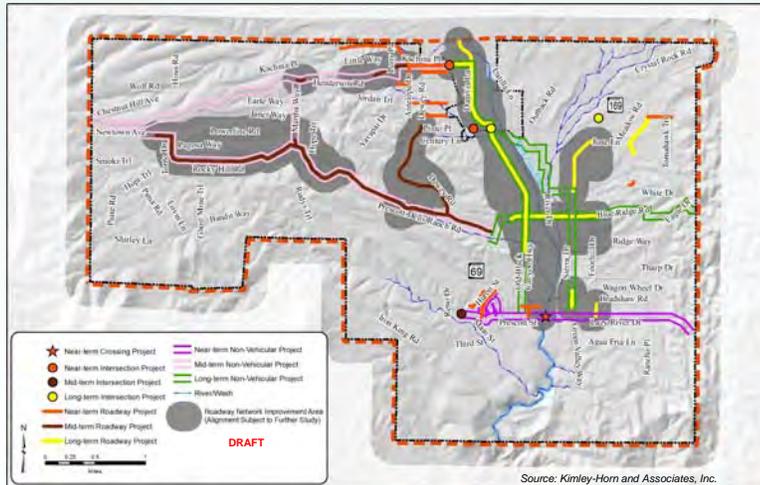
TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

ADOT

Kimley-Horn and Associates, Inc.

All draft improvements are conceptual only. Detailed engineering studies are needed to determine the exact location of potential improvements. No funding has been identified for further study, the purchase of right-of-way, or the construction of any improvements.

Draft Recommended Improvements



Improvements not in graphic:

- Near-term Timeframe**
 - ❖ Update road classifications
 - ❖ Develop and adopt traffic impact guidelines
 - ❖ Develop and adopt access management guidelines
 - ❖ Coordinate with regional transit representatives on transit opportunities
 - ❖ Apply for Safe Routes to School grant
- Mid-term Timeframe**
 - ❖ Maintain existing paved roads
 - ❖ Update road classifications after roadway network improvements have been constructed
 - ❖ Coordinate with regional transit representatives on transit opportunities
- Long-term Timeframe**
 - ❖ Maintain existing paved roads
 - ❖ Update road classifications from rural to urban when the Town reaches a population of 5,000
 - ❖ Coordinate with regional transit representatives on transit opportunities

Source: Kimley-Horn and Associates, Inc.

All draft improvements are conceptual only. Detailed engineering studies are needed to determine the exact location of potential improvements. No funding has been identified for further study, the purchase of right-of-way, or the construction of any improvements.

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TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

Draft Cost Estimate for Recommended Improvements

- ❖ Near-term (0-5 years)
 - ❖ \$5.5 million - \$6.0 million
- ❖ Mid-term (6-10 years)
 - ❖ \$16.6 million - \$20.6 million
- ❖ Long-term (11-20 years)
 - ❖ \$10.9 million - \$15.2 million
- ❖ Total Cost
 - ❖ \$33.0 million - \$41.8 million
- ❖ Costs exceed existing revenue

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TOWN OF Dewey-Humboldt TRANSPORTATION STUDY

Next Steps

- ❖ April:
 - ❖ Draft Final Report
- ❖ May:
 - ❖ Town Council presentation
 - ❖ Final Report



Discussion

Project website: <http://www.azdot.gov/dewey-humboldt>



Appendix C – Daily Traffic Volume Counts

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-001

Location: Foothill Dr. -- 0.25 mi N from Antelope Way

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	1			12:00	4	3		
00:15	0	0			12:15	4	10		
00:30	0	0			12:30	11	9		
00:45	0	0	1		12:45	4	23	8	30
01:00	0	0			13:00	6	9		
01:15	0	0			13:15	12	9		
01:30	0	0			13:30	5	12		
01:45	0	0	0	0	13:45	3	26	16	46
02:00	0	0			14:00	9	13		
02:15	0	1			14:15	10	8		
02:30	1	0			14:30	2	10		
02:45	0	1	0	1	14:45	6	27	9	40
03:00	1	0			15:00	6	6		
03:15	0	0			15:15	7	11		
03:30	0	0			15:30	4	4		
03:45	2	3	0	0	15:45	5	22	9	30
04:00	1	0			16:00	4	17		
04:15	1	0			16:15	5	14		
04:30	1	0			16:30	6	14		
04:45	3	6	0	0	16:45	6	21	13	58
05:00	3	0			17:00	6	7		
05:15	7	0			17:15	5	15		
05:30	2	0			17:30	4	12		
05:45	7	19	0	0	17:45	5	20	13	47
06:00	9	3			18:00	5	14		
06:15	9	1			18:15	5	16		
06:30	9	3			18:30	4	7		
06:45	6	33	3	10	18:45	0	14	6	43
07:00	14	1			19:00	4	9		
07:15	8	0			19:15	2	3		
07:30	13	1			19:30	1	5		
07:45	14	49	5	7	19:45	2	9	8	25
08:00	12	4			20:00	1	6		
08:15	13	4			20:15	1	5		
08:30	6	6			20:30	2	12		
08:45	8	39	6	20	20:45	0	4	5	28
09:00	10	1			21:00	2	2		
09:15	11	2			21:15	0	2		
09:30	11	6			21:30	4	2		
09:45	6	38	5	14	21:45	0	6	3	9
10:00	5	12			22:00	2	0		
10:15	6	5			22:15	0	8		
10:30	11	8			22:30	1	2		
10:45	8	30	2	27	22:45	2	5	4	14
11:00	4	8			23:00	1	0		
11:15	8	6			23:15	0	2		
11:30	4	9			23:30	0	0		
11:45	6	22	10	33	23:45	0	1	0	2

Total Vol. 240 113 353 178 372 550

Daily Totals		WB	Combined
NB	SB	EB	
418	485		903

	AM			PM		
Split %	68.0%	32.0%	39.1%	32.4%	67.6%	60.9%
Peak Hour	07:30	11:00	07:30	12:30	16:00	13:15
Volume	52	33	66	33	58	79
P.H.F.	0.93	0.83	0.87	0.69	0.85	0.90

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-003

Location: Foothill Dr. -- 1.790 mi from SR 169

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB	
00:00	0	0			12:00	2	3			
00:15	0	0			12:15	3	6			
00:30	0	0			12:30	7	1			
00:45	0	0	0		12:45	2	14	2	12	
01:00	0	0			13:00	2	5			
01:15	0	0			13:15	2	4			
01:30	0	0			13:30	4	1			
01:45	0	0	0		13:45	5	13	1	11	
02:00	1	0			14:00	3	1			
02:15	0	0			14:15	4	2			
02:30	0	0			14:30	2	3			
02:45	0	1	0	0	1	14:45	2	11	5	11
03:00	0	0			15:00	4	5			
03:15	0	1			15:15	7	2			
03:30	0	0			15:30	0	1			
03:45	0	0	0	1	1	15:45	3	14	7	15
04:00	1	1			16:00	3	2			
04:15	0	0			16:15	4	1			
04:30	0	0			16:30	6	3			
04:45	1	2	1	2	4	16:45	4	17	0	6
05:00	0	0			17:00	4	2			
05:15	1	2			17:15	2	4			
05:30	1	1			17:30	2	3			
05:45	2	4	2	5	9	17:45	4	12	2	11
06:00	1	1			18:00	4	4			
06:15	0	1			18:15	5	3			
06:30	1	3			18:30	2	0			
06:45	1	3	2	7	10	18:45	2	13	2	9
07:00	3	5			19:00	1	3			
07:15	3	1			19:15	0	3			
07:30	5	2			19:30	1	1			
07:45	1	12	4	12	24	19:45	2	4	0	7
08:00	0	1			20:00	2	1			
08:15	1	2			20:15	1	0			
08:30	2	1			20:30	0	2			
08:45	1	4	5	9	13	20:45	1	4	2	5
09:00	3	1			21:00	2	1			
09:15	8	2			21:15	0	1			
09:30	6	6			21:30	3	0			
09:45	4	21	0	9	30	21:45	0	5	1	3
10:00	0	8			22:00	1	1			
10:15	2	9			22:15	0	1			
10:30	5	2			22:30	0	0			
10:45	2	9	3	22	31	22:45	1	2	2	4
11:00	3	2			23:00	1	1			
11:15	2	5			23:15	0	1			
11:30	7	2			23:30	1	0			
11:45	4	16	2	11	27	23:45	1	3	0	2

Total Vol. 72 78 150 112 96 208

Daily Totals		WB	Combined
NB	SB	EB	
184	174		358

Split %	AM			PM		
	48.0%	52.0%	41.9%	53.8%	46.2%	58.1%
Peak Hour	09:00	09:30	09:30	16:15	14:15	14:30
Volume	21	23	35	18	15	30
P.H.F.	0.66	0.64	0.73	0.75	0.75	0.83

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-004

Location: Henderson Rd. - 0.042 mi W from Martha Way

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			6	10			
00:15			0	5	12:15			12	7			
00:30			1	1	12:30			5	10			
00:45			0	1	12:45			14	37	13	40	77
01:00			2	1	13:00			8	6			
01:15			0	1	13:15			7	9			
01:30			0	3	13:30			10	6			
01:45			0	2	13:45			5	30	4	25	55
02:00			0	1	14:00			4	11			
02:15			1	1	14:15			4	14			
02:30			0	0	14:30			5	14			
02:45			0	1	14:45			9	22	9	48	70
03:00			1	0	15:00			5	13			
03:15			1	1	15:15			10	12			
03:30			2	0	15:30			6	20			
03:45			1	5	15:45			8	29	7	52	81
04:00			3	0	16:00			3	9			
04:15			5	0	16:15			7	15			
04:30			2	0	16:30			6	13			
04:45			2	12	16:45			4	20	13	50	70
05:00			5	2	17:00			8	12			
05:15			10	2	17:15			6	11			
05:30			4	0	17:30			6	13			
05:45			11	30	17:45			5	25	10	46	71
06:00			8	2	18:00			8	13			
06:15			7	6	18:15			2	12			
06:30			10	5	18:30			2	9			
06:45			11	36	18:45			5	17	2	36	53
07:00			10	1	19:00			1	10			
07:15			7	4	19:15			2	5			
07:30			9	2	19:30			2	5			
07:45			20	46	19:45			5	10	5	25	35
08:00			5	4	20:00			4	10			
08:15			12	2	20:15			3	4			
08:30			10	1	20:30			1	11			
08:45			5	32	20:45			3	11	8	33	44
09:00			11	4	21:00			1	4			
09:15			14	2	21:15			6	4			
09:30			4	6	21:30			1	5			
09:45			9	38	21:45			2	10	3	16	26
10:00			8	16	22:00			4	3			
10:15			12	9	22:15			0	2			
10:30			6	4	22:30			1	2			
10:45			9	35	22:45			1	6	2	9	15
11:00			12	5	23:00			0	0			
11:15			9	10	23:15			1	4			
11:30			2	8	23:30			0	1			
11:45			11	34	23:45			0	1	0	5	6

Total Vol. 272 150 422 218 385 603

		Daily Totals		
NB	SB	EB	WB	Combined
		490	535	1025

	AM			PM		
Split %	64.5%	35.5%	41.2%	36.2%	63.8%	58.8%
Peak Hour	07:45	09:30	10:00	12:15	14:45	14:45
Volume	47	39	74	39	54	84
P.H.F.	0.59	0.61	0.77	0.70	0.68	0.81

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-005

Location: Henderson Rd. - 0.136 mi from Pony Place

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			1	3	12:00			8	18			
00:15			0	2	12:15			16	14			
00:30			2	2	12:30			9	16			
00:45			0	3	0	7	10	14	47	14	62	109
01:00			1	0	13:00			8	9			
01:15			0	2	13:15			15	12			
01:30			0	3	13:30			17	13			
01:45			0	1	0	5	6	9	49	12	46	95
02:00			0	1	14:00			9	18			
02:15			0	1	14:15			6	16			
02:30			1	0	14:30			7	16			
02:45			1	2	0	2	4	10	32	18	68	100
03:00			2	1	15:00			6	19			
03:15			2	0	15:15			12	17			
03:30			2	0	15:30			6	30			
03:45			0	6	0	1	7	10	34	13	79	113
04:00			5	0	16:00			5	15			
04:15			7	0	16:15			9	15			
04:30			3	0	16:30			5	16			
04:45			2	17	1	1	18	5	24	21	67	91
05:00			8	5	17:00			7	14			
05:15			14	0	17:15			8	18			
05:30			7	1	17:30			2	12			
05:45			17	46	2	8	54	3	20	16	60	80
06:00			6	3	18:00			8	18			
06:15			11	8	18:15			3	17			
06:30			17	4	18:30			3	12			
06:45			13	47	4	19	66	6	20	10	57	77
07:00			15	4	19:00			4	11			
07:15			15	4	19:15			3	11			
07:30			14	6	19:30			0	11			
07:45			29	73	8	22	95	7	14	7	40	54
08:00			10	6	20:00			4	8			
08:15			20	3	20:15			2	11			
08:30			17	9	20:30			1	9			
08:45			15	62	8	26	88	4	11	9	37	48
09:00			13	5	21:00			2	3			
09:15			16	6	21:15			5	5			
09:30			12	10	21:30			3	6			
09:45			17	58	15	36	94	1	11	3	17	28
10:00			9	12	22:00			2	2			
10:15			14	12	22:15			1	2			
10:30			7	12	22:30			2	2			
10:45			15	45	17	53	98	1	6	2	8	14
11:00			14	9	23:00			1	2			
11:15			9	10	23:15			1	2			
11:30			8	14	23:30			1	2			
11:45			11	42	7	40	82	0	3	1	7	10

Total Vol.			402	220	622			271	548	819
								Daily Totals		
						NB	SB	EB	WB	Combined
								673	768	1441

	AM			PM		
Split %	64.6%	35.4%	43.2%	33.1%	66.9%	56.8%
Peak Hour	07:45	11:45	07:45	12:45	14:45	14:45
Volume	76	55	102	54	84	118
P.H.F.	0.66	0.76	0.69	0.79	0.70	0.82

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-006

Location: Horseshoe Ln. - 0.088 mi from Antelope Dr.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	5	12:00			15	12			
00:15			1	2	12:15			15	18			
00:30			0	1	12:30			11	12			
00:45			0	1	0	8	9	22	63	13	55	118
01:00			1	0	13:00			9	12			
01:15			0	4	13:15			15	13			
01:30			0	0	13:30			17	14			
01:45			0	1	0	4	5	10	51	13	52	103
02:00			0	1	14:00			9	17			
02:15			1	0	14:15			11	22			
02:30			1	0	14:30			6	18			
02:45			1	3	0	1	4	13	39	18	75	114
03:00			2	0	15:00			6	14			
03:15			2	0	15:15			17	19			
03:30			3	0	15:30			6	30			
03:45			1	8	1	1	9	9	38	18	81	119
04:00			5	0	16:00			6	14			
04:15			9	0	16:15			13	14			
04:30			0	0	16:30			8	16			
04:45			2	16	5	5	21	6	33	24	68	101
05:00			10	2	17:00			11	16			
05:15			14	0	17:15			7	18			
05:30			5	2	17:30			6	11			
05:45			14	43	1	5	48	10	34	20	65	99
06:00			10	4	18:00			9	22			
06:15			12	7	18:15			5	15			
06:30			18	5	18:30			3	8			
06:45			15	55	5	21	76	9	26	12	57	83
07:00			11	2	19:00			3	11			
07:15			15	4	19:15			4	15			
07:30			18	7	19:30			2	10			
07:45			29	73	10	23	96	6	15	9	45	60
08:00			12	6	20:00			2	7			
08:15			19	4	20:15			3	11			
08:30			17	8	20:30			1	10			
08:45			15	63	5	23	86	3	9	8	36	45
09:00			16	6	21:00			2	6			
09:15			11	9	21:15			6	4			
09:30			14	8	21:30			2	5			
09:45			12	53	16	39	92	3	13	3	18	31
10:00			12	11	22:00			1	3			
10:15			14	12	22:15			1	2			
10:30			11	17	22:30			2	2			
10:45			16	53	12	52	105	1	5	1	8	13
11:00			13	12	23:00			0	4			
11:15			10	10	23:15			1	1			
11:30			8	12	23:30			1	2			
11:45			12	43	13	47	90	0	2	1	8	10

Total Vol. 412 229 641 328 568 896

		Daily Totals		
NB	SB	EB	WB	Combined
		740	797	1537

	AM			PM		
Split %	64.3%	35.7%	41.7%	36.6%	63.4%	58.3%
Peak Hour	07:30	09:45	11:45	12:00	14:45	14:45
Volume	78	56	108	63	81	123
P.H.F.	0.67	0.82	0.82	0.72	0.68	0.85

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-007

Location: Kachina Pl. - 0.24 mi from SR 69

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	5	12:00			20	23			
00:15			2	3	12:15			16	24			
00:30			0	2	12:30			21	17			
00:45			0	2	0	10	12	20	77	23	87	164
01:00			2	1	13:00			9	16			
01:15			0	4	13:15			20	22			
01:30			0	0	13:30			22	23			
01:45			0	2	0	5	7	12	63	22	83	146
02:00			0	1	14:00			15	32			
02:15			2	0	14:15			14	31			
02:30			1	0	14:30			19	26			
02:45			1	4	1	2	6	19	67	27	116	183
03:00			2	0	15:00			12	27			
03:15			3	0	15:15			26	29			
03:30			5	1	15:30			14	36			
03:45			2	12	0	1	13	15	67	39	131	198
04:00			5	0	16:00			13	29			
04:15			11	0	16:15			19	30			
04:30			4	0	16:30			17	30			
04:45			3	23	3	3	26	12	61	39	128	189
05:00			15	4	17:00			21	26			
05:15			19	0	17:15			16	30			
05:30			14	7	17:30			10	20			
05:45			21	69	1	12	81	14	61	26	102	163
06:00			22	6	18:00			18	29			
06:15			19	9	18:15			7	21			
06:30			22	7	18:30			7	16			
06:45			19	82	6	28	110	14	46	24	90	136
07:00			29	8	19:00			9	22			
07:15			36	6	19:15			8	18			
07:30			23	11	19:30			8	16			
07:45			48	136	13	38	174	14	39	12	68	107
08:00			23	11	20:00			5	15			
08:15			26	9	20:15			6	17			
08:30			27	12	20:30			6	14			
08:45			27	103	8	40	143	5	22	10	56	78
09:00			25	11	21:00			3	9			
09:15			27	18	21:15			9	8			
09:30			23	15	21:30			2	9			
09:45			25	100	22	66	166	3	17	6	32	49
10:00			21	22	22:00			1	8			
10:15			24	18	22:15			1	6			
10:30			13	20	22:30			5	3			
10:45			19	77	20	80	157	1	8	2	19	27
11:00			23	23	23:00			0	9			
11:15			16	18	23:15			4	3			
11:30			20	19	23:30			1	3			
11:45			14	73	16	76	149	2	7	1	16	23

Total Vol. 683 361 1044 535 928 1463

		Daily Totals				
		NB	SB	EB	WB	Combined
				1218	1289	2507

		AM			PM		
Split %		65.4%	34.6%	41.6%	36.6%	63.4%	58.4%
Peak Hour		07:00	09:45	07:00	12:00	15:30	15:15
Volume		136	82	174	77	134	201
P.H.F.		0.71	0.93	0.71	0.92	0.86	0.91

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-010

Location: Old Black Canyon Highway - 1.629 mi from SR 169

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	3	6		
00:15	0	0			12:15	11	3		
00:30	0	0			12:30	3	4		
00:45	0	0	0		12:45	4	21	8	21
01:00	0	0			13:00	4	5		
01:15	0	0			13:15	7	2		
01:30	0	0			13:30	3	4		
01:45	2	2	2	2	13:45	3	17	3	14
02:00	0	0			14:00	9	2		
02:15	0	0			14:15	3	3		
02:30	0	0			14:30	3	5		
02:45	1	1	0	0	14:45	2	17	4	14
03:00	0	0			15:00	4	8		
03:15	0	0			15:15	4	3		
03:30	0	0			15:30	3	9		
03:45	1	1	0	0	15:45	0	11	6	26
04:00	1	0			16:00	2	1		
04:15	2	0			16:15	2	6		
04:30	1	0			16:30	5	11		
04:45	1	5	0	0	16:45	2	11	4	22
05:00	1	1			17:00	7	5		
05:15	2	0			17:15	5	5		
05:30	5	0			17:30	5	4		
05:45	1	9	1	2	17:45	2	19	4	18
06:00	3	1			18:00	1	3		
06:15	3	0			18:15	3	6		
06:30	6	0			18:30	5	2		
06:45	5	17	1	2	18:45	4	13	3	14
07:00	3	2			19:00	4	5		
07:15	8	0			19:15	2	5		
07:30	2	2			19:30	0	3		
07:45	9	22	1	5	19:45	3	9	2	15
08:00	4	1			20:00	3	2		
08:15	3	3			20:15	2	0		
08:30	3	2			20:30	1	2		
08:45	2	12	2	8	20:45	2	8	5	9
09:00	6	2			21:00	1	4		
09:15	5	0			21:15	2	3		
09:30	3	5			21:30	1	3		
09:45	3	17	1	8	21:45	0	4	2	12
10:00	1	3			22:00	0	1		
10:15	4	3			22:15	2	1		
10:30	3	5			22:30	0	0		
10:45	2	10	4	15	22:45	0	2	0	2
11:00	3	1			23:00	0	3		
11:15	6	4			23:15	0	0		
11:30	4	0			23:30	0	0		
11:45	4	17	3	8	23:45	0	0	0	3

Total Vol. 113 50 163 132 170 302

Daily Totals		EB	WB	Combined
NB	SB			
245	220			465

Split %	AM			PM		
	69.3%	30.7%	35.1%	43.7%	56.3%	64.9%
Peak Hour	07:15	11:45	11:45	12:15	15:00	16:30
Volume	23	16	37	22	26	44
P.H.F.	0.64	0.67	0.66	0.50	0.72	0.69

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-012

Location: Prescott St. - 0.031 mi from Main St.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	0			12:00	17	9		
00:15	0	0			12:15	19	12		
00:30	1	1			12:30	15	12		
00:45	1	3	0	1	12:45	8	59	12	45
01:00	0	0			13:00	13	10		
01:15	0	0			13:15	14	13		
01:30	1	0			13:30	25	11		
01:45	1	2	0	0	13:45	18	70	4	38
02:00	0	1			14:00	12	8		
02:15	0	1			14:15	17	4		
02:30	0	1			14:30	17	10		
02:45	1	1	1	4	14:45	10	56	8	30
03:00	0	0			15:00	13	5		
03:15	1	0			15:15	18	12		
03:30	2	0			15:30	19	7		
03:45	0	3	2	2	15:45	12	62	6	30
04:00	0	3			16:00	17	11		
04:15	1	2			16:15	10	5		
04:30	0	2			16:30	14	6		
04:45	1	2	5	12	16:45	32	73	3	25
05:00	0	1			17:00	13	4		
05:15	1	9			17:15	16	5		
05:30	0	5			17:30	14	8		
05:45	2	3	10	25	17:45	14	57	6	23
06:00	5	3			18:00	10	9		
06:15	2	8			18:15	11	4		
06:30	5	12			18:30	11	7		
06:45	3	15	11	34	18:45	11	43	5	25
07:00	2	14			19:00	12	7		
07:15	9	10			19:15	13	6		
07:30	13	9			19:30	9	3		
07:45	10	34	8	41	19:45	6	40	2	18
08:00	6	14			20:00	7	3		
08:15	7	10			20:15	10	1		
08:30	14	17			20:30	10	0		
08:45	14	41	8	49	20:45	5	32	2	6
09:00	8	10			21:00	10	3		
09:15	10	10			21:15	6	3		
09:30	13	18			21:30	1	5		
09:45	21	52	14	52	21:45	0	17	4	15
10:00	14	15			22:00	4	1		
10:15	15	11			22:15	2	0		
10:30	15	8			22:30	5	1		
10:45	10	54	15	49	22:45	1	12	0	2
11:00	15	6			23:00	1	2		
11:15	11	10			23:15	0	0		
11:30	15	6			23:30	1	0		
11:45	14	55	10	32	23:45	0	2	0	2

Total Vol.	265	301		566		523	259		782
								Daily Totals	
						NB	SB	EB	WB
						788	560		1348

	AM			PM		
Split %	46.8%	53.2%	42.0%	66.9%	33.1%	58.0%
Peak Hour	09:45	09:30	09:30	16:30	12:30	13:00
Volume	65	58	121	75	47	108
P.H.F.	0.77	0.81	0.86	0.59	0.90	0.75

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-013

Location: Prescott St. - 0.057 mi E from Jones St.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	1	12:00			10	3			
00:15			0	0	12:15			8	12			
00:30			0	1	12:30			10	8			
00:45			0	0	0	2	2	8	36	4	27	63
01:00			0	0	13:00			8	11			
01:15			0	0	13:15			8	9			
01:30			0	1	13:30			8	6			
01:45			0	0	0	1	1	10	34	4	30	64
02:00			1	2	14:00			10	9			
02:15			1	0	14:15			9	6			
02:30			0	1	14:30			13	7			
02:45			0	2	0	3	5	5	37	8	30	67
03:00			0	0	15:00			11	10			
03:15			0	0	15:15			15	5			
03:30			2	0	15:30			10	5			
03:45			1	3	1	1	4	14	50	4	24	74
04:00			0	2	16:00			11	10			
04:15			1	2	16:15			9	7			
04:30			2	0	16:30			11	8			
04:45			2	5	0	4	9	15	46	1	26	72
05:00			2	2	17:00			13	6			
05:15			0	4	17:15			4	4			
05:30			0	5	17:30			11	4			
05:45			1	3	7	18	21	10	38	2	16	54
06:00			1	6	18:00			9	9			
06:15			2	3	18:15			11	5			
06:30			1	3	18:30			7	6			
06:45			3	7	4	16	23	5	32	3	23	55
07:00			1	12	19:00			5	3			
07:15			3	10	19:15			8	7			
07:30			5	6	19:30			10	2			
07:45			4	13	10	38	51	5	28	4	16	44
08:00			1	12	20:00			4	3			
08:15			2	8	20:15			7	4			
08:30			6	7	20:30			6	1			
08:45			5	14	6	33	47	6	23	3	11	34
09:00			6	4	21:00			4	3			
09:15			10	6	21:15			5	2			
09:30			7	10	21:30			5	1			
09:45			10	33	8	28	61	5	19	0	6	25
10:00			5	8	22:00			5	1			
10:15			6	12	22:15			1	1			
10:30			7	8	22:30			0	0			
10:45			5	23	10	38	61	1	7	1	3	10
11:00			6	9	23:00			0	1			
11:15			7	4	23:15			0	0			
11:30			9	7	23:30			0	0			
11:45			10	32	5	25	57	2	2	0	1	3

Total Vol. 135 207 342 352 213 565

		Daily Totals		
NB	SB	EB	WB	Combined
		487	420	907

Split %	AM			PM		
	39.5%	60.5%	37.7%	62.3%	37.7%	62.3%
Peak Hour	11:45	10:15	09:30	15:00	12:15	14:30
Volume	38	39	66	50	35	74
P.H.F.	0.95	0.81	0.92	0.83	0.73	0.88

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-015

Location: Third St. - Humboldt - 0.05 mi from SR 69

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			1	3			
00:15			0	0	12:15			1	2			
00:30			0	0	12:30			0	1			
00:45			0	0	12:45			0	2	0	6	8
01:00			0	0	13:00			0	1			
01:15			0	0	13:15			1	0			
01:30			0	0	13:30			0	0			
01:45			0	0	13:45			2	3	2	3	6
02:00			0	0	14:00			1	2			
02:15			0	0	14:15			1	1			
02:30			0	0	14:30			3	1			
02:45			0	0	14:45			0	5	0	4	9
03:00			0	0	15:00			1	1			
03:15			0	0	15:15			0	0			
03:30			0	0	15:30			0	0			
03:45			0	0	15:45			4	5	6	7	12
04:00			0	0	16:00			1	1			
04:15			0	0	16:15			1	0			
04:30			0	0	16:30			1	0			
04:45			0	0	16:45			1	4	1	2	6
05:00			1	0	17:00			0	0			
05:15			0	0	17:15			1	3			
05:30			0	0	17:30			2	1			
05:45			0	1	17:45			1	4	1	5	9
06:00			3	0	18:00			4	4			
06:15			0	1	18:15			1	1			
06:30			2	1	18:30			0	0			
06:45			2	7	18:45			0	5	0	5	10
07:00			3	0	19:00			0	0			
07:15			1	1	19:15			0	0			
07:30			0	0	19:30			1	1			
07:45			3	7	19:45			2	3	1	2	5
08:00			0	0	20:00			0	1			
08:15			2	2	20:15			0	0			
08:30			3	1	20:30			0	0			
08:45			2	7	20:45			0	0	0	1	1
09:00			2	1	21:00			0	0			
09:15			3	0	21:15			1	0			
09:30			1	0	21:30			2	1			
09:45			0	6	21:45			0	3	0	1	4
10:00			0	0	22:00			1	0			
10:15			4	0	22:15			0	0			
10:30			3	0	22:30			0	0			
10:45			0	7	22:45			0	1	0	0	1
11:00			0	1	23:00			0	0			
11:15			2	2	23:15			0	0			
11:30			3	1	23:30			0	0			
11:45			9	14	23:45			1	1	0	0	1

Total Vol.			49	24	73				36	36	72
									Daily Totals		
						NB	SB	EB	WB	Combined	
								85	60	145	

