# **Final Report**

Navajo County

# Gila County TRANSPORTATION STUDY January 2014

Prepared by



[[4888



# Gila County Transportation Study

ADOT MPD Task Assignment 011C-13 PGTD0904 Contract ADOT11-013152

# **Executive Summary**

### Prepared by:



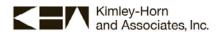
Kimley-Horn and Associates, Inc.

Prepared for: ARIZONA DEPARTMENT OF TRANSPORTATION GILA COUNTY

January 2014 098236006



Expires 09-30-14



## **1 INTRODUCTION**

The Arizona Department of Transportation (ADOT) awarded funding for the Gila County 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 addressing a broad range of multimodal transportation planning issues.

The principal purpose of the Gila County Transportation Study is to identify the most critical transportation infrastructure needs within Gila County and recommend a program of improvement projects to address these needs. Transportation needs were grouped into the following elements: roadway, safety, pavement management, bicycle and pedestrian facilities, and transportation finance.

The study area for the Gila County Transportation Study is all transportation facilities within Gila County that are owned or maintained by Gila County. This excludes transportation facilities owned and maintained by Gila County's incorporated communities and Indian reservations, as well as the state highways owned and maintained by ADOT, although it does include the connecting points between these facilities and those facilities owned or maintained by Gila County.

This 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** SOCIOECONOMIC CONDITIONS

Per the U.S. Census, the 2010 population of Gila County (including the incorporated communities) is 53,597 and the 2010 employment in Gila County is 11,094. The major economic industries in Gila County are mining, recreation, ranching, and tourism.

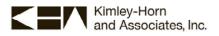
The Gila County population grew at a compound annual growth rate of approximately 1.45% per year between 1990 and 2010. Population projections for Gila County estimate an average compound annual growth rate of 0.37% per year between 2013 and 2033, resulting in a 2033 population estimate of 57,800.

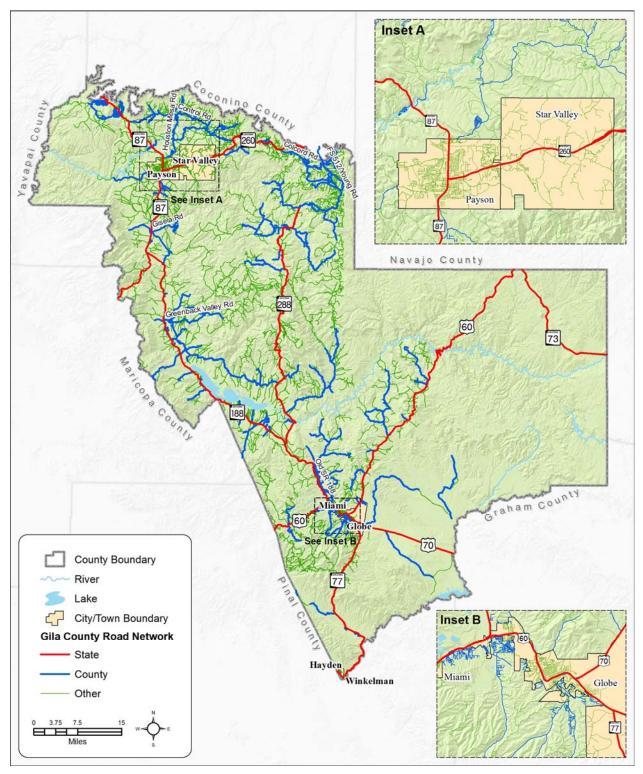
# 3 ROADWAYS

The existing roadway network and roadway ownership in Gila County are shown in **Figure ES-1**. The roadway network is comprised of state highways and non-state roadways owned by Gila County, federal agencies, local jurisdictions, or private owners. Gila County owns or maintains a total of 764.9 miles of roadways (171.8 miles of paved roadways and 593.1 miles of unpaved roadways), of which approximately 500 miles are U.S. Forest Service (USFS) roadways.

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. The highest traffic volumes occur on segments of Golden Hill Road, Main Street, Jesse Hayes Road, and Houston Mesa Road. All study area roadway segments for which traffic volume data was available currently provide acceptable levels of service and are projected to continue to provide acceptable levels of service through the study horizon year of 2033.

Of the 13 bridges owned or maintained by Gila County, eight bridges have been rated by ADOT as being in need of repair or replacement. Gila County is planning to construct two new bridges at Oak Creek and Tonto Creek to provide all-weather access through the Tonto Basin community.





Source: Gila County, ADOT, USFS





## 4 SAFETY

Crash data was obtained from ADOT, Gila County, and USFS for a five-year analysis period from January 1, 2008 through December 31, 2012. There were a total of 324 motor vehicle crashes on study area roadways within the analysis period, of which there were six fatal crashes (five involving motorcycles or all-terrain vehicles) and 105 injury crashes. Speed and/or alcohol were identified as factors in most of the fatal and serious injury crashes.

Four study area segments with higher numbers of crashes were identified as warranting more detailed safety evaluations: Broadway Street/El Camino Street intersection; Young Road (FS 512) east of FS 202; Russell Road (FS 55) between Roberts Drive and Kellner Canyon Road; and Houston Mesa Road between SR 87 and Control Road.

# 5 PAVEMENT MANAGEMENT

A roadway pavement condition inventory was conducted in May 2013 for the paved roadway segments within Gila County's two maintenance regions: the Timber region (the Payson/Mogollon Rim area); and the Copper region (Globe area).

The roadway pavement conditions were visually rated as being Excellent, Good, Fair, Poor, or Failed. Overall, the majority of the roadways within the Timber region are in Good to Fair condition with the most common distresses observed being low-severity longitudinal and transverse (L&T) cracking, alligator cracking, edge cracking, and weathering/raveling. The majority of the paved roadways within the Copper region are in Fair to Poor condition with the most common distresses observed being mediumseverity block and alligator cracking in addition to low- to medium-severity weathering/raveling.

The roadway segments rated as Failed or Poor in both the Timber and Copper regions generally exhibit a significant amount of medium- to high-severity alligator cracking, medium- to high-severity edge-cracking, and patching, resulting in a loss of surface integrity and ability to safely and efficiently accommodate the vehicular traffic being applied to the roadway surface.

# 6 BICYCLE AND PEDESTRIAN FACILITIES

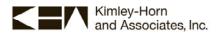
Elements that make up bicycle networks can include designated bike routes, striped bike lanes, paved shoulders along roadways, wide outside lanes, shared use paths, and sidewalks. There are limited existing bicycle facilities on Gila County roads. Fairgrounds Road has a wide shoulder that is marked as a bicycle lane. Several of the state highways that connect to County roadways have wide shoulders.

Pedestrian networks are typically comprised of sidewalks, trails, and shared use paths. Few sidewalks exist on County roadways. Those that do exist are generally located within or near the incorporated communities of Globe, Miami, and Payson and there are often gaps in the sidewalk network. There are no trails or shared use paths owned or maintained by Gila County.

# 7 TRANSPORTATION FINANCE

In 1994, Gila County voters passed a half-cent excise tax to pay for highway and street improvements and transportation projects that has a sunset date of December 31, 2014. This tax has generated approximately \$3 million in revenue per year for Gila County.

The State of Arizona taxes motor fuels and collects a variety of fees relating to the registration and operation of motor vehicles to generate revenue for the Highway User Revenue Fund (HURF). HURF



revenue, which is intended to be used on highway-related expenses, has historically been approximately \$3.3 million per year for Gila County.

Federal funding for transportation improvements is available through federal programs authorized under Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21), subject to eligibility requirements and approval by ADOT and the Federal Highway Administration (FHWA). Utilizing federal funds requires obtaining environmental, utility, and right-of-way clearances before proposed improvements can be implemented.

Transportation improvement needs have historically exceeded available revenue. This trend is anticipated to continue for the foreseeable future unless additional sources of revenue are identified.

# 8 TRANSPORTATION NEEDS

Transportation system needs (e.g., safety issues, infrastructure gaps or deficiencies, and unmet demand for transportation facilities or services) were identified from an analysis of current and future transportation conditions and comments received from the general public, the technical advisory committee, and stakeholders regarding transportation system needs.

### 8.1 Roadway Needs

Paving Control Road (FS 64) between SR 87 and SR 260 and paving Young Road (FS 512) between SR 260 and SR 288 are the highest-priority Gila County paving needs.

Eight Gila County bridges need to be rehabilitated to current standards or replaced. New bridges at Oak Creek and Tonto Creek are needed to provide all-weather access through Tonto Basin.

### 8.2 Safety Needs

There is a need to improve enforcement and driver education on Gila County roadways. Speed limits should be adhered to and the public should be warned about the dangers of alcohol consumption while driving.

Four study area segments need more detailed safety evaluations: Broadway Street/El Camino Street intersection; Young Road (FS 512) east of FS 202; Russell Road (FS 55) between Roberts Drive and Kellner Canyon Road; and Houston Mesa Road between SR 87 and Control Road.

Another identified need is the development of a more consistent procedure for reporting crash data collected by Gila County and USFS to ADOT.

### 8.3 Pavement Management Needs

The roadway segments whose pavement condition is rated as Failed or Poor need to be rehabilitated to prevent further deterioration and to improve circulation, safety, emergency vehicle access, and drainage. Because pavement conditions are generally expected to deteriorate over time, even the roadways rated as Excellent, Good, or Fair will likely need to be rehabilitated within the next 20 years.

### 8.4 Bicycle and Pedestrian Needs

Bike lanes/paved shoulders should be provided on roadways that connect urbanized areas, activity centers, and recreational destinations, particularly if these routes have high traffic volumes, high speeds, or are used by trucks or recreational vehicles.



Gila County staff has identified two roadways that are high-priority candidates for bike lanes/paved shoulders: Christopher Creek Loop is a recreational roadway with sufficient pavement width that a bike lane/paved shoulder could be created if the roadway were restriped to remove the center turn lanes; and Houston Mesa Road has sufficient right-of-way that the roadway could be widened to create bike lanes/paved shoulders without needing additional right-of-way.

Another identified need was to fill in gaps and expand the sidewalk network, particularly in the vicinity of the incorporated communities of Globe, Miami, and Payson.

### 8.5 Transportation Finance Needs

The cost of needed improvements is expected to exceed projected available revenue from traditional revenue sources. A key identified need is extending the transportation excise tax or identifying other funding sources to construct the projects currently in the Gila County 2013-2018 Capital Improvement Program (CIP) and the improvement projects recommended in this study.

# 9 IMPROVEMENT CONSIDERATIONS

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

Proactive maintenance activities can prolong pavement life cycle spans, thus requiring less capital expenditure. 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 Gila County to make cost-effective decisions and protect the investment in the roadway network. It is important that Gila County 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.

It is recommended that Gila County consider updating its rural collector, rural local, and rural very low volume roadway cross-sections to provide sufficient accommodation for bike travel (i.e., a minimum 5-foot flat paved shoulder or bike lane). It is also recommended that Gila County consider adopting a "complete streets" policy that emphasizes the importance of providing transportation facilities that accommodate all users.

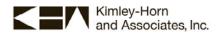
A Road Safety Assessment (RSA) of the Broadway Street/El Camino Street intersection was conducted by ADOT in June 2013 at the request of Gila County because the location was identified as needing a more detailed safety evaluation. Issues and recommended countermeasures for consideration were identified as a result of the RSA. Gila County has indicated it intends to implement the recommended countermeasures as funding and staff resources become available.

# **10 EVALUATION CRITERIA AND PRIORITIZATION**

### 10.1 Prioritization of Recommended Capital Improvements

Roadway, safety, bicycle, and pedestrian improvements are collectively considered capital improvements. Capital improvement project recommendations are based on an assessment of need. Prioritization of those projects reflects the degree to which the projects meet the following evaluation criteria:

- Already programmed or designed;
- Promotes safety;
- Preserves existing infrastructure;
- Improves system continuity and efficiency;



- Encourages multimodal travel;
- Improves air quality;
- Design is not overly complex; and
- Functionally classified as a collector or arterial.

The prioritized projects were grouped into near-term, mid-term, and long-term priorities.