	AM			PM		
Split %	67.1%	32.9%	50.3%	50.0%	50.0%	49.7%
Peak Hour	11:15	11:15	11:15	17:15	17:15	17:15
Volume	15	13	28	8	9	17
P.H.F.	0.42	0.46	0.44	0.50	0.56	0.53

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-016

Location: Lazy River Dr. - 0.10 mi E of Green Valley Way

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			2	1			
00:15			0	0	12:15			2	5			
00:30			0	0	12:30			3	0			
00:45			0	0	12:45			2	9	4	10	19
01:00			0	0	13:00			2	1			
01:15			0	0	13:15			1	2			
01:30			0	0	13:30			4	1			
01:45			1	1	13:45			3	10	1	5	15
02:00			0	0	14:00			5	1			
02:15			0	0	14:15			8	5			
02:30			0	0	14:30			5	0			
02:45			0	0	14:45			6	24	3	9	33
03:00			0	0	15:00			2	0			
03:15			0	0	15:15			4	3			
03:30			0	0	15:30			4	2			
03:45			0	0	15:45			4	14	1	6	20
04:00			0	0	16:00			6	2			
04:15			1	0	16:15			0	1			
04:30			0	1	16:30			4	0			
04:45			2	3	16:45			6	16	0	3	19
05:00			0	0	17:00			1	1			
05:15			0	3	17:15			2	1			
05:30			0	1	17:30			3	0			
05:45			0	0	17:45			5	11	2	4	15
06:00			0	1	18:00			0	1			
06:15			0	0	18:15			2	3			
06:30			1	2	18:30			2	0			
06:45			1	2	18:45			1	5	0	4	9
07:00			0	5	19:00			3	2			
07:15			0	2	19:15			4	1			
07:30			2	0	19:30			1	0			
07:45			0	2	19:45			0	8	1	4	12
08:00			2	5	20:00			2	0			
08:15			2	3	20:15			4	3			
08:30			3	3	20:30			2	1			
08:45			2	9	20:45			1	9	1	5	14
09:00			1	2	21:00			2	1			
09:15			3	4	21:15			3	1			
09:30			0	3	21:30			2	0			
09:45			7	11	21:45			0	7	0	2	9
10:00			2	4	22:00			0	0			
10:15			2	2	22:15			0	0			
10:30			3	3	22:30			0	0			
10:45			1	8	22:45			0	0	0	0	
11:00			3	1	23:00			0	1			
11:15			4	0	23:15			0	0			
11:30			4	5	23:30			0	0			
11:45			3	14	23:45			0	0	0	1	1

Total Vol. 50 67 117 113 53 166

		Daily Totals		
NB	SB	EB	WB	Combined
		163	120	283

AM
Split % 42.7% 57.3% 41.3%

PM
Split % 68.1% 31.9% 58.7%

Peak Hour	09:45	09:15	09:15	14:00	12:00	14:00
Volume	14	14	26	24	10	33
P.H.F.	0.50	0.88	0.65	0.75	0.50	0.63

Field Data Services of Arizona, Inc.
(520) 316-6745

Volumes for: Tuesday, August 02, 2011

City: Dewey-Humboldt

Project #: 11-1112-018

Location: Prescott Dells Ranch Rd. - 0.05 mi from SR 69

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			2	0			
00:15			0	0	12:15			2	4			
00:30			0	0	12:30			1	2			
00:45			0	0	12:45			3	8	0	6	14
01:00			0	0	13:00			1	1			
01:15			0	0	13:15			10	1			
01:30			0	0	13:30			1	0			
01:45			0	0	13:45			5	17	3	5	22
02:00			0	0	14:00			2	1			
02:15			0	0	14:15			1	1			
02:30			0	0	14:30			0	1			
02:45			1	1	14:45			2	5	3	6	11
03:00			1	2	15:00			4	6			
03:15			0	0	15:15			4	0			
03:30			0	0	15:30			3	4			
03:45			0	1	15:45			2	13	7	17	30
04:00			0	1	16:00			3	7			
04:15			0	0	16:15			2	1			
04:30			0	1	16:30			2	3			
04:45			0	0	16:45			4	11	4	15	26
05:00			0	0	17:00			3	2			
05:15			0	1	17:15			3	2			
05:30			0	7	17:30			3	1			
05:45			0	0	17:45			0	9	1	6	15
06:00			0	4	18:00			2	1			
06:15			0	7	18:15			2	2			
06:30			0	2	18:30			0	1			
06:45			0	0	18:45			2	6	1	5	11
07:00			0	3	19:00			2	1			
07:15			2	1	19:15			6	1			
07:30			3	1	19:30			2	2			
07:45			2	7	19:45			1	11	1	5	16
08:00			3	0	20:00			2	3			
08:15			5	1	20:15			3	1			
08:30			5	1	20:30			0	0			
08:45			5	18	20:45			1	6	0	4	10
09:00			9	3	21:00			2	1			
09:15			8	3	21:15			0	0			
09:30			3	1	21:30			0	0			
09:45			7	27	21:45			0	2	0	1	3
10:00			4	0	22:00			0	0			
10:15			4	0	22:15			0	0			
10:30			3	0	22:30			0	3			
10:45			1	12	22:45			0	0	1	4	4
11:00			6	1	23:00			1	0			
11:15			5	3	23:15			0	0			
11:30			6	1	23:30			0	0			
11:45			4	21	23:45			0	1	0	0	1

Total Vol.			87	57	144			89	74	163
								Daily Totals		
						NB	SB	EB	WB	Combined
								176	131	307

	AM			PM		
Split %	60.4%	39.6%	46.9%	54.6%	45.4%	53.1%
Peak Hour	08:30	05:30	09:00	13:15	15:30	15:00
Volume	27	22	39	18	19	30
P.H.F.	0.75	0.79	0.81	0.45	0.68	0.75

Appendix D – Crash Data

ADOT SR 69 and SR 169 AADT Volumes - provided by ADOT MPD Traffic Data Collection Staff on 08/31/11

ROUTE	BMP	STARTS AT	EMP	ENDS AT	LENGTH	AADT00	AADT01	AADT02	AADT03	AADT04	AADT05	AADT06	AADT07	AADT08	AADT09	AADT10	AADT30
SR 169	0.00	SR 69 - Dewey	2.38	Crystal Rock Rd	2.38	7,900	9,000	7,819	9,204	9,462	9,745	9,034	9,141	7,257	7,234	9,500	12,000
SR 169	2.38	Crystal Rock Rd	4.91	Orme Rd	2.53	7,900	9,000	7,819	9,204	9,462	9,745	9,034	9,141	7,257	7,234	5,700	7,100
SR 169	4.91	Orme Rd	15.16	I-17 (Exit 278)	10.25	4,700	5,500	4,763	5,379	4,943	6,827	5,745	5,117	4,560	4,545	5,000	7,400
SR 69	262.58	I-17 (Exit 262) - Cordes Junction	265.31	Spring Ln - Spring Valley	2.73	12,400	11,600	12,377	14,020	13,560	13,817	14,212	13,881	12,914	12,871	12,885	16,500
SR 69	265.31	Spring Ln - Spring Valley	270.70	Central Ave	5.39	12,400	12,500	13,513	12,856	13,545	14,315	14,384	14,736	14,578	13,450	13,465	19,500
SR 69	270.70	Central Ave	279.10	Main St - Humbolt	8.40	11,800	12,000	12,972	10,214	11,611	14,813	13,595	13,865	13,254	12,733	12,747	18,500
SR 69	279.10	Main St - Humbolt	279.98	Rockey Hill Rd	0.88	13,200	13,400	14,442	13,037	16,042	16,938	17,388	17,430	17,703	13,611	13,817	20,000
SR 69	279.98	Rockey Hill Rd	281.07	SR 169 - Dewey	1.09	13,200	13,400	14,442	13,037	16,042	16,938	17,388	17,430	17,703	15,417	15,650	22,500
SR 69	281.07	SR 169 - Dewey	283.51	Fain Rd / Western Way	2.44	21,200	17,300	13,751	24,713	27,113	28,416	24,480	24,358	24,232	24,105	24,235	27,000
SR 69	283.51	Fain Rd / Western Way	286.27	Mendecino Dr	2.76	23,800	21,300	24,003	27,423	25,430	26,456	22,852	22,738	26,948	22,164	22,284	30,000
SR 69	286.27	Mendecino Dr	287.48	Robert Rd -Prescott Valley	1.21	23,800	21,300	24,003	27,423	25,430	26,456	22,852	22,738	26,948	22,574	22,696	30,500
SR 69	287.48	Robert Rd - Prescott Valley	288.70	Glassford Hill Rd	1.22	25,700	25,500	31,713	40,320	36,921	37,502	32,793	32,616	32,262	32,085	32,258	43,000
SR 69	288.70	Glassford Hill Rd	289.48	Prescott East Hwy	0.78	25,700	25,500	27,522	40,320	36,740	37,361	28,623	25,676	19,783	33,672	33,854	59,000
SR 69	289.48	Prescott East Hwy	292.10	Sunrise Blvd	2.62	32,900	29,200	28,559	44,392	43,507	45,091	38,492	37,660	35,996	35,164	35,354	63,000
SR 69	292.10	Sunrise Blvd	293.76	Prescott Lake Pkwy	1.66	37,800	30,600	30,545	48,812	46,714	46,414	38,902	37,034	33,297	31,428	31,598	53,000
SR 69	293.76	Prescott Lake Pkwy	295.40	Frontier Village Center	1.64	37,800	30,600	30,545	48,812	46,714	46,414	38,902	36,677	32,228	30,003	30,165	51,000
SR 69	295.40	Frontier Village Center	296.04	SR 89 - Prescott	0.64	42,100	37,300	38,380	50,700	48,288	46,954	39,729	39,245	38,278	37,794	37,998	64,000

ADOT Crash Locations and Severity

DATE_	MICROFILM	ROAD	FEATURE	OFFSET	LAT	LONG_	JUNCTION	LIGHT	WEATHER	FIRST_HARM	MANNER	INJURY
12/1/2005 0:00	15200059	S 069	M281	0.9	34.54109	-112.2473	DRIVEWAY	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	POSSIBLE_INJURY
12/5/2005 0:00	15201723	S 069	M281	0.1	34.53023	-112.2423	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	OTHER	NO_INJURY
12/23/2005 0:00	15291789	S 069	13 MAIN ST	0	34.50277	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	NO_INJURY
12/26/2005 0:00	15291275	S 069	M281	0.7	34.53838	-112.246	NOT_JUNCTION_RELATED	DAYLIGHT	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	POSSIBLE_INJURY
1/18/2006 0:00	15360662	S 069	S 169	0	34.52982	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	LEFT_TURN	NO_INJURY
1/26/2006 0:00	15370085	S 069	M279	0.5	34.50814	-112.2417	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	GUARDRAIL_FACE	SINGLE_VEHICLE	NO_INJURY
1/31/2006 0:00	15081621	S 069	M281	0.2	34.53159	-112.243	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	PARKED_MOTOR_VEHICLE	REAR_END	NON_INCAPACITATING_INJURY
2/25/2006 0:00	15681831	S 069	M281	0.25	34.53227	-112.2433	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	OTHER_FIXED_OBJECT	SINGLE_VEHICLE	NO_INJURY
3/3/2006 0:00	15560393	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
3/9/2006 0:00	15562343	13 MAIN ST	S 069	0	34.50277	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
3/23/2006 0:00	15581903	S 069	13 3RD ST	0	34.49755	-112.2474	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	NON_INCAPACITATING_INJURY
3/27/2006 0:00	15612716	S 069	M280	0.9	34.52736	-112.2411	NOT_JUNCTION_RELATED	DAYLIGHT	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	POSSIBLE_INJURY
3/30/2006 0:00	15592413	S 069	M281	0.0799	34.52996	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
4/13/2006 0:00	16561814	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
4/14/2006 0:00	15811999	S 069	S 169	0	34.52982	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	NO_INJURY
4/15/2006 0:00	16561650	S 069	S 169	0	34.52982	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	LEFT_TURN	NO_INJURY
5/24/2006 0:00	15911781	S 069	M281	0.8	34.53973	-112.2467	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
6/1/2006 0:00	16062200	S 069	M281	0.6	34.53702	-112.2454	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NON_INCAPACITATING_INJURY
6/26/2006 0:00	16061667	S 069	M281	0.7	34.53838	-112.246	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
7/3/2006 0:00	16082592	S 069	M278	0.5	34.49465	-112.2483	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	TRAFFIC_SIGN_SUPPORT	SINGLE_VEHICLE	NO_INJURY
7/9/2006 0:00	16132994	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	POSSIBLE_INJURY
7/19/2006 0:00	16161242	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
7/30/2006 0:00	16172007	S 169	S 069	0	34.52982	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
7/30/2006 0:00	16172007	S 169	S 069	0	34.52982	-112.2422	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
8/29/2006 0:00	16260544	S 069	M281	0.1	34.53023	-112.2423	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NON_INCAPACITATING_INJURY
9/7/2006 0:00	16291224	S 069	M280	0	34.5149	-112.2389	NOT_JUNCTION_RELATED	DAYLIGHT	RAIN	GUARDRAIL_FACE	SINGLE_VEHICLE	NO_INJURY
9/12/2006 0:00	16341083	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DARK_UNKNOWN_LIGHTING	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
9/27/2006 0:00	15791086	S 069	M281	0.3	34.53294	-112.2436	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	CURB	SINGLE_VEHICLE	NO_INJURY
10/9/2006 0:00	16442207	S 069	M281	0.1	34.53023	-112.2423	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
10/16/2006 0:00	16020199	S 069	13 MAIN ST	0	34.50277	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	FATAL
11/25/2006 0:00	16920604	S 069	M277	0.9	34.48692	-112.2521	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	INCAPACITATING_INJURY
12/28/2006 0:00	16542092	S 069	M281	0.1	34.53023	-112.2423	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	RAIN	FIRE_EXPLOSION	SINGLE_VEHICLE	NO_INJURY
12/29/2006 0:00	17142691	S 069	M277	0.9	34.48692	-112.2521	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	TRAFFIC_SIGN_SUPPORT	SINGLE_VEHICLE	NO_INJURY
1/15/2007 0:00	17291941	S 069	S 169	-0.25	34.52639	-112.2407	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
1/21/2007 0:00	17292053	S 069	M278	0	34.48795	-112.2516	NOT_JUNCTION_RELATED	DAWN	CLOUDY	FENCE	SINGLE_VEHICLE	NO_INJURY
1/21/2007 0:00	17292062	S 069	M279	0	34.50145	-112.2451	UNKNOWN	DAYLIGHT	CLOUDY	OVERTURN_ROLLOVER	SINGLE_VEHICLE	NON_INCAPACITATING_INJURY
2/16/2007 0:00	16620332	S 069	M279	0	34.50145	-112.2451	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	OVERTURN_ROLLOVER	SINGLE_VEHICLE	FATAL
3/23/2007 0:00	17460544	S 069 0	13 MAIN ST	0	34.50278	-112.2445	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	ANGLE (front to side)(other than left turn)	POSSIBLE_INJURY
5/10/2007 0:00	17641991	S 069	M278	0.9	34.50009	-112.2459	NOT_JUNCTION_RELATED	DAWN	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	NO_INJURY
6/16/2007 0:00	17684836	S 069	M280	0.9	34.52736	-112.2411	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NON_INCAPACITATING_INJURY
7/1/2007 0:00	17731530	S 069	13 PRESCOTT DELLS RANCHR	0	34.51475	-112.2389	INTERSECTION_RELATED_NON_INTERCHANGE	DARK_UNKNOWN_LIGHTING	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	NO_INJURY
8/5/2007 0:00	17756239	S 069	M278	0.4	34.49331	-112.2489	DRIVEWAY	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	LEFT_TURN	NON_INCAPACITATING_INJURY
10/15/2007 0:00	17825891	S 069	M279	0.1	34.50275	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	HEAD_ON	POSSIBLE_INJURY
12/8/2007 0:00	17907084	S 069	M280	0.5	34.52186	-112.2389	DRIVEWAY	DAYLIGHT	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	LEFT_TURN	NO_INJURY
4/28/2008 0:00	18115853	S 069	M278	0.2	34.49068	-112.2504	NOT_JUNCTION_RELATED	DARK_UNKNOWN_LIGHTING	CLEAR	CONCRETE_TRAFFIC_BARRIER	SINGLE_VEHICLE	NON_INCAPACITATING_INJURY
7/3/2008 0:00	18263393	S 069	M279	0.4	34.50677	-112.2423	NOT_JUNCTION_RELATED	DAYLIGHT	RAIN	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
7/17/2008 0:00	18264719	S 069	M279	0.8	34.51225	-112.24	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	TRAFFIC_SIGN_SUPPORT	SINGLE_VEHICLE	NO_INJURY
8/11/2008 0:00	18296790	S 069	M278	0.5	34.49465	-112.2483	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	NO_INJURY
8/23/2008 0:00	18313097	S 069	M280	0.5	34.52186	-112.2389	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	NO_INJURY
9/22/2008 0:00	18345763	S 069	M279	0.1	34.50275	-112.2443	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OTHER_FIXED_OBJECT	SINGLE_VEHICLE	NO_INJURY
1/5/2009 0:00	18520784	S 069	M279	0.1	34.50274	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_OPPOSITE_DIRECTION	NON_INCAPACITATING_INJURY
1/22/2009 0:00	18525440	KACHINA PL	GRAHAM DR	0	0	0	INTERSECTION_NON_INTERCHANGE	DUSK	CLOUDY	PEDESTRIAN	SINGLE_VEHICLE	NO_INJURY
2/17/2009 0:00	19011416	S 069	M279	0.5	34.50813	-112.2417	INTERSECTION_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	OTHER	INCAPACITATING_INJURY
3/14/2009 0:00	18944738	S 069	M280	0	34.5149	-112.2389	NOT_JUNCTION_RELATED	DARK_NOT_LIGHTED	CLEAR	OVERTURN_ROLLOVER	SINGLE_VEHICLE	POSSIBLE_INJURY
3/29/2009 0:00	18683790	13 DEWEY RD	13 KACHINA ST	0	34.53883	-112.2512	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	OTHER_POST_POLE_OR_SUPPORT	SINGLE_VEHICLE	NO_INJURY
3/29/2009 0:00	18693587	13 DEWEY RD	INDIAN HILL RD	0	0	0	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	HEAD_ON	POSSIBLE_INJURY
4/30/2009 0:00	19105183	S 069	M278	0.5	34.49464	-112.2483	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OTHER_NON_FIXED_OBJECT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
5/9/2009 0:00	18801122	S 069	M280	0.3	34.51919	-112.238	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OVERTURN_ROLLOVER	SINGLE_VEHICLE	POSSIBLE_INJURY
5/21/2009 0:00	19095372	S 069	13 MAIN ST	0	34.50277	-112.2443	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	RAIN	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	POSSIBLE_INJURY
5/21/2009 0:00	19105187	S 069	M279	0	34.50145	-112.2451	NOT_JUNCTION_RELATED	DAYLIGHT	CLOUDY	MOTOR_VEHICLE_IN_TRANSPORT	HEAD_ON	NON_INCAPACITATING_INJURY
6/9/2009 0:00	19283230	S 069	M279	0.9	34.51361	-112.2394	NOT_JUNCTION_RELATED	DARK_NOT_LIGHTED	CLEAR	GUARDRAIL_END	SINGLE_VEHICLE	NO_INJURY
7/24/2009 0:00	19132741	S 069 0	M278	0.5	34.49469	-112.2484	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE_VEHICLE	NO_INJURY

ADOT Crash Locations and Severity

DATE_	MICROFILM	ROAD	FEATURE	OFFSET	LAT	LONG_	JUNCTION	LIGHT	WEATHER	FIRST_HARM	MANNER	INJURY
8/20/2009 0:00	19052605	S 069 0	M280	0	34.51498	-112.239	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE VEHICLE	NO_INJURY
10/3/2009 0:00	19275862	S 069 0	13 3RD ST	-0.0057	34.49734	-112.2476	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NO_INJURY
10/19/2009 0:00	19284503	13 KACHINA ST	13 GRAHAM WAY	0.0189	34.53886	-112.2487	DRIVEWAY	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
12/8/2009 0:00	19324808	S 069	M278	0.7	34.49749	-112.2474	NOT_JUNCTION_RELATED	DARK_NOT_LIGHTED	DWING_SNG	EMBANKMENT	SINGLE VEHICLE	NO_INJURY
12/25/2009 0:00	19330692	S 069	M279	0.1	34.50274	-112.2443	NOT_JUNCTION_RELATED	DUSK	CLEAR	EMBANKMENT	SINGLE VEHICLE	POSSIBLE_INJURY
1/9/2010 0:00	19475493	S 069 0	M277	0.9	34.48703	-112.2523	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OVERTURN_ROLLOVER	SINGLE VEHICLE	NO_INJURY
1/16/2010 0:00	19481907	S 069	M278	0	34.48795	-112.2516	NOT_JUNCTION_RELATED	DARK_NOT_LIGHTED	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
2/2/2010 0:00	19533312	S 169	M001	0.5	34.5331	-112.217	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
4/25/2010 0:00	19645899	S 169	M001	0	34.52964	-112.2246	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	ANIMAL_WILD_GAME	SINGLE VEHICLE	NO_INJURY
4/26/2010 0:00	19651516	S 069 0	M279	0.2	34.50412	-112.2437	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OVERTURN_ROLLOVER	SINGLE VEHICLE	NO_INJURY
4/27/2010 0:00	19655337	13 KACHINA ST	S 069	-0.0568	34.53882	-112.2472	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	SIDESWIPE_SAME_DIRECTION	NO_INJURY
6/21/2010 0:00	19751323	13 NEWTON AV	13 CLAYTON PL	-0.14	34.53205	-112.2922	NOT_JUNCTION_RELATED	DAWN	CLEAR	OTHER_FIXED_OBJECT	SINGLE VEHICLE	NO_INJURY
6/28/2010 0:00	19751331	13 KACHINA ST	13 PONY PL	0	34.5389	-112.2556	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	OTHER_NON_COLLISION	OTHER	POSSIBLE_INJURY
11/18/2010 0:00	20106802	S 069	M279	0.4	34.50678	-112.2423	NOT_JUNCTION_RELATED	DAYLIGHT	CLEAR	OVERTURN_ROLLOVER	SINGLE VEHICLE	NON_INCAPACITATING_INJURY
11/26/2010 0:00	20106814	S 169	M000.00 (IN DEWEY)	0.7	34.52946	-112.2299	INTERSECTION_RELATED_NON_INTERCHANGE	DAYLIGHT	CLEAR	MOTOR_VEHICLE_IN_TRANSPORT	REAR_END	NON_INCAPACITATING_INJURY

Yavapai County Crash Locations and Severity

DATE_	REPORT	STREET1	STREET2	MILEPOST	CITY_1	LOCATION	UNITS	CRASH	ACCIDENT_T	MANNER	INJURIES	FATALITY	ALCOHOL
2/26/2005 0:00	05-007319	Kachina Pl	Kathy Ln		Dewey	Blue Hills	1	Single Vehicle	Overtuning	Single Vehicle	0	0	
4/12/2005 0:00	05-012794	Beverly Hills Dr			Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Head-on	0	0	
5/11/2005 0:00	05-016486	Hecla St	McCabe St	75' S	Humboldt	Humboldt	1	Tree, Bush, Stump	Fixed Object	Single Vehicle	0	0	
7/2/2005 0:00	05-023443	Henderson Rd	Pony Pl	0.2 M W	Dewey	Dewey	1	Other Non-collision	Other Non-collision	Single Vehicle	1	0	Y
7/6/2005 0:00	05-024052	Henderson Rd	11095 Henderson Rd		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Rear-end	0	0	
12/22/2005 0:00	05-046506	Kachina Pl	SR 69	128' S	Dewey	Blue Hills	1	Other Non-collision	Other Non-collision	Single Vehicle	0	0	
2/10/2006 0:00	06-005125	Cranberry Rd	Smoki Tr		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Right Turn	0	0	Y
3/30/2006 0:00	06-011149	Kachina Pl	10555 Kachina Pl		Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Sideswipe (opposite direction)	0	0	
7/22/2006 0:00	06-026298	Sleepy Acre Ln	2990 Sleepy Acre Ln		Dewey	Dewey	1	Single Vehicle	Overtuning	Single Vehicle	0	0	
8/22/2006 0:00	06-030372	White Dr	Blue Ridge Rd	0.5 M E	Dewey	Dewey	1	Other Fixed Object	Other Object	Single Vehicle	0	0	
9/11/2006 0:00	06-033084	Kachina Pl	SR 69	50' W	Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Unknown	0	0	
10/8/2006 0:00	06-036779	Lazy River Dr	Green Valley Wy	500' W	Dewey-Humboldt	Dewey-Humboldt	1	Single Vehicle	Overtuning	Single Vehicle	3	0	
10/22/2006 0:00	06-038564	Smoki Rd	Power Pole 500189	115' W	Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Angle	1	0	
11/2/2006 0:00	06-039902	Hill St	Humboldt St		Dewey-Humboldt	Dewey-Humboldt	2	Motor Vehicle	Motor Vehicle	Backing	0	0	
12/24/2006 0:00	06-046673	Phoenix St	Old Black Canyon Hwy	223' W	Dewey-Humboldt	Dewey Humboldt	1	Tree, Bush, Stump	Fixed Object	Single Vehicle	0	0	
3/1/2007 0:00	07-007196	Kachina Pl	SR 69	0.5 M W	Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Angle	0	0	
4/7/2007 0:00	07-011955	Henderson Rd	11377 Henderson Rd		Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Rear-end	1	0	
4/23/2007 0:00	07-014098	Lazy River Dr	14145 Lazy River Rd		Dewey	Dewey	1	Other Fixed Object	Other Object	Single Vehicle	0	0	Y
5/1/2007 0:00	07-015112	Kachina Pl	12415 Kachina Pl		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Angle	0	0	
5/11/2007 0:00	07-016567	Foothill Dr	SR 169		Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Sideswipe (opposite direction)	0	0	Y
5/30/2007 0:00	07-019139	Mountain Lion Rd	Dewey Rd	0.2 M W	Dewey	Dewey	1	Other Non-collision	Other Non-collision	Single Vehicle	0	0	
6/25/2007 0:00	07-022677	Henderson Rd	Pony Pl		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Right Turn	0	0	
6/28/2007 0:00	07-023065	Kachina Pl	11200 Kachina Pl		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Sideswipe (opposite direction)	0	0	
8/20/2007 0:00	07-031049	Henderson Rd	10809 Henderson Rd		Dewey-Humboldt	Blue Hills	2	Motor Vehicle	Motor Vehicle	Head-on	2	0	Y
8/26/2007 0:00	07-031856	Prescott St	Main St		Humboldt	Humboldt	2	Motor Vehicle	Motor Vehicle	Angle	1	1	Y
10/24/2007 0:00	07-040573	Dewey Rd	Indian Hill Dr		Dewey-Humboldt	Blue Hills	2	Motor Vehicle	Motor Vehicle	Unknown	1	0	
11/14/2007 0:00	07-043851	Henderson Rd	Pony Pl	200' E	Dewey-Humboldt	Blue Hills	2	Animal, Wild Game	Animal	Unknown	0	0	
3/10/2008 0:00	08-010775	Dewey Rd	Deerpath Rd	0.1 M S	Dewey-Humboldt	Dewey	1	Pedestrian	Pedestrian	Sideswipe (same direction)	1	0	Y
3/25/2008 0:00	08-013079	Newtown Rd	Wicklow Pl	0.1 E	Dewey	Blue Hills	1	Single Vehicle	Overtuning	Single Vehicle	1	0	
4/2/2008 0:00	08-014464	Wells St			Humboldt	Humboldt	2	Motor Vehicle	Motor Vehicle	Rear-end	0	0	
4/8/2008 0:00	08-015581	Old Black Canyon Hwy	SR 69		Dewey	Dewey	1	Tree, Bush, Stump	Fixed Object	Right Turn	0	0	
4/13/2008 0:00	08-016432	Lazy River Dr	Mingus Mountain Ln		Dewey	Dewey	3	Motor Vehicle	Motor Vehicle	Rear-end	1	0	
6/3/2008 0:00	08-024693	Henderson Rd	10840 Henderson Rd		Dewey	Blue Hills	1	Single Vehicle	Overtuning	Single Vehicle	0	0	Y
6/6/2008 0:00	08-025161	Cherry Creek Rd	SR 169	5 M N	Dewey	Cherry	2	Motor Vehicle	Motor Vehicle	Rear-end	1	0	
6/8/2008 0:00	08-025395	Foothill Dr	Meadow Rd		Dewey	Dewey	2	Motor Vehicle	Motor Vehicle	Sideswipe (opposite direction)	0	0	
6/25/2008 0:00	08-028064	Powerline Rd	10279 Powerline Rd		Dewey	Blue Hills	2	Motor Vehicle	Motor Vehicle	Sideswipe (opposite direction)	0	0	
8/24/2008 0:00	08-037297	Newtown Ave	9955 Newtown Ave		Dewey-Humboldt	Blue Hills	1	Other Fixed Object	Other Object	Single Vehicle	0	0	Y
11/19/2008 0:00	08-049934	Old Black Canyon Hwy	McCabe St		Dewey-Humboldt	Dewey	2	Motor Vehicle	Motor Vehicle	Right Turn	0	0	