### 10.2 Prioritization of Recommended Pavement Improvements

To provide the framework necessary to make informed decisions regarding pavement improvement priorities, a set of prioritization criteria was developed. The primary factors considered in the development of the prioritization criteria were functional classification, overall pavement condition rating, and the type, severity, and amount of load-related distress observed (measured as a percentage of the overall area experiencing the distress).

Nine pavement improvement categories were developed consisting of "Resurface – Priority #1" through "Resurface – Priority #4", "Chip Seal – Priority #1" through "Chip Seal – Priority #4", and "Preventive Maintenance". Resurface improvements refer to an asphalt pavement overlay and are for those segments with low overall pavement condition ratings or high degrees of load-related distresses. Chip seal improvements are for those segments with moderate overall pavement condition ratings or moderate degrees of load-related distresses. Preventive maintenance improvements such as crack sealing, fog sealing, and asphalt patching are for those segments with high overall pavement condition ratings or low degrees of load-related distresses.

Roadway segments with a priority of "Resurface – Priority #1", "Resurface – Priority #2", and "Chip Seal – Priority #1" have been assigned to the near-term implementation timeframe.

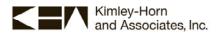
Roadway segments with a priority of "Resurface – Priority #3", "Resurface – Priority #4", "Chip Seal – Priority #2", "Chip Seal – Priority #3", and "Chip Seal – Priority #4" have been assigned to the mid-term implementation timeframe.

Roadways with a priority of "Preventive Maintenance" are not assigned to a specific implementation timeframe – rather, preventive maintenance on these segments should be conducted at regular intervals or as needed to address specific issues that arise. It is anticipated that some of the roadways with a priority of "Preventive Maintenance" that receive regular preventive maintenance treatment in the near-term and mid-term implementation timeframes will still likely need resurfacing or chip seal treatment in the long-term timeframe.

# **11 PLAN FOR IMPROVEMENTS**

### 11.1 Implementation Plan

An implementation plan has been developed to group the recommended improvements into near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) timeframes based on the aforementioned prioritization process for capital and pavement maintenance improvement projects. Implementation timeframes are based on fiscal years (FY). 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 Gila County's budget processes or as needed if conditions and travel patterns change significantly.



**Table ES-1**, **Table ES-2**, and **Table ES-3** present the implementation plan, split into near-term (FY2015-FY2019), mid-term (FY2020-2024), and long-term (FY2025-2034) timeframes. These tables include project cost estimates. Project cost estimates include, where applicable, planning-level construction costs as well as "soft" costs such as planning, design, construction engineering, and contingency costs. Right-of-way costs are not included in the estimates. All cost estimates are in 2013 dollars, do not account for inflation, and are rounded to the nearest \$5,000.

To be conservative, the cost estimates developed as part of this study assume federal funding will be utilized in case federally funded grants can be obtained. The exception to this assumption is that the cost estimates developed for the pavement maintenance improvement projects (i.e., chip seal, resurface, and miscellaneous preventive maintenance and equipment) assume Gila County funding will be utilized as pavement maintenance activities have historically been funded by Gila County.

The total cost estimate for the implementation plan is:

- Near-term (FY2015-FY2019) improvement projects: \$32.8 million;
- Mid-term (FY2020-FY2024) improvement projects: \$41.9 million;
- Long-term (FY2025-FY2034) improvement projects: \$91.5 million; and
- Total implementation plan cost: \$166.2 million.

The locations of the recommended improvement projects included in the implementation plan are shown in **Figure ES-2**.

### 11.2 Existing Revenues Sources

Three scenarios were developed to assess potential future transportation project funding opportunities based on existing revenue sources:

- *Scenario 1*: The transportation excise tax is extended for another 20 years and Gila County applies the full revenue amount to Gila County projects. HURF revenues continue as a funding source;
- *Scenario* 2: The transportation excise tax is extended for another 20 years and Gila County shares revenues with the other jurisdictions in Gila County. This scenario assumes that Gila County will get one-half of the transportation excise tax revenues of Scenario 1. HURF revenues continue as a funding source; and
- *Scenario 3*: The transportation excise tax is not extended and Gila County depends solely on HURF revenues for funding.

It is assumed that transportation excise tax and HURF revenues will grow 1.0% per year over the preceding year. This assumption provides the revenues shown in **Table ES-4** for FY 2015 through FY 2034, the analysis period for the Gila County Transportation Study. It should be noted that costs are not indexed to inflation and are based on today's dollars.

For the analysis period (FY 2015-2034), projected total revenues vary from approximately \$139.0 million to \$73.7 million, depending on whether the excise tax extension is approved by voters, and if approved, how the revenues would be distributed. The total cost of recommended improvement projects and corresponding projected revenue shortfall for each of the three revenue scenarios are also shown in **Table ES-4**.

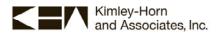


Table ES-1 – Recommended Near-term	<b>Improvement Projects</b>
------------------------------------	-----------------------------

Project Name	Project Type	Project Cost Estimate
Roadway Improvements - Paving and Improving Existing Un	paved Roadways	
Pine Creek Canyon Dr: Pine Ln to campground entrance	Paving	\$1,550,000
Icehouse Canyon Rd: Six Shooter Canyon Rd to end of pavement	Paving	\$300,000
Roadway Improvements - Bridges	·	
Tonto Creek Bridge (assumed \$100k per year of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$500,000
Bridge Load Rating Study	Study	\$100,000
Rim Trail Bridge	Replacement	\$195,000
Bloody Tanks Wash Bridge	Replacement	\$205,000
Tonto Village Bridge	Replacement	\$265,000
Roadway Improvements - Other		
SR 260: Lion Springs Section (Gila County contribution)	Widen to 4-lane highway	\$2,200,000
Cemetery Rd: SR 87 to end of pavement	Paving and reconstruction	\$150,000
Monroe St. Reconstruction: 7th St to Gila County Courthouse	Roadway realignment	\$890,000
Safety Improvements		
Broadway St/El Camino St Intersection RSA	Modifications per RSA	\$100,000
Houston Mesa Rd RSA – 9.64-mile segment from SR 87 to Control Rd	Modifications per RSA	\$250,000
Russell Rd (FS 55) RSA – 5.5-mile segment from Roberts Dr to Kellner Canyon Rd	Modifications per RSA	\$200,000
Young Rd (FS 512) RSA – 0.7-mile segment east of FS 202	Modifications per RSA	\$150,000
Driver Education Campaign	Outreach	\$25,000
Bicycle Facility Improvements		
Houston Mesa Rd: SR 87 to Control Rd	Add paved shoulder or shared use path	\$160,000
Christopher Creek Loop: SR 260 to SR 260	Add paved shoulder	\$45,000
Pavement Maintenance Improvements		
Chip seal projects	Chip seal - Priority #1	\$225,000
Resurface projects	Resurface - Priority #1 and #2	\$14,025,000
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$11,250,000
Total Near-term (FY2015-FY2019) Improvement Costs		\$32,785,000



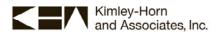
Table ES-2 – Recommended Mid-term Improvement Projects
--

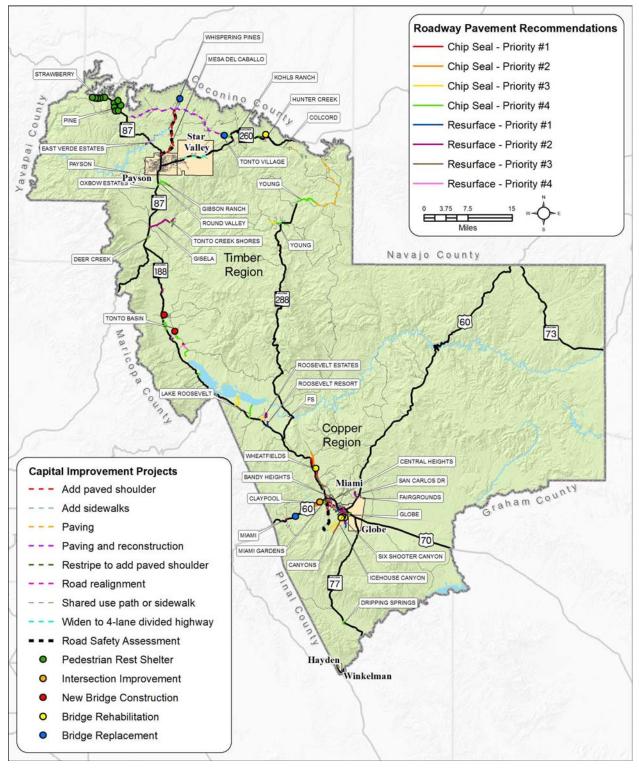
Project Name	Project Type	Project Cost Estimate
Roadway Improvements - Paving and Improving Existing U	npaved Roadways	
Control Rd (FS 64): Houston Mesa Rd to FS 144	Paving and reconstruction	\$8,970,000
Young Rd (FS 512): Colcord Rd to FS 128	Paving	\$10,230,000
Roadway Improvements - Bridges		
Icehouse Canyon Bridge 1	Rehabilitation	\$20,000
Icehouse Canyon Bridge 2	Rehabilitation	\$65,000
Christopher Creek Bridge	Rehabilitation	\$20,000
Pinal Creek Bridge	Rehabilitation	\$45,000
Pinal Creek Reinforced Concrete Box Culvert	Rehabilitation	\$20,000
Tonto Creek Bridge (assumed \$100k per year of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$500,000
Bicycle Facility Improvements		
Six Shooter Canyon Rd: Cherokee Rd to Icehouse Canyon Rd	Add paved shoulder	\$335,000
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add paved shoulder	\$1,245,000
Fossil Creek Rd: Rimwood Rd to SR 87	Add paved shoulder	\$595,000
Pedestrian Facility Improvements		
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add sidewalks	\$105,000
Pavement Maintenance Improvements		
Chip seal projects	Chip seal - Priority #2, #3, and #4	\$1.935,000
Resurface projects	Resurface - Priority #3 and #4	\$6,565,000
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$11,250,000
Total Mid-term (FY2020-FY2024) Improvement Project Costs		\$41,900,000



Table ES-3 – Recommended Long-term	<b>Improvement Projects</b>
------------------------------------	-----------------------------

Project Name	Project Type	Project Cost Estimate
Roadway Improvements - Paving and Improving Existing Un	paved Roadways	
Young Rd (FS 512): FS 128 to FS 101	Paving	\$8,140,000
Control Rd (FS 64): FS 144 to 2 miles west of SR 260	Paving and reconstruction	\$11,930,000
Young Rd (FS 512): FS 101 to Crouch Mesa Rd (FS 116)	Paving	\$9,100,000
Control Road (FS 64): SR 87 to Houston Mesa Road	Paving and reconstruction	\$18,195,000
Roadway Improvements - Bridges		
Tonto Creek Bridge (assumed remaining \$140k of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$140,000
Bicycle Facility Improvements		
Russell Rd: Hospital Dr to Golden Hill Rd	Add paved shoulder	\$240,000
Main St: Golden Hill Rd to Short Ave	Add paved shoulder	\$280,000
Golden Hill Rd: Russell Rd to Main St	Add paved shoulder	\$450,000
Old Oak St: Locomotive Dr to US 60	Add paved shoulder	\$170,000
Pedestrian Facility Improvements		
Russell Rd: US 60 to Golden Hill Rd	Add sidewalks	\$100,000
Golden Hill Rd: Russell Rd to Main St	Add shared use path or sidewalks	\$170,000
Broadway St: Existing sidewalk to Old Oak St	Add sidewalks	\$55,000
Old Oak St: US 60 to Railroad Ave, Railroad Ave to Maple St	Add sidewalks	\$65,000
Pavement Maintenance Improvements		•
Chip seal and resurface projects for roadways in good condition now that will need rehabilitation in 10-20 years	Assumes \$2.00M per year	\$20,000,000
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$22,500,000
Total Long-term (FY2025-FY2034) Improvement Project Cost	S	\$91,535,000







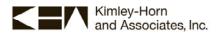
Revenue Source	Scenario 1 Revenues (Excise Tax + HURF)	Scenario 2 Revenues (1/2 Excise Tax + HURF)	Scenario 3 Revenues (HURF Only)	Total Cost of Recommended Improvement Projects	Projected Revenue Shortfall
Near-term (FY2015-FY	′2019)			Near-term (FY2015-	FY2019)
Excise Tax Revenues	\$15,120,000	\$7,560,000	\$0		Scenario 1: <b>\$585,000</b>
HURF Revenues	\$17,080,000	\$17,080,000	\$17,080,000	\$32,785,000	Scenario 2: <b>\$8,145,000</b>
Total Near-term Revenues	\$32,200,000	\$24,640,000	\$17,080,000		Scenario 3: \$15,705,000
Mid-term (FY2020-FY2024)			Mid-term (FY2020-F	Y2024)	
Excise Tax Revenues	\$15,890,000	\$7,945,000	\$0		Scenario 1: <mark>\$8,060,000</mark>
HURF Revenues	\$17,950,000	\$17,950,000	\$17,950,000	\$41,900,000	Scenario 2: \$16,005,000
Total Mid-term Revenues	\$33,840,000	\$25,895,000	\$17,950,000		Scenario 3: \$23,950,000
Long-term (FY2025-FY2034)		Long-term (FY2025	-FY2034)		
Excise Tax Revenues	\$34,240,000	\$17,120,000	\$0		Scenario 1: \$18,595,000
HURF Revenues	\$38,700,000	\$38,700,000	\$38,700,000	\$91,535,000	Scenario 2: \$35,715,000
Total Long-term Revenues	\$72,940,000	\$55,820,000	\$38,700,000		Scenario 3: \$52,835,000
Total (FY2015-FY2034)			Total (FY2015-FY20	)34)	
					Total Revenue Shortfall
Total Revenues	\$138,980,000	\$106,355,000	\$73,730,000	Total Cost	Scenario 1: <b>\$27,240,000</b>
i otal Nevenues	φ130,300,000	φ100,555,000	φ13,130,000	\$166,220,000	Scenario 2: <b>\$59,865,000</b>
					Scenario 3: <b>\$92,490,000</b>

### Table ES-4 – Revenue Projections

Source: Kimley-Horn and Associates, Inc.

### 11.3 Additional Revenue Sources

Based on revenue projections, Gila County will not have sufficient revenue from existing sources to complete all of the recommended improvements in this study within the recommended timeframes. For the three aforementioned revenue scenarios, the projected total revenue shortfall for FY2015 through FY2034 is estimated to be approximately \$27.2 million with Scenario 1, \$59.9 million with Scenario 2, and \$92.5 million with Scenario 3. Additional local, regional, state, and/or federal revenue sources will be needed if all of the recommended improvements are to be constructed within the recommended timeframes.



### 11.4 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 Gila County Transportation Study is a long-range multimodal planning study that addresses the transportation needs in the study area for the near-term, mid-term, and long-term transportation planning horizons. 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.

### 11.5 Recommended Next Steps

Recommended next steps include the following:

- Present the Gila County Transportation Study to the Gila County Board of Supervisors for approval;
- Support extension of the transportation excise tax and identify other potential funding sources such as local/regional taxes and federal funding programs;
- Develop various funding scenarios showing what can be funded depending on various levels of anticipated revenues;
- Continue to coordinate with ADOT regarding funding for widening SR 260: Lion Springs section;
- Integrate the implementation plan into the next update of the Gila County five-year CIP as available funding allows; and
- Coordinate the implementation of the Gila County Transportation Study with the previously completed Payson Transportation Study and Cobre Valley Comprehensive Transportation Study.

# **12 PUBLIC AND STAKEHOLDER PARTICIPATION**

To inform and involve Gila County residents in the study and to obtain public input, two rounds of public meetings were held in both Payson and Globe. Public involvement summary reports were prepared that documented the input received at the public meetings.

To inform and involve Gila County elected officials in the study and to obtain their input, presentations that summarized the findings and recommendations of the study were made to the Gila County Board of Supervisors and to several of the City/Town Councils of the incorporated communities in Gila County.

To inform and involve Gila County agency staff in the study and to obtain their input on interim deliverables, a technical advisory committee met four times that was comprised of key stakeholders representing the incorporated communities in Gila County, Central Arizona Governments (CAG), ADOT, Gila County, USFS, and the San Carlos Apache Tribe.



# Gila County Transportation Study

ADOT MPD Task Assignment 011C-13 PGTD0904 Contract ADOT11-013152

# **Final Report**

Prepared by:

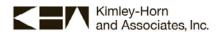


Kimley-Horn and Associates, Inc.

Prepared for: ARIZONA DEPARTMENT OF TRANSPORTATION GILA COUNTY

January 2014 098236006





### Management Team

Arizona Department of Transportation Mail Drop: 310B 206 S. 17th Ave. Phoenix, AZ 85007

Charla Glendening, Project Manager Email: CGlendening@azdot.gov Telephone: 602-712-7376 Fax: 602-712-6412

Gila County Public Works Division 1400 East Ash Street Globe, Arizona 85501

Steve Sanders, Deputy Director Email: ssanders@gilacountyaz.gov Telephone: 928-402-8530 Fax: 928-425-8104

### Study Consultant Team

Kimley-Horn and Associates, Inc. 1855 W. Baseline Road Suite 200 Mesa, AZ 85202

Michael Grandy, P.E., Project Manager Email: michael.grandy@kimley-horn.com Telephone: 480-207-2666 Fax: 602-944-7423

This report has been funded in part through grants from the Federal Highway Administration, U.S. Department of Transportation. The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data, and for the use or adaptation of previously published material, presented herein. The contents do not necessarily reflect the official views or policies of the Arizona Department of Transportation or the Federal Highway Administration, U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation. Trade or manufacturers' names that may appear herein are cited only because they are considered essential to the objectives of the report. The U.S. government and the State of Arizona do not endorse products or manufacturers.

### TABLE OF CONTENTS

1		Introduction
	1.1	Study Purpose1
	1.2	Study Objectives
	1.3	Study Area1
	1.4	Summary of Relevant Plans and Studies
2	1.5	Technical Advisory Committee       5         Socioeconomic Conditions       6
3	2.1 2.1.1 2.1.2 2.1.3 2.1.4	<ul> <li>2 Historic Population Growth</li></ul>
	3.1	Paved and Unpaved Roadways 11
	3.2	Forest Service Roads
	3.3	Tribal Roads
	3.4	Functional Classification
	3.5 3.5.1 3.5.2	5
	3.6	Bridge Condition
	3.7 3.7.1 3.7.2 3.7.3	2 Gila County Road Activities-Accident Report Data
	3.8 <i>3.8.1</i>	Pavement Management
4	3.9 3.9.1 3.9.2 3.9.3 3.9.4	2 Pedestrian Facilities
	4.1 4.1.1 4.1.2	Gila County Transportation Excise Tax Program
	4.2	Other Transportation Revenue Sources



	4.2.1 4.2.2 4.2.3 4.2.4	<ul> <li>Moving Ahead for Progress in the 21st Century (MAP-21)</li> <li>Gila County General Revenue Funds</li> </ul>	. 40 . 40
5	4.3	Programmed Transportation Expenditures Transportation Needs	. 40
	5.1 5.1.1 5.1.2	0	. 43
	5.2	Safety Needs	. 43
	5.3	Pavement Management Needs	. 44
	5.4	Bicycle and Pedestrian Needs	. 44
	5.5	Transportation Finance Needs	. 45
6		Improvement Considerations	. 46
	6.1	Pavement Maintenance	. 46
	6.2	Complete Street Cross-Sections	. 47
7	6.3	Road Safety Assessment at Broadway Street / El Camino Street Recommended Improvements	
	7.1 7.1.1 7.1.2 7.1.3	2 Bridge Improvements	. 52 . 52
	7.2 7.2.1 7.2.2 7.2.3 7.2.4	<ul> <li>Road Safety Assessment Recommendations at Broadway/El Camino</li> <li>Future Road Safety Assessment Studies</li> </ul>	. 55 . 55 . 56
	7.3 7.3.1 7.3.2 7.3.3	Pavement Resurfacing	. 56 . 57
	7.4 7.4.1 7.4.2	J 1	. 60
8	7.5	Recommended Transportation Finance Strategies Evaluation Criteria and Prioritization	
	8.1	Prioritization of Recommended Capital Improvements	. 63
9	8.2	Prioritization of Recommended Pavement Improvements Plan for Improvements	. 70

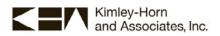


9.1	Implementation Plan	76
9.2 9.2. 9.2. 9.2.	2 Highway User Revenue Fund (HURF) Revenues	81 81
9.3	Potential Revenue Sources	82
9.4	Title VI Impacts	86
9.5 10	Recommended Next Steps Public Participation	
10.1 10.1 10.1	.1 Public Meeting Round 1 – Payson	87
10.2 10.2 10.2		88
Appendiz Appendiz Appendiz Appendiz	<ul> <li>x A – Forest Service Roads Maintained by Gila County</li> <li>x B – Detailed Crash Data</li> <li>x C – Detailed Pavement Condition Data</li> <li>x D – Road Safety Assessment Information</li></ul>	90 93 94 95
	x G – Public Involvement Summary Reports	



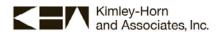
### **INDEX OF FIGURES**

Figure 1 – Jurisdictional Boundaries within Gila County	2
Figure 2 – Roadway Network in Gila County1	0
Figure 3 – Roadway Surface Types for County Roadways1	2
Figure 4 – Bridge Improvement Project on Control Road (FS 64) 1	3
Figure 5 – Federal Functional Classifications for County Roadways1	5
Figure 6 – Number of Crashes, Gila County Roadways, 2008-2012 2	2
Figure 7 – Crash Severity, Gila County Roadways, 2008-2012	2
Figure 8 – Crash Locations, 2008-2012	4
Figure 9 – Fatal/Incapacitating Crash Locations, 2008-2012	5
Figure 10 – Bicycle and Pedestrian Crashes, 2008-2012	6
Figure 11 – Pavement Condition Ratings	1
Figure 12 – Bike Lane Decision Matrix	2
Figure 13 – ADOT Bicycle Route Map	
Figure 14 – Payson Trails System	4
Figure 15 – Tonto National Forest Trails	
Figure 16 – Pavement Life Cycle 4	6
Figure 17 – Gila County Rural Cross-sections 4	
Figure 18 – Recommended Roadway Capital Improvement Projects	3
Figure 19 – Recommended Pavement Improvements 5	9
Figure 20 – Recommended Pavement Maintenance Improvement Priorities	2
Figure 21 – Recommended Improvement Projects in Implementation Plan	0



### **INDEX OF TABLES**

Table 1 – CAG TIP Projects in Gila County, 2013-2016	3
Table 2 – 2010 Population and Employment Data for Gila County	
Table 3 – Population Growth Rates in Gila County	6
Table 4 – Population Growth Rates in Urbanized Areas of Gila County	
Table 5 – Gila County Population Projections	
Table 6 – Racial Demographic Percentages in Gila County	
Table 7 – Sex, Age, and Poverty Level Data from 2010 Census (except where noted)	
Table 8 – Traffic Volumes on Unpaved Roads in Gila County	
Table 9 – Miles of County Roads that are Federally Functionally Classified	
Table 10 – Average Daily Traffic Volumes on Higher-Volume Gila County Roadways	
Table 11 – Level of Service Definitions	
Table 12 – Level of Service Daily Volume Thresholds	
Table 13 – Future Traffic Volumes	
Table 14 – Bridge Ratings for Gila County Bridges	
Table 15 – Gila County Bridges with a Sufficiency Rating of 80 or Below	
Table 16 – Crashes by Manner of Collision	
Table 17 – Crash Data for Higher-Crash Segments	
Table 18 – Pavement Ratings Summary	
Table 19 – 2012 and 2013 Estimates Excise Tax Revenues	
Table 20 – Projects Completed with Transportation Excise Tax Funds	
Table 21 – Major Projects Implemented Using Transportation Excise Taxes	
Table 22 – Other Expenditures Funded Through the Transportation Excise Tax Funds	
Table 23 – Gila County 2013-2018 Capital Improvement Program	
Table 24 – Potential Bike Lane/Paved Shoulder Candidate Roadways	
Table 25 – Broadway Street/El Camino Street RSA Suggested Countermeasures	
Table 26 – Recommended Roadway Improvements - Paving Unpaved Roadways	
Table 27 – Recommended Roadway Improvements - Bridges	
Table 28 – Other Recommended Roadway Improvements	
Table 29 – Broadway Street/El Camino Street RSA Recommendations	
Table 30 – General Guidelines for Applying Preventive Maintenance	
Table 31 – Pavement Improvement Decision Matrix	
Table 32 – Recommended Bicycle Facility Improvements	
Table 33 – Recommended Pedestrian Facility Improvements	
Table 34 – Capital Improvement Project Prioritization	
Table 35 – Pavement Maintenance Prioritization Criteria for Arterials and Collectors	
Table 36 – Pavement Maintenance Prioritization Criteria for All Other Roadways	
Table 37 – Recommended Pavement Maintenance Improvement Priorities by Region	73
Table 38 – Pavement Maintenance Improvements by Copper Region Community	
Table 39 – Pavement Maintenance Improvements by Timber Region Community	
Table 40 – Recommended Near-term Improvement Projects	
Table 41 – Recommended Mid-term Improvement Projects	
Table 42 – Recommended Long-term Improvement Projects	
Table 43 – Revenue Projections	
Table 44 – Other Revenue Opportunities	
Table 45 – MAP-21 Federal Programs	



# **1 INTRODUCTION**

The Arizona Department of Transportation (ADOT) awarded funding for the Gila County 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 addressing a broad range of multimodal transportation planning issues related to roadways, transit, and non-motorized modes of travel.