Appendix E – Pavement Condition Data

Dewey-Humboldt Paved Roadway Inventory and Conditions

Sorted Alphabetically

ROAD NAME	PAVED	LENGTH	LOCATION RELATIVE TO SR 69	BEGIN REF	END REF.	Pavement Distresses (Typical Severity)*								General Site Conditions				Overall Rating ^							
						L&T Cracking	Alligator Cracking	Block Cracking	Edge Cracking	Patching	Potholes	Weath/Rav	Rutting	Lr/Shld Drop Off	Washboard	Erosion	Drainage		Falling Surface						
Agua Fria Ln.	yes	0.125	East	Holiday Dr.	End	L						L												2	
Antelope Wy	yes	0.196	East	Foothill Dr	Sierra Dr.	L	M/H					M													4
Apache Knolls Tr.	yes	0.615	East	Tanya Bl	End		H		H		H	H													5
Blue Rdge Rd.	yes	0.747	East	Foothill Dr	White Dr.	L	M		L						L										2
Blue Ridge Rd.	yes	0.507	East	White Dr.	End	L	L		M						L										2
Cherry Circle	yes	0.104	East	Quarterhorse Ln	End	L						M/H													2
Cherry Siding Ln	yes	0.19	East	Meadow Rd.	End	L/M	M	L	M			M													4
Clearview Dr.	yes	0.279	East	SR 169	Tanya	L			L		L	L/M													4
Comanche Trail	yes	0.181	East	Old Blk. Cyn. Hwy	Shawnee Ln	L			L																2
Corral St.	yes	0.109	East	Prescott St.	End	L	L/M		M	L/M		L													3
Crest Cr.	yes	0.161	East	Foothill Dr.	End	L/M						L													2
Datura Ln	yes	0.102	East	Meadow Rd.	End	L/M	L	L				L/M													3
Deer Pass	yes	0.498	East	Foothill Dr.	River Dr.	L	L/M		L		L	L													2
E. McCabe	yes	0.253	East	S. Hecla	Old Blk Cyn Hwy	M	M/H		M	H	H	H													5
E. Phoenix. St	yes	0.249	East	S. Hecla	Old Blk Cyn Hwy	M	M/H		M	M	M	H													5
E. Bradshaw Rd.	yes	0.246	East	Green Valley Wy	Rancho Pl.	L/M	L		L			L													3
Eagle Dr.	yes	0.655	East	Blue Ridge Rd.	White Dr.	L	L/M/H			L															3
Edwards Dr.	yes	0.129	East	Blue Ridge Rd.	End		M		M/H	M	L	H			H										4
Foothill Dr.	yes	1.871	East	SR 169	E. Bradshaw	L	L		L			L													3
Gladstone Av	yes	0.145	East	E. Sub. Bdry	Cul de sac	L	M/H			M	M	L		M											3
Glenn Dr.	yes	0.239	East	Sierra Dr.	Foothill	L	M	L	L	L/M		M													4
Golden View Dr.	yes	0.142	East	White Dr.	Gladstone Av	L/M	M		L	L															3
Green Valley Wy	yes	0.59	East	E. Bradshaw Rd.	Agua Fria	L						M/H													3
Hecla St.	yes	0.137	East	Prescott St.	McCabe St.	L/M	M																		4
Henderson Rd.	yes	0.562	East	Sierra Dr.	Foothill Drive	L	L		L	M		L													3
Hill Street	yes	0.204	East	Kloss Av.	S. Sub. Bdry	L			M	L	M	M													5
Holiday Dr.	yes	0.261	East	Lazy River Dr.	End of pvmt.	L/M	M					L	H												4
Humboldt St.	yes	0.09	East	Huron St.	Hill St.	L	M		M	M	L	M													5
Huron St.	yes	0.316	East	Main St.	End	L	L/M		M	L/M															5
Jones St.	yes	0.097	East	Prescott St.	Wells	M	M		M		L	H													5
Kloss Av	yes	0.232	East	SR 69	Edd's Sand Tr.		M		L	M				L											3
Knoll Cr	yes	0.1	East	Foothill Dr.	Sierra Dr.	L/M			M/H	M		M													3
Lazy River Dr.	yes	0.369	East	Holiday Dr.	End	L/M	L		L					L/M/H											3
Lotsa View Dr.	yes	0.239	East	Foothill Dr.	Sierra Dr.	L	M			L/M		L		M											3
Main St.	yes	0.8	East	SR. 69	Third St.	L	L	L				L/M		L											3
McCabe Cr.	yes	0.145	East	Golden View Dr.	End	L	L		L	M		H													3
Meadow Ranch Ln	yes	0.086	East	Meadow Ranch Pl	End	L	M	M				L/M													4
Meadow Ranch Pl.	yes	0.286	East	Meadow Rd.	End	L	M	L	L			L/M													4
Meadow Rd.	yes	0.551	East	Foothill Dr.	Gate	L	M	L	L	L		M													4
Old Blk Cyn Hwy.	yes	3.555	East	SR 69	to Prescott St./SR 69 connector	M	L		L	M															3
Pony Wy	yes	0.066	East	E. Mustang Dr.	Ridge Wy.	L	L			L															3
Prescott St.	yes	0.76	East	Main St.	Holiday Dr.	L	L					L		L											2
Prescott St.	yes	0.662	East	Holiday Dr.	End	L	L			L		L													3
Quail Ct.	yes	0.108	East	Sierra Dr.	End	L	L																		2
Quail Run	yes	0.241	East	Sierra Dr.	Foothill Dr.	L	M					M													3
Quarterhorse Ln	yes	0.569	East	Sierra Dr.	Foothill Dr.	L	L		L	L															2
Quarterhorse Ln.	yes	0.48	East	River Dr.	Sierra Dr.	L	M		L/M	M		L/M													3
Rancho Place	yes	0.126	East	Lazy River Dr.	Bradshaw	L						M/H		H											2
Richards Ln.	yes	0.208	East	First St.	Old Blk Cyn Hwy							L													1
Ridge Wy	yes	0.248	East	Foothill Dr.	Sierra Dr.	L	L				M														2
Ridge Wy	yes	0.737	East	Foothill Dr.	Tiffany Ln	L						L/M		M											3
River Dr.	yes	0.25	East	Quarterhorse Ln	Deer Pass	L	L/M																		2
River Dr.	yes	0.955	East	SR 169	Quarterhorse	L	L/M		L/M	L	L														4
S. Azurite St	yes	0.131	East	Prescott St.	End	M	M/H		M	M	M	H													5
S. Butte St.	yes	0.123	East	Prescott St.	End	M	M/H		M	M	M	H													5
S. Butte St.	yes	0.071	East	McCabe	Phoenix	M	M/H		M	H	H	H													5
S. Calument	yes	0.125	East	McCabe	Prescott St.	M			M	H	H	H													5

* L = low level of pavement distress, M = moderate level of pavement distress, and H = high level of pavement distress
 ^ 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor, and 5 = Failed

Dewey-Humboldt Paved Roadway Inventory and Conditions

Sorted Alphabetically

ROAD NAME	PAVED	LENGTH	LOCATION RELATIVE TO SR 69	BEGIN REF	END REF.	Pavement Distresses (Typical Severity)*								General Site Conditions				Overall Rating ^	
						L&T Cracking	Alligator Cracking	Block Cracking	Edge Cracking	Patching	Potholes	Weath/Rav	Rutting	Lr/Shld Drop Off	Washboard	Erosion	Drainage		Falling Surface
S. Calument	yes	0.126	East	Prescott St.	Third St.	M	M		M	M	H	H			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
S. Dana St.	yes	0.125	East	McCabe	Prescott St.	M	M		M	H	H	H			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
S. Dana St.	yes	0.130	East	Prescott St.	End	M	M/H		M	M	M	H			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
Second St.	yes	0.026	East	Main St.	End	L	L/M		L			L							3
Shawnee Ln.	yes	0.191	East	Old Blk. Cyn. Hwy	End	L			L			L							2
Sierra Dr.	yes	0.991	East	Trails End	Quarterhorse	L	L/M		L						<input checked="" type="checkbox"/>				3
Sleepy Acre Ln	yes	0.249	East	Lazy River Dr.	End	L			M	M	M	M						<input checked="" type="checkbox"/>	4
Sunhill Tr	yes	0.065	East	Cherry Siding Ln	End	L/M	M					M						<input checked="" type="checkbox"/>	5
Tanya Blvd	yes	0.241	East	Clearview Dr.	End				M/H	M	M	M			<input checked="" type="checkbox"/>				5
Third St.	yes	0.508	East	SR 69	Lower Water Xing	L													1
Third St.	yes	0	East	low water xing	Main St.	L	M		L	M									3
Third St.	yes	0.084	East	Calumet		M	M/H		H		H	H			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
Trails End	yes	0.334	East	Foothill Dr.	End	L/M						L			<input checked="" type="checkbox"/>				3
W.Mustang	yes	0.284	East	Cul de sac	Cul de sac	L	L					L			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3
Wagon Wheel Dr.	yes	0.707	East	Foothill Dr.	End	L					L				<input checked="" type="checkbox"/>				2
Wells St.	yes	0.183	East	Old Blk. Cyn. Hwy	End	L/M			M		L	H			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
White Cr.	yes	0.084	East	Blue Ridge Rd.	Cul de sac	L			L			L							3
White Dr.	yes	1.137	East	Blue Ridge Rd.	End of pvmt		L/M		H		L			H	<input checked="" type="checkbox"/>				3
Acoma Tr.	yes	0.176	West	Smoki Tr	East Hopi Tr.	L	L		M	L							<input checked="" type="checkbox"/>		3
Antelope Dr	yes	0.501	West	Kachina Pl.	Deerpath Rd.	L	L/M		L/M	M	H	L	M		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	5
Cranberry Rd.	yes	0.145	West	Wicklow P.	Smoki Tr.	L	M/H		L										3
Deerpath Rd.	yes	0.385	West	Dewey Rd.	Manzanita Bl		H		M			H		H		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5
Dewey Rd.	yes	0.621	West	Kachina Pl.	Deerpath Rd.	L	M			M			L			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4
E. Hopi Tr.	yes	1.553	West	Piute Rd	Acoma	L	L		L	M					<input checked="" type="checkbox"/>				3
Graham Wy	yes	0.122	West	Kachina Pl.	Montezuma Wy	L			L			L							3
Henderson Rd.	yes	2.414	West	Pony Pl	W. Line Sec. 5	L/M	L		M						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4
Horseshoe Ln.	yes	0.125	West	Antelope Dr.	Pony Pl.	L			L										2
Indian Hill Dr.N.	yes	0.189	West	Indian Hill Dr.	Indian Hill Dr. S	L	L					L							2
Indian Hill Dr. S.	yes	0.189	West	Antelope Dr.	Indian Hills Dr							M							2
Janet	yes	0.464	West	Martha	End	L			L				H		<input checked="" type="checkbox"/>				3
Kachina Pl	yes	1.012	West	Nancy/Kathy	End	L							L						1
Kachina Pl	yes	1.193	West	SR 69	Nancy Ln.	L/M	M											<input checked="" type="checkbox"/>	5
Kathy Ln.	yes	0.231	West	Kachina Pl	End	M			H			M			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3
Manzanita Bl.	yes	0.199	West	Indian Hill Dr. S.	End	L						L	L		<input checked="" type="checkbox"/>				2
Manzanita Bl.	yes	0.198	West	Kachina Pl.	Manzanita Bl	L/M							L						3
Marilyn Ln.	yes	0.429	West	Piute	Pima	L	L					M		H			<input checked="" type="checkbox"/>		3
Martha Wy	yes	0.608	West	Henderson	End of Pvmnt	L	M								<input checked="" type="checkbox"/>				3
McAllister Dr.	yes	0.237	West	Dewey Rd.	Manzanita Bl	L/M	M		M	M								<input checked="" type="checkbox"/>	5
Merrill Rd	yes	0.270	West	Chustnut Hill	Cranberry Rd				L/M					H			<input checked="" type="checkbox"/>		2
Montezuma Wy	yes	0.251	West	Dewey Rd.	Manzanita Bl	L			M			M							3
Nancy Ln.	yes	0.213	West	Kachina Pl	End	L			M			M					<input checked="" type="checkbox"/>		3
Newtown Av	yes	0.549	West	W. Line Sec. 5	Wicklow Pl.	M	L		L/M						<input checked="" type="checkbox"/>				3
Piute Rd.	yes	0.462	West	Smoki Trail	Shirley Ln.	L/M	L		H			M		H		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4
Pony Pl.	yes	0.188	West	Valley High Dr.	Horseshoe Ln	M	M/H		M	H								<input checked="" type="checkbox"/>	4
Pony Place	yes	0.192	West	Henderson	Kachina Pl	L			M										3
S. Dewey Rd	yes	0.18019	West	Deerpath	End	L													1
S.Hopi Tr.	yes	1.55	West	Acoma Tr.	Gravel	L/M	L			L									2
Shirley Ln	yes	0.820	West	Piute	End	L			H					H	<input checked="" type="checkbox"/>				2
Smoki Tr.	yes	0.33	West	Cranberry Rd.	Acoma Tr.	L	L/M		L						<input checked="" type="checkbox"/>				3
Smoki Tr.	yes	0.853	West	Acoma Tr.	Piute Rd.	L	L			M		M							3
Tonto	yes	0.365	West	Cranberry	End	L			L/M			M		L	<input checked="" type="checkbox"/>				3
Valley High Dr.	yes	0.253	West	Antelope Dr.	Pony Pl.		M/H		M	M								<input checked="" type="checkbox"/>	5
Wicklow Pl.	yes	0.106	West	Newtown Av.	Cranberry Rd.	L			M										2
Yavapai Dr.	yes	0.506	West	Antelope Dr.	Manzanita Bl		H					L/M			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5

* L = low level of pavement distress, M = moderate level of pavement distress, and H = high level of pavement distress
 ^ 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor, and 5 = Failed

Appendix F – Mobility Management Table of Private Transit Operators

CENTRAL YAVAPAI TRANSPORTATION PROVIDERS

General Information	Service	Special needs services										NACOG Vouchers?	AHCCCS Provider?	Additional Info					
		Fixed bus/van stops	Curb-to-curb service	Door-to-door service	Target Pop/eligibility	Geographic Scope (service area)	Attendant Services	Caregivers ride free	Assist on/off vehicle	Wheelchair Transport	Stretcher transport				Restrictions on Trip Purpose (if any)	Vehicle descriptions	Hours	Fees	
Company:	Address:	Service Provided																	
AAA Taxi (928) 708-0800	717 Brannon Avenue Prescott, AZ 86301	Taxi/Dial-a-ride	X	X	X	Gen public	Prescott, PV & CV, 60 mile radius	X	X				None	Vans only that hold multiple people up to 6.	Service hours 24/7, 365 days a year. Should call at least 30 min prior to appt. Can reserve up to an hour prior.	\$2.75 Pick up fee, \$2.00 Per mile .50 Cents per minute wait time			
American Red Cross (Reserve a Ride) (928) 776-1015	1020 Sandretto Dr. Prescott, AZ 86305	Reserve-a-ride / Senior transportation			X	Seniors & People w/ disabilities	Prescott & PV	X	X	X			Essential services only: Med appts, Grocery, P.O.	Three 7 passenger mini vans. 1 large van with wheel chair lift.	Office hours M-F 8:00am - 12:00 noon. Service hours M-F 8:00am -4:30pm. PV service on Tuesdays only. Not open major Holidays	\$8.00 round trip within Prescott, \$15.00 round trip to Prescott Valley	X		All drivers are volunteers
Angels on Duty (928) 772-5248	3185 N. Windsong Dr Prescott Valley, AZ 86314	Reserve-a-ride (48 hours in advance if possible) Non-emergency medical transportation			X	General Public with a specialty in Seniors and people w/ disabilities, non emer. medical patients	Statewide including Prescott, Prescott Valley, Chino Valley & corridors between and the Verde Valley Area	X	X	X	X		None	2 vans w/ rear access for wheelchairs & scooters, 1 van w/ lift and 1 for ambulatory clients. Most can accommodate client & a companion/ caregiver, 1 stretcher van	Office hours: Monday thru Thursday, 8:00am 5:00 pm and Fridays 8:30am to 4:30 pm With advanced scheduling rides are provided after office hours on weekdays, nights, weekends and holidays	\$5.00 Pick-up & \$2.00 a mile for most day rates. We can round off all transport fees to a flat rate for client convenience. No pick-up charges to veterans, just mileage. Special billing available please call the office. Call for after- hour rates.	X	X	Drivers are CPR & first aide certified. Also have fingerprint clearance card, background checks and TB skin tests. Drivers are trained in defensive driving, passenger assistance, and cultural awareness. Yavapai County Long Term Care contractor.
Black Canyon City Meals of Wheels (623) 374-5004	P.O. Box 33 Black canyon City, AZ 85324	Reserve-a-ride (24 hours in advance if possible)	X	X	X	60+ Seniors	Black Canyon City to Anthem, Phoenix, Prescott & Prescott Valley	X	X	X			No restrictions at this time but primarily used for medical and essential services	9 Passenger Van	Call between 7 am and 1 pm to reserve a ride or leave a message on the voicemail. Rides provided Monday- Fridayor any time as Prarranged	\$5 to Anthem and \$20 to Phoenix, Prescott or Prescott Valley			
Chino Valley, Town of Senior Services Dept. (928)-636-9114	1021 W. Butterfield Chino Valley, AZ 86323	Reserve-a-ride			X	CV residents over 60 and disabled	Chino Valley to regional communities	X	X	X			None	Two 9 passenger ADA accessible Vans; 1 15 Passenger Van	Reserve rides from 8:00 am - 5:00pm. Rides occur as pre-arranged	Donations			Service uses volunteer drivers
Citibus (928) 445-5470	820 E. Sheldon St. Prescott, AZ 86301	Fixed-route. See: http://www.prescotttransit.com/images/citibus-route-map.pdf	X			Gen public	Prescott		X	X			None	Mini Buses that can accommodate up to 17 passengers at a time. One bus w/ Wheelchair lift	Service hours 9:00am to 5:00pm M-F	\$1.00 per ride or \$3.00 per day, \$9.00 per week or \$27.00 per month	X		
Coconino/Yavapai Shuttle (928) 775-8929 (928) 713-6650 for door to door Service	11250 E. St Route 69 sp 1170 Dewey, AZ 86327	Inter community Shuttle: Prescott to Flagstaff and communities inbetween			X	General Public	Communities between Prescott & Flagstaff: See http://coconinoyavapaishuttle.com			X			None	Late model 7-8 passenger mini vans	Twice daily (6:00am & 2:00pm) M-F trips Prescott to Flagstaff and return. 1 trip on sat/sun each direction.	Rates between \$15 and \$45 depending on origin and destination.	X		8 years in business. Will go to Chino Valley, Paulden and Ash Fork if needed. We also make special trips to the Grand Canyon on weekends.
Copper State Transportation (928) 925-3223	P.O. Box 402 Chino Valley AZ 86323	Dial-a-ride/Non-emergency medical transportation	X	X	X	General Public, Elderly & People with Disabilities	Chino Valley, Prescott Valley & Prescott	X	X	X			None	2007 GMC Savannah Conversion Van w/ TV with wheelchair lift	Service hours 24/7	\$10.00 Ambulatory pick-up plus \$2.25 per mile \$15.00 Wheelchair pick-up plus \$2.25 per mile	X		
Dial a Ride Taxi (928) 776-7433	820 E. Sheldon St. Prescott, AZ 86301	Taxi/Dial-a-ride / Non-emergency medical transportation	X	X	X	Gen public	Quad City area and all of Arizona	X	X	X	X		none	Fleet includes Sedans and Wheelchair accessible Vans w/ ramp	Service hours 24/7, 365 Days per year	\$2.75 pick up and \$2.00 per mile. Senior Discount: \$1.75 pick up plus \$1.75 per mile, NACOG Contact price: \$1.50 pick up plus \$1.50 per mile, Medical Transport: \$2.75 pick up plus \$1.25 per mile. CV trips or intercommunity runs are \$18 minimum. \$.50 per minute wait time.	X	X	Discounts available for frequent riders. Drivers are CPR certified and safety trained.

CENTRAL YAVAPAI TRANSPORTATION PROVIDERS

General Information		Service Provided	Service			Target Pop/eligibility	Geographic Scope (service area)	Special needs services				Restrictions on Trip Purpose (if any)	Vehicle descriptions	Hours	Fees	MAGOG Vouchers?	AHCCCS Provider?	Additional Info	
Company:	Address:		Fixed bus/van stops	Curb-to-curb service.	Door-to-door service.			Attendant Services	Caregivers ride free	Assist on/off vehicle	Wheelchair Transport								Stretcher transport
Executive Charter Services (928) 445-5466	820 E. Sheldon St. Prescott, AZ 86301	Reserve-a-ride /Charter services	X	X	X	Gen public	All of Arizona and beyond				X	X	None	48-56 Passenger Charter Buses & Trolleys	24 hours upon request 365 days per year	Varies depending on origin and destination.		Charter trips from local and out of state. From small groups to large.	
Executive Transportation Service (928) 445-5466	820 E. Sheldon St. Prescott, AZ 86301	Reserve-a-ride / Limousine services	X	X	X	Gen public	All of Arizona and beyond				X	X	None	Limousines & sedans	Office hours M-F 9:00am-6:00pm. Service 24 hours a day upon request	Varies depending on destination		State of the art limousines and sedans, suited chauffeurs	
Express Ride (928) 636-1715	1900 Jackrabbit Trail Chino Valley, AZ 86323	Dial-a-ride		X		Gen public	Chino Valley, Prescott Valley & Prescott. By arrangement statewide					X	None	2 Crown Victorias (Former police cars with reinforced steel frames for safety)	Service hours 24/7	Livery i.e., flat rate (no meter) Any destination in Chino Valley \$8.00, CV to Prescott \$10.00, CV to Prescott Valley \$23.00, add'l stops \$2.00 (5 min.)			
Four County Conference on Developmental Disabilities (928) 778-3391	325 N. Arizona Ave. Prescott, AZ 86301	Reserve-a-ride	X	X	X	Elderly & Disabled	Prescott, Prescott Valley & Chino Valley					X	X	No restrictions at this time but cannot wait for passenger if shopping.	Two 7-Passenger Vans; one equipped with wheelchair lift	Monday- Friday; 8:00am - 5:00pm	Sliding fee Scale	X	
Greyhound Agent (928) 445-5470	820 E. Sheldon St. Prescott, AZ 86301	Fixed-route	X			Gen public	Anywhere in the US						Inter community over the road bus line	Agent services only locally. Closest Bus Station is in Phoenix	Office hours 8:00am to 6:00pm	Varies, depending on destination		Local agent for Greyhound Bus lines. Provide info & sell tickets.	
H & M Rogers Transportation (928) 776-0772	8170 E. Ashley Drive Prescott Valley, AZ 86314	Reserve-a-ride / Non - emergency medical transportation / senior transportation	X	X	X	Seniors, people w/ disabilities, non emer. medical patients	Prescott, PV, CV, County wide, State wide, out of State by arrangement				X	X	X	Medical appts, hospital discharges, post dialysis appts. etc. Infant by arrangement.	Vans multiple passenger and ambulatory vans. All vehicles have wheel chair lifts and/or ramps, and geriatric stretcher capacity.	Service Hours M-Sat 6:00am-6:00pm. After hours transport can be arranged with advance notice. Reserve a day or two in advance for trips during normal operating hours.	Pick up fee plus mileage each way, varies depending on stretcher or wheelchair and type of transport needed.	X	Professional Drivers in uniform-courteous, caring, well-trained drivers who participate in ongoing training & award-based safety programs, CPR & First Aid Certification
Hurry Cab (928) 775-7557	7402 E. Palo Verde St. Prescott Valley, AZ 86314	Taxi/Dial-a-ride		X	X	Gen public	Prescott				X		None	Sedans and minivans	Service hours 24/7, 365 Days a Year. Reservations in advance are helpful.	\$1.90 Pick up \$1.50 Per Mile	X	X	Company is affiliated with Tri City Cab
Life Line Ambulance Service, Inc (928) 445-3811	1099 W Iron Springs Road Prescott, AZ 86305	Ambulance service			X	medical patients	9000 sq miles between Williams and Wickenburg	X				X	Emergency & non emergency medical only	Ambulances	24/7, 365 days a year.			Unlimited emergency and medically necessary non-emergency ambulance transportation for only \$49.71 per year, per family. Enrollment in Sept. Only	
Master's Touch Christian Charter Services (928) 759-0206	6550 E. 2nd Street Prescott Valley, AZ 86314	Charter Services / Tour Company				Gen Public, Under 18 w/ Adult supervision	Lower 48, Canada and Alaska					X	X	Buses hold 25 to 57 passengers. Lavatories, luggage storage below, DVD player, reclining seats.	Office hours 9:00am- 5:00pm. Advance reservation needed. Year in advance sometimes necessary, last minute rescues if vehicles available.	Based on trip itself.		Company slogan is "finest of service at the fairest price".	
Mayer Area Meals on Wheels (928) 632-7511	P.O. Box 883 Mayer AZ 86333	Reserve-a-Ride for Seniors & people with disabilities Non-Emergency Medical transportation		X	X	People with disabilities and Senior populations in Mayer, Cordes Lakes, Spring Valley, Poland Junction, Humbolt/Dewey	To Prescott & Prescott Valley					X	Medical, shopping & essential services	9 Passenger Van w/wheel chair Lift	Case by case basis. Please make a reservations two weeks in advance if possible.	Donation of twenty dollars or whatever the rider can afford		Currently working on a program to transport seniors from their home to the Mayer Area Elders Center	

CENTRAL YAVAPAI TRANSPORTATION PROVIDERS

General Information		Service				Special needs services														
Company:	Address:	Service Provided	Fixed bus/van stops	Curb-to-curb service.	Door-to-door service.	Door-thru-door	Target Pop/eligibility	Geographic Scope (service area)	Attendant Services	Caregivers ride free	Assist on/off vehicle	Wheelchair Transport	Stretcher transport	Restrictions on Trip Purpose (if any)	Vehicle descriptions	Hours	Fees	MACOG Vouchers?	AHCCCS Provider?	Additional Info
Neighbor To Neighbor (928) 775-6145	P. O. Box 25450, Prescott Valley, AZ 86314	Client Transportation Only (call to enroll)		X			Seniors and people w/ disabilities	Residents of PV & Hwy 69 to Cordes Junction						Medical appointments and group shopping	Volunteer drivers use their personal vehicles.	Service hours 8:00am to 5:00pm	Vouchers accepted. Donations accepted	X		all volunteer drivers
New Horizons Independent Living Center (928) 775-8870	8085 E. Manley Drive Prescott Valley, AZ 86314	Reserve-a-ride/ Non-emergency medical transportation/ senior transportation	X	X	X		Low income, Seniors 55+ and/or people w/ disabilities, wheelchair users, Gen Public	West Yavapai County/ points beyond by prior arrangement	X	X	X			None unless subject to contractual requirement	8 vans, 4 are lift-equipped. Passenger capacity ranges from 4 - 9. Vans are fragrance free in consideration of those with allergies and lung issues.	Our current hours of operation are Monday through Friday from 7:00am to 5:00pm and as needed by special arrangement.	Private-pay rates (all rates start from PV): PV: O/W \$10, R/T \$15; Prescott: O/W \$15, R/T \$25; PCC, Dewey Humboldt: O/W \$15, R/T \$30; Mayer, Spring Valley: O/W \$20, R/T \$40; Chino Valley: O/W \$20, R/T \$40; Cordes Lakes, Paulden: O/W \$30, R/T \$60; Williamson Valley: O/W \$30, R/T \$60. Other locations by special arrangement.	X	X	Transport safety experts for cross-disability & elderly. 10 PT & FT employees w/ CPR, First Aid & Article 9 training. Drivers also trained in defensive driving, passenger assistance, cultural awareness, disability etiquette, & emergency procedures. Drivers have Class 1 fingerprint clearance & wear identifying uniforms for security.
People Who Care Chino Valley (928) 636-3295	1969 N. Hwy 89 Chino Valley, AZ 86323	Client Transportation Only (call to enroll)				X	CV adults over 18 w/ medical conditions or disabilities, frail elderly	Chino Valley & CV to Prescott	X	X				Essential services only	Volunteer drivers use their personal vehicles.	Service available M - Saturday 7:00am -5:00pm. 3 to 4 days advance notice needed.	No fees			All volunteer drivers. Must be a client. Call to determine eligibility
People Who Care Prescott (928) 445-2480	505 W. Gurley St. Prescott, AZ 8303	Client Transportation Only (call to enroll)				X	Adults over 18 w/ medical conditions or disabilities, frail elderly	Also serves the greater Prescott area			X			Essential services only (med appts, grocery, visiting spouse in nursing homes or assisted living)	Volunteer drivers use their personal vehicles. PWC also leases ADA accessible van for group trips and special needs.	Service available M-Sat. At least 24 hours advance notice needed. Prefer 3- 4 days notice	No fees			All volunteer drivers. Must be a client. Call to determine eligibility
Prescott Airport Shuttle (928) 445-5470	820 E. Sheldon St. Prescott, AZ 86301	Airport shuttle	X	X	X		Gen Public	Stops from Prescott to Sky Harbor that are scheduled			X	X			Vans and Wheelchair accessible vans	4:00AM - 10:00PM 7 days a week 365 days a year	Current special \$28.00 one way. \$22.95 Internet Price. Regularly priced \$34.00 one way & \$56.00 RT. Prescott to IHOP in Prescott Valley \$7.00	X	X	Has additional stops available between PV & Phoenix and in north Phoenix by prior arrangement
Red Rock Taxi (928) 759-7300	2965 N. Golden Way Prescott Valley, AZ 86314	Taxi/Dial-a-ride	X	X			Gen Public	Yavapai County	X	X					Crown Victoria sedans and 7 passenger mini vans.	24 hours 365 days a week 25-30 min notice for reservation	\$4.00 pick up \$2.50 per mile negotiable for people who use service regularly.	X		Vehicles insured up to a million dollars
Senior Companion Program (928) 713-4114	P.O. Box 10935 Prescott, AZ 85304	Client Transportation Only (call to enroll)				X	Homebound seniors.	Prescott, Prescott Valley & Chino Valley						Essential Services	Volunteers' vehicle	Depends on volunteer availability	None--Paid for by NAU Senior Companion Program Grants			All volunteer drivers. Must be a client. Call for eligibility.
Shuttle - U Prescott (928) 442-1000	740 N. Montezuma Prescott, AZ 86301	Airport shuttle/ private charter services	X				Gen Public	Prescott and Prescott Valley to Phoenix Sky Harbor airport				X			Fleet of 14 passenger vans. 1 ADA accessible van that is used to transport wheelchair passengers and their caregivers.	364 days a year, a shuttle van leaves Prescott's shuttle office every hour on the hour starting at 4am with the last shuttle leaving at 7pm. Shuttles come back from the airport on the half hour starting at 7:30am with the last shuttle leaving the airport at 10:30pm. Closed Christmas	One way \$34.00, Roundtrip \$56.00	X		Home curbside pickup available for \$10.00. Has additional stops available between PV & Phoenix and in North Phoenix by prior arrangement. Will also do private charters i.e. weddings, sporting events, group travel to airport, etc.