### 1.1 Study Purpose

The principal purpose of the Gila County Transportation Study is to identify the most critical transportation infrastructure needs within Gila County and recommend a program of improvement projects to address these needs. The study will serve as a guide for community development, project funding applications, and project implementation.

### 1.2 Study Objectives

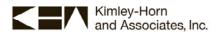
Objectives of the Gila County Transportation Study are:

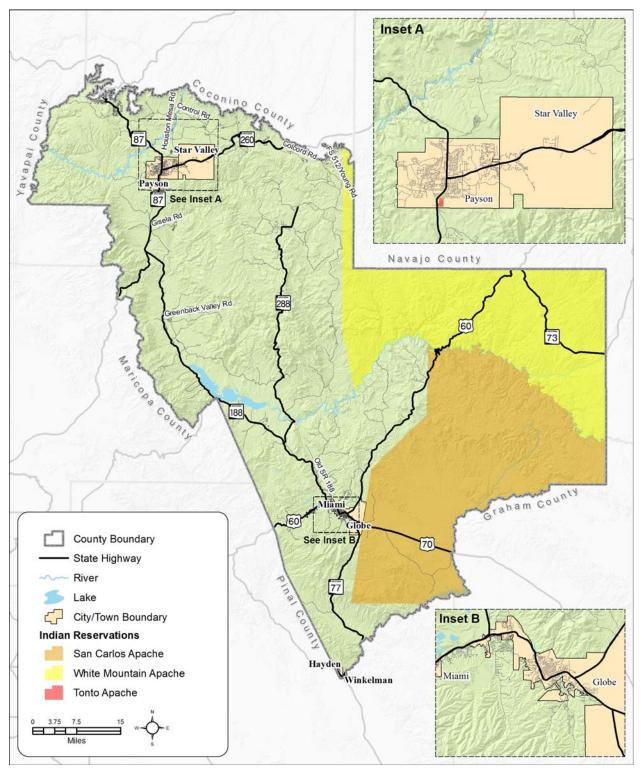
- Compile data and information on current and projected future conditions to identify transportation needs for the following elements:
  - Roadway,
  - Safety,
  - Pavement management,
  - Bicycle and pedestrian facilities, and
  - Transportation finance;
- Recommend and prioritize specific projects and implementation strategies along with their associated costs that address identified needs over the next five, ten, and twenty years;
- Present study information to, and obtain input from, technical staff and the general public; and
- Summarize the study's findings and recommendations in a final report.

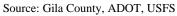
### 1.3 Study Area

The study area for the Gila County Transportation Study is all transportation facilities within Gila County that are owned or maintained by Gila County. This excludes transportation facilities owned and maintained by Gila County's incorporated communities (Globe, Payson, Star Valley, Hayden, Winkelman, and Miami) and Indian reservations (San Carlos Apache, White Mountain Apache, and Tonto Apache), as well as the state highways owned and maintained by ADOT, although it does include the connecting points between these facilities and those facilities owned or maintained by Gila County.

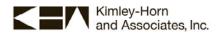
Jurisdictional boundaries consisting of the municipal planning areas of the incorporated communities and the Indian reservation boundaries within Gila County are shown in **Figure 1**. Over half of Gila County is federal public land managed by the U.S. Forest Service (USFS). The San Carlos, Tonto, and White Mountain Apache Nations encompass an additional 37% of the land within the county.











### 1.4 Summary of Relevant Plans and Studies

A number of plans and studies were reviewed in the preparation of this study. A brief summary of the key relevant plans and studies is presented as follows.

- ADOT Five-Year Transportation Facilities Construction Program, 2014-2018 As part of the public comment process for the Five-Year Program, ADOT developed three scenarios to address how to fund projects in Arizona with limited money. Scenario A focused on allocating the majority of funding to preservation. Scenario B focused on moving major projects forward with the available funding. Scenario C focused on a combination of preservation and major projects. The Arizona State Transportation Board adopted a modified version of Scenario C. In Gila County, State Route (SR) 260 Lion Springs Section was the main construction project proposed. This widening project was allocated \$5 million in funding in fiscal year (FY) 2018 for design work but the \$40 million construction is currently unfunded.
- ADOT Statewide Transportation Planning Framework Study (March 2010) The ADOT Statewide Transportation Planning Framework Study established a vision for a multimodal transportation network within Arizona in the year 2050. Portions of Gila County are contained within two regional framework studies that fed into the statewide framework study: the Central Framework Study and the Eastern Framework Study. These studies included conceptual improvement recommendations for three transportation and growth scenarios.
- Arizona Trails 2010: A Statewide Motorized & Non-Motorized Trails Plan (July 2010) The Arizona Statewide Trails Plan provides information and recommendations for recreational trail management for five years from the published date. This plan addresses both motorized and non-motorized trails and includes information on public input, trends and issues, as well as funding priorities.
- Central Arizona Governments (CAG) Transportation Improvement Program (TIP), FY 2013-2016 (July 2012) and TIP Amendment (approved September 25, 2013) The CAG TIP for fiscal years 2013-2016 discusses the projects, processes, and funding sources for projects within the CAG region, which includes Gila County. Projects for roads owned or maintained by Gila County are shown in Table 1.

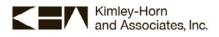
Project Number	Year/ Enhancement Grant Round	Project Name and Location	Project Type	Total Cost
GIL 11-01C	2013	Upgrade various roads to thermoplastic striping	Road Construction	\$212,089
GIL 07-01T	Round 15	Sidewalks - Six Shooter Canyon Road	Pedestrian Facility	\$529,675
GIL 09-01T	Round 17	Sidewalks - Globe Main Street	Pedestrian Facility	\$521,166
GIL 10-01T	Round 18	Pine-Strawberry pedestrian shelters	Pedestrian Facility	\$506,903
GIL 09-01H	Ongoing	Tonto Creek bridge	Bridge Design	\$3,138,918
GIL 12-01P	Ongoing	Upgrade various roads to thermoplastic striping	Road Construction	\$280,800
GIL 13-01C	2013	Oak Creek Bridge-Ewing Trail across Oak Creek in Tonto Basin	Bridge Construction	\$2,000,000

 Table 1 – CAG TIP Projects in Gila County, 2013-2016

Source: CAG



- Gila County Comprehensive Plan (2001) The Gila County Comprehensive Plan serves as a guide to address future growth and development within Gila County unincorporated areas. Transportation and circulation goals and objectives are:
  - *Goal:* Gila County has a safe, efficient and cost effective multimodal circulation system that provides for adequate mobility and access.
  - *Objective:* adopt a roadway classification system that is responsive to existing and projected traffic access and mobility demands and that complements the County's land use planning efforts.
  - *Objective:* provide a balanced transportation system that promotes multimodal transportation opportunities and ensures adequate emergency access.
  - *Objective:* maximize the public benefit of limited roadway funding and optimize the expenditure of funds for roadway maintenance and construction.
  - *Objective*: encourage the formation of informal partnerships to coordinate mutually beneficial transportation improvements.
  - *Objective:* actively work to reduce fugitive dust levels due to vehicular traffic on unimproved roadways.
- **Gila County Small Area Transportation Study (October 2006)** This study developed a 20-year transportation plan for Gila County in two phases: 2006-2010 and 2011-2030. While some of the projects in the first phase have been implemented, many projects in the first phase and second phase have not yet been implemented.
- **Gila County Rail Passenger Study (January 2009)** This study focused on the Arizona Eastern Railway and evaluated the feasibility of implementing permanent excursion rail service between Globe and the Apache Gold Casino. It included the operating costs, a summary of operational best practices, an estimate of transit demand, and draft rail service scenarios.
- Arizona Forest Highway Long Range Transportation Plan (February 2012) This study identified six funded projects in Arizona, one of which is in Gila County on Forest Service (FS) 199 (also known as Houston Mesa Road or Forest Highway 52), which consists of constructing bridges at two low-flow crossing locations at a cost of \$4.1 million. An application was received for one other project in Gila County but there was not sufficient available funding so this project was identified as "unconstrained", which means it must be resubmitted through an application process in the next call for projects to be considered again for future funding. The unconstrained project in Gila County is:
  - FS 64 (also known as Control Road or Forest Highway 51) Construct two-lane chip seal, curve realignment, culvert replacement, and new guardrail on a 23.1-mile segment in the Tonto National Forest at an estimated cost of \$24.8 million.
- **Payson Transportation Study** (March 2011) This study developed a long-range multimodal transportation program for the Town of Payson, located in the northern portion of Gila County. Recommended improvements included developing access management standards and guidelines, developing and maintaining a pavement management system, and establishing a new functional classification system. This study also evaluated several potential alternate corridors to help reduce traffic congestion on SR 87 and SR 260. Some of these alternate corridors extend beyond the current boundaries of Payson into unincorporated areas of Gila County.
- Cobre Valley Comprehensive Transportation Study (October 2012) The primary focus of the Cobre Valley Comprehensive Transportation Study was to update local transportation plans within the City of Globe and Town of Miami and interface with ADOT and Gila County transportation systems to meet the needs of the region.
- Tonto Creek Bridge Location/Design Concept Report (August 2011) This document discusses the recommended location and design concept for a bridge across Tonto Creek in the Tonto Basin community. The existing low-flow crossings are impassable during flood events. Crossing closure



durations can last several weeks. A bridge will improve roadway network continuity, quality of life, and emergency response times in Tonto Basin.

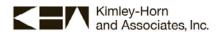
- Tonto National Forest Travel Management Environmental Impact Statement (Ongoing) The Tonto National Forest is in the process of implementing the Travel Management Rule, which calls for establishing a system of roads, trails, and areas designated for motorized vehicle use and determining suitable locations for dispersed camping. After initiating compliance with the Travel Management Rule under an Environmental Assessment (EA), the Tonto National Forest determined that the level of significance reached a point that environmental analysis for travel management under an Environmental Impact Statement (EIS) would be more appropriate. All comments provided throughout the process thus far, including those to the 2009 proposed action, the 2012 EA, and public meetings, will continue to be considered and may be incorporated into either the proposed action for the EIS or alternatives to that proposed action.
- Pinal Creek Corridor Study (September 2004) This corridor study analyzed location options for a four-lane urban arterial roadway in the area bounded by Beer Tree Crossing, Jesse Hayes Road, Pinal Creek, Railway America, US 70 and SR 77. The need for this project is to improve emergency access, accommodate regional growth, and provide access for future power transmission systems. Five alternatives were examined, and the recommended alternative was Alternative 1 Beer Tree Crossing to US 70. This alignment extends from Beer Tree Crossing to US 70 approximately 600 feet southeast and along US 70 from an existing railroad bridge trestle. The cost of this project was estimated at \$5.29 million.

### 1.5 Technical Advisory Committee

The Technical Advisory Committee (TAC) for this study was comprised of key stakeholders representing the following agencies:

- City of Globe;
- Towns of Payson, Star Valley, Hayden, Winkelman, and Miami;
- Gila County;
- CAG;
- ADOT Multimodal Planning Division;
- ADOT Communications;
- ADOT Environmental Planning Group;
- ADOT Globe and Prescott Engineering Districts;
- USFS Tonto National Forest; and
- San Carlos Apache Tribe.

The TAC met four times during the course of the study and provided input on key project deliverables, as well as provided input on current and future transportation needs and potential improvements.



# **2 SOCIOECONOMIC CONDITIONS**

This section summarizes data obtained on current and future socioeconomic conditions to help identify growth trends within Gila County. Growth patterns in population and employment are used in projecting future traffic demands and transportation needs.

### 2.1 Socioeconomic Data

Socioeconomic data based on the 2010 U.S. Census data is summarized in this section. Historic population growth rates are also examined for Gila County and urbanized areas within the county.

### 2.1.1 2010 Population and Employment

Population and employment data from the 2010 U.S. Census are summarized in **Table 2**. In 2010, Gila County (including the incorporated communities) had a population of 53,597. Today, the major economic industries in Gila County are mining, recreation, ranching, and tourism.

### Table 2 – 2010 Population and Employment Data for Gila County

2010	2010	
Population	Employment*	
53,597	11,094	

\*Private non-farm employment

Sources: U.S. Census Data, http://quickfacts.census.gov/qfd/states/04/04007.html, referenced 2/21/13

### 2.1.2 Historic Population Growth

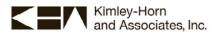
Population growth rates were developed based on a review of the 1990, 2000, and 2010 U.S. Census data. These data indicate that Gila County has grown at a compound annual growth rate of approximately 1.45% per year over the 20-year period. For comparison purposes, the compound annual growth rate of the state of Arizona was computed. The state of Arizona grew at a compound annual growth rate of 2.82%, nearly double the growth rate of Gila County over the 20-year period. The majority of Gila County population growth occurred over the 1990 to 2000 time period. These growth rates are shown in **Table 3**.

Location	1990 Population	2000 Population	2010 Population	1990-2000 Compound Annual Growth Rate	2000-2010 Compound Annual Growth Rate	1990-2010 Compound Annual Growth Rate
Gila County	40,216	51,335	53,597	2.47%	0.43%	1.45%
Arizona	3,665,228	5,130,632	6,392,017	3.42%	2.22%	2.82%

Table 3 – Population Growth Rates in Gila County

Sources: U.S. Census Data, 1990, 2000, 2010

The annual growth rates of the urbanized areas within the county were also reviewed. As shown in **Table 4**, these growth rates vary considerably, with the mining communities of Hayden and Winkelman showing negative growth rates and Star Valley showing the highest growth rate, 4.17 % per year.



Urbanized Area	2000 Population*	2010 Population**	Compound Annual Growth Rate
Globe	7,486	7,532	0.06%
Star Valley	1,536	2,310	4.17%
Payson	13,620	15,301	1.17%
Hayden	892	662	-2.94%
Winkelman	443	353	-2.25%

#### Table 4 – Population Growth Rates in Urbanized Areas of Gila County

\*Source: Gila County Small Area Transportation Study, October 2006. \*\*Gila County: Profile of General Population and Housing Characteristics: 2010, http://www.cagaz.org/CAG/RegionalData/RegionalData.html, accessed 2/21/13.

### 2.1.3 Future Population Growth

Population projections are prepared for all counties in the state by the Arizona Department of Administration (ADOA) Office of Employment and Population Statistics. Their mission is to provide reliable unbiased projections of future population growth and a single state repository for current population references. They provide population projections for each year between 2012 and 2050. Population projections for Gila County are summarized in **Table 5**. These data assume relatively modest annual growth rates (typically less than 0.5% per year) over the 20-year study period from 2013 to 2033. The average compound annual growth rate for the 20-year period from 2013 to 2033 is 0.37% per year.

Year	Gila County Population Projection	Compound Annual Growth Rate
2013	53,700	-
2023	56,300	2013-2023: 0.47% per year
2033	57,800	2023-2033: 0.26% per year

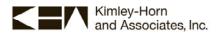
**Table 5 – Gila County Population Projections** 

Source: http://www.workforce.az.gov/population-projections.aspx, referenced 5/15/13.

### 2.1.4 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 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 Order – minority and low-income populations.

According to the 2010 Census, the racial composition of Gila County is predominantly white, with about 23% minorities, as shown in **Table 6**. American Indian residents comprise a higher proportion of county residents than the state as a whole because there are three reservations located within Gila County. Persons of Hispanic heritage (of any race) comprise 17.9% of the Gila County population, as compared to 29.6% statewide.

Race Category (alone or in combination with one or more races)	Gila County	State of Arizona
White	78.6%	75.9%
African American	0.6%	5.0%
American Indian or Alaska Native	15.8%	5.5%
Asian	0.7%	3.6%
Other	6.0%	13.2%
Hispanic population (of any race)	17.9%	29.6%

 Table 6 – Racial Demographic Percentages in Gila County

Source: 2010 Census

The Executive Order also requires the consideration of persons older than 65 years of age. Approximately 23% of the population in Gila County is 65 years or older. This is higher than the statewide percentage of persons over 65, which is 13.8%.

In addition, the Executive Order mandates that impacts on low-income people must also be considered. Approximately 21% of all people in Gila County are estimated to be living below the poverty level, as compared to 16% living below the poverty level statewide. Title VI population percentages for Gila County are shown in **Table 7**.

Table 7 – Sex, Age, and Poverty Level Data from 2010 Census (except where noted)

Population Category	Gila County	State of Arizona
Females	50.3%	50.3%
Males	49.7%	49.7%
Persons over age 65	23.2%	13.8%
Persons living below the poverty level	20.9%*	16.2%*

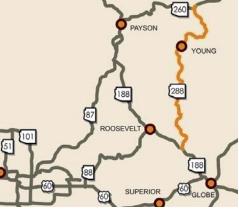
Sources: 2010 Census, \*U.S. Census Bureau 2007-2011 American Community Survey



# 3 ROADWAYS

The existing roadway network and roadway ownership in Gila County are shown in **Figure 2**. The roadway network is comprised of state highways and non-state roadways owned by Gila County, federal agencies, local jurisdictions, or private owners. The major state highways in Gila County are described as follows:

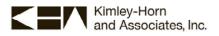
- US 60 is the primary east-west route connecting Phoenix and Globe. US 60 is a four-lane highway in the Miami-Globe area and a two-lane highway through most of the rest of Gila County. East of Globe, US 60 cuts diagonally across Gila County and traverses portions of the San Carlos Apache and White Mountain Apache Indian Reservations.
- **US 70** is a two-lane highway connecting Globe to the San Carlos Apache Indian Reservation and the southeastern part of the state.
- SR 73 is a two-lane highway primarily serving the White Mountain Apache Indian Reservation.
- SR 77 is a two-lane north-south route connecting Globe and Winkelman.
- SR 87 is the primary north-south route connecting Phoenix and Payson. SR 87 is a four-lane highway between SR 260 in Payson and the Maricopa County border and a two-lane highway through most of the rest of Gila County.
- **SR 188** is the primary route connecting Globe and Payson. The SR 188 cross-section varies from a two-lane highway to a four-lane highway.
- SR 260 is an east-west road that extends east from Payson to the Coconino County border. SR 260 is primarily a four-lane highway in Gila County that serves both local and regional traffic.
- SR 288 is a two-lane highway that heads north from SR 188 near Roosevelt Lake and ends at Young south of SR 260 where it connects to FS 512. SR 288 between mileposts 257.7 and 311.0 and FS 512 are designated the Desert to Tall Pines Scenic Road.

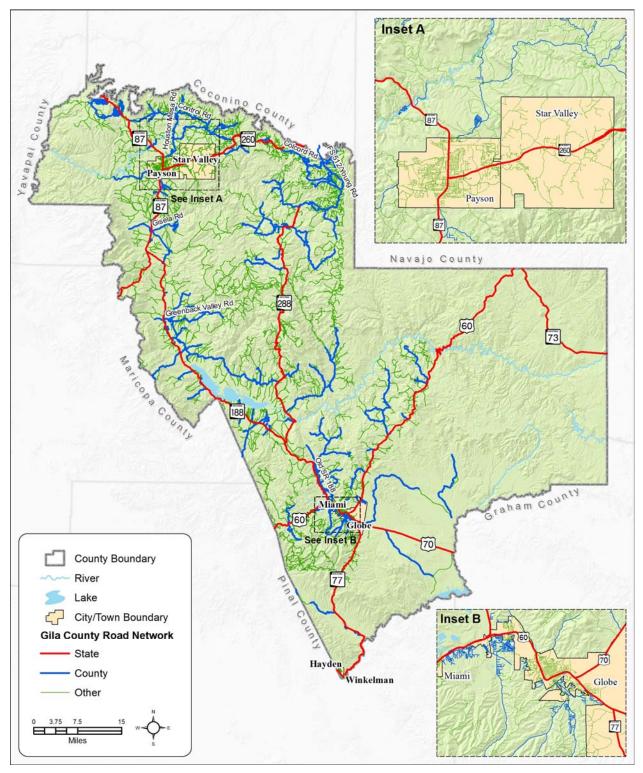


The Desert to Tall Pines Scenic Road is highlighted in gold

Primary county roadways in Gila County are:

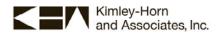
- Houston Mesa Road (FS 199) is a two-lane rural major collector that runs north from Payson to the Mogollon Rim area.
- Fossil Creek Road (FS 708) is a two-lane rural minor collector that extends west from SR 87 towards Camp Verde.
- **Control Road** (FS 64) is a two-lane rural minor collector that runs east-west north of and between SR 87 and SR 260.
- Young Road (FS 512) is a two-lane rural minor collector that connects SR 288 and SR 260.
- Gisela Road is a two-lane rural major collector road that connects SR 87 to Gisela.
- **Six Shooter Canyon Road** is a primarily north-south two-lane minor arterial located south of Globe. This road is named Jesse Hayes Road within Globe.
- **Russell Road** is a two-lane north-south urban collector in the Globe area.
- Icehouse Canyon Road is a two-lane rural major collector in the Globe area that connects to Russell Road via Kellner Canyon Road.
- S. Broad Street is an urban minor arterial that links US 60 to US 70 via Saguaro Drive in Globe.





Source: Gila County, ADOT, USFS





### 3.1 Paved and Unpaved Roadways

Based on information submitted by Gila County for the 2012 Highway Performance Management System (HPMS), Gila County owns or maintains a total of 764.9 miles of roadways, which are all within Gila County except for the segment of Young Road (FS 512) in Coconino County and approximately 500 feet of roadway along the Pinal County border. There are approximately 171.8 miles of paved roadways and 593.1 miles of unpaved roadways. Roadway pavement surface types are shown in **Figure 3**.

Research on volume criteria for paved versus unpaved roadways indicates that criteria for when it is costeffective in the long run for a roadway to be paved can vary from jurisdiction to jurisdiction. Based on discussions with Gila County and a review of criteria in other jurisdictions, unpaved roadways that have average daily traffic (ADT) volumes approaching or exceeding 400 vehicles per day (vpd) were identified as candidates for new paving, with those roadways that are also federally functionally classified considered the highest-priority candidates.

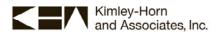
In Gila County, there are a limited number of unpaved roads that have traffic counts. These roads are summarized in **Table 8**.