CENTRAL YAVAPAI TRANSPORTATION PROVIDERS

General Information	Service	Special needs services							Restrictions on Trip Purpose (if any)	Vehicle descriptions	Hours	Fees	MAGOG Vouchers?	AHCCCS Provider?	Additional Info					
		Fixed bus/van stops	Curb-to-curb service	Door-to-door service	Target Pop/eligibility	Geographic Scope (service area)	Attendant Services	Caregivers ride free								Assist on/off vehicle	Wheelchair Transport	Stretcher transport		
Company:	Address:	Service Provided																		
Statewide Express Toll Free (866) 522-0666 Direct Line (928) 522-6666	1928 N. Second St. Flagstaff, AZ 86001	Reserve-a-ride/ Non-emergency Medical Transportation	X	X	X	Infants, Seniors, People with Disabilities, General Public	Anywhere is Arizona, but can travel across statelines.				X	X	X	None	The Prescott assigned vehicle is equipped w/ wheelchair lift but other vehicle can be assigned as needed.	Service is 24/7	Varies according to service needed. Call for a quote			24 hour notice required
Tender Hearts Transportation Services (928) 777-5512	1129 West Iron Springs Road, 108-A Prescott, AZ 86305	Reserve-a-ride/ Non-emergency medical transportation/ senior transportation	X	X	X	Seniors, people w/ disabilities, non emer. medical patients	Prescott, PV, CV, anywhere the client needs to go.			X	X	X	X	None	Three "kneeling" minivans with wheelchair ramps. Can transport 1 wheelchair and 2 additional passengers OR 2 wheelchairs and 1 additional passenger. One stretched van.	Service hours 24/7, 365 days a year.	Our fees vary according to location and destination as well as time of day. 7:00am to 7:00pm. are different rates than night rate 7:00pm. to 7:00am.	X		Altec Provider. Drivers are certified care-givers and are trained in CPR/First Aide
Tri - City Cab Company (928) 445-6500	7402 E. Palo Verde St. Prescott Valley, AZ 86314	Taxi/Dial-a-ride	X	X	X	Gen public	Yavapai County including Cordes & BBC, plus Phoenix and Flagstaff.			X	X		None	Sedans, and vans including at least one wheelchair accessible van.	Service hours 24/7, 365 Days a Year. Reservations in advance are helpful.	\$2.75 Pick up \$2.00 Per Mile	X	X		
U.S Veterans Initiative (928) 717-7581	500 North Hwy #89 Prescott, AZ 86313	Reserve-a-ride			X	Participant of VA's the homeless veterans program	Jobs within Prescott, Prescott Valley or Chino Valley							To employment Only	One Van	Weekdays 8:00 am - 5:00 pm	none			
Van Go of Prescott Shuttle Service (928) 717-8264	P.O Box 10685 Prescott, AZ 86302	Airport shuttle	X	X	X	Gen public	Prescott, PV, or CV to Phoenix Airport			X				14 passenger vans	South bound--first pick up 7:00am, last pick up 5:30pm; North Bound--first pick up 11:00am, last pick up 9:00pm		Varies, depending on origin. 1 way \$34 - \$50; Roundtrip \$58-\$90	X		Various origination points but only one destination point.
Veteran's Transportation Network (928) 776-6064 or (800) 949-1005 Ext. 6064	Northern Arizona Health Care System 500 N. Hwy. 89 Prescott, AZ 86313	Reserve-a-ride/ non-emergency medical transportation	X			Veterans & their attendants over 18 yrs. old	Prescott, PV, CV, Anthem, Phoenix & Tucson			X				VA Hospitals & scheduled Medical Appts only (Verified)	13 vans No wheelchair transport	Reservations made from 7:30 am to 2:30 pm	No fees			All volunteer drivers. They provide approx. 643 rides to veterans every month and have approx. 85 volunteer drivers
Willis Sedan Service (928) 925-0447	528 McNally Drive Prescott, AZ 86305	Reserve-a-ride/ airport shuttle	X	X	X	Gen Public, extra charge for escort service to gate for passengers under 15	Anywhere, mostly to Sky Harbor			X	X	X		Lincoln Town Cars 1 SUV that is a Lincoln. Can Carry Wheel Chair	Service hours 24/7, 365 days a year. Same day reservations possible. Prefer 24 hour notice in advance.		One way: Prescott to Airport \$125.00, Williamson Valley \$135.00, \$125.00 PV, Mayor \$110.00 Cordes Junction \$110.00			Accept Personal Checks & Credit Cards as well as cash
Yarnell Activities Center (To make an Appt. Call Terry) (928) 427-6360	18412 S. Quail Rd. People's Valley, AZ 86332	Senior transportation	X			Senior Populations in Yarnell, Wilhoit, North Ranch, Peeple's Valley, Kirkland & Congress	From service areas listed in eligibility column (It) to Prescott & Wickenburg							Medical appointments, group shopping & occasional day trips	9 passenger Van	Depends on need and time of appt.	Prescott \$40.00 divided by number of riders; Wickenburg \$40.00 divided by the number of riders			Will go to Phoenix for medical appts. under certain conditions

CENTRAL YAVAPAI TRANSPORTATION PROVIDERS

General Information			Service				Special needs services													
Company:	Address:	Service Provided	Fixed bus/van stops	Curb-to-curb service.	Door-to-door service.	Door-thru-door	Target Pop/eligibility	Geographic Scope (service area)	Attendant Services	Caregivers ride free	Assist on/off vehicle	Wheelchair Transport	Stretcher transport	Restrictions on Trip Purpose (if any)	Vehicle descriptions	Hours	Fees	NACOG Vouchers?	AHCCCS Provider?	Additional Info
<p>NOTE: People who are enrolled in the AHCCCS program or the Arizona Long Term Care System (ALTCS) are potentially eligible for transportation to and from medically necessary medical appointments and health services. Please contact your medical practitioner, healthcare provider or AHCCCS/ ALTCS health plan for information on how to obtain transportation services.</p>																				

Appendix G – Planned Future Developments



Community Development Department
7501 E. Civic Circle
Prescott Valley, Arizona 86314
Ph 928-759-3050
Fax 928-772-7829
email: comdev.pvaz.net

TO: Planning and Zoning Commission
FOR: March 12, 2007 Meeting
FROM: Joseph Scott AICP, Planner
DATE: February 23, 2007
RE: "ZMC07-002/PDP07-002 – Cavan"

STAFF REPORT

Applicant/Owner:

Cavan Opportunity Fund
15333 N. Pima Rd. Ste 305
Scottsdale, AZ 85260

Zoning: R1L-70 and C2

General Plan: PAD 5-II

Request:

ZMC07-002. Upon the application of Cavan Opportunity Fund, L.L.C., Agent, a request for a Zoning Map Change from R1L-70 (Residential; Single-Family Limited) and C2 (Commercial; General Sales and Service) to C2-PAD (Commercial; General Sales and Service – Planned Area Development) on approximately twenty-five (25) acres generally located at the northeast intersection of State Routes 69 and 169.

PDP07-002. Upon the application of Cavan Opportunity Fund, consideration of a Preliminary Development Plan covering approximately twenty-five (25) acres for the purpose of developing a commercial center with a potential of two hundred thousand (200,000) square feet of retail, office and service uses located at the northeast corner of State Routes 69 and 169.

Background:

The subject property was part of Annexation ANX04-C that comprised a total of two hundred twenty-four (224) acres in the Dewey Area approved April 29, 2004 by Ordinance No. 585. The zoning on the annexed property was designated as R1L-70 and C2 as existed in Yavapai County at the time of annexation and as illustrate on "Exhibit A".

At the time of annexation all of the property within the annexation boundary was outside of the Prescott Valley *General Plan 2020* boundary. At the November 13, 2006 meeting, the Planning and Zoning Commission recommended approval of a Major General Plan Amendment that, among other things, included the expansion of the Tier II boundary and the PAD 5II boundary to include all the annexed lands, along with other State Lands. GPA06-001 was approved by the Town Council at the December 7, 2006 meeting ("Exhibit B"). Recognizing the proximity to State Highways, the amendment also included various text changes defining the Charter as:

Offering diverse housing, commercial, office and employment opportunities for people working or living in the vicinity of the Highway 69 corridor and to serve the surrounding communities.

PAD 5-II defines Land Uses as:

Low density residential, Medium Density Residential, Medium High Density Residential, Regional Commercial, Community Commercial and Neighborhood Commercial and Open Space.

The requested rezoning and land uses illustrated on the Preliminary Development Plan are consistent with the recommendations of the Town's *General Plan 2020*.

The requested C2-PAD zoning is intended to provide the most development flexibility for the property. Planned Area Development Districts (PADs) are zoning districts established over underlying zoning districts and which modify the regulations of the districts with which they are combined. PADs allow groups of structures to be designed for construction as a "unified" project under a "plan". The purpose of PADs is to help develop large areas and encourage variations in environments, commercial facilities, building styles, lot sizes, lot arrangements, site plans, streets and utilities. A Final Development Plan is approved by the Town Council following approval of a Preliminary Development Plan.

Preliminary Development Plan:

The Preliminary Development Plan identifies conceptual building locations, parking and open space, and identifies access and circulation features. The final building configuration, traffic circulation, signage, etc., will be addressed as part of Final Development Plan submittals for each phase of the development, as set forth within Town Code related to administration of the Planned Area Development Use District overlay. A final drainage study and infrastructure plans specific to the individual unit development will be required prior to approval of a Final Development Plan. Access will be from State Highways 69 and 169 and will be subject to requirements of Arizona Department of Transportation (ADOT). A limited Traffic Study for Traffic signal warrants was prepared for the project to identify access points. A more detailed study may be required by the Town Engineer in conjunction with more specific Final Development Plans.

Neighborhood Meeting:

The Town has adopted a Citizens Participation Process. In meeting this intention, the applicant conducted a Neighborhood Meeting with property owners on January 10, 2007 and noticed owners within a one thousand (1,000) foot radius. Approximately five (5) persons attended, none of which voiced objections to the proposed rezoning application, more so interest in what might be constructed at the site and the proposed schedule of construction activities.

Review and Recommendation:

First, the Commission is being asked to consider if the request for the Zoning Map Change from R1L-70 (Residential; Single Family Limited) and C2 (Commercial; General Sales and Service) to C2-PAD (Commercial; General Sales and Service – Planned Area Development) involving approximately twenty-five (25) acres generally located at the northeast corner of State Routes 69 and 169 is in conformance with the *General Plan 2020* and appropriate with the limitations set forth as conditions of approval.

The proposed Zoning Map Change and associated site plan propose uses that are supported by the recommendations of the Town's *General Plan 2020*. The conditions of rezoning are intended to

ensure that this project pays for its cost of development and contributes to other regional impacts. Development of a large project such as this proposal, utilizing the management tools afforded by the Planned Area Development Use District, is supported by Staff. This PAD zoning district enables specific site plan review for each and every phase of development of the project. Staff recommends approval of Zoning Map Change 07-002 subject to the following conditions that are intended to guide or direct the management of future site plan submittals and construction of public infrastructure that is necessary to support the use.

1. Development shall generally occur consistent with the circulation patterns as illustrated on the Preliminary Development Plan or as derived from an approved Traffic Impact Analysis and uses of the property shall be consistent with uses permitted in the C-2 PAD Zoning District;
2. Approval by the Town Council of a Final Development Plan (FDP) as required by Town Code Article 13-19 for each phase of construction, prior to issuance of construction permits, and including engineered drainage and grading plans and all off site street and drainage improvements as recommended by the Town Engineer and Public Works Director;
3. The developer shall be responsible for any infrastructure needed to serve the site; however, may seek to distribute or reimburse cost through a Communities Facilities District, Creation of a Public Improvement Reimbursement Agreements per Section 14-04-070, a Development Agreement with the Town per ARS §9-500.05 or other voluntary process or arrangement with the Town or other parties; and
4. The developer shall participate in roadway improvements, including (but not limited to) travel lane widening and intersection signalization commensurate with traffic generated by the project as determined by the Public Works Director and approved by the Town Council in conjunction with each subsequent Final Development Plan approval.

Second, the Commission is being asked to approve PDP07-002 as submitted in order to permit the eventual development of a commercial center with a potential of two hundred thousand (200,000) square feet of retail, office and service uses.

Staff must note that separate motions will be required for each request (ZMC07-002 and PDP07-002).



Site Data	
Gross Site Acres	25.7 +/-
Total Square Footage	183,400
Floor Area Ratio (FAR)	0.164
Parking Spaces	950
Parking Ratio	~ 5 / 1,000 sf
Building Data	
Building	Square Footage
Anchor	76,000
Shops	114,000
Shops	214,000
Shops	311,400
Pad A	4,500
Pad B	10,000
Pad C	5,000
Pad D	5,100
Pad E	5,000
Pad F	4,800
Pad G	3,000
Pad H	3,375
Pad I	4,000
Pad J	3,500
Pad K	9,975
Pad L	9,750
Total	183,400

**TOWN OF PRESCOTT VALLEY
REQUEST FOR COUNCIL ACTION
Date: February 28, 2008**

SUBJECT: Zoning Map Change (ZMC07-013) – Spray Jones, L.L.C.

SUBMITTING DEPARTMENT: Community Development Department

PREPARED BY: Joe Scott, A.I.C.P., Planner, for Richard T. Parker, Community Development Director

AGENDA LOCATION: Comments/Communications , Consent , Work/Study ,
New Business , Public Hearing , Second Reading

ATTACHMENTS: a) Ordinance No. 711, with attachments

SUMMARY/BACKGROUND: This is a request by Rod Spray, Owner and Agent, for a Zoning Map Change from R1L-70 (Residential; Single-Family Limited) and PAD (Yavapai County – Planned Area Development) to C2-PAD (Commercial; General Sales and Service – Planned Area Development) and RS-PAD (Residential and Services – Planned Area Development) on approximately fifty-eight (58) acres generally located on the east side of State Route 69, north and south of the intersection with Kachina Place.

The subject property was part of Annexation ANX04-C that comprised a total of two hundred twenty-four (224) acres on April 29, 2004 (Ordinance No. 585). The original zoning on the annexed property was designated as R1L-70 and PAD (Yavapai County – Planned Area Development) as existed in Yavapai County at the time of annexation.

At the time of annexation all of the property within the annexation boundary was outside of the Prescott Valley *General Plan 2020* boundary. However, at its November 13, 2006 meeting, the Planning and Zoning Commission recommended approval of a Major General Plan Amendment that, among other things, included the expansion of the Tier II boundary and the PAD 5-II boundary to include all the annexed lands (along with certain State Lands). GPA06-001 was approved by the Town Council at its December 7, 2006 meeting. Recognizing the proximity to State Highways, the amendment also included various text changes defining the Chapter as:

Offering diverse housing, commercial, office and employment opportunities for people working or living in the vicinity of the Highway 69 corridor and to serve the surrounding communities.

PAD 5-II defines Land Uses as:

Low density residential, Medium Density Residential, Medium High Density Residential, Regional Commercial, Community Commercial and Neighborhood Commercial and Open Space.

The requested rezoning and proposed land uses illustrated on the conceptual Preliminary Development Plan are consistent with the recommendations of the Town's *General Plan 2020*. The requested C2-PAD and RS-PAD zoning is intended to provide the most development flexibility for the property. The applicant desires to rezone several contiguous parcels into a comprehensive mixed-use development

consisting of multi-family and commercial retail (utilizing the RS-PAD and C2-PAD zoning, respectively).

Planned Area Development Districts (PADs) are zoning districts established over underlying zoning districts which modify the regulations of the districts with which they are combined. PADs allow groups of structures to be designed for construction as a "unified" project under a "plan". The purpose of PADs is to help develop large areas and encourage variations in environments, commercial facilities, building styles, lot sizes, lot arrangements, site plans, streets and utilities. A Final Development Plan is approved by the Town Council following approval of a Preliminary Development Plan.

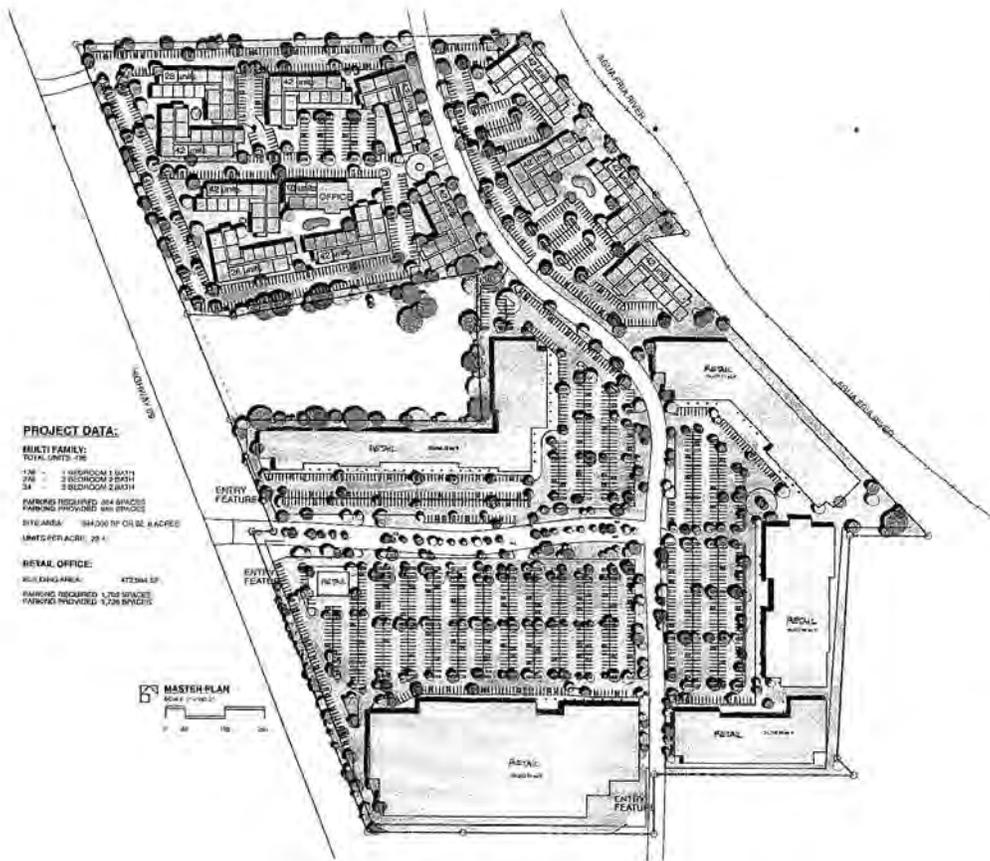
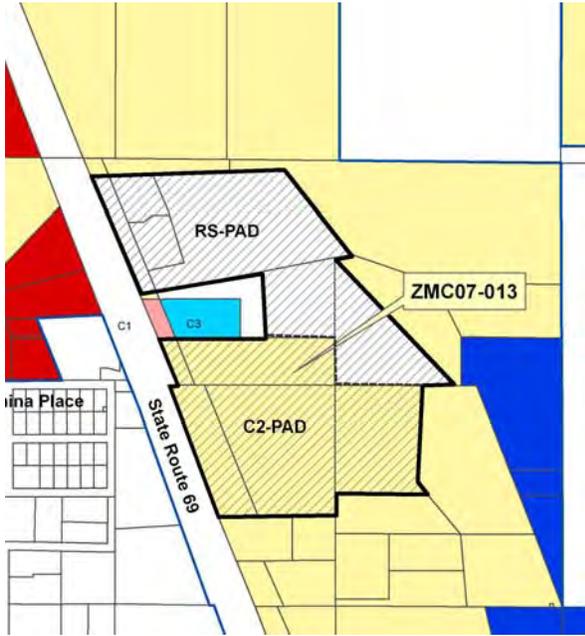
The area in consideration is west of State Route 69 and Kachina Place and goes to the west bank of the Agua Fria River. The northern portion is desired to be multi-family and the southern portion is intended as retail commercial. In addition, the developers are requesting a maximum building height of up to seventy (70) feet within the proposed RS-PAD areas to accommodate building heights to include a maximum of five usable levels approximately eleven (11) feet per story (with additional height for structural support, roofing, and utilities). This height allowance will compensate for the proposed one hundred (100) foot right-of-way dedication that the developers will be providing along the eastern boundary. It is the intention of the developers to participate in a Community Facility District in order to provide the sewer and water infrastructure.

The anticipated circulation for the project consists of the existing signalized intersection at State Route 69 and Kachina Place in conjunction with a planned north/south regional collector, generally along the Agua Fria (on the east side of this site), extending from State Route 169 up to Bradshaw Mountain Road. This regional collector is part of the Circulation Element of the *General Plan 2020*. Development of the collector will be based on specific requirements of this or any other project in the region, or will be partially developed through the formation of a Communities Facilities District. A preliminary Focused Traffic Study was prepared, dated November 13, 2007, providing a summary of findings and recommendations as to the roadway infrastructure needs for different phases of this development. Any access from State Route 69 and 169 will be subject to requirements of the Arizona Department of Transportation (ADOT). A more detailed study will be required by the Town Engineer in conjunction with more specific Final Development Plans.

The applicant conducted a Neighborhood Meeting with property owners on September 7, 2007 and notified owners within a one thousand (1,000) foot radius. Approximately fourteen (14) persons attended, none of which voiced objections to the proposed rezoning application; rather, attendees expressed interest in what might be constructed at the site and the proposed schedule of construction activities.

The Planning and Zoning Commission considered this request in a public hearing at its January 14, 2008 meeting, and voted unanimously to recommend approval of the re-zoning by the Town Council. The Town Council held a public hearing and voted to read Ordinance No. 711 for the first time at its regular session on February 14, 2008.

With approval of Ordinance No. 711 Council is now asked to read ordinance No. 711 for the second time and place it on final passage.



PROJECT DATA:
MULTI FAMILY:
 TOTAL UNITS: 216
 136 1 BEDROOM 1 BATH
 228 3 BEDROOM 2 BATH
 34 3 BEDROOM 2 BATH
PARKING REQUIRED: 884 SPACES
PARKING PROVIDED: 888 SPACES
BYE AREA: 184,000 SF OR 8.4 ACRES
UNITS AFFLUENT: 25.4
RETAIL OFFICE:
BUILDING AREA: 472,000 SF
PARKING REQUIRED: 1,710 SPACES
PARKING PROVIDED: 1,728 SPACES

MASTER PLAN
 SCALE: 1"=20'-0"



 A NEW MASTERPLAN FOR
 SPRAY JONES LLC
 RENO, NEVADA
 ARCHITECTURE P.C.
 1000 S. 2ND STREET
 SUITE 100
 RENO, NEVADA 89502
 DATE: 10/20/2017
 DRAWING NO.: 17-001

HEADWATERS

A-2

Appendix H – Construction Cost Estimates



Kimley-Horn
and Associates, Inc.

Upgrade Existing Unpaved Roadway to All-weather Roadway - Level Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2030204	EMBANKMENT	CU.YD.	7,040	\$7.00	\$49,280
2030301	ROADWAY EXCAVATION	CU.YD.	2,347	\$10.00	\$23,470
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
Construction Subtotal					\$80,750
	DRAINAGE CONSTRUCTION	10%			\$8,075
Drainage Construction Subtotal					\$8,075
Roadway & Drainage Construction Subtotal					\$88,825
	Unidentified Item Allowance (25%)				\$ 22,300
Subtotal					\$111,125
	Water Supply/Dust Palliative (2%)				\$ 2,300
	Maintenance And Protection Of Traffic (5%)				\$ 5,600
	Erosion Control (1%)				\$ 1,200
	Contractor Quality Control (2%)				\$ 2,300
	Construction Surveying And Layout (2%)				\$ 2,300
Other Item Subtotal					\$124,825
	Mobilization (10%)				\$ 12,500
Construction Subtotal					\$ 137,325
	Design (20%)				\$ 27,500
	Construction Engineering and Contingencies (14%)				\$ 19,300
	Indirect Cost Allocation (5.19%)				\$ 7,200
Construction Total					\$ 192,000
	Utility Relocations				\$ 10,000
TOTAL Upgrade Existing Unpaved Roadway to All-weather Roadway - Level Terrain COST					\$ 202,000



Upgrade Existing Unpaved Roadway to All-weather Roadway - Rolling Terrain
ITEMIZED COST ESTIMATE

Kimley-Horn
and Associates, Inc.

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2030204	EMBANKMENT	CU.YD.	16,430	\$7.00	\$115,010
2030301	ROADWAY EXCAVATION	CU.YD.	9,387	\$10.00	\$93,870
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$216,880
	DRAINAGE CONSTRUCTION	10%			\$21,688
				Drainage Construction Subtotal	\$21,688
				Roadway & Drainage Construction Subtotal	\$238,568
	Unidentified Item Allowance (25%)				\$ 59,700
				Subtotal	\$298,268
	Water Supply/Dust Palliative (2%)				\$ 6,000
	Maintenance And Protection Of Traffic (5%)				\$ 15,000
	Erosion Control (1%)				\$ 3,000
	Contractor Quality Control (2%)				\$ 6,000
	Construction Surveying And Layout (2%)				\$ 6,000
				Other Item Subtotal	\$334,268
	Mobilization (10%)				\$ 33,500
				Construction Subtotal	\$ 367,768
	Design (20%)				\$ 73,600
	Construction Engineering and Contingencies (14%)				\$ 51,500
	Indirect Cost Allocation (5.19%)				\$ 19,100
				Construction Total	\$ 512,000
	Utility Relocations				\$ 10,000
TOTAL	Upgrade Existing Unpaved Roadway to All-weather Roadway - Rolling Terrain	COST			\$ 522,000



Kimley-Horn
and Associates, Inc.