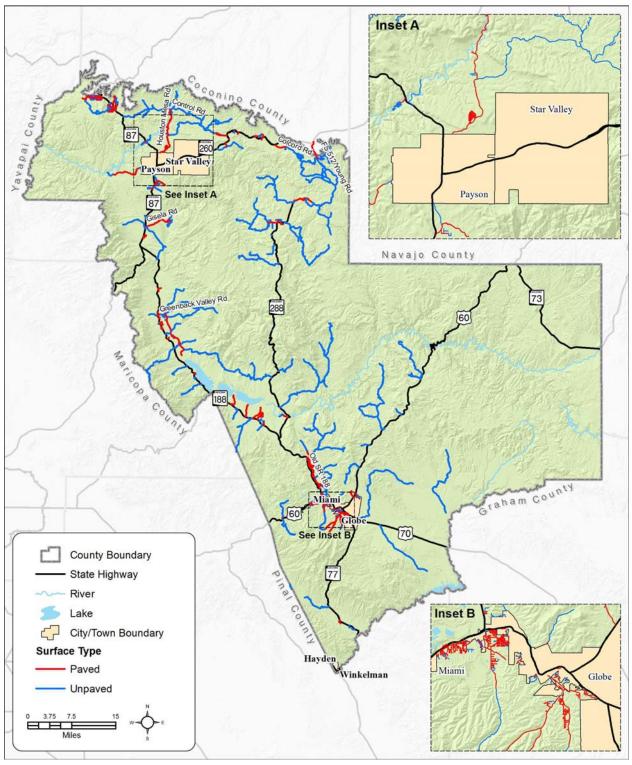
Roadway	From	То	Length in Miles	2011 ADT	2013 ADT
Rolling Hills Road	Cul de sac	Baker Ranch Road	0.74	124	
Manzanita Trail	Holly Drive	Mistletoe Drive	0.14	279	
Control Road	SR 87	Houston Mesa Road	9.84		96
Control Road	Houston Mesa Road	Fitch Lane	11.77		455
Control Road	Fitch Lane	SR 260	1.52		295
Pinal Creek Road	Unknown Globe 2	0.030mi W of Jackrabbit Road	1.91	117	
Tonto Creek Drive	Buckboard Trail	Stetson Drive	0.65	451	
Young Road (FS 512)	0.420 mi N of FH188	Coconino/Gila CB	2.86	299	
Copper Hills Road	0.504 mi NE of Globe TB	0.365 mi E of Ida Drive	1.96	212	
Sycamore Lane	0.169 mi SE of Zimmer Lane	Cul de sac	0.34	336	
Mistletoe Drive	0.165 mi N of Louis Lane	Manzanita Trail	0.21	370	
Colcord Road	2.041 mi S of SR 260	5.353 mi S of SR 260	3.31	290	508

Table 8 – Traffic Volumes on Unpaved Roads in Gila County

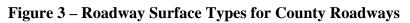
Source: ADOT 2011 HPMS and Gila County

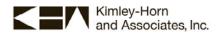
Based on traffic count data and input from Gila County staff, paving Control Road (FS 64) between SR 87 and SR 260 and paving Young Road (FS 512) between SR 260 and SR 288 are the highest-priority paving needs. Tonto Creek Drive, Sycamore Lane, Mistletoe Drive, and Colcord Road should be monitored and traffic counted regularly in the future to determine if paving is needed.





Source: Gila County, CAG, ADOT, ASLD





### 3.2 Forest Service Roads

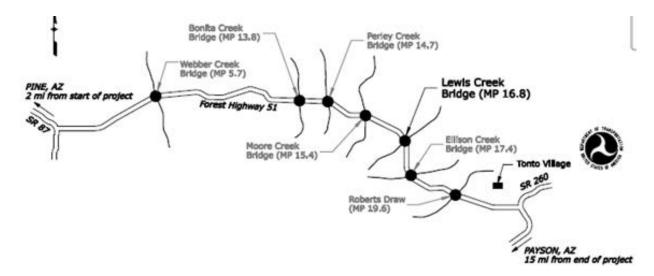
There are approximately 500 miles of USFS roads currently being maintained by Gila County, most of which are unpaved. This study focuses primarily on the paved USFS roads. USFS classifies roads on a scale of 1 to 5. These levels can be summarized as follows:

- Level 1 is a road that has been closed to the public for at least a year.
- Level 2 is an unpaved road that requires a high clearance vehicle.
- Level 3 is an unpaved road that passenger vehicles can drive on.
- Level 4 is a road that typically has some kind of surfacing treatment (can be paved or unpaved) and is in good condition.
- Level 5 is a paved road and is designed for higher speeds.

Most of the USFS roads maintained by the County are Level 2 or Level 3 roads. A list of the USFS roads maintained by Gila County and the maintenance level is provided in **Appendix A**. USFS has typically included funding as part of its maintenance agreement with the County but this funding is not assured in the future. USFS is currently developing a travel management plan (TMP) process to identify whether the Level 1-5 classifications should be changed on any road segments. Some roads currently open to the public could be converted to administrative use only roads that would be gated and locked. The TMP will be finalized and implemented in 2014; an EIS is currently being prepared.

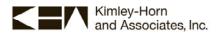
State statute requires posting of signs warning the public of primitive roads. Gila County posts primitive road signs on all Level 2 USFS roads maintained by the County.

USFS recently replaced the seven bridges on Control Road (FS 64) shown in **Figure 4**. The seven bridges were load-restricted and were approaching the limits of their original design life. Additionally, the bridges were too narrow to accommodate simultaneous two-way traffic and were not rated to carry heavier, modern vehicles.



Source: USFS





USFS is preparing to replace the '2<sup>nd</sup> Crossing' and '3<sup>rd</sup> Crossing' concrete low-flow crossings with two bridges on Houston Mesa Road and replace a concrete low-flow crossing with a third bridge on Control Road near Tonto Village. These low-flow crossings are impassable during and following large precipitation events or heavy snowmelt. Construction on these projects is ongoing.

### 3.3 Tribal Roads

The Tonto Apache Indian Reservation is located adjacent to SR 87 in Payson. The San Carlos Apache and White Mountain Apache Indian Reservations cover much of the eastern part of Gila County. Gila County has an agreement with the San Carlos Apache Tribe to provide limited maintenance on some tribal roads on an as-needed basis. The County does not have ongoing roadway maintenance agreements with the other Indian tribes. This study does not include tribal roadways.

### 3.4 Functional Classification

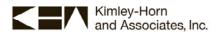
Functional classification defines the hierarchy of streets in a roadway system according to the character of service they are intended to provide as it relates to mobility, access, and trip length. Roadway design standards for each type of roadway are established by agencies responsible for roadway maintenance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

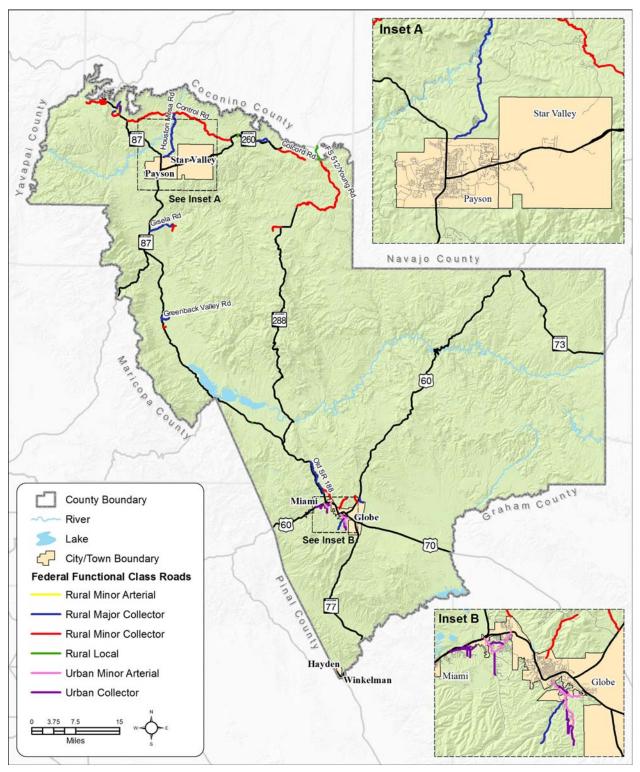
The Federal Highway Administration (FHWA) has developed guidelines for federal functional classification of roadways. The federal functional classification groups include principal arterials, minor arterials, collectors, and local roadways. In general, the principal and minor arterials provide a high level of mobility for the traveling public with minimal allowance for access, while the collectors and local roadways (in areas with a population less than 5,000) and urban 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 5** and are summarized in **Table 9**.

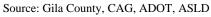
Federal Functional Classification	Number of Miles Classified in the County Road System
Rural Minor Arterial	0.3
Rural Major Collector	32.3
Rural Minor Collector	67.8
Rural Local	3.6
Urban Minor Arterial	4.7
Urban Collector	6.9
Total	115.3

Table 9 – Miles of County Roads that are Federally Functionally Classified

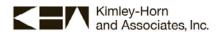
Source: ADOT 2011 HPMS











# 3.5 Existing Traffic Volumes

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. Available traffic volume data was reviewed from the 2011 HMPS database of federally functionally classified roads and from 2013 traffic counts taken by Gila County where noted. Roadways with traffic volumes in excess of 1,000 vehicles per day are shown in **Table 10**. The highest traffic volumes occur on segments of Golden Hill Road, Main Street, Jesse Hayes Road, and Houston Mesa Road. All of the roads on this table have two through lanes (one lane in each direction).

### 3.5.1 Levels of Service

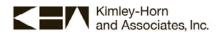
Roadway traffic operations are defined and categorized by the amount of delay experienced by an average driver. The operations are categorized by a grading system called level of service (LOS), which has a letter designation ranging from A (no delay) to F (severe congestion). The LOS definitions for each letter designation are given in **Table 11** and are based on LOS definitions provided in the Highway Capacity Manual 2010 (HCM).

For a planning level analysis, the level of service is determined based on the ratio of traffic volume on the roadway to the capacity of the roadway. Daily volume thresholds for the LOS letter designations have been developed for the functionally classified study area roadways and are shown in **Table 12**. 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 12** and the daily volumes in **Table 10**, all study area roadway segments for which current traffic volume data was available provide LOS C or better.



### Table 10 – Average Daily Traffic Volumes on Higher-Volume Gila County Roadways

Road	From	То	Current ADT
Old Oak Street	Globe Avenue	Railroad Avenue	1,016
Saguaro Drive	Daybreak Drive	0.15 miles northeast of Daybreak Drive	1,036
Pine Creek Canyon Road	SR 87	Cedar Meadow Lane	1,089
Old Highway 188	FS 71	SR 188	1,151
Fossil Creek Road	0.54 miles east of FS 708/Fossil Creek Road	Rimwood Road	1,220
Old SR188	Hicks Road	SR 188	1,345
Railroad Avenue	Old Oak St.	Ragus Road	1,352
Icehouse Canyon Road	Jesse Hayes Road	0.23 miles south of Jesse Hayes Road	1,371*
Walliman Road	Beer Tree Crossing	Highland Drive	1401*
Old Oak Street	Railroad Avenue	Locomotive Drive	1,494
Ragus Road	Railroad Avenue	0.33 miles east of Railroad Avenue	1,574
Six Shooter Canyon Road	Jesse Hayes Road	0.12 miles south of Jesse Hayes Road	1,615*
Hardscrabble Mesa Road	Southard Drive	SR 87	1,702
Beer Tree Crossing	Jesse Hayes Road	0.02 miles west of Upper Pinal Creek Road	1,767
Beer Tree Crossing	Crossing 0.02 miles west of Upper Saguaro Drive Pinal Creek Road		1,767
Icehouse Canyon Road	Tonto NF	Hagen Road	1,778
Icehouse Canyon Road	Hagen Road	El Paso Way	1,778
Houston Mesa Road	0.20 miles south of FS 420	FS 420	1,835
Houston Mesa Road	FS420	Control Road	1,835
Russell Road	Hospital Drive	Golden Hill Road	1,844*
Russell Road	Besich Blvd/Hope Lane	Huie Street	1,849*
Main Street	Roberts Drive	Golden Hill Road	1,974
Roberts Drive	Russell Road	Main St	1,974
Russell Road	Golden Hill Road	Golden Street	1,979*
Six Shooter Canyon Road	Marlin Drive	Cherokee Road	1,994
Old Oak Street	Locomotive Drive	US 60	2,028
Six Shooter Canyon Road	Cherokee Road	Icehouse Canyon Road	2,093
Fossil Creek Road	Fuller Road	SR 87	2,098
Golden Hill Road	Russell Road	Main Street	2,160
Fossil Creek Road	Rimwood Road	Fuller Road	2,187



Road	From	То	Current ADT
Walliman Road	Beer Tree Crossing	0.13 miles east of Beer Tree Crossing	2,194*
Main Street	US 60	0.44 miles south of US 60	3,607*
Houston Mesa Road	0.50 miles east of SR 87	0.20 mi south of FS 420	3,670
Jesse Hayes Road	0.09 miles northwest of Beer Tree Crossing	Oil Circle Drive	4,178
Main Street	Golden Hill Road	Short Avenue	4,707

Source: ADOT 2011 HPMS, except where noted by \*, which indicates a 2013 traffic count

### Table 11 – Level of Service Definitions

LOS	Definition
А	Primarily free-flow operation; virtually no delay.
В	Reasonably unimpeded operation; the presence of other users in the traffic stream begins to be noticeable.
С	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)

### Table 12 – Level of Service Daily Volume Thresholds

Functional Classification	Under Capacity (LOS A–C)	Near Capacity (LOS D)	At Capacity (LOS E)	Over Capacity (LOS F)
Rural Minor Arterial	< 9,800	9,800 – 11,700	11,700 – 13,000	> 13,000
Rural Minor Collector	< 5,500	5,500 - 6,700	6,700 - 7,400	> 7,400

Source: CYMPO Regional Transportation Plan

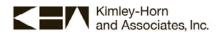
### 3.5.2 Future Traffic Volumes

No previously approved traffic volume projections are available for Gila County roadways. Future transportation volume projections were developed using the compound annual growth rate of 0.37% per year, which was the rate assumed in the development of the ADOA Office of Employment and Population Statistics population projections. Future traffic volumes projections are provided in **Table 13**. All roadways are assumed to continue to have two through lanes (one lane in each direction).



Road	From	То	Current ADT <sup>1</sup>	2033 ADT
Old Oak Street	Globe Avenue	Railroad Avenue	1,016	1,102
Saguaro Drive	Daybreak Drive	0.15 miles northeast of Daybreak Drive	1,036	1,124
Pine Creek Canyon Road	SR 87	Cedar Meadow Lane	1,089	1,181
Old Highway 188	FS 71	SR 188	1,151	1,248
Fossil Creek Road	0.543 miles east of FS 708/Fossil Creek Road	Rimwood Road	1,220	1,323
Old SR188	Hicks Road	SR 188	1,345	1,459
Railroad Avenue	Old Oak St.	Ragus Road	1,352	1,466
Icehouse Canyon Road	Jesse Hayes Road	0.23 miles south of Jesse Hayes Road	1,371*	1,476
Walliman Road	Beer Tree Crossing	Highland Drive	1401*	1,508
Old Oak Street	Railroad Avenue	Locomotive Drive	1,494	1,620
Ragus Road	Railroad Avenue	0.33 miles east of Railroad Avenue	1,574	1,707
Six Shooter Canyon Road	Jesse Hayes Road	0.12 miles south of Jesse Hayes Road	1,615*	1,739
Hardscrabble Mesa Road	Southard Drive	SR 87	1,702	1,846
Beer Tree Crossing	Jesse Hayes Road	0.022 miles west of Upper Pinal Creek Road	1,767	1,917
Beer Tree Crossing	0.022 miles west of Upper Pinal Creek Road	Saguaro Drive	1,767	1,917
Icehouse Canyon Road	Tonto NF	Hagen Road	1,778	1,928
Icehouse Canyon Road	Hagen Road	El Paso Way	1,778	1,928
Houston Mesa Road	0.20 miles south of FS 420	FS 420	1,835	1,990
Houston Mesa Road	FS420	Control Road	1,835	1,990
Russell Road	Hospital Drive	Golden Hill Road	1,844*	1,985
Russell Road	Besich Blvd/Hope Lane	Huie Street	1,849*	1,991
Main Street	Roberts Drive	Golden Hill Road	1,974	2,141
Roberts Drive	Russell Road	Main St	1,974	2,141
Russell Road	Golden Hill Road	Golden Street	1,979*	2,131
Six Shooter Canyon Road	Marlin Drive	Cherokee Road	1,994	2,163
Old Oak Street	Locomotive Drive	US 60	2,028	2,200
Six Shooter Canyon Road	Cherokee Road	Icehouse Canyon Road	2,093	2,270
Fossil Creek Road	Fuller Road	SR 87	2,098	2,276
Golden Hill Road	Russell Road	Main Street	2,160	2,343

### **Table 13 – Future Traffic Volumes**



Road	From	То	Current ADT <sup>1</sup>	2033 ADT
Fossil Creek Road	Rimwood Road	Fuller Road	2,187	2,372
Walliman Road	Beer Tree Crossing	0.13 miles east of Beer Tree Crossing	2,194*	2,362
Main Street	US 60	0.44 miles south of US 60	3,607*	3,884
Houston Mesa Road	0.50 miles east of SR 87	0.20 mi south of FS 420	3,670	3,981
Jesse Hayes Road	0.09 miles northwest of Beer Tree Crossing	Oil Circle Drive	4,178	4,532
Main Street	Golden Hill Road	Short Avenue	4,707	5,105

<sup>1</sup>Source: ADOT 2011 HPMS, analysis by Kimley-Horn and Associates, Inc., except where noted by \*, which are 2013 daily traffic counts

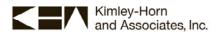
# 3.6 Bridge Condition

**Table 14** lists bridge sufficiency ratings obtained from the ADOT Bridge Group for bridges owned or maintained by Gila County. The federal definition states that highway structures spanning or having a combined span of at least 20 feet are classified as bridges.

Structure Number	Bridge Name	Structure Length in Feet	Functionally Obsolete	Sufficiency Rating
8605	Pinal Creek Reinforced Concrete Box Culvert	77	No	99.70
7871	Houston Mesa Road Bridge	215	No	98.35
8914	Icehouse Canyon Bridge # 3	44	No	97.94
8706	Pinal Creek Bridge	387	No	92.78
7862	Pine Creek Bridge	41	No	88.68
8194	Pinal Creek Reinforced Concrete Box Culvert	20	No	79.51
8604	Pinal Creek Bridge	34	No	76.21
10532	Christopher Creek Bridge	46	No	72.55
8198	Icehouse Canyon Bridge 1	35	Yes	71.54
8197	Icehouse Canyon Bridge 2	30	No	68.58
10839	Bloody Tanks Wash Bridge	34	Yes	36.03
7882	Tonto Village Bridge	40	Yes	21.82
7881	Rim Trail Bridge	48	Yes	19.96

Table 14 – Bridge Ratings for Gila County Bridges

Source: ADOT



The result of the bridge sufficiency rating formula is a percentage in which 100% represents an entirely sufficient bridge and 0% represents an entirely insufficient or deficient bridge. The sufficiency rating is never less than 0 or more than 100. For structures that are classified as "functionally obsolete" or "structurally deficient" the letter "F" or "S" follows the rating number.

Federal regulations dictate that every bridge must be inspected every two years. The ADOT Bridge Group does bridge inspections in Arizona and submits to FHWA all of the required information for each bridge. The FHWA uses these numbers to determine the sufficiency rating. Many factors are included in the ratings. The sufficiency rating does not necessarily indicate a bridge's ability to carry traffic loads. It does help determine which bridges may need repair or replacement. A bridge's sufficiency rating affects its eligibility for federal funding for maintenance, rehabilitation, or replacement activities. For bridges to qualify for federal replacement funds, they must have a rating of 50 or below. To qualify for federal rehabilitation funding, the rating must be 80 or below. Eight bridges in Gila County have a sufficiency rating lower than 80. The bridges with sufficiency ratings below 80 are summarized in **Table 15**.

Bridge Name	Sufficiency Number
Pinal Creek Reinforced Concrete Box Culvert	79.51
Pinal Creek Bridge	76.21
Christopher Creek Bridge	72.55
Icehouse Canyon Bridge 1	71.54
Icehouse Canyon Bridge 2	68.58
Bloody Tanks Wash Bridge	36.03
Tonto Village Bridge	21.82
Rim Trail Bridge	19.96

 Table 15 – Gila County Bridges with a Sufficiency Rating of 80 or Below

Source: ADOT

In Gila County, four bridges have been rated as functionally obsolete:

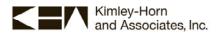
- Tonto Village Bridge;
- Rim Trail Bridge;
- Icehouse Canyon Bridge 1; and
- Bloody Tanks Wash Bridge.

The proposed Tonto Creek Bridge and nearby Oak Creek Bridge are currently under design. Gila County has secured funding for Oak Creek Bridge and is still looking to secure the funding necessary on Tonto Creek Bridge. Both bridges are needed to provide all-weather access through the Tonto Basin community.

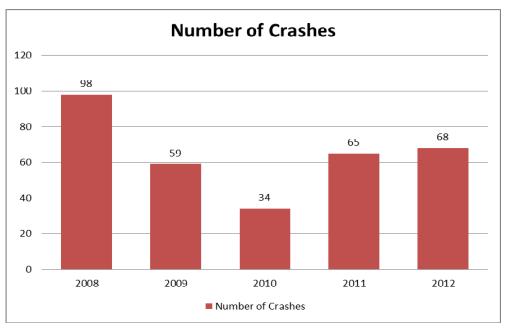
# 3.7 Safety

## 3.7.1 Crash Analysis

Crash data was obtained from ADOT's Safety Data Mart, Gila County, and USFS for a five-year analysis period from January 1, 2008 through December 31, 2012. Based on crash data included in the ADOT Safety Data Mart, there were a total of 324 motor vehicle crashes on study area roadways (county roads)

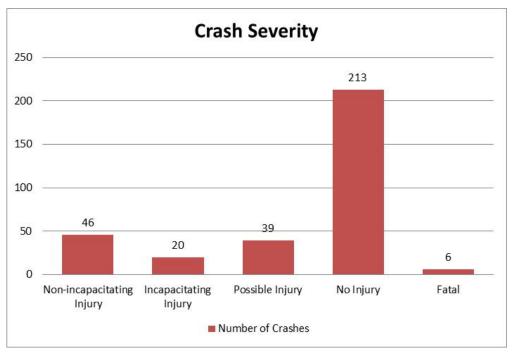


within the analysis period. The highest number of crashes on county roadways occurred in 2008. The number of crashes per year is shown in **Figure 6**. Crash severity is shown in **Figure 7**. Of the 324 crashes, there were six fatal crashes and 105 injury crashes.



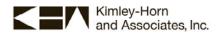
Source: ADOT Safety Data Mart

Figure 6 – Number of Crashes, Gila County Roadways, 2008-2012



Source: ADOT Safety Data Mart

### Figure 7 – Crash Severity, Gila County Roadways, 2008-2012



Fatal crashes occurred on the following roadways:

- FS 272/Flowing Spring Road (2008): motorcycle, collision with tree/brush stump;
- Beer Tree Crossing (2009): motorcycle/ all-terrain vehicle (ATV), overturn rollover;
- FS 203/Cherry Creek Road (2011): motorcycle/ATV, overturn rollover;
- Deer Creek Drive (2011): motorcycle/ATV, overturn rollover;
- FS 420/Pyle Ranch Road (2011): motorcycle/ATV, overturn rollover; and
- FS 406 (2012): overturn rollover.

Four of the six fatal crashes were categorized as either inattention/distraction or speed too fast for conditions. Alcohol was cited as a contributing factor in three of the crashes including the only non-motorcycle/ATV crash. Five of the six fatal crashes involved motorcycles/ATVs.

There were 20 incapacitating crashes. Seventeen of the crashes were single vehicle crashes. Speed was identified as a factor in ten of the crashes. Alcohol was identified as a factor in six of the crashes.