Upgrade Existing Unpaved Roadway to All-weather Roadway - Steep Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2030204	EMBANKMENT	CU.YD.	23,470	\$7.00	\$164,290
2030301	ROADWAY EXCAVATION	CU.YD.	14,080	\$10.00	\$140,800
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$313,090
	DRAINAGE CONSTRUCTION	10%			\$31,309
				Drainage Construction Subtotal	\$31,309
				Roadway & Drainage Construction Subtotal	\$344,399
	Unidentified Item Allowance (25%)				\$ 86,100
				Subtotal	\$430,499
	Water Supply/Dust Palliative (2%)				\$ 8,700
	Maintenance And Protection Of Traffic (5%)				\$ 21,600
	Erosion Control (1%)				\$ 4,400
	Contractor Quality Control (2%)				\$ 8,700
	Construction Surveying And Layout (2%)				\$ 8,700
				Other Item Subtotal	\$482,599
	Mobilization (10%)				\$ 48,300
				Construction Subtotal	\$ 530,899
	Design (20%)				\$ 106,200
	Construction Engineering and Contingencies (14%)				\$ 74,400
	Indirect Cost Allocation (5.19%)				\$ 27,600
				Construction Total	\$ 739,100
	Utility Relocations				\$ 10,000
TOTAL	Upgrade Existing Unpaved Roadway to All-weather Roadway - Steep Terrain	COST			\$ 740,000



Pave Existing Unpaved Roadway Using Chip-seal - Level Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	7,040	\$7.00	\$49,280
2030301	ROADWAY EXCAVATION	CU.YD.	2,347	\$10.00	\$23,470
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$178,082
	DRAINAGE CONSTRUCTION	10%			\$17,808
				Drainage Construction Subtotal	\$17,808
				Roadway & Drainage Construction Subtotal	\$195,890
	Unidentified Item Allowance (25%)			\$	49,000
				Subtotal	\$244,890
	Water Supply/Dust Palliative (2%)			\$	4,900
	Maintenance And Protection Of Traffic (5%)			\$	12,300
	Erosion Control (1%)			\$	2,500
	Contractor Quality Control (2%)			\$	4,900
	Construction Surveying And Layout (2%)			\$	4,900
				Other Item Subtotal	\$274,390
	Mobilization (10%)			\$	27,500
				Construction Subtotal	\$ 301,890
	Design (20%)			\$	60,400
	Construction Engineering and Contingencies (14%)			\$	42,300
	Indirect Cost Allocation (5.19%)			\$	15,700
				Construction Total	\$ 421,000
	Utility Relocations			\$	10,000
	TOTAL Pave Existing Unpaved Roadway Using Chip-seal - Level Terrain COST			\$	440,000



Pave Existing Unpaved Roadway Using Chip-seal - Rolling Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	16,430	\$7.00	\$115,010
2030301	ROADWAY EXCAVATION	CU.YD.	9,387	\$10.00	\$93,870
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$314,212
	DRAINAGE CONSTRUCTION	10%			\$31,421
				Drainage Construction Subtotal	\$31,421
				Roadway & Drainage Construction Subtotal	\$345,633
	Unidentified Item Allowance (25%)			\$	86,500
				Subtotal	\$432,133
	Water Supply/Dust Palliative (2%)			\$	8,700
	Maintenance And Protection Of Traffic (5%)			\$	21,700
	Erosion Control (1%)			\$	4,400
	Contractor Quality Control (2%)			\$	8,700
	Construction Surveying And Layout (2%)			\$	8,700
				Other Item Subtotal	\$484,333
	Mobilization (10%)			\$	48,500
				Construction Subtotal	\$ 532,833
	Design (20%)			\$	106,600
	Construction Engineering and Contingencies (14%)			\$	74,600
	Indirect Cost Allocation (5.19%)			\$	27,700
				Construction Total	\$ 742,000
	Utility Relocations			\$	10,000
	TOTAL Pave Existing Unpaved Roadway Using Chip-seal - Rolling Terrain COST			\$	760,000



Pave Existing Unpaved Roadway Using Chip-seal - Steep Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	23,470	\$7.00	\$164,290
2030301	ROADWAY EXCAVATION	CU.YD.	14,080	\$10.00	\$140,800
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$410,422
	DRAINAGE CONSTRUCTION		10%		\$41,042
				Drainage Construction Subtotal	\$41,042
				Roadway & Drainage Construction Subtotal	\$451,464
	Unidentified Item Allowance (25%)			\$	112,900
				Subtotal	\$564,364
	Water Supply/Dust Palliative (2%)			\$	11,300
	Maintenance And Protection Of Traffic (5%)			\$	28,300
	Erosion Control (1%)			\$	5,700
	Contractor Quality Control (2%)			\$	11,300
	Construction Surveying And Layout (2%)			\$	11,300
				Other Item Subtotal	\$632,264
	Mobilization (10%)			\$	63,300
				Construction Subtotal	\$ 695,564
	Design (20%)			\$	139,200
	Construction Engineering and Contingencies (14%)			\$	97,400
	Indirect Cost Allocation (5.19%)			\$	36,100
				Construction Total	\$ 969,000
	Utility Relocations			\$	10,000
	TOTAL Pave Existing Unpaved Roadway Using Chip-seal - Steep Terrain COST			\$	979,000



Pave Existing Unpaved Roadway Using Asphalt - Level Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	7,040	\$7.00	\$49,280
2030301	ROADWAY EXCAVATION	CU.YD.	2,347	\$10.00	\$23,470
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$205,642
	DRAINAGE CONSTRUCTION	10%			\$20,564
				Drainage Construction Subtotal	\$20,564
				Roadway & Drainage Construction Subtotal	\$226,206
	Unidentified Item Allowance (25%)			\$	56,600
				Subtotal	\$282,806
	Water Supply/Dust Palliative (2%)			\$	5,700
	Maintenance And Protection Of Traffic (5%)			\$	14,200
	Erosion Control (1%)			\$	2,900
	Contractor Quality Control (2%)			\$	5,700
	Construction Surveying And Layout (2%)			\$	5,700
				Other Item Subtotal	\$317,006
	Mobilization (10%)			\$	31,800
				Construction Subtotal	\$ 348,806
	Design (20%)			\$	69,800
	Construction Engineering and Contingencies (14%)			\$	48,900
	Indirect Cost Allocation (5.19%)			\$	18,200
				Construction Total	\$ 486,000
	Utility Relocations			\$	10,000
	TOTAL Pave Existing Unpaved Roadway Using Asphalt - Level Terrain COST				\$ 496,000



Pave Existing Unpaved Roadway Using Asphalt - Rolling Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	16,430	\$7.00	\$115,010
2030301	ROADWAY EXCAVATION	CU.YD.	9,387	\$10.00	\$93,870
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
				Construction Subtotal	\$341,772
	DRAINAGE CONSTRUCTION	10%			\$34,177
				Drainage Construction Subtotal	\$34,177
				Roadway & Drainage Construction Subtotal	\$375,949
	Unidentified Item Allowance (25%)			\$	94,000
				Subtotal	\$469,949
	Water Supply/Dust Palliative (2%)			\$	9,400
	Maintenance And Protection Of Traffic (5%)			\$	23,500
	Erosion Control (1%)			\$	4,700
	Contractor Quality Control (2%)			\$	9,400
	Construction Surveying And Layout (2%)			\$	9,400
				Other Item Subtotal	\$526,349
	Mobilization (10%)			\$	52,700
				Construction Subtotal	\$ 579,049
	Design (20%)			\$	115,900
	Construction Engineering and Contingencies (14%)			\$	81,100
	Indirect Cost Allocation (5.19%)			\$	30,100
				Construction Total	\$ 807,000
	Utility Relocations			\$	10,000
	TOTAL Pave Existing Unpaved Roadway Using Asphalt - Rolling Terrain COST				\$ 817,000



Pave Existing Unpaved Roadway Using Asphalt - Steep Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	-	\$5,000.00	\$0
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	23,470	\$7.00	\$164,290
2030301	ROADWAY EXCAVATION	CU.YD.	14,080	\$10.00	\$140,800
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	-	\$5,000.00	\$0
Construction Subtotal					\$437,982
DRAINAGE CONSTRUCTION		10%			\$43,798
Drainage Construction Subtotal					\$43,798
Roadway & Drainage Construction Subtotal					\$481,780
Unidentified Item Allowance (25%)					\$ 120,500
Subtotal					\$602,280
Water Supply/Dust Palliative (2%)					\$ 12,100
Maintenance And Protection Of Traffic (5%)					\$ 30,200
Erosion Control (1%)					\$ 6,100
Contractor Quality Control (2%)					\$ 12,100
Construction Surveying And Layout (2%)					\$ 12,100
Other Item Subtotal					\$674,880
Mobilization (10%)					\$ 67,500
Construction Subtotal					\$ 742,380
Design (20%)					\$ 148,500
Construction Engineering and Contingencies (14%)					\$ 104,000
Indirect Cost Allocation (5.19%)					\$ 38,600
Construction Total					\$ 1,034,000
Utility Relocations					\$ 10,000
TOTAL Pave Existing Unpaved Roadway Using Asphalt - Steep Terrain COST					\$ 1,044,000



Realign and Upgrade to All-weather Roadway - Level Terrain
ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2030204	EMBANKMENT	CU.YD.	14,080	\$7.00	\$98,560
2030301	ROADWAY EXCAVATION	CU.YD.	4,693	\$10.00	\$46,930
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
				Construction Subtotal	\$233,490
	DRAINAGE CONSTRUCTION	25%			\$58,373
				Drainage Construction Subtotal	\$58,373
				Roadway & Drainage Construction Subtotal	\$291,863
	Unidentified Item Allowance (25%)				\$ 73,000
				Subtotal	\$364,863
	Water Supply/Dust Palliative (2%)				\$ 7,300
	Maintenance And Protection Of Traffic (5%)				\$ 18,300
	Erosion Control (1%)				\$ 3,700
	Contractor Quality Control (2%)				\$ 7,300
	Construction Surveying And Layout (2%)				\$ 7,300
				Other Item Subtotal	\$408,763
	Mobilization (10%)				\$ 40,900
				Construction Subtotal	\$ 449,663
	Design (20%)				\$ 90,000
	Construction Engineering and Contingencies (14%)				\$ 63,000
	Indirect Cost Allocation (5.19%)				\$ 23,400
				Construction Total	\$ 627,000
	Utility Relocations				\$ 10,000
	TOTAL Realign and Upgrade to All-weather Roadway - Level Terrain COST				\$ 637,000



Realign and Upgrade to All-weather Roadway - Rolling Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2030204	EMBANKMENT	CU.YD.	32,860	\$7.00	\$230,020
2030301	ROADWAY EXCAVATION	CU.YD.	18,773	\$10.00	\$187,730
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
				Construction Subtotal	\$505,750
	DRAINAGE CONSTRUCTION	25%			\$126,438
				Drainage Construction Subtotal	\$126,438
				Roadway & Drainage Construction Subtotal	\$632,188
	Unidentified Item Allowance (25%)				\$ 158,100
				Subtotal	\$790,288
	Water Supply/Dust Palliative (2%)				\$ 15,900
	Maintenance And Protection Of Traffic (5%)				\$ 39,600
	Erosion Control (1%)				\$ 8,000
	Contractor Quality Control (2%)				\$ 15,900
	Construction Surveying And Layout (2%)				\$ 15,900
				Other Item Subtotal	\$885,588
	Mobilization (10%)				\$ 88,600
				Construction Subtotal	\$ 974,188
	Design (20%)				\$ 194,900
	Construction Engineering and Contingencies (14%)				\$ 136,400
	Indirect Cost Allocation (5.19%)				\$ 50,600
				Construction Total	\$ 1,357,000
	Utility Relocations				\$ 10,000
	TOTAL Realign and Upgrade to All-weather Roadway - Rolling Terrain COST				\$ 1,367,000



Realign and Upgrade to All-weather Roadway - Steep Terrain
ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2030204	EMBANKMENT	CU.YD.	46,940	\$7.00	\$328,580
2030301	ROADWAY EXCAVATION	CU.YD.	32,853	\$10.00	\$328,530
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
				Construction Subtotal	\$745,110
	DRAINAGE CONSTRUCTION	25%			\$186,278
				Drainage Construction Subtotal	\$186,278
				Roadway & Drainage Construction Subtotal	\$931,388
	Unidentified Item Allowance (25%)				\$ 232,900
				Subtotal	\$1,164,288
	Water Supply/Dust Palliative (2%)				\$ 23,300
	Maintenance And Protection Of Traffic (5%)				\$ 58,300
	Erosion Control (1%)				\$ 11,700
	Contractor Quality Control (2%)				\$ 23,300
	Construction Surveying And Layout (2%)				\$ 23,300
				Other Item Subtotal	\$1,304,188
	Mobilization (10%)				\$ 130,500
				Construction Subtotal	\$ 1,434,688
	Design (20%)				\$ 287,000
	Construction Engineering and Contingencies (14%)				\$ 200,900
	Indirect Cost Allocation (5.19%)				\$ 74,500
				Construction Total	\$ 1,998,000
	Utility Relocations				\$ 10,000
	TOTAL Realign and Upgrade to All-weather Roadway - Steep Terrain COST				\$ 2,008,000



Realign and Upgrade to All-weather Roadway Using Chip-seal - Level Terrain
ITEMIZED COST ESTIMATE

Kimley-Horn
and Associates, Inc.

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	14,080	\$7.00	\$98,560
2030301	ROADWAY EXCAVATION	CU.YD.	4,693	\$10.00	\$46,930
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
				Construction Subtotal	\$330,822
	DRAINAGE CONSTRUCTION		25%		\$82,706
				Drainage Construction Subtotal	\$82,706
				Roadway & Drainage Construction Subtotal	\$413,528
	Unidentified Item Allowance (25%)			\$	103,400
				Subtotal	\$516,928
	Water Supply/Dust Palliative (2%)			\$	10,400
	Maintenance And Protection Of Traffic (5%)			\$	25,900
	Erosion Control (1%)			\$	5,200
	Contractor Quality Control (2%)			\$	10,400
	Construction Surveying And Layout (2%)			\$	10,400
				Other Item Subtotal	\$579,228
	Mobilization (10%)			\$	58,000
				Construction Subtotal	\$ 637,228
	Design (20%)			\$	127,500
	Construction Engineering and Contingencies (14%)			\$	89,300
	Indirect Cost Allocation (5.19%)			\$	33,100
				Construction Total	\$ 888,000
	Utility Relocations			\$	10,000
TOTAL	Realign and Upgrade to All-weather Roadway Using Chip-seal - Level Terrain	COST		\$	898,000



Realign and Upgrade to All-weather Roadway Using Chip-seal - Rolling Terrain

Kimley-Horn
and Associates, Inc.

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	32,860	\$7.00	\$230,020
2030301	ROADWAY EXCAVATION	CU.YD.	18,773	\$10.00	\$187,730
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
Construction Subtotal					\$603,082
DRAINAGE CONSTRUCTION		25%			\$150,771
Drainage Construction Subtotal					\$150,771
Roadway & Drainage Construction Subtotal					\$753,853
Unidentified Item Allowance (25%)					\$ 188,500
Subtotal					\$942,353
Water Supply/Dust Palliative (2%)					\$ 18,900
Maintenance And Protection Of Traffic (5%)					\$ 47,200
Erosion Control (1%)					\$ 9,500
Contractor Quality Control (2%)					\$ 18,900
Construction Surveying And Layout (2%)					\$ 18,900
Other Item Subtotal					\$1,055,753
Mobilization (10%)					\$ 105,600
Construction Subtotal					\$ 1,161,353
Design (20%)					\$ 232,300
Construction Engineering and Contingencies (14%)					\$ 162,600
Indirect Cost Allocation (5.19%)					\$ 60,300
Construction Total					\$ 1,617,000
Utility Relocations					\$ 10,000
TOTAL Realign and Upgrade to All-weather Roadway Using Chip-seal - Rolling Terrain COST					\$ 1,627,000



Realign and Upgrade to All-weather Roadway Using Chip-seal - Steep Terrain
ITEMIZED COST ESTIMATE

Kimley-Horn
and Associates, Inc.

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	46,940	\$7.00	\$328,580
2030301	ROADWAY EXCAVATION	CU.YD.	32,853	\$10.00	\$328,530
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4040074	EMULSIFIED ASPHALT (CRS-2)	TON	26	\$450.00	\$11,880
4040162	COVER MATERIAL	CU.YD.	169	\$40.00	\$6,760
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
Construction Subtotal					\$842,442
DRAINAGE CONSTRUCTION		25%			\$210,611
Drainage Construction Subtotal					\$210,611
Roadway & Drainage Construction Subtotal					\$1,053,053
Unidentified Item Allowance (25%)					\$ 263,300
Subtotal					\$1,316,353
Water Supply/Dust Palliative (2%)					\$ 26,400
Maintenance And Protection Of Traffic (5%)					\$ 65,900
Erosion Control (1%)					\$ 13,200
Contractor Quality Control (2%)					\$ 26,400
Construction Surveying And Layout (2%)					\$ 26,400
Other Item Subtotal					\$1,474,653
Mobilization (10%)					\$ 147,500
Construction Subtotal					\$ 1,622,153
Design (20%)					\$ 324,500
Construction Engineering and Contingencies (14%)					\$ 227,200
Indirect Cost Allocation (5.19%)					\$ 84,200
Construction Total					\$ 2,259,000
Utility Relocations					\$ 10,000
TOTAL Realign and Upgrade to All-weather Roadway Using Chip-seal - Steep Terrain COST					\$ 2,269,000



Kimley-Horn
and Associates, Inc.

Realign and Upgrade to All-weather Roadway Using Asphalt - Level Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	14,080	\$7.00	\$98,560
2030301	ROADWAY EXCAVATION	CU.YD.	4,693	\$10.00	\$46,930
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
Construction Subtotal					\$358,382
DRAINAGE CONSTRUCTION		25%			\$89,596
Drainage Construction Subtotal					\$89,596
Roadway & Drainage Construction Subtotal					\$447,978
Unidentified Item Allowance (25%)				\$	112,000
Subtotal					\$559,978
Water Supply/Dust Palliative (2%)				\$	11,200
Maintenance And Protection Of Traffic (5%)				\$	28,000
Erosion Control (1%)				\$	5,600
Contractor Quality Control (2%)				\$	11,200
Construction Surveying And Layout (2%)				\$	11,200
Other Item Subtotal					\$627,178
Mobilization (10%)				\$	62,800
Construction Subtotal					\$ 689,978
Design (20%)				\$	138,000
Construction Engineering and Contingencies (14%)				\$	96,600
Indirect Cost Allocation (5.19%)				\$	35,900
Construction Total					\$ 961,000
Utility Relocations				\$	10,000
TOTAL Realign and Upgrade to All-weather Roadway Using Asphalt - Level Terrain COST					\$ 971,000



Realign and Upgrade to All-weather Roadway Using Asphalt - Rolling Terrain
ITEMIZED COST ESTIMATE

Kimley-Horn
and Associates, Inc.

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	32,860	\$7.00	\$230,020
2030301	ROADWAY EXCAVATION	CU.YD.	18,773	\$10.00	\$187,730
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
				Construction Subtotal	\$630,642
	DRAINAGE CONSTRUCTION	25%			\$157,661
				Drainage Construction Subtotal	\$157,661
				Roadway & Drainage Construction Subtotal	\$788,303
	Unidentified Item Allowance (25%)			\$	197,100
				Subtotal	\$985,403
	Water Supply/Dust Palliative (2%)			\$	19,800
	Maintenance And Protection Of Traffic (5%)			\$	49,300
	Erosion Control (1%)			\$	9,900
	Contractor Quality Control (2%)			\$	19,800
	Construction Surveying And Layout (2%)			\$	19,800
				Other Item Subtotal	\$1,104,003
	Mobilization (10%)			\$	110,500
				Construction Subtotal	\$ 1,214,503
	Design (20%)			\$	243,000
	Construction Engineering and Contingencies (14%)			\$	170,100
	Indirect Cost Allocation (5.19%)			\$	63,100
				Construction Total	\$ 1,691,000
	Utility Relocations			\$	10,000
TOTAL	Realign and Upgrade to All-weather Roadway Using Asphalt - Rolling Terrain	COST			\$ 1,701,000



Kimley-Horn
and Associates, Inc.

Realign and Upgrade to All-weather Roadway Using Asphalt - Steep Terrain

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	8	\$5,000.00	\$40,000
2020201	SAW CUTTING	L.FT.	48	\$4.00	\$192
2030204	EMBANKMENT	CU.YD.	46,940	\$7.00	\$328,580
2030301	ROADWAY EXCAVATION	CU.YD.	32,853	\$10.00	\$328,530
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	1,570	\$50.00	\$78,500
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	1,540	\$30.00	\$46,200
6080101	MISCELLANEOUS WORK (SIGNS)	L.SUM	1	\$2,500.00	\$2,500
7041501	PAVEMENT MARKINGS	L.SUM	1	\$5,500.00	\$5,500
8050003	SEEDING (CLASS II)	ACRE	8	\$5,000.00	\$40,000
Construction Subtotal					\$870,002
DRAINAGE CONSTRUCTION		25%			\$217,501
Drainage Construction Subtotal					\$217,501
Roadway & Drainage Construction Subtotal					\$1,087,503
Unidentified Item Allowance (25%)				\$	271,900
Subtotal					\$1,359,403
Water Supply/Dust Palliative (2%)				\$	27,200
Maintenance And Protection Of Traffic (5%)				\$	68,000
Erosion Control (1%)				\$	13,600
Contractor Quality Control (2%)				\$	27,200
Construction Surveying And Layout (2%)				\$	27,200
Other Item Subtotal					\$1,522,603
Mobilization (10%)				\$	152,300
Construction Subtotal					\$ 1,674,903
Design (20%)				\$	335,000
Construction Engineering and Contingencies (14%)				\$	234,500
Indirect Cost Allocation (5.19%)				\$	87,000
Construction Total					\$ 2,332,000
Utility Relocations				\$	10,000
TOTAL Realign and Upgrade to All-weather Roadway Using Asphalt - Steep Terrain COST					\$ 2,342,000



Construct 6' Sidewalk With Curb and Gutter (Both Sides of Street)

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2020201	SAW CUTTING	L.FT.	10,560	\$3.00	\$31,680
2030204	EMBANKMENT	CU.YD.	2,000	\$20.00	\$40,000
2030301	ROADWAY EXCAVATION	CU.YD.	1,000	\$12.00	\$12,000
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	260	\$40.00	\$10,400
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	260	\$150.00	\$39,000
9080109	CONCRETE SINGLE CURB (VERTICAL CURB)	L.FT.	10,560	\$16.00	\$168,960
9080201	CONCRETE SIDEWALK (C-05.20)	SQ.FT.	63,360	\$4.00	\$253,440
				Construction Subtotal	\$555,480
	DRAINAGE CONSTRUCTION	0%			\$0
				Drainage Construction Subtotal	\$0
				Roadway & Drainage Construction Subtotal	\$555,480
	Unidentified Item Allowance (5%)			\$	27,800
				Subtotal	\$583,280
	Water Supply/Dust Palliative (1%)			\$	5,900
	Maintenance And Protection Of Traffic (2%)			\$	11,700
	Erosion Control (1%)			\$	5,900
	Contractor Quality Control (2%)			\$	11,700
	Construction Surveying And Layout (2%)			\$	11,700
				Other Item Subtotal	\$630,180
	Mobilization (12%)			\$	75,700
				Construction Subtotal	\$ 705,880
	Design (20%)			\$	141,200
	Construction Engineering and Contingencies (14%)			\$	98,900
	Indirect Cost Allocation (5.19%)			\$	36,700
				Construction Total	\$ 983,000
	Utility Relocations			\$	-
	TOTAL Construct 6' Sidewalk With Curb and Gutter (Both Sides of Street) COST				\$ 983,000



Kimley-Horn
and Associates, Inc.

Construct 6' Sidewalk Without Curb and Gutter (Both Sides of Street)

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2030204	EMBANKMENT	CU.YD.	2,000	\$20.00	\$40,000
2030301	ROADWAY EXCAVATION	CU.YD.	1,000	\$12.00	\$12,000
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	260	\$40.00	\$10,400
4060006	ASPHALTIC CONCRETE (3/4" MIX)	TON	260	\$150.00	\$39,000
9080201	CONCRETE SIDEWALK (C-05.20)	SQ.FT.	63,360	\$4.00	\$253,440
Construction Subtotal					\$354,840
DRAINAGE CONSTRUCTION		0%			\$0
Drainage Construction Subtotal					\$0
Roadway & Drainage Construction Subtotal					\$354,840
Unidentified Item Allowance (5%)					\$ 17,800
Subtotal					\$372,640
Water Supply/Dust Palliative (1%)					\$ 3,800
Maintenance And Protection Of Traffic (2%)					\$ 7,500
Erosion Control (1%)					\$ 3,800
Contractor Quality Control (2%)					\$ 7,500
Construction Surveying And Layout (2%)					\$ 7,500
Other Item Subtotal					\$402,740
Mobilization (12%)					\$ 48,400
Construction Subtotal					\$ 451,140
Design (20%)					\$ 90,300
Construction Engineering and Contingencies (14%)					\$ 63,200
Indirect Cost Allocation (5.19%)					\$ 23,500
Construction Total					\$ 629,000
Utility Relocations					\$ -
TOTAL Construct 6' Sidewalk Without Curb and Gutter (Both Sides of Street) COST					\$ 629,000



Construct 6' Unpaved Shared-Use Path/Trail - Flat Terrain (Both Sides of Street)

Kimley-Horn
and Associates, Inc.

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	2	\$4,000.00	\$8,000
2030204	EMBANKMENT	CU.YD.	7,040	\$20.00	\$140,800
2030301	ROADWAY EXCAVATION	CU.YD.	2,347	\$12.00	\$28,158
				Construction Subtotal	\$176,958
	DRAINAGE CONSTRUCTION	0%			\$0
				Drainage Construction Subtotal	\$0
				Roadway & Drainage Construction Subtotal	\$176,958
	Unidentified Item Allowance (5%)				\$ 8,900
				Subtotal	\$185,858
	Water Supply/Dust Palliative (1%)				\$ 1,900
	Maintenance And Protection Of Traffic (2%)				\$ 3,800
	Erosion Control (1%)				\$ 1,900
	Contractor Quality Control (2%)				\$ 3,800
	Construction Surveying And Layout (2%)				\$ 3,800
				Other Item Subtotal	\$201,058
	Mobilization (12%)				\$ 24,200
				Construction Subtotal	\$ 225,258
	Design (20%)				\$ 45,100
	Construction Engineering and Contingencies (14%)				\$ 31,600
	Indirect Cost Allocation (5.19%)				\$ 11,700
				Construction Total	\$ 314,000
	Utility Relocations				\$ -
TOTAL	Construct 6' Unpaved Shared-Use Path/Trail - Flat Terrain (Both Sides of Street) COST				\$ 314,000



Construct 6' Unpaved Shared-Use Path/Trail - Rolling Terrain (Both Sides of Street)

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	2	\$4,000.00	\$8,000
2030204	EMBANKMENT	CU.YD.	16,430	\$20.00	\$328,600
2030301	ROADWAY EXCAVATION	CU.YD.	9,387	\$12.00	\$112,638
				Construction Subtotal	\$449,238
	DRAINAGE CONSTRUCTION	0%			\$0
				Drainage Construction Subtotal	\$0
				Roadway & Drainage Construction Subtotal	\$449,238
	Unidentified Item Allowance (5%)				\$ 22,500
				Subtotal	\$471,738
	Water Supply/Dust Palliative (1%)				\$ 4,800
	Maintenance And Protection Of Traffic (2%)				\$ 9,500
	Erosion Control (1%)				\$ 4,800
	Contractor Quality Control (2%)				\$ 9,500
	Construction Surveying And Layout (2%)				\$ 9,500
				Other Item Subtotal	\$509,838
	Mobilization (12%)				\$ 61,200
				Construction Subtotal	\$ 571,038
	Design (20%)				\$ 114,300
	Construction Engineering and Contingencies (14%)				\$ 80,000
	Indirect Cost Allocation (5.19%)				\$ 29,700
				Construction Total	\$ 796,000
	Utility Relocations				\$ -
TOTAL	Construct 6' Unpaved Shared-Use Path/Trail - Rolling Terrain (Both Sides of Street) COST				\$ 796,000



Construct 6' Unpaved Shared-Use Path/Trail - Steep Terrain (Both Sides of Street)

ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
2010011	CLEARING AND GRUBBING	ACRE	2	\$4,000.00	\$8,000
2030204	EMBANKMENT	CU.YD.	23,470	\$20.00	\$469,400
2030301	ROADWAY EXCAVATION	CU.YD.	16,427	\$12.00	\$197,118
				Construction Subtotal	\$674,518
	DRAINAGE CONSTRUCTION	0%			\$0
				Drainage Construction Subtotal	\$0
				Roadway & Drainage Construction Subtotal	\$674,518
	Unidentified Item Allowance (5%)				\$ 33,800
				Subtotal	\$708,318
	Water Supply/Dust Palliative (1%)				\$ 7,100
	Maintenance And Protection Of Traffic (2%)				\$ 14,200
	Erosion Control (1%)				\$ 7,100
	Contractor Quality Control (2%)				\$ 14,200
	Construction Surveying And Layout (2%)				\$ 14,200
				Other Item Subtotal	\$765,118
	Mobilization (12%)				\$ 91,900
				Construction Subtotal	\$ 857,018
	Design (20%)				\$ 171,500
	Construction Engineering and Contingencies (14%)				\$ 120,000
	Indirect Cost Allocation (5.19%)				\$ 44,500
				Construction Total	\$ 1,194,000
	Utility Relocations				\$ -
TOTAL	Construct 6' Unpaved Shared-Use Path/Trail - Steep Terrain (Both Sides of Street) COST				\$ 1,194,000



Install 2 Signs
ITEMIZED COST ESTIMATE

Project Location: Dewey-Humboldt

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
	WARNING SIGN PANEL	SQ FT	18	\$13.00	\$234
	SIGN POST (PERFORATED) (2 1/2S)	LF	20	\$8.00	\$160
	FOUNDATION FOR SIGN POST (CONCRETE)	EACH	2	\$150.00	\$300
				Construction Subtotal	\$694
	Unidentified Item Allowance (5%)				\$ 100
				Construction Subtotal	\$ 794
	Construction Engineering and Contingencies (14%)				\$ 200
				TOTAL Install 2 Signs COST	\$ 994

Construction Cost Estimate - Roadway Network Improvements

Alternative	Project Location	Project Description	Terrain	Length (ft)	New Roadway (ft)	Pave Exst Roadway (ft)	Low Flow River Crossing Cost (\$)	Minimum Curve Radius	Posted Speed (mph)	Maximum Grade	Structure Impact	Parcel Impact	ROW Required (sq ft)	Cost of Full Take (\$)	Special Parcel Impacts	Alternative ROW Cost (\$ Min)	Alternative ROW Cost (\$ Max)	Alternative Construction Cost Unpaved (\$ Min)	Alternative Construction Cost (\$ Max)	Alternative Cost Total Min (\$)	Alternative Cost Total Max (\$)	Area ROW Cost Min (\$)	Area ROW Cost Max (\$)	Area Construction Cost Min (\$)	Area Construction Cost Max (\$)	AREA TOTAL COST MIN (\$)	AREA TOTAL COST MAX (\$)
1 EX	Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve	LEVEL					155'	-	0%	0	0	-	-	-	0	0										
1A	Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve	LEVEL	410	410	0		465'	40	0%	0	1	8,890	\$ -	-	0	9000	X	\$76,000	\$76,000	\$85,000	\$0	\$9,000	\$50,000	\$150,000	\$50,000	\$150,000
1B	Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve	LEVEL	270	270	0		250'	30	0%	0	1	1,975	\$ -	-	0	2000	X	\$50,000	\$50,000	\$52,000	\$0	\$9,000	\$50,000	\$150,000	\$50,000	\$150,000
1C	Area 1 Alternatives: Henderson Rd./Martha Way Curve	Realign roadway with larger radius curve	LEVEL	816	816	0		250'	30	0%	0	1	-	\$ -	-	0	0	X	\$150,000	\$150,000	\$150,000	\$0	\$9,000	\$50,000	\$150,000	\$50,000	\$150,000
2 EX	Area 2 Alternatives: Henderson Rd./Ponily Pl./Horseshoe Ln.	Connect Henderson Rd to Horseshoe Ln	ROLLING		0			50'	-	6%	0	0	-	-	BLM Parcel	0	0			\$0	\$0						
2A	Area 2 Alternatives: Henderson Rd./Ponily Pl./Horseshoe Ln.	Connect Henderson Rd to Horseshoe Ln	ROLLING	1607	1607	0		350'	25	10%	1	10	77,913	\$ 57,902	BLM Parcel	0	140000	X	\$520,000	\$520,000	\$660,000	\$0	\$190,000	\$520,000	\$820,000	\$520,000	\$1,010,000
2B	Area 2 Alternatives: Henderson Rd./Ponily Pl./Horseshoe Ln.	Connect Henderson Rd to Horseshoe Ln	ROLLING	2545	2545	0		350'	25	10%	1	8	127,249	\$ 57,278	BLM Parcel	0	190000	X	\$820,000	\$820,000	\$1,010,000	\$0	\$190,000	\$520,000	\$820,000	\$520,000	\$1,010,000
2C	Area 2 Alternatives: Henderson Rd./Ponily Pl./Horseshoe Ln.	Connect Henderson Rd to Horseshoe Ln	ROLLING	1912	1912	0		350'	25	10%	0	11	95,637	\$ -	BLM Parcel	0	100000	X	\$620,000	\$620,000	\$720,000	\$0	\$190,000	\$520,000	\$820,000	\$520,000	\$1,010,000
3 EX	Area 3 Alternatives: Prescott Valley New Development Connection	Construct new paved roadway	LEVEL		0			-	-	0%	0	0	-	-	-	0	0			\$0	\$0						
3A	Area 3 Alternatives: Prescott Valley New Development Connection	Construct new paved roadway	LEVEL	6605	6605	0		-	25	0%	2	22	330,531	\$ 475,239	-	0	810000	\$810,000	\$1,220,000	\$810,000	\$2,030,000	\$0	\$820,000	\$800,000	\$1,240,000	\$800,000	\$2,060,000
3B	Area 3 Alternatives: Prescott Valley New Development Connection	Construct new paved roadway	LEVEL	6705	6705	0		-	25	0%	2	19	335,263	\$ 475,239	-	0	820000	\$820,000	\$1,240,000	\$820,000	\$2,060,000	\$0	\$820,000	\$800,000	\$1,240,000	\$800,000	\$2,060,000
3C	Area 3 Alternatives: Prescott Valley New Development Connection	Construct new paved roadway	LEVEL	6546	6546	0		-	25	0%	2	17	326,162	\$ 475,239	-	0	810000	\$800,000	\$1,210,000	\$800,000	\$2,020,000	\$0	\$820,000	\$800,000	\$1,240,000	\$800,000	\$2,060,000
4 EX	Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and pave roadway	STEEP		0			45'	-	16%	0	0	-	-	BLM Parcel	0	0			\$0	\$0						
4A	Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and pave roadway	STEEP	8803	4303	4500		350'	25	13%	0	59	439,643	\$ -	BLM Parcel	0	440000	\$2,300,000	\$2,800,000	\$2,300,000	\$3,240,000	\$0	\$520,000	\$2,300,000	\$3,900,000	\$2,300,000	\$4,380,000
4B	Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and pave roadway	STEEP	9423	8023	1400		350'	25	13%	0	24	471,159	\$ -	-	0	480000	\$3,300,000	\$3,900,000	\$3,300,000	\$4,380,000	\$0	\$520,000	\$2,300,000	\$3,900,000	\$2,300,000	\$4,380,000
4C	Area 4 Alternatives: Powerline Rd./Rocky Hill Rd./Martha Way	Realign and pave roadway	STEEP	10417	3622	6795		350'	25	13%	0	35	519,584	\$ -	-	0	520000	\$2,400,000	\$3,000,000	\$2,400,000	\$3,520,000	\$0	\$520,000	\$2,300,000	\$3,900,000	\$2,300,000	\$4,380,000
5 EX	Area 5 Alternatives: Improved Dewey Rd.	Realign and pave roadway	STEEP		0			80'	-	13%	0	0	-	-	-	0	0			\$0	\$0						
5A	Area 5 Alternatives: Improved Dewey Rd.	Realign and pave roadway	STEEP	6699	4699	2000		350'	25	13%	0	36	334,991	\$ -	-	0	340000	\$2,100,000	\$2,500,000	\$2,100,000	\$2,840,000	\$0	\$340,000	\$790,000	\$2,500,000	\$790,000	\$2,840,000
5B	Area 5 Alternatives: Improved Dewey Rd.	Realign and pave roadway	STEEP	3332	1332	2000		350'	25	10%	0	22	116,598	\$ -	-	0	120000	\$790,000	\$990,000	\$790,000	\$1,110,000	\$0	\$340,000	\$790,000	\$2,500,000	\$790,000	\$2,840,000
5C	Area 5 Alternatives: Improved Dewey Rd.	Realign and pave roadway	STEEP	4391	4391	0		800'	25	13%	0	23	219,528	\$ -	BLM Parcel	0	220000	\$1,680,000	\$1,950,000	\$1,680,000	\$2,170,000	\$0	\$340,000	\$790,000	\$2,500,000	\$790,000	\$2,840,000
6 EX	Area 6 Alternatives: New Road West of Agua Fria River	Construct new paved roadway	LEVEL		0			-	-	-	0	0	-	-	-	0	0			\$0	\$0						
6A	Area 6 Alternatives: New Road West of Agua Fria River	Construct new paved roadway	LEVEL	3739	3739	0		1000'	35	0%	0	5	186,968	\$ -	-	0	190000	\$460,000	\$690,000	\$460,000	\$880,000	\$0	\$720,000	\$460,000	\$2,000,000	\$460,000	\$2,720,000
6B	Area 6 Alternatives: New Road West of Agua Fria River	Construct new paved roadway	LEVEL	7011	7011	0		1000'	35	0%	0	7	350,594	\$ -	-	0	360000	\$900,000	\$1,300,000	\$900,000	\$1,660,000	\$0	\$720,000	\$460,000	\$2,000,000	\$460,000	\$2,720,000
6C	Area 6 Alternatives: New Road West of Agua Fria River	Construct new paved roadway	LEVEL	10618	10618	0		1000'	35	0%	2	16	530,924	\$ 181,759	-	0	720000	\$1,300,000	\$2,000,000	\$1,300,000	\$2,720,000	\$0	\$720,000	\$460,000	\$2,000,000	\$460,000	\$2,720,000
7 EX	Area 7 Alternatives: Sierra Dr. North Extension	Construct new paved roadway	LEVEL		0			130'	-	0%	0	0	-	-	-	0	0			\$0	\$0						
7A	Area 7 Alternatives: Sierra Dr. North Extension	Construct new paved roadway	LEVEL	3441	2786	655				0%	2	8	142,897	\$ 29,000	-	0	180000	\$370,000	\$580,000	\$370,000	\$760,000	\$0	\$180,000	\$240,000	\$580,000	\$240,000	\$760,000
7B	Area 7 Alternatives: Sierra Dr. North Extension	Construct new paved roadway	LEVEL	2706	2401	305			25	0%	2	5	121,413	\$ 29,000	-	0	160000	\$310,000	\$470,000	\$310,000	\$630,000	\$0	\$180,000	\$240,000	\$580,000	\$240,000	\$760,000
7C	Area 7 Alternatives: Sierra Dr. North Extension	Construct new paved roadway	LEVEL	2143	1838	305		350'	25	0%	2	4	93,307	\$ 29,000	-	0	130000	\$240,000	\$370,000	\$240,000	\$500,000	\$0	\$180,000	\$240,000	\$580,000	\$240,000	\$760,000
8 EX	Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new paved low-flow river crossing	LEVEL		0			-	-	-	0	0	-	-	-	0	0			\$0	\$0						
8A	Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new paved low-flow river crossing	LEVEL	4573	2355	2218	420,000	350'	25	0%	0	7	118,083	\$ -	-	0	120000	\$800,000	\$1,100,000	\$800,000	\$1,220,000	\$0	\$140,000	\$800,000	\$1,100,000	\$800,000	\$1,220,000
8B	Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new paved low-flow river crossing	LEVEL	4218	2652	1566	420,000	350'	25	0%	0	13	128,397	\$ -	-	0	130000	\$810,000	\$1,060,000	\$810,000	\$1,190,000	\$0	\$140,000	\$800,000	\$1,100,000	\$800,000	\$1,220,000
8C	Area 8 Alternatives: Additional Agua Fria River Crossing	Construct new paved low-flow river crossing	LEVEL	3924	2974	950	420,000	350'	25	0%	0	8	130,505	\$ -	-	0	140000	\$820,000	\$1,060,000	\$820,000	\$1,200,000	\$0	\$140,000	\$800,000	\$1,100,000	\$800,000	\$1,220,000
9 EX	Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new paved roadway	LEVEL		0			-	-	0%	0	0	-	-	-	0	0			\$0	\$0						
9A	Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new paved roadway	LEVEL	965	965	0		-	25	0%	0	0	3,886	\$ -	-	0	10000	\$120,000	\$180,000	\$120,000	\$190,000	\$0	\$150,000	\$80,000	\$180,000	\$80,000	\$300,000
9B	Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new paved roadway	LEVEL	656	656	0		-	25	0%	0	0	-	\$ -	-	0	0	\$80,000	\$130,000	\$80,000	\$130,000	\$0	\$150,000	\$80,000	\$180,000	\$80,000	\$300,000
9C	Area 9 Alternatives: Sierra Dr./Foothill Dr. Connections	Construct new paved roadway	LEVEL	789	789	0		380'	35	0%	1	1	14,600	\$ 134,286	-	0	150000	\$100,000	\$150,000	\$100,000	\$300,000	\$0	\$150,000	\$80,000	\$180,000	\$80,000	\$300,000

Construction Cost Estimate - Paving of Existing Unpaved Roadways

Project Location	Project Description	Terrain	Parcel Impact	ROW Required (sq ft)	cost per sf	Total (miles)	Total (feet)	ROW Cost (\$) Min	ROW Cost (\$) Max	Construction Cost (\$) Min	Construction Cost (\$) Max	Total Cost (\$) Min	Total Cost (\$) Max
Cranberry Rd: Smoki Trail-Tonto Dr	Pave unpaved roadway	Rolling	1	4,990	\$1.00	0.15	800	\$ -	\$5,000	\$80,000	\$120,000	\$80,000	\$125,000
Dewey Rd: 500' east of Stump Rd-Prescott Dells Ranch Rd	Pave unpaved roadway	Steep	24	165,000	\$1.00	0.63	3,300	\$ -	\$170,000	\$460,000	\$650,000	\$460,000	\$820,000
Martha Way: 350' north of Rocky Hill Rd-Rocky Hill Rd	Pave unpaved roadway	Rolling	2	17,500	\$1.00	0.07	350	\$ -	\$20,000	\$30,000	\$50,000	\$30,000	\$70,000
Meadow Rd: Meadow Ranch Place-Tanya Boulevard	Pave unpaved roadway	Rolling	3	115,000	\$1.00	0.44	2,300	\$ -	\$120,000	\$230,000	\$360,000	\$230,000	\$480,000
Prescott Dells Ranch Rd: Rocky Hill Rd-SR 69	Pave unpaved roadway	Flat	23	222,500	\$1.00	0.84	4,450	\$ -	\$220,000	\$170,000	\$420,000	\$170,000	\$640,000
Rocky Hill Rd: 0.5 miles east of Martha Way-Prescott Dells Ranch Rd	Pave unpaved roadway	Steep	18	210,000	\$1.00	0.80	4,200	\$ -	\$210,000	\$590,000	\$830,000	\$590,000	\$1,040,000

Construction Cost Estimate - Bicycle and Pedestrian Facilities

Project Location	Project Description	Length (LF)	Total Length (LF)	% Flat	% Rolling	% Steep	Unit Cost Flat Terrain Without Curb/Gutter (\$)	Unit Cost Flat Terrain With Curb/Gutter (\$)	ROW Length (LF)	ROW Width LF	ROW Cost (\$)	Construction Cost Min (\$)	Construction Cost Max (\$)	TOTAL COST MIN (\$)	TOTAL COST MAX (\$)
Corral Street – Prescott Street to Humboldt Elementary School	Construct sidewalk	920	920	100%	0%	0%	\$119	\$186	0	0	\$0	\$110,000	\$180,000	\$110,000	\$180,000
Hecla Street – Prescott Street to Humboldt Elementary School	Construct sidewalk	900	900	100%	0%	0%	\$119	\$186	0	0	\$0	\$110,000	\$170,000	\$110,000	\$170,000
Huron Street – Main Street to end of pavement	Construct sidewalk	1650	1650	100%	0%	0%	\$119	\$186	0	0	\$0	\$200,000	\$310,000	\$200,000	\$310,000
Main Street – SR 69 to Third Street	Construct sidewalk	2170	2170	100%	0%	0%	\$119	\$186	0	0	\$0	\$260,000	\$410,000	\$260,000	\$410,000
Prescott Street – Main Street to Old Black Canyon Hwy	Construct sidewalk	2030	2030	100%	0%	0%	\$119	\$186	0	0	\$0	\$250,000	\$380,000	\$250,000	\$380,000
Prescott Street – Old Black Canyon Hwy to Green Valley Way/Sierra	Construct sidewalk	2650	2650	100%	0%	0%	\$119	\$186	0	0	\$0	\$320,000	\$500,000	\$320,000	\$500,000

Construction Cost Estimate - Trail Facilities

Project Location	Project Description	Length (LF)	Total Length (LF)	% Flat	% Rolling	%Steep	Unit Cost Flat Terrain (\$)	Unit Cost Rolling Terrain (\$)	Unit Cost Steep Terrain (\$)	ROW Length (LF)	ROW Width (LF)	ROW Cost Min (\$)	ROW Cost Max (\$)	Construction Cost (\$)	TOTAL COST MIN(\$)	TOTAL COST MAX(\$)
Agua Fria River: SR 169-Kachina Pl	Construct shared-use trail along river	3800	3800	100%	0%	0%	\$59	\$152	\$225	3800	10	\$0	\$38,000	\$230,000	\$230,000	\$268,000
Blue Ridge Rd: Sierra Dr-east Town boundary	Construct shared-use trail along roadway	7300	7300	100%	0%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$430,000	\$430,000	\$430,000
Deer Pass Rd: SR 69-Sierra Dr	Construct shared-use trail along roadway	5000	5000	90%	10%	0%	\$59	\$152	\$225	2000	10	\$0	\$20,000	\$340,000	\$340,000	\$360,000
Kachina Pl: SR 69-Agua Fria River	Construct shared-use trail along roadway	2000	2000	100%	0%	0%	\$59	\$152	\$225	2000	10	\$0	\$20,000	\$120,000	\$120,000	\$140,000
Lazy River Dr: Sierra Dr/Green Valley Way-east Town boundary	Construct shared-use trail along roadway	6820	6820	0%	100%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$1,040,000	\$1,040,000	\$1,040,000
Newtown Av/Henderson Rd/Horseshoe Ln/Kachina Pl: west Town bo	Construct shared-use trail along roadway	20500	20500	0%	100%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$3,110,000	\$3,110,000	\$3,110,000
Old Black Canyon Hwy/New Roadway: Prescott St-SR 169	Construct shared-use trail along roadway	10500	10500	100%	0%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$620,000	\$620,000	\$620,000
Quarterhorse Ln: River Dr-Meadow Rd	Construct shared-use trail along roadway	3100	3100	0%	100%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$470,000	\$470,000	\$470,000
River Dr: SR 169-Quarterhorse Ln	Construct shared-use trail along roadway	5050	5050	100%	0%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$300,000	\$300,000	\$300,000
Rocky Hill Rd/Tonto Dr: Newtown Avenue-SR 69	Construct shared-use trail along roadway	20950	20950	0%	50%	50%	\$59	\$152	\$225	0	0	\$0	\$0	\$3,950,000	\$3,950,000	\$3,950,000
Sierra Dr: Lazy River Dr-Quarterhorse Ln	Construct shared-use trail along roadway	6600	6600	0%	100%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000
SR 169: New Roadway East of Old Black Canyon Hwy-River Drive	Construct shared-use trail along roadway	600	600	100%	0%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$40,000	\$40,000	\$40,000
Martha Way: Rocky Hill Rd.-Henderson Rd	Construct shared-use trail along roadway	3500	3500	0%	100%	0%	\$59	\$152	\$225	0	0	\$0	\$0	\$540,000	\$540,000	\$540,000

Appendix I – Traffic Impact Guidelines



Town of Dewey- Humboldt PARA Transportation Study

DRAFT Traffic Impact Study Guidelines

Prepared by:



Kimley-Horn
and Associates, Inc.

March 2012

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1 INTRODUCTION

The purpose of a traffic impact study (TIS) is to assist Town of Dewey-Humboldt (Town) staff in understanding the demands and impacts placed on the Town's transportation network by proposed development. Development, such as new subdivisions and businesses, generate traffic. The traffic impact study will determine if additional investment in the transportation network is required as a result of the development, including new roads, traffic signals, or turn lanes.

A TIS is a planning tool to forecast demands on the transportation network, and to mitigate any negative impacts.

These guidelines will:

- Establish the conditions that determine the need for a TIS.
- Establish the minimum requirements for a TIS in terms of study area, study horizon and study contents.

These guidelines contain the following sections:

- Introduction (this section)
- Determining the Need for a Traffic Impact Study
- Categories for Traffic Impact Study
- Scope
- Certification
- Sample Table of Contents for a Traffic Impact Study
- Auxiliary Lanes

These guidelines were developed based on the following sources:

- *ADOT Traffic Engineering Policies, Guidelines, and Procedures – Section 240 – Traffic Impact Analyses*
- *Pima County Subdivision and Development Street Standards, Section 3.1.2 – Traffic Impact Studies, April, 2005*
- *MCDOT Traffic Impact Procedures*

Key definitions relating to TIS are:

Area of Significant Traffic Impact	The geographic area that includes the facilities significantly impacted by the site traffic.
Influence Area	The geographic area surrounding the site from which the development is likely to draw a high percentage (80% or more) of the total site traffic.
Mode Split	The estimation of the number of trips made by each mode (automobiles, pedestrian, transit, etc.)
Peak Hour	The single hour of a representative day when the traffic volume on the highway represents the most critical period for operation and the highest typical capacity requirements.

Peak Hour of Generator	The single hour of highest volume of traffic entering and exiting a site.
Traffic Generation	The estimation of the number of origins from and destinations to a site resulting from the land use activity on that site.
Traffic Generator	A designated land use (residential, commercial, office, industrial, etc.) or change in land use that generates vehicular and/or pedestrian traffic to and from the site.
Trip Assignment	The assignment of site plus non-site traffic to specific streets and highways.
Trip Distribution	The allocation of the site-generated traffic among all possible approach and departure routes.
Traffic Impact	The effect of site traffic on highway operations and safety.
Traffic Impact Analysis	A complete analysis includes an estimation of future traffic with and without the proposed generator, analysis of the traffic impacts, and recommended roadway improvements which may be necessary to accommodate the expected traffic.
Traffic Mitigation	The reduction of traffic impacts on roadways and/or intersections to an acceptable level of service by way of roadway construction improvements, the upgrade of existing traffic control devices, or the modification of the site plan.

2 DETERMINING THE NEED FOR A TRAFFIC IMPACT STUDY

A Traffic Impact Study (TIS) prepared by a registered Professional Engineer is required for any subdivision or commercial development which generates 100 or more gross trips during the morning or afternoon peak hour of the generator.

Table 1 shows the thresholds that would trigger the need for a TIS for some of the most common uses. Typical peak hour trips per unit for various land uses are included in the table. For uses not included in the table, the number of trips generated should be calculated using the latest edition of *Trip Generation*, published by the Institute of Transportation Engineers.

A TIS can also be required by the Town, even if the proposed development generates less than 100 trips in the peak hour, if there are existing traffic concerns in the local area (such as an offset intersection, or high accident rates), or if there are other traffic specific problems that may be aggravated by the proposed development.

Table 1 – Thresholds to Trigger Need for Traffic Impact Study

ITE Code	Land Use	Unit	Peak Hour Trips/Unit	Threshold
Residential				
210	Single Family	DU	1 .02	100 DU
220	Apartments	DU	0.67	150 DU
230	Condominium/Townhomes	DU	0.54	185 DU
240	Mobile Home	DU	0 .58	175 DU
250	Retirement Community	DU	0.34	295 DU
416	RV Park	Space	0.48	210 SPACES
Commercial And Industrial				
110	General Light Industrial	1,000 SF	1.08	93,000 SF
120	General Heavy Industrial	1,000 SF	0.68	147,000 SF
130	Industrial Park	1,000 SF	0.92	109,000 SF
150	Warehousing	1,000 SF	0.61	164,000 SF
430	Golf Course	Holes	4.59	22 holes
492	Racquet Club	Court	4.66	22 courts
493	Health Club	1,000 SF	4.3	24,000 SF
812	Lumber Store	1,000 SF	8.38	12,000 SF
816	Hardware/Paint Store	1,000 SF	11.18	9,000 SF
820	Shopping Center	1,000 SF	4.97	21,000 SF
831	Quality Restaurant	1,000 SF	10.82	10,000 SF
832	Sit Down High Turnover Restaurant	1,000 SF	19.38	5,000 SF
834	Fast Food (with drive-thru)	1,000 SF	72.74	1,500 SF
840	Vehicle Repair (Automobile Care Center)	1,000 SF	4.01	25,000 SF
841	New Car Sales	1,000 SF	2.97	34,000 SF
844	Gas Station	Pump	16.18	7 pumps
850	Supermarket (Grocery Store)	1,000 SF	12.25	8,000 SF
851	24-Hour Convenience Store	1,000 SF	65.24	1,500 SF
861	Discount Club	1,000 SF	6.46	16,000 SF
890	Furniture Store	1,000 SF	0.92	109,000 SF
911	Walk-in Bank	1,000 SF	42.02	2,500 SF
912	Drive-in Bank	1,000 SF	51.23	2,000 SF

Table 1 – Thresholds to Trigger Need for Traffic Impact Study (continued)

ITE Code	Land Use	Unit	Peak Hour Trips/Unit	Threshold
Offices				
710	General Office Building	1,000 SF	1.56	65,000 SF
720	Medical-Dental Office Buildings	1,000 SF	4.36	23,000 SF
730	Government Office	1,000 SF	11.03	10,000 SF
750	Office Park	1,000 SF	1.74	58,000 SF
760	Research & Development Center	1,000 SF	1.24	81,000 SF
770	Business Parks	1,000 SF	1.43	70,000 SF
Institutional				
520	Elementary school	Students	0.30	335 students
522	Middle/Junior High School	Students	0.46	220 students
530	High School	Students	0.46	220 students
560	Church	1,000 SF	9.49	11,000 SF
565	Day care center	Students	0.86	120 students

3 CATEGORIES FOR TRAFFIC IMPACT STUDY

Based on the size and phasing of the proposed development, the following categories of TIS have been established:

CATEGORY I. Small developments which generate 100 or more peak hour trips but less than 500 trips during the morning or afternoon peak hour.

CATEGORY II. Moderate size developments which generate 500 or more peak hour trips but less than 1,000 trips during the morning or afternoon peak hour.

CATEGORY III. Large single-phase developments which generate 1,000 or more trips during the morning or afternoon peak hour.

CATEGORY IV. Large multi-phase developments which generate 1,000 or more trips during the morning or afternoon peak hour.

The Town Public Works Director makes the final decision on requiring a TIS and determining whether the TIS falls within either of the categories.

A developer shall first estimate the number of vehicle trips generated by the development to determine if a TIS is required and the applicable category. The developer shall obtain concurrence from the Town Public Works Director on the number of trips generated by the development.

If a developer agrees to perform mitigation improvements as outlined by the Town Public Works Director, preparation of a TIS may be waived.

4 SCOPE

The level of detail needed for the TIS depends on the size of the development and its phasing. However, every TIS must address elements such as the study area, the study horizon, data collection requirements, capacity analysis, among others. Those elements are discussed here.

4.1 Study Area

The minimum study area shall be determined by project type and size in accordance with the criteria in **Table 2**. The study area for the proposed development shall include traffic signal controlled intersections, site access drives and major unsignalized intersections to ensure their operation and level of service are adequately assessed. Unsignalized intersections where at least one of the intersecting streets is a collector or arterial are considered major unsignalized intersections. The extent of the study area may be either enlarged or decreased depending on special conditions as determined by the Town Public Works Director.

4.2 Horizon Years

The study horizon years shall be determined by project type and size in accordance with the criteria in **Table 2**.

Table 2 – Criteria for Determining Study Requirements

Study Category	Development / Subdivision Characteristics	Study Horizons (a)	Minimum Study Area (b)
I	Small development 100-499 peak hour trips	1. Opening year	1. Site access drives 2. All signalized intersections and/or major unsignalized intersections within ¼ mile
II	Moderate development 500-999 peak hour trips	1. Opening year 2. 5 years after opening	1. Site access drives 2. All signalized intersections and / or major unsignalized intersections within ½ mile
III	Large single-phase development ≥ 1000 peak hour trips	1. Opening year 2. 5 years after opening 3. 20 years after opening	1. Site access drives 2. All signalized intersections and /or major unsignalized intersections within 1 mile
IV	Large multi-phase development ≥ 1000 peak hour trips	1. Opening year of each phase 2. 5 years after build-out 3. 20 years after build-out	1. Site access drives 2. All signalized intersections and /or major unsignalized intersections within 1 mile

- a. Assume full occupancy and build-out for single phase developments.
b. An enlarged study area may be required

4.3 Analysis Time Period

Both the morning and afternoon weekday peak hours need to be analyzed. If the proposed project is expected to generate no trips or a very low number of trips during either the morning or evening peak periods the requirement to analyze such period may be waived by the Town Public Works Director. If the peak traffic hour in the study area occurs during a time period other than the normal peak travel periods, these peak hours shall also be analyzed.

4.4 Seasonal Adjustments

The traffic volumes for the analysis hours shall be adjusted for the peak season, if appropriate, in cases where seasonal traffic data are available. For example, if traffic counts were collected in a retirement community in the summer, and the peak traffic period occurs in the winter, the counts should be adjusted to winter months.

4.5 Data Collection Requirements

All data is to be collected in accordance with the latest edition of the ITE Manual of Transportation Engineering Studies or as directed by the Town Public Works Director, if not specifically covered in the ITE Manual.

- **Turning Movement Counts** - Turning movement counts shall be obtained for all existing cross-street intersections to be analyzed during the morning and afternoon peak periods and the peak hour of generator. Turning movement counts may be required during other periods as directed by the Town Public Works Director. Available turning movement counts may be extrapolated a maximum of three years with concurrence of the Town. The current and projected daily traffic volumes shall be presented in the report.
- **Daily Traffic Volumes** – Current and projected daily traffic volumes shall be presented in the report. Available daily count data may be obtained from the Town or by field data collection and extrapolated a maximum of two years with the concurrence of the Town.
- **Accident Data** – Traffic accident data shall be obtained from the Town or ADOT for the most current three year period available.
- **Roadway and Intersection Geometrics** – Roadway geometric information shall be obtained for all streets in the study area. This includes: roadway width, number of lanes, turning lanes, vertical grade, location of nearby driveways, and lane configuration at intersections.
- **Traffic Control Devices** – The location and type of traffic controls shall be identified. If appropriate, traffic volumes should be adjusted to account for seasonal variations. The use of seasonal adjustment factors should be approved by the Town.

4.6 Trip Generation

The latest edition of ITE's Trip Generation shall be used for selecting trip generation rates. The guidelines contained in Trip Generation shall be used to determine whether the average trip generation rate or equation should be used. Other rates may be used with the approval of the Town in cases where Trip Generation does not include trip rates for a specific land use category, or includes only limited data, or where local trip rates have been shown to differ from the ITE rates.

4.7 Trip Distribution and Assignment

Projected trips shall be distributed and added to the projected non-site traffic on the roadway network. The projected traffic volume must be shown for all roadways internal to the subdivision and for all other

roadways within the study area. The specific assumptions and data sources used in deriving trip distribution and assignment shall be documented in the study.

4.8 Capacity Analysis

Level of Service (LOS) shall be computed for signalized and major unsignalized intersections as identified in Table 2, in accordance with the latest edition of the Highway Capacity Manual. While the use of operational methodologies presented in the Highway Capacity Manual is desirable, analyses using the planning method are acceptable for dimensioning new facilities.

4.9 Traffic Signal Needs

An analysis of traffic signal needs shall be conducted for all arterial/arterial, arterial/major collector and major collector/major collector intersections within the study area for the opening year. Signal need evaluations must determine if an intersection meets the signal warrants included in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). If the warrants are not met for the opening year, they should be evaluated 5 years after opening for categories II, III and IV Traffic Impact Studies.

4.10 Accident Analysis

An analysis of three-year accident data within the study area shall be conducted to determine if the level of safety (in terms of accident rates) needs improvement due to the addition of site traffic.

4.11 Queuing Analysis

A queuing analysis shall be conducted for all turn lanes under stop or signal control within the study area to ensure that the expected queues can be accommodated in the storage length provided. Although there are several methods for estimating queue length, the following equations may be used:

For signalized intersections (for every cycle):

$$Queue\ length\ (ft) = 2 \cdot \left(25 \frac{ft}{veh} \right) \cdot \left(\frac{Volume\ (veh / hr)}{Cycles\ per\ hour} \right)$$

For unsignalized intersections (for a 2 minute period):

$$Queue\ length\ (ft) = \left(25 \frac{ft}{veh} \right) \cdot \left(\frac{Volume\ (veh / hr)}{30} \right)$$

4.12 Improvement Analysis

The roadways and intersections within the study area shall be analyzed with and without the proposed development to identify any projected impacts in regard to level of service and safety. The minimum design requirements for all intersections and roadway segments shall be LOS D with no intersection through lane movement falling below LOS D and no intersection turning movement falling below LOS E. If a TIS demonstrates that the impact of a development will bring the LOS below those thresholds during

the study horizon, mitigation alternatives to improve the LOS to at least those thresholds must be analyzed as part of the study. Common mitigation alternatives include capacity improvements, travel demand management and provision of alternative modes. If the performance of the existing intersection or roadway is already below those thresholds (e.g. below LOS D for through movements) the study must find alternatives to at least maintain the existing performance. The TIS must also evaluate the need for turning lanes on all major unsignalized intersections using the criteria presented in the section entitled “Scope”.

4.13 Alternative Modes

In cases where pedestrian, transit, bicycle, golf cart or equestrian activity should be expected, the TIS must identify any conflict points between vehicles and any other mode. In those cases the study must also make recommendations to facilitate the operation of alternative modes and ensure the safety of their users, especially at the interface with the vehicular network. Particular attention should be paid to:

- Ensuring connectivity of pedestrian and bicycle systems.
- Providing safe non-motorized access to school for school children.

5 CERTIFICATION

The TIS shall be prepared under the supervision of a registered Professional Engineer (Civil). The final report shall be signed and sealed.

6 SAMPLE TABLE OF CONTENTS FOR TIS

Table 3 presents a sample table of contents for a TIS. The table of contents may be modified to better fit the needs of the particular study, but the TIS should at least address the points presented in the section entitled “Scope”.

Table 3 – Sample Table of Contents for Traffic Impact Study

<p>1. INTRODUCTION AND SUMMARY</p> <p>a. Purpose of report and study objectives</p> <p>b. Executive Summary</p> <ul style="list-style-type: none"> · Site location and study area · Development description · Principal findings · Conclusions/Recommendations <p>2. PROPOSED DEVELOPMENT (Site and Nearby)</p> <p>a. Site location</p> <p>b. Land use and intensity</p> <p>c. Site plan (must be legible)</p> <ul style="list-style-type: none"> · Access geometrics <p>d. Development phasing and timing</p> <p>3. STUDY AREA CONDITIONS</p> <p>a. Study area</p> <ul style="list-style-type: none"> · Area of significant traffic impact · Influence area <p>b. Land use</p> <ul style="list-style-type: none"> · Existing land use · Anticipated future development <p>c. Site accessibility</p> <ul style="list-style-type: none"> · Existing and future area roadway system · Site circulation <p>4. ANALYSIS OF EXISTING CONDITIONS</p> <p>a. Physical characteristics</p> <ul style="list-style-type: none"> · Roadway characteristics · Traffic control devices · Transit service · Pedestrian/bicycle facilities · Existing transportation demand management <p>b. Traffic volumes</p> <ul style="list-style-type: none"> · Daily, morning and afternoon peak periods, and others as required <p>c. Level of service</p> <ul style="list-style-type: none"> · Morning peak hour, afternoon peak hour, and others as required <p>d. Safety related deficiencies</p> <p>e. Data sources</p> <p>5. PROJECTED TRAFFIC</p> <p>a. Site traffic forecasting (each horizon year)</p> <ul style="list-style-type: none"> · Trip generation · Mode split (if applicable) · Pass-by traffic (if applicable) · Trip distribution · Trip assignment <p>b. Non-site traffic forecasting (each horizon year)</p> <ul style="list-style-type: none"> · Projections of non-site traffic <p>c. Total traffic (each horizon year)</p> <p>6. TRAFFIC AND IMPROVEMENT ANALYSIS</p> <p>a. Site access</p> <p>b. Level of service analysis</p>	<ul style="list-style-type: none"> · Without project including programmed improvements (each horizon year) · With project including programmed improvements (each horizon year) <p>c. Roadway improvements</p> <ul style="list-style-type: none"> · Improvements by Town or others to accommodate non-site traffic · Additional alternative improvements to accommodate site traffic <p>d. Traffic safety</p> <ul style="list-style-type: none"> · Sight distance · Acceleration/deceleration lanes, auxiliary lanes · Adequacy of location and design of driveway access <p>e. Alternative modes considerations</p> <ul style="list-style-type: none"> · Vehicle/pedestrian conflict points · Vehicle/bicycle conflict points · Vehicle/Golf Cart <p>f. Traffic control needs</p> <p>h. Traffic signal needs (base plus 5-year horizon)</p> <p>i. Transportation demand management</p> <p>8. CONCLUSIONS</p> <p>9. RECOMMENDATIONS</p> <p>a. Roadway improvements</p> <ul style="list-style-type: none"> · Phasing <p>b. Site access</p> <p>c. Internal site circulation</p> <p>d. Transportation demand management actions (if appropriate)</p> <p>e. Other</p> <p>10. APPENDICES</p> <p>a. Traffic counts</p> <p>b. Capacity analyses worksheets</p> <p>c. Traffic signal needs studies</p> <p>d. Queuing Analysis</p> <p>e. Accident data summaries</p> <p>11. FIGURES AND TABLES</p> <p>a. Site location</p> <p>b. Site plan</p> <p>c. Existing transportation system</p> <p>d. Existing daily volumes</p> <p>e. Existing peak hour turning volumes</p> <p>f. Future transportation system</p> <p>g. Estimated site traffic generation (daily and peak period)</p> <p>h. Directional distribution of site traffic (daily and peak period)</p> <p>i. Site traffic (peak period)</p> <p>j. Non-site traffic (peak period)</p> <p>k. Total future traffic (daily and peak period)</p> <p>l. Projected levels of service</p> <p>m. Recommended improvements</p>
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7 AUXILIARY LANES

In order for the internal subdivision streets and the adjacent existing roadways to operate safely and efficiently, it is necessary to evaluate the need for channelization of traffic movements, especially at major unsignalized intersections. The warrants outlined here shall be followed for unsignalized intersections that provide access to new subdivisions or developments and for major unsignalized intersections internal to the subdivision or development. The warrants apply both to subdivisions and developments that require TIS, and to those that do not.

Left Turn Lane Warrants

The methodology presented here applies to all subdivision or development access points where a left turn must be executed from a two-lane roadway to enter the subdivision. The intent is to identify locations where lack of left turn lanes presents a potential safety concern. The need for an exclusive left turn lane can be determined from **Table 4** if the following parameters are known:

- ADT - The two-way average daily traffic on the roadway from which the left turn is executed.
- LT - Number of left turns in the peak hour. If a TIS for the subdivision is not available, the number of left turns can be estimated based on the number of trips generated by the subdivision or development in the peak hour (using the trip generation rate from *Trip Generation 4* or **Table 4**) divided by the number of access points where left turns are (or will be) permitted, as shown in the following equation:

$$LT = (0.5 \times \text{Trip Generation}) / \text{Access Points}$$

For residential subdivisions this simplifies to:

$$LT = (0.5 \times \text{Dwelling Units}) / \text{Access Points}$$

Table 4 shows the maximum number of left turn movements allowed in the peak hour without a dedicated left turn lane. If those values are exceeded for any ADT and speed combination, a left turn lane shall be provided. The posted speed in the table refers to the posted speed limit on the roadway from which the left turn is executed.

An exclusive left turn lane will also be required regardless of the size of the subdivision or development, if an access point to the subdivision is located in an area where sufficient stopping sight distance is not provided on the major roadway. If the roadway shoulders or any pedestrian or bicycle facilities are affected by the addition of a left turn lane they must be replaced.

Table 4 – Maximum Left turn Volume in the Peak Hour without a Left Turn Lane

Posted Speed (mph)	ADT (2-way)			
	<2,500	2,500 – 5,000	5,000-10,000	>10,000
< 35	75	50	30	15
40-50	75	40	20	10
>55	75	30	10	5

Source: Pima County Subdivision and Development Street Standards

Right Turn Lane Warrants

The methodology presented here applies to all subdivision or development access points where a right turn must be executed from a collector or arterial to enter the subdivision. The intent is to identify locations where the lack of right turn lanes presents a potential safety concern. The need for an exclusive right turn lane can be determined from **Table 5** if the following parameters are known:

- ADT- The bi-directional average daily traffic on the roadway from which the rights turn is executed.
- RT - Number of right turns in the peak hour. If a TIS for the subdivision is not available, the number of right turns can be estimated based on the number of trips generated by the subdivision or development in the peak hour (using the trip generation rate from Trip Generation or Table 1) divided by the number of access points where right turns are (or will be) permitted, as shown in the equation below:

$$RT = (0.5 \times \text{Trip Generation}) / \text{Access Points}$$

For residential subdivisions this simplifies to:

$$RT = (0.5 \times \text{Dwelling Units}) / \text{Access Points}$$

Table 5 shows the maximum number of right turn movements allowed in the peak hour without a dedicated right turn lane. If those values are exceeded, a right turn lane shall be provided.

Table 5 – Peak Hour Volume Warrant for Right Turns

ADT (2-way)	Maximum Peak Hour Right Turn Volume (without Right Turn Lane)
2,500 -5,000	100
5,000 – 10,000	70
>10,000	40

Appendix J – Excerpts from the ADOT *State Route 69 Access Management Plan*

3. SR 69 ACCESS MANAGEMENT PLAN

The SR 69 Access Management Plan is described in this section. The specifics of the Plan are presented in the following discussions and are shown on the aerial photos in the Appendix to this report. The Plan identifies the locations of 30 traffic signals in the 33 miles of SR 69 between I-17 and Prescott. Fourteen of these are existing and nine more have been planned in accordance with the 1992 SR 69 Access Management Study. The remaining seven are in locations where development has occurred and signals will someday be warranted.

Aerial photos at the end of this report illustrate the existing access points on SR 69. The photos also show the locations of traffic signals, median breaks and frontage roads. Design for the widening of SR 69 to a four lane divided highway have been completed for two sections of SR 69; from Big Bug Creek to Mayer (MP 268-271) and from Poland Junction to Humboldt (MP 276-279). For these sections the planned access points, median breaks, and frontage roads after construction (according to design plans provided by ADOT) are shown on the aerials.

A list of all streets with posted street names on SR 69 is provided in Tables 1 and 2. The tables identify the location of existing signals and the distance between the signals. The location of signals (when warranted and funded) that would be allowed under the SR 69 Access Management Plan is also shown.

General Access Management Policies

The general policies of the SR 69 Access Management Plan are as follows:

- Traffic signals will only be installed at major intersections when warranted.
- Major intersections should conform to the typical geometrics shown in Figure 9.
- Only right-in, right-out and left-in access will be permitted at non-major intersections.
- Non-major intersections should conform to the typical geometrics shown in Figure 10.
- Exclusive left and right turn lanes on SR 69 will be required at all intersections.
- If needed, a local street network should be constructed to provide access to streets with signalized intersections on SR 69 as part of land use development.

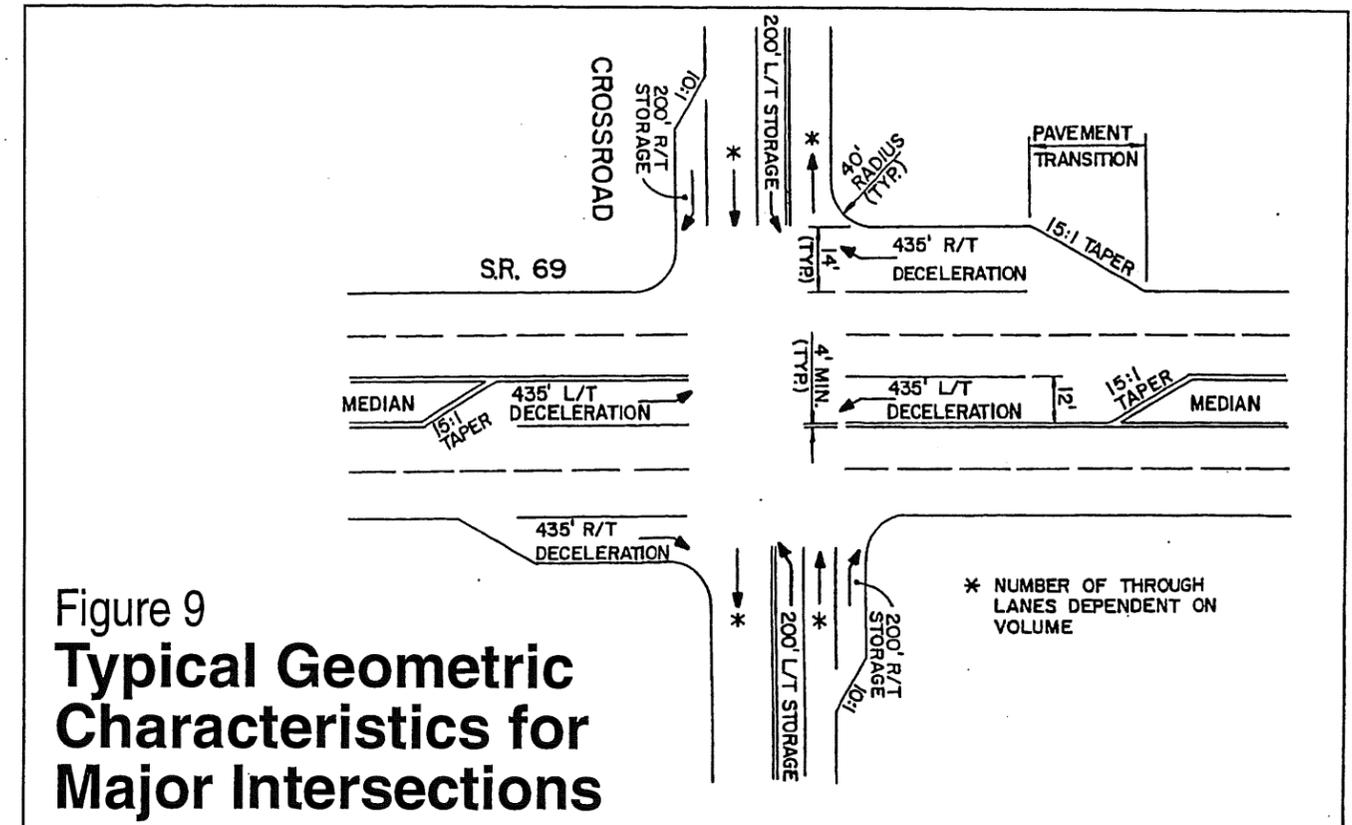


Figure 9
Typical Geometric Characteristics for Major Intersections

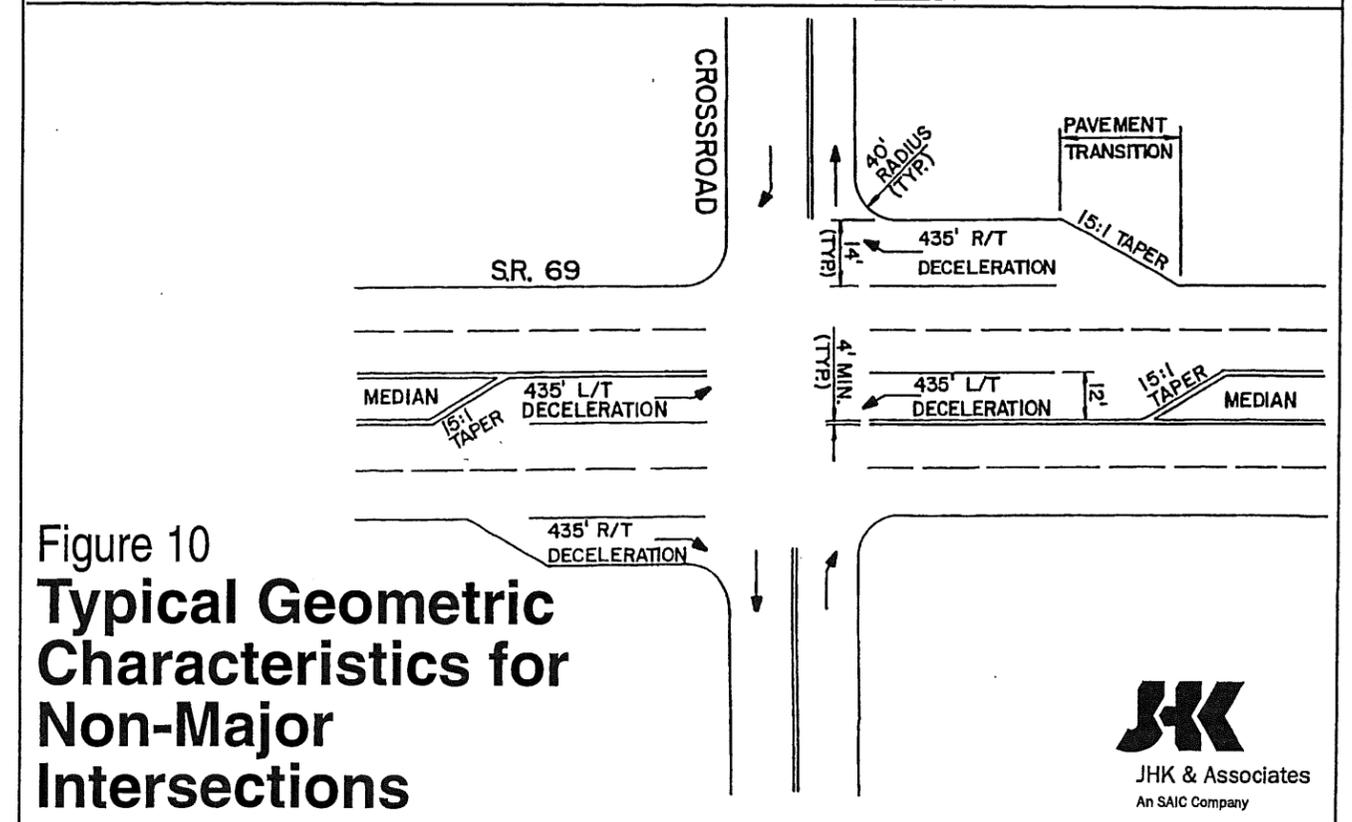


Figure 10
Typical Geometric Characteristics for Non-Major Intersections



- Existing driveway access points should be eliminated or consolidated as redevelopment occurs.
- No new driveway access will be permitted.
- Access will not be allowed on the ramps at the SR 69/I-17 and SR-69/SR 89 traffic interchanges.

Prescott to SR 169 Access Management

Since 1992, access to SR 69 has been based upon the Access Management Study prepared by DMJM for the Arizona Department of Transportation. Under this study, access was allowable at one-quarter mile spacing in urban areas and one-half mile spacing in rural areas. There are 14 traffic signals on SR 69, 12 of these between the SR69/SR89 junction in Prescott and Navajo Drive in Prescott Valley. In addition, there are nine new signals being planned, one at Holiday Drive just east of Frontier Village, two in Diamond Valley, at Robin Drive and Diamond Drive, four in Prescott Valley: at Santa Fe, Mendecino Drive, and at two new locations approximately one-half mile north of Santa Fe and one mile south of Mendecino, and two more between Prescott Valley and SR 169 at Bradshaw Mountain Road and Kachina Place. Recognizing the difficulty of removing existing signals and the fact that development plans have been based upon the 1992 access guidelines, all of these signals will be allowed under the 1996 Plan.

In addition, under the 1996 Plan, one location between Prescott and SR 169 has been identified for the installation of a traffic signal when warranted, the proposed SR 69/SR 89 connector road. The SR69/SR89 connector road, currently under design by the City of Prescott, is intended to become an alternative route around the SR69/SR89 junction and will need to be signalized.

When the planned and the “when warranted” signals are installed there will be 24 traffic signals located between the SR 169 intersection and Prescott—a distance of 15 miles. Spacing between adjacent signals will range from one-third mile to nearly two miles. Except for the stretch between the future road being planned by Prescott Valley and Fain Road, a distance of 1.7 miles, there is no location where signal spacing is more than one mile. With the possible exception of adding one new signal in the future road segment. No other signals will be allowed between Prescott and SR 169 under the 1996 Access Management Plan.

Table 1. State Route 69 - Traffic Signal Locations - Prescott to SR 169

Milepost	Crossroad Name	Planned Traffic Control		
		Signal Locations (1)	Spacing from Previous Signal	
			Existing	Planned
295.9	Heather Heights Road	existing signal	3/4 mile	3/4 mile
295.5	Frontier Village West	existing signal	1/3 mile	1/3 mile
295.1	Frontier Village East	existing signal	1/3 mile	1/3 mile
294.7	Prescott Canyon Road			
294.5	Grant Street			
294.3	Holiday Drive	planned signal		3/4 mile
293.6	proposed 69 / 89 connector road	signal when warranted		3/4 mile
293.3	Lee Boulevard	existing signal	1 2/3 mile	1/3 mile
293.0	Walker Road	existing signal	1/4 mile	1/4 mile
292.0	Old Black Canyon Hwy / Sunrise Blvd.	existing signal	1 mile	1 mile
291.6	Robin Drive	planned signal		1/2 mile
291.2	Turquoise Road / Rhinestone Drive			
291.1	Ramada Drive			
291.0	Onyx Drive			
290.7	Diamond Drive	planned signal		1 mile
290.2	future road	planned signal		1/2 mile
289.7	Santa Fe	planned signal		1/2 mile
289.5	Prescott E. Highway	existing signal	2 1/2 miles	1/4 mile
289.0	Valley View Drive			
288.7	Glassford Hill Road/ Castle View	existing signal	3/4 mile	3/4 mile
288.2	Lake Valley Road	existing signal	1/2 mile	1/2 mile
287.8	Windsong Road	existing signal	1/3 mile	1/3 mile
287.6	Yavapai Road			
287.4	Robert Road	existing signal	1/4 mile	1/4 mile
287.2	Navajo Drive	existing signal	1/4 mile	1/4 mile
286.9	Truwood Drive			
286.2	Mendecino Drive	planned signal		1 mile
285.1	future road	planned signal		1 mile
283.4	Fain Road / Prescott CC Blvd.	existing signal	3 3/4 miles	1 3/4 miles
282.7	Lynx Creek Blvd.			
282.3	Bradshaw Mountain Road	planned signal		1 mile
281.8	Kachina Place	planned signal		1/2 mile
281.0	SR 169	existing signal	2 1/4 miles	3/4 mile

(1) Traffic signals not permissible unless so designated.

SR 169 to I-17 Access Management

There are currently no traffic signals on SR 69 south of the SR 169 intersection. If signals are installed, the minimum spacing between them should be one mile. This Access Management Plan has identified six possible locations where signals could be installed when warranted—Main Street in Humboldt, Collins Drive in Poland Junction, Main Street, Central Avenue, an unnamed road where a median break is being provided in Mayer, and Spring Lane in Spring Valley. Signal spacing under this concept ranges from one mile to over four miles. Other traffic signals may also be warranted as the area develops, however spacing should be kept at a minimum of one mile.

With the implementation of Yavapai County's Regional Roads Program which could ultimately include a controlled access roadway in the relocated Fain Road, SR 89A, and Glassford Hill Road Extension corridors, it may be desirable to some day convert the I-17 to SR 169 segment of SR 69 to a controlled access roadway. Thus, as the area develops, right-of-way should be reserved for the possibility of future traffic interchanges. It will also be important to maintain intersection spacing at a minimum of one mile and preferably two miles throughout this segment of the corridor—both for efficient operation of the highway when signalized and to provide acceptable intersection spacing if the highway is converted to a controlled access roadway.

Table 2. State Route 69 - Traffic Signal Locations - SR 169 to Cordes Junction

Milepost	Crossroad Name	Planned Traffic Control		
		Signal Locations (1)	Spacing from Previous Signal	
			Existing	Planned
279.5	Orange Rock Road			
279.3	Klasse Avenue			
279.2	Main Street (Humboldt)	signal when warranted (2)		1 3/4 mile
278.6	Old Black Canyon Highway			
275.2	Poland Road			
275.1	Collins Drive	signal when warranted (2)		4 miles
273.2	Finley Road			
271.9	Main Street (Mayer)	signal when warranted (2)		3 1/3 miles
270.6	Central Avenue	signal when warranted (2)		1 1/3 mile
269.6	unnamed road (new median break)	signal when warranted (2)		1 mile
267.1	Old Sycamore Road			
266.0	Rocking LK Lane			
265.8	Lazy T Trail			
265.2	Spring Lane	signal when warranted (2)		4 1/3 miles

(1) Traffic signals not permissible unless so designated.

(2) Right-of-way should be preserved for the possibility of a future traffic interchange.

4. IMPLEMENTATION

Access control techniques can be implemented with two basic legal powers: police power and eminent domain. The first power allows a state to restrict individual power for public welfare. The second power allows a state to take property for public use provided an owner is compensated for his loss. Police power is sufficient authority for most access control techniques associated with highway operations, driveway location, and driveway design. Most states have adequate power to effectively control access. As long as reasonable access is provided, access regulation can be implemented and enforced.¹

The SR 69 Access Management Plan can be implemented through a cooperative effort among ADOT, City of Prescott, the Town of Prescott Valley, and Yavapai County. ADOT has the authority through police power to prevent the unauthorized use and abuse to state highways (ARS28-108A (19) and administrative rule R17-3-712). The local jurisdictions, through land use and zoning regulations can ensure that development along the highway conforms to the Access Management Plan.

Plan Adoption

The first step in implementing the SR 69 Access Management Plan will be the adoption of the plan by ADOT and by the jurisdictions through which the roadway passes. Thus, the Plan needs to be adopted by the State Board of Transportation, the Yavapai County Board of Supervisors, the Prescott City Council, and the Prescott Valley Town Council.

Land Use

In order to maintain the traffic signal spacing called for the Plan, it will be important to plan and develop the land along SR 69 in patterns with which a local roadway system can be developed to provide access to streets which have or will have traffic signals at their intersection with SR 69. Land use plans will be instrumental in defining the land use patterns in the corridor. The adopted SR 69 Access Management Plan will provide guidance from a transportation perspective in the development of these land use plans.

¹ Source: National Cooperative Highway Research Program Report 348, Access Management Guidelines for Activity Centers.

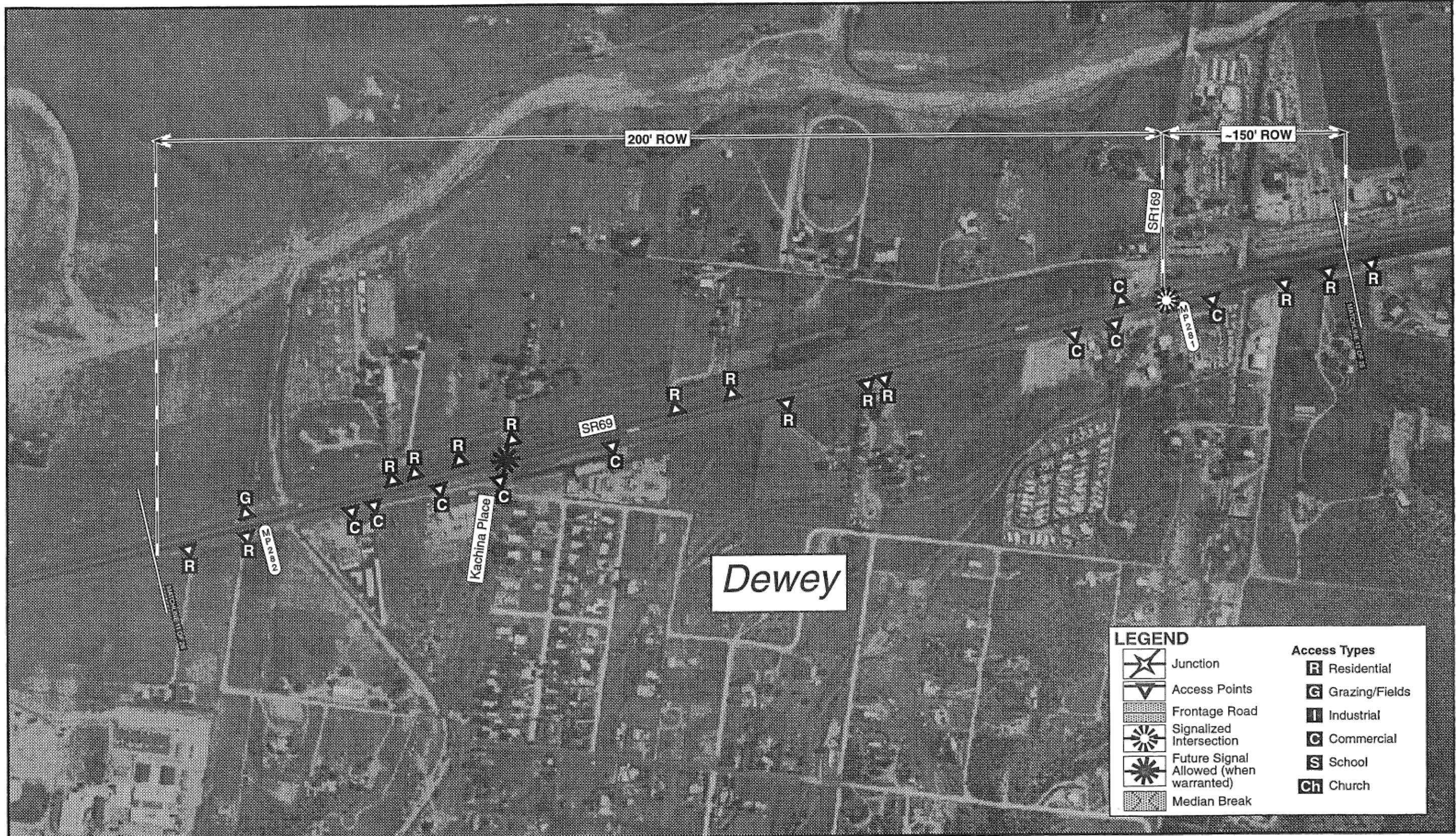
Access Application Procedure

The police power to grant or deny access to SR 69 rests with ADOT's District Engineer in Prescott. Thus, the district should be brought into any discussion of new access to the highway early in the development process. It is suggested that the following access application procedure be followed:

- The county or municipality informs ADOT of pending developments as soon as possible. This should occur through written notification to the District Engineer.
- ADOT and the municipality agree on the access which will be allowed under the Access Management Plan.
- Following ADOT Traffic Impact Study Guidelines, a traffic impact study is prepared by the developer for the development. In addition to the information required under the guidelines, the impact study should include the type of access requested relative to the allowable access, the type of proposed traffic control, the distance to the nearest traffic signal on SR 69 in both directions, alternative access available, and the need, if required, for any variances to the Access Management Plan.
- The ADOT District Permits Engineer, in coordination with the ADOT Regional Traffic Engineer and local government, approves or denies access.

Site Specific Issues

- Although not specifically located as part of the Access Management Plan, raised medians may be needed to alleviate safety concerns at some locations. Possible locations include Frontier Village and Prescott Valley. The option of raised medians should be considered as part of safety studies at these and other locations.
- When the traffic signal is installed at Holiday Drive, the feasibility of eliminating the existing commercial driveways on SR 69 to Coca-Cola, U-Haul, Calvary Chapel, Alpine Car Audio, and Smith Electric and providing these businesses with access to Holiday Drive should be investigated. If possible this access should be extended across Grant Street to provide access to Holiday Drive for the commercial properties north of Grant Street.
- If a controlled access roadway were to be constructed between I-17 and SR 169 and traffic interchanges were to be constructed at the six locations specified in the Plan, approximately seven existing businesses and one mobile home park would be impacted. The possibility of a controlled access roadway in this corridor should be considered during the access application procedure for any new development.

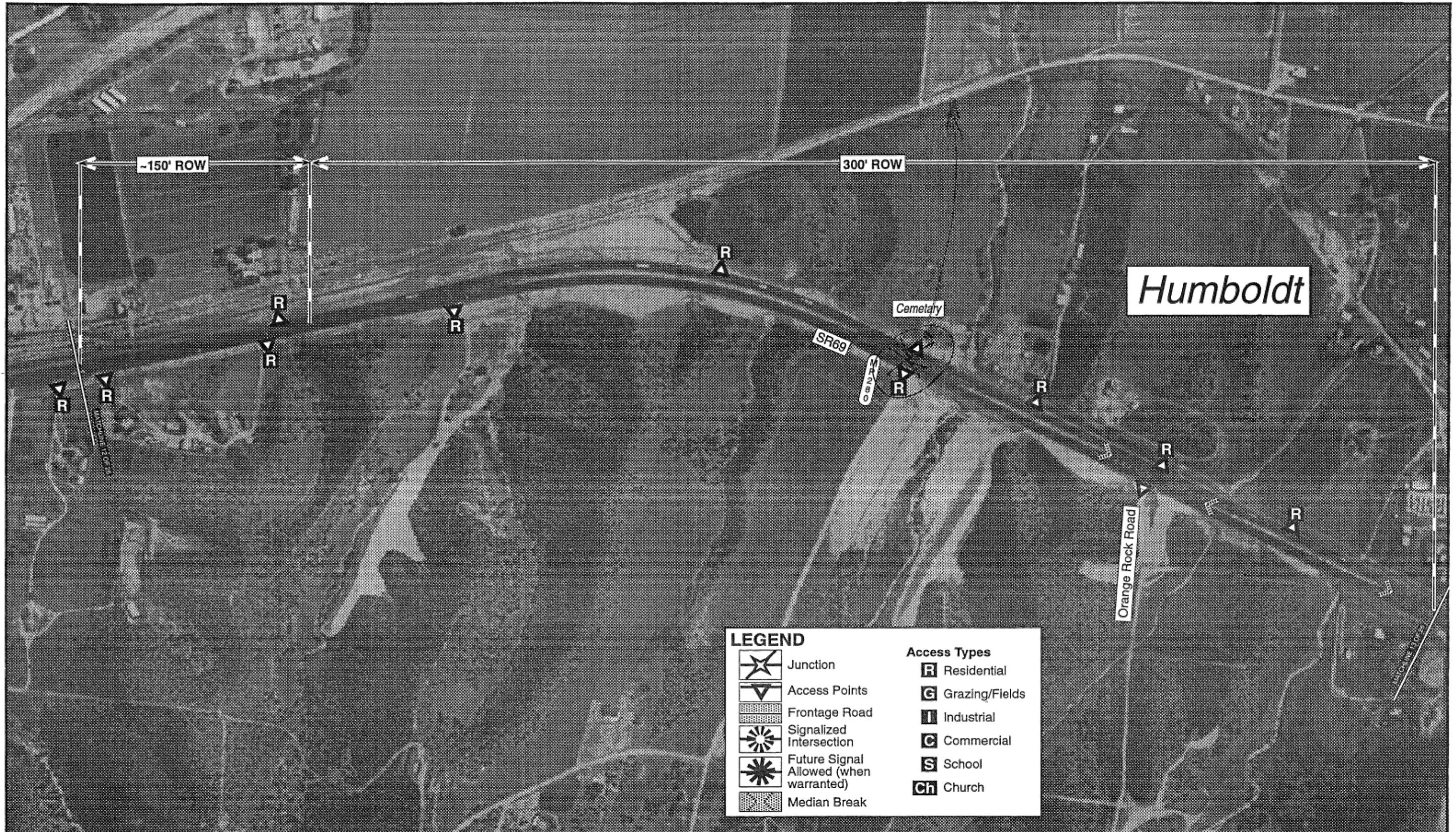


SR69
Panel 12 of 27

Scale (approx.) 1 inch = 480 feet
Flight: October 20, 1995

JJK JHK & Associates
An SAIC Company

Photo 226A



SR69
Panel 13 of 27

Scale (approx.) 1 inch = 480 feet
Flight: October 20, 1995





SR69
Panel 14 of 27

Scale (approx.) 1 inch = 480 feet
Flight: October 20, 1995

Appendix K – Excerpts from the ADOT *State Route 169 Access Management Plan*

3. SR 169 ACCESS MANAGEMENT PLAN

The SR 169 Access Management Plan is described in this section. The specifics of the Plan are presented in the following discussions and are shown on the aerial photos in the Appendix to this report.

General Access Management Policies

The general policies of the SR 169 Access Management Plan are as follows:

- Traffic signals will only be installed at major intersections when warranted.
- Major intersections should conform to the typical geometrics shown in Figure 5.
- Exclusive left and right turn lanes on SR 169 will be required at all intersections.
- A local street network should be constructed to provide access to streets with intersections on SR 169 as part of land use development.
- Existing driveway access points should be eliminated or consolidated as redevelopment occurs.
- No new driveway access will be permitted.
- Any median openings at other than dedicated roads would have to be applied for through the Regional Traffic Engineer.

SR 69 to Foothills Drive

From SR 69 to just east of Foothills Drive, SR 169 should be improved to a four lane divided highway with a raised median. Median breaks should be allowed at the following four locations:

- 1) At the commercial driveway (Young's Farm) approximately 0.2 miles from SR 69.
- 2) At the fire station (for emergency vehicles only).
- 3) At River Drive. River Drive and Outback Road should be realigned north of the medical center.
- 4) At Foothills Drive.

To implement the Access Plan through this section of SR 169, existing driveways or access points not at the median breaks should be closed and connected to the median breaks through a local street system. If any of these driveways are not closed then left turns in and

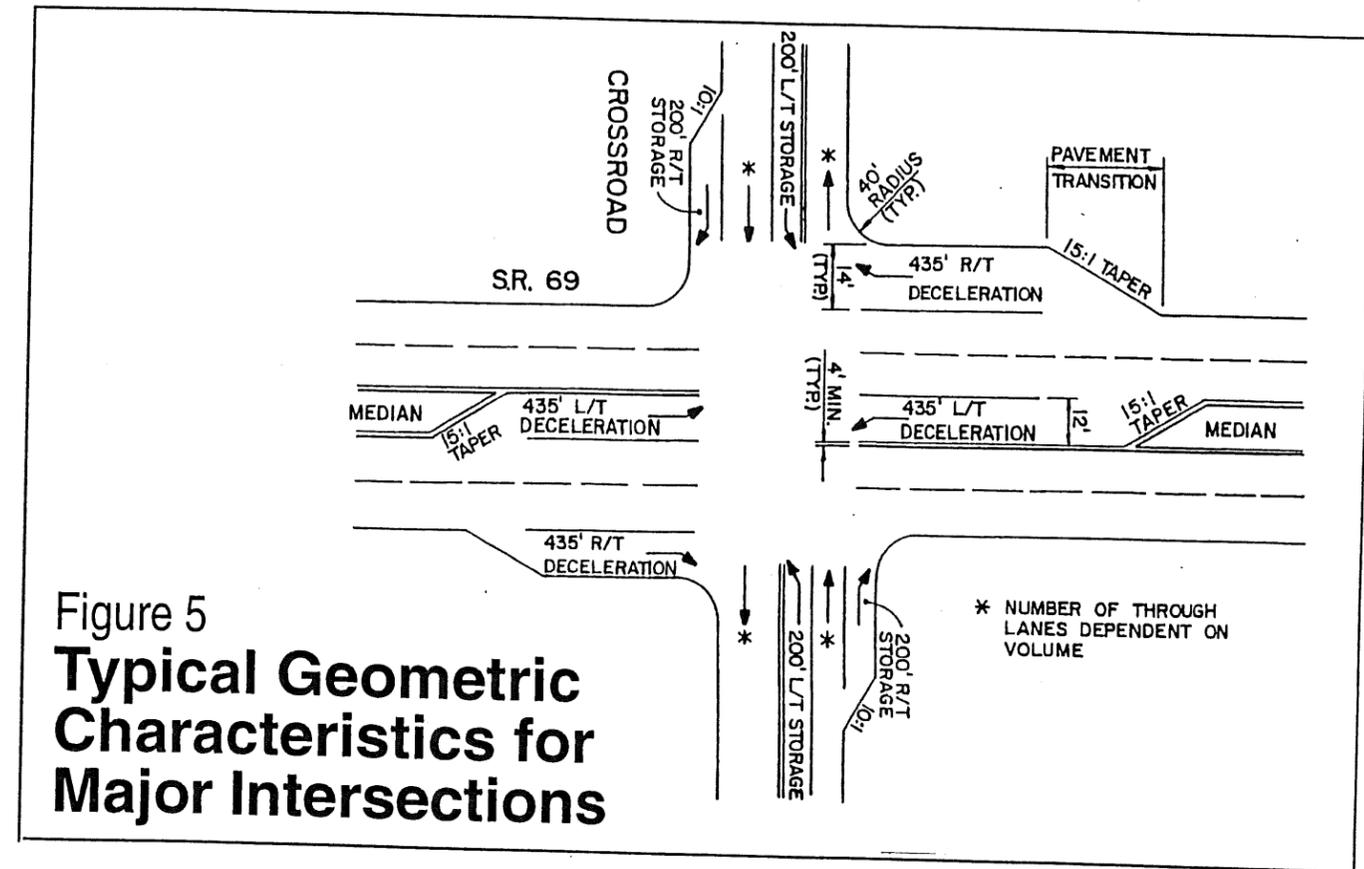


Figure 5
Typical Geometric Characteristics for Major Intersections

Table 1. State Route 169 - SR 69 to Foothills Drive

Milepost	Side of Road	Crossroad Name or Type of Access	Access to	Implementation Measure (1)
0.1	west	driveway	residential	RIRO
0.1	east	Old Black Canyon Hwy.	residential	RIRO
0.1	west	driveway	house	RIRO
0.2	east	driveway	commercial	RIRO
0.3	east	River Drive	residential	relocate to north of medical center
0.3	west	driveway	house	local roads to realigned Outback Road
0.3	west	driveway	commercial	local roads to realigned Outback Road
0.4	east	driveway	fire station	median break
0.4	east	driveway	medical center	local roads to relocated River Drive
0.7	west	Outback Road	residential	realign w/relocated River Dr. (median break)
0.7	east	driveway	residential	local roads to relocated River Drive
0.8	west	driveway	house	local roads to realigned Outback Road
1.3	east	Foothills Drive	residential	median break and "tee" into SR 169

(1) If access points are not connected to major intersection locations then only right turns in and right turns out (RIRO) will be allowed; no left turns will be permitted.

out of that driveway will be prohibited. Table 1 summarizes the existing access points and the measures required to implement the Access Plan at each access point location. The aerial photos illustrate the proposed measures.

Foothills Drive to Prescott National Forest Boundary

In the future, between Foothills Drive and the Prescott National Forest Boundary, SR 169 may become a divided four lane controlled access roadway with the possibility of future traffic interchanges. Major intersections will be restricted to two mile spacing and new driveways will not be allowed.

To implement the Access Plan through this section will require the realigning of roadways and consolidating of driveways. Major intersections should be restricted to the intersections of Wind River Drive/Clear View and Orme Road with SR 169. Access points not at a major intersection should be closed and connected to the intersection through a local street system. If any of these driveways are not closed then left turns in and out of that driveway will be prohibited allowing only right turns in and out (RIRO). Right turn deceleration and acceleration lanes should be constructed at these driveways. Table 2 summarizes the existing access points and the measure required to implement the Access Plan at each access point location. The aerial photos illustrate the proposed measures.

Prescott National Forest Boundary to I-17

In the future, SR 169 may become a divided four lane controlled access roadway between the Prescott National Forest Boundary and I-17. New access should not be allowed through this section. Left and right turn deceleration and right turn acceleration lanes should be constructed at each existing access point. Table 3 summarizes the existing access points and the measure required to implement the Access Plan at each access point location. The aerial photos illustrate the proposed measures.

Table 2. State Route 169 - Foothills Drive to Prescott National Forest Boundary

Milepost	Side of Road	Crossroad Name or type of access	Access to	Implementation Measure (1)
1.5	east	driveway	house	local road to Foothills Drive
1.5	west	driveway	house	local road to Foothills Drive
1.8	west	Wind River Drive	residential	realign to "tee" into SR 169
1.8	east	Clear View	residential	realign to "tee" into SR 169
2.0	west	driveway	house	RIRO or local road to Wind River Dr.
2.1	east	driveway	house	RIRO or local road to Clear View
2.2	east	driveway	house	RIRO or local road to Clear View
2.4	west	driveway	house	RIRO or local road to Wind River Dr.
2.5	west	driveway	industrial	RIRO or local road to Wind River Dr.
2.6	east	driveway	grazing	RIRO or local road to Clear View
2.6	east	driveway	grazing	RIRO or local road to Clear View
3.0	west	driveway	house	RIRO or local road to Wind River Dr.
3.6	east	driveway	grazing	RIRO or local road to Orme Road
3.6	west	driveway	grazing	RIRO or local road to Orme Road
4.2	west	driveway	house	RIRO or local road to Orme Road
4.3	west	driveway	grazing	RIRO or local road to Orme Road
4.3	east	driveway	grazing	RIRO or local road to Orme Road
4.8	west	driveway	residential	RIRO or local road to Orme Road
5.0	east	Orme Road	residential	continue to provide access
5.3	west	driveway	residential	RIRO or local road to Orme Road
5.6	west	driveway	residential	RIRO or local road to Orme Road
5.8	west	driveway	residential	RIRO or local road to Orme Road
5.9	west	driveway	residential	frontage/local road to Orme Road
5.9	east	driveway	residential	frontage/local road to Orme Road

(1) If access points are not connected to major intersection locations then only right turns in and right turns out (RIRO) will be allowed; no left turns will be permitted.

Table 3. State Route 169 - Prescott National Forest Boundary to I-17

Milepost	Side of Road	Crossroad Name or type of access	Access to	Implementation Measure (1)
6.5	west	driveway	grazing	continue to provide access
8.2	east	driveway	grazing	align with driveway across SR 169
8.2	west	driveway	grazing	align with driveway across SR 169
9.6	west	road	to Cherry	continue to provide access
9.6	east	driveway	grazing	align with road across SR 169
11.8	east	road	landfill	continue to provide access
13.1	east	driveway	grazing	continue to provide access
13.9	east	road	grazing	align with driveway across SR 169
13.9	west	road	grazing	align with driveway across SR 169
14.6	west	road	grazing	consolidate driveways
14.7	west	road	grazing	consolidate driveways
14.7	east	road	farm land	consolidate driveways

(1) Add left turn and right turn deceleration lanes and right turn acceleration lane at all access points.

4. IMPLEMENTATION

State Route 169 is an excellent candidate for access control. First, there are relatively few existing intersections and access drives beyond Milepost 3. Another opportunity is that approximately nine-miles of highway are within the Prescott National Forest. A third opportunity is that Yavapai County is currently preparing a community plan for the Dewey area which could be developed in conjunction with the concepts for access control for SR 169.

Full control of access is recommended from Milepost 3 to I-17. The segment of SR 169 under full access control would have a minimum of two-mile intersection spacing with no other access onto the highway. Some existing drives within the full access control segment may be difficult to link to existing roads or to a new frontage road. In these cases, the existing access points may be "grandfathered" to allow continuing access onto the SR 169. Partial access control is recommended on SR 169 between the SR 69 junction and Milepost 3.

In order to implement full access control along SR 169 local access rights must be acquired through compensation to the property owner or alternative access must be provided without unusual damage to the property owner. Only a one foot strip of right-of-way needs to be acquired to prohibit direct access to SR 169. This approach is similar to Lake Havasu City's approach to control access along SR 95. The acquisition of a one foot strip of right-of-way along SR 169 may be applicable to the property owned by State Lands and to the Prescott National Forest.

Access control techniques can be implemented with two basic legal powers: police power and eminent domain. The first power allows a state to restrict individual power for public welfare. The second power allows a state to take property for public use provided an owner is compensated for his loss. Police power is sufficient authority for most access control techniques associated with highway operations, driveway location, and driveway design. Most states have adequate power to effectively control access. As long as reasonable access is provided, access regulation can be implemented and enforced.¹

¹ Source: National Cooperative Highway Research Program Report 348, Access Management Guidelines for Activity Centers.

The SR 169 Access Management Plan can be implemented through a cooperative effort between ADOT and Yavapai County. ADOT has the authority through police power to prevent the unauthorized use and abuse to state highways (ARS28-108A (19) and administrative rule R17-3-712). Yavapai County, through land use and zoning regulations can ensure that development along the highway conforms to the Access Management Plan. A partnership should be formed between these two agencies and the U.S. Forest Service to implement the Access Management Plan. The Central Yavapai Transportation Planning Organization (CYTPO) could be the coordinating body for this partnership.

Plan Adoption

The first step in implementing the SR 169 Access Management Plan will be the adoption of the plan by ADOT and by the jurisdictions through which the roadway passes. Thus, the Plan needs to be adopted by the State Board of Transportation and the Yavapai County Board of Supervisors.

Land Use

In order to maintain the intersection spacing called for the Plan, it will be important to plan and develop the land along SR 169 in patterns with which a local roadway system can be developed to provide access to streets which intersect with SR 169. Land use plans will be instrumental in defining the land use patterns in the corridor. The adopted SR 169 Access Management Plan will provide guidance from a transportation perspective in the development of these land use plans.

Access Application Procedure

The police power to grant or deny access to SR 169 rests with ADOT's District Engineer in Prescott. Thus, the district should be brought into any discussion of new access to the highway early in the development process. It is suggested that the following access application procedure be followed:

- The county or municipality informs ADOT of pending developments as soon as possible. This should occur through written notification to the District Engineer.

- ADOT and the municipality agree on the access which will be allowed under the Access Management Plan.
- Following ADOT Traffic Impact Study Guidelines, a traffic impact study is prepared by the developer for the development. In addition to the information required under the guidelines, the impact study should include the type of access requested relative to the allowable access, the type of proposed traffic control, the distance to the nearest intersection on SR 169 in both directions, alternative access available, and the need, if required, for any variances to the Access Management Plan.
- The ADOT District Permits Engineer, in coordination with the ADOT Regional Traffic Engineer, and local government, approves or denies access.



Access points should be connected to median breaks through a local street system. Left turns in and out will be prohibited at driveways not at median breaks.

LEGEND

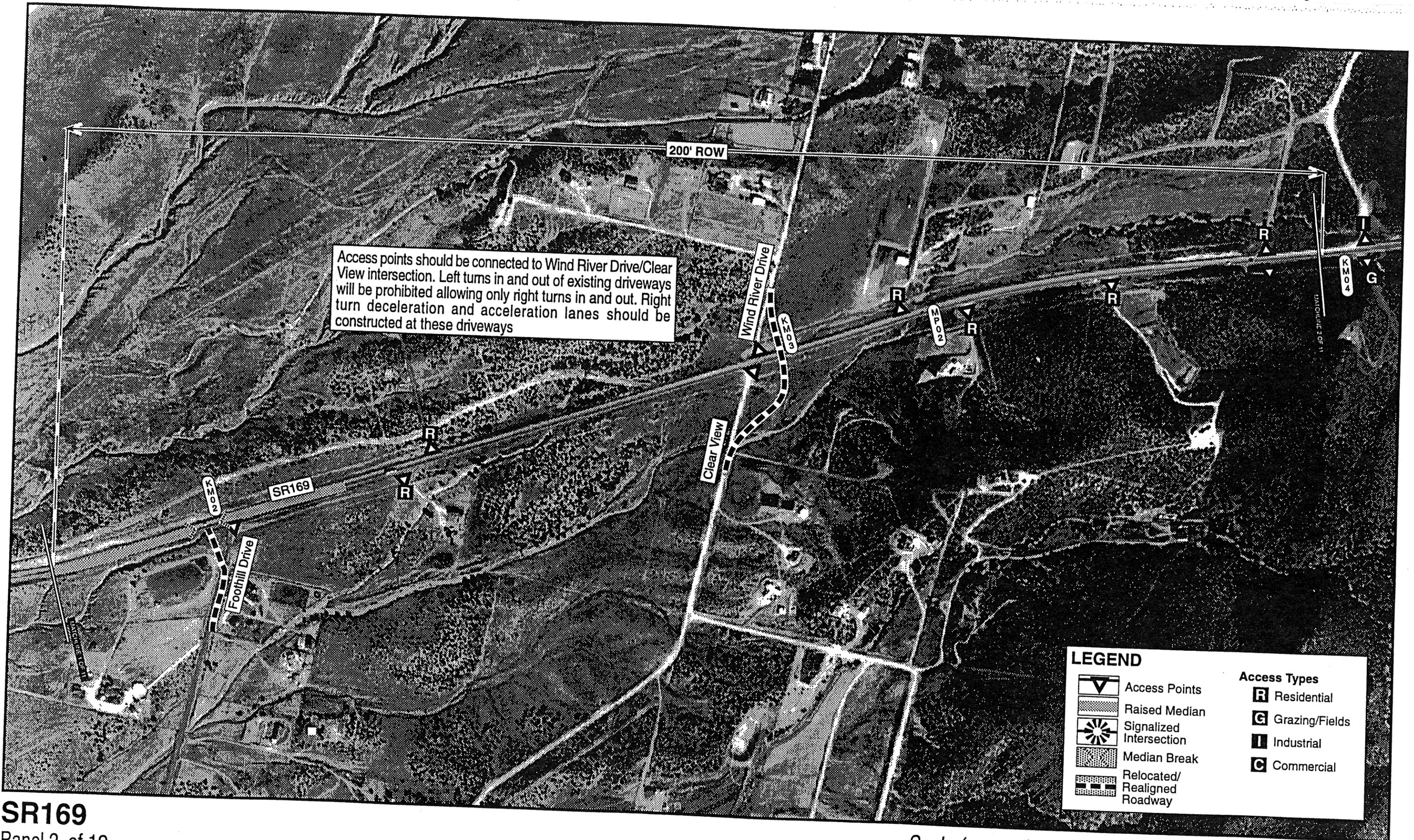
	Access Points	Access Types
	Raised Median	R Residential
	Signalized Intersection	G Grazing/Fields
	Median Break	I Industrial
	Relocated/Realigned Roadway	C Commercial

SR169
Panel 1 of 12

SR 169 Access Management Plan

Scale (approx.) 1 inch = 480 feet
Flight: October 20, 1995

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Access points should be connected to Wind River Drive/Clear View intersection. Left turns in and out of existing driveways will be prohibited allowing only right turns in and out. Right turn deceleration and acceleration lanes should be constructed at these driveways

LEGEND

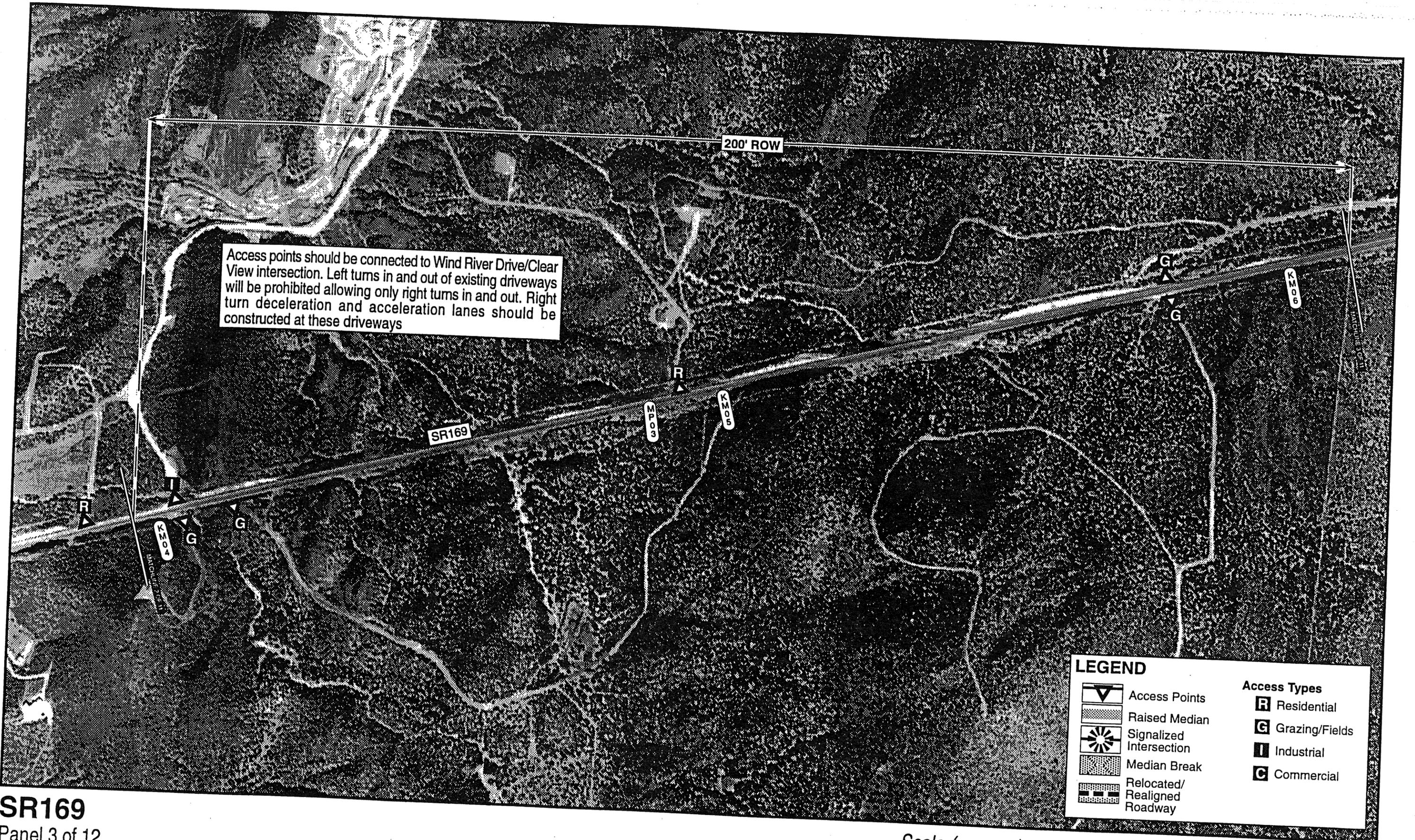
	Access Points	Access Types
	Raised Median	R Residential
	Signalized Intersection	G Grazing/Fields
	Median Break	I Industrial
	Relocated/Realigned Roadway	C Commercial

SR169
Panel 2 of 12

SR 169 Access Management Plan

Scale (approx.) 1 inch = 480 feet
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SR169

Panel 3 of 12

SR 169 Access Management Plan

Scale (approx.) 1 inch = 480 feet
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