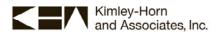
The locations of all 324 crashes are shown in **Figure 8**. The locations of fatal and incapacitating crashes are shown in **Figure 9**. Bicycle and pedestrian crashes are shown graphically in **Figure 10**.

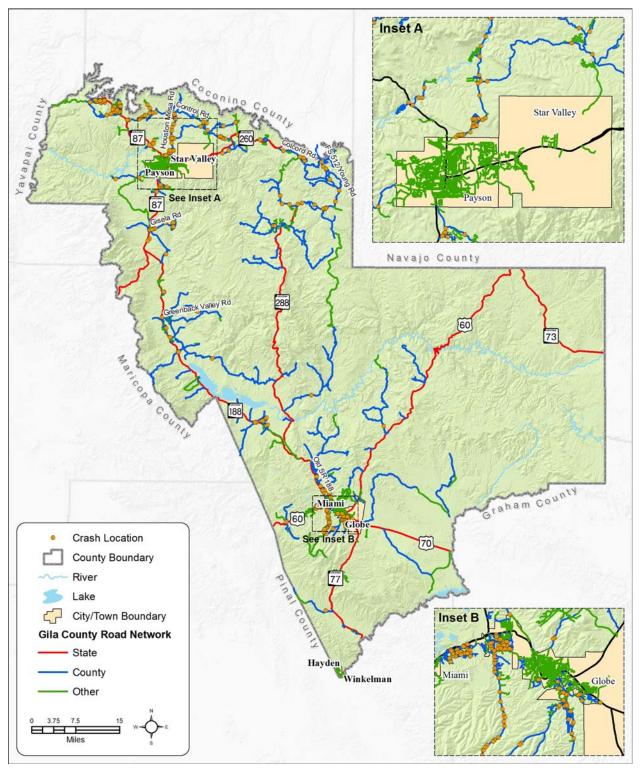
The collision manner of the crashes is shown in **Table 16**. The vast majority of crashes (66%) were single vehicle crashes.

Manner of Collision	Number of Crashes	Percentage of Crashes
Angle (front to side)(other than left turn)	15	4.6%
Head On	9	2.8%
Left Turn	3	0.9%
Other	8	2.5%
Rear End	19	5.9%
Rear to Rear	4	1.2%
Rear to Side	12	3.7%
Sideswipe Opposite Direction	19	5.9%
Sideswipe Same Direction	19	5.9%
Single Vehicle	213	65.7%
Unknown	3	0.9%
TOTAL	324	100%

Table 16 – Crashes by Manner of Collision

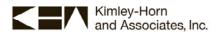
Source: ADOT Safety Data Mart

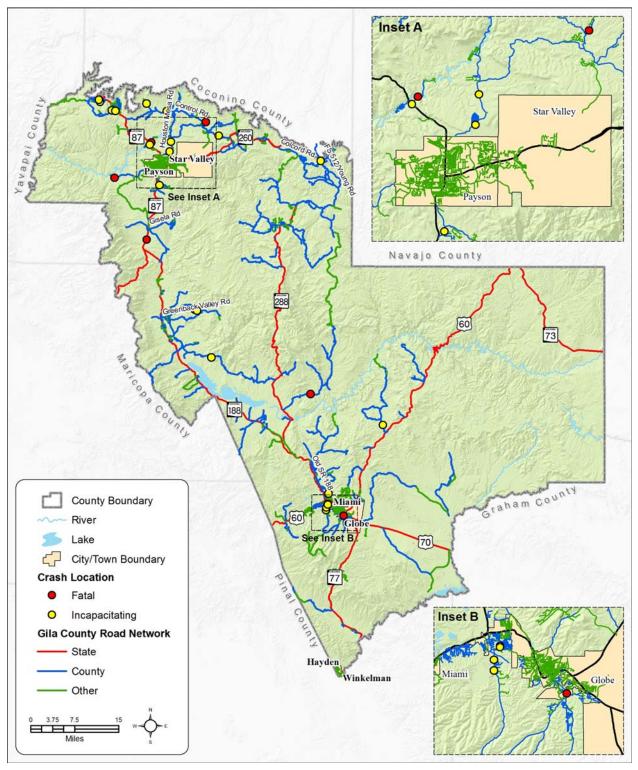




Source: Gila County, CAG, ADOT, ASLD

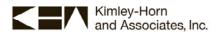


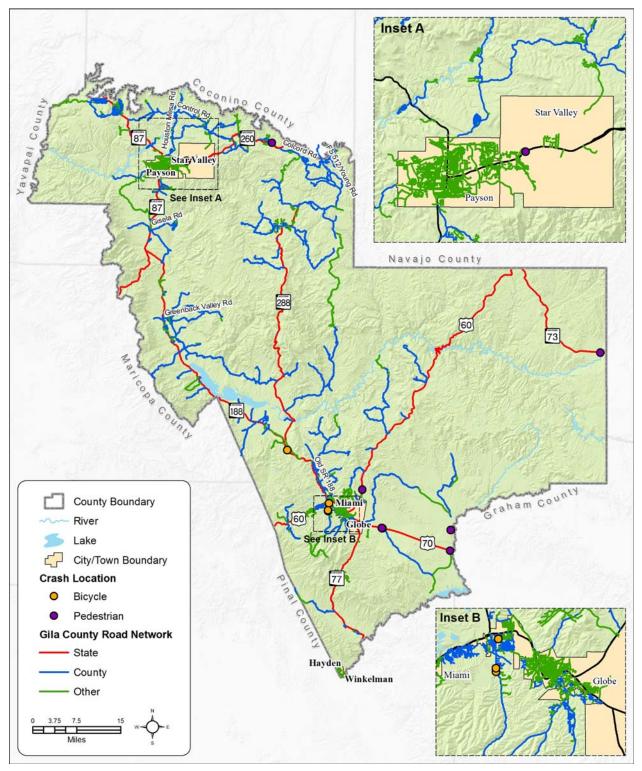




Source: Gila County, CAG, ADOT, ASLD

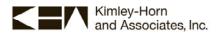






Source: Gila County, CAG, ADOT, ASLD





As the data illustrates, a high number of crashes are single vehicle crashes in which speed was a contributing factor. Furthermore, five of the six fatal crashes involved motorcycles/ATVs. These statistics demonstrate a need to improve driver education regarding how to drive safely, particularly on rural roads. Speed limits should always be adhered to. The public should also be warned about the dangers of alcohol consumption while riding motorcycles or ATVs.

Additional crash data is included in Appendix B.

Crash data for the study area segments with higher numbers of crashes is presented in **Table 17**. These locations were identified through visual inspection and review of the ADOT database. Each segment has three or more crashes over the five-year analysis period. El Camino Street was added to the list due to its close proximity to Broadway Street. These roadway segments are candidates for more detailed safety analysis.

The crash analysis identified the need to conduct more detailed safety evaluations (e.g., Road Safety Assessments (RSA)) at the following locations:

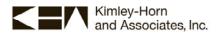
- Broadway Street/El Camino Street intersection (a RSA has since been conducted at this location and is discussed later in this document);
- Young Road (FS 512) 0.7-mile segment east of FS 202;
- Russell Road (FS 55) 5.5-mile segment from Roberts Drive to Kellner Canyon Road; and
- Houston Mesa Road 9.64-mile segment from SR 87 to Control Road.

### 3.7.2 Gila County Road Activities-Accident Report Data

A Road Activities-Accident Report, dated March 12, 2013, was provided by Gila County. Crashes were reviewed within the Road Activities-Accident Report to determine if they are included in the ADOT Safety Data Mart. A review of the Road Activities-Accident Report identified up to 81 crashes that are contained within the Road Activities-Accident Report that are not included in the ADOT Safety Data Mart. Seventy crashes within the Road Activities-Accident Report are included in the ADOT Safety Data Mart. It should be noted that the data provided in the Road Activities-Accident Report is limited and does not provide sufficient data for a meaningful analysis. **Table 17** includes notations where additional crashes from the Road Activities-Accident Report were identified that are not included in the ADOT Safety Data Mart.

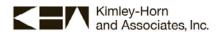
### 3.7.3 USFS Crash Data

A spreadsheet containing additional crash data was provided by USFS in April 2013. This crash data was extracted from the USFS law enforcement record database for crashes responded to by USFS law enforcement staff. There were 19 crashes in the study analysis period of 2008-2012, 14 of which were single vehicle crashes. Only one of the 19 crash records appears to match a crash record in the ADOT Safety Data Mart – the sole fatal crash in the dataset. It should be noted that the crash data provided in the USFS spreadsheet is limited and does not provide sufficient data for a meaningful analysis.



Nearby Segment Number						
Location	Intersecting Roadways	Road #	Length (miles)	of Crashes	Crashes per mile	Comments
Broadway Street	El Camino Street	523	0.33	6	18.2	Paved 3 crashes are associated with a driveway
El Camino Street	Broadway Street	1193	0.11	2	18.2	-
Control Road	Houston Mesa Road/SR 87	1846	23	19	.82	Unpaved 16 single vehicle crashes 11 speed related
Fossil Creek Road	SR 87	380, 1823	2.98	4	1.34	Paved 3 speed related
FS 272	Flowing Spring Road/SR 87	1616	1.99	4	2.0	Unpaved 1 Fatal crash 4 injury crashes 2 speed related
FS 428	Hardscrabble/ Mesa Road	-	6.5	4	0.61	Unpaved, 4 ran off road/ditch/embankme nt
FS 55 Russell Road	Russell Road/ Russell Gulch Road/ Kellner Canyon	685	3.4	13 *5 additional GC crashes	5.29	Unpaved 5 speed related, 3 inattention
Gibson Ranch Road	SR 87	706	2.58	5	1.94	Paved
Gisela Road	SR 87	176	5.22	5	0.96	Paved 4 ran off road/rollover
Golden Hill Road	Alcott Drive	706	2.58	4	1.55	Paved 2 alcohol related
Houston Mesa Road	SR 87	696	9.64	30 *5 additional GC crashes	3.63	Paved 16 ran off road 4 collision with animal/wild game
Russell Road	Roberts Drive/ Quail Run/ Pinal Canyon/ Lancaster Street	1396	2.1	14 * 1 additional GC crash	7.14	Paved 2 collisions with bicyclists
Young Road (FS 512)	FS 202	1518	0.7 (segment approaching FS 202	6	8.57	Unpaved 3 crashes classified as "negotiating a curve"

Sources: ADOT Safety Data Mart, Gila County Road Activities-Accident Report, and Kimley-Horn and Associates, Inc. \* Crashes recorded by Gila County Sheriff's Office but not reported to ADOT Safety Data Mart



# 3.8 Pavement Management

### 3.8.1 Pavement Conditions

A roadway pavement condition inventory was conducted via visual windshield surveys in May 2013 for the paved roadway segments maintained by Gila County.

Gila County has two maintenance regions: the Timber region (the Payson/Mogollon Rim area); and the Copper region (Globe area). For purposes of this study, the inventory was divided into these same two regions. Two survey crews each consisting of one Kimley-Horn staff member and one Gila County staff member inventoried the roadway conditions in each region, respectively.

Although a few conventional asphalt-surfaced roadways exist in Gila County, the majority of the paved roadways consist of a chip sealed wearing course generally placed on aggregate base or subgrade. The County has a proactive program for roadway maintenance that includes crack sealing and chip sealing. The County makes a concerted effort to chip seal roadway surfaces on a five- to seven-year cycle as budgets allow. Gila County has diverse geographical and climatic site conditions, from the arid Copper region at a lower elevation to the Timber region at a higher elevation that is subject to more significant climate cycling and adverse weather conditions. These factors have a significant impact on pavement life cycle.

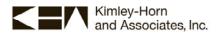
Since 2005, Gila County has been proactive in developing and maintaining a Pavement Management System (PMS) for the County-maintained paved roadways. The County utilizes the Cartegraph asset management software platform to store paved roadway inventory/condition data and to develop maintenance and rehabilitation plans. Current paved roadway inventory data stored in Cartegraph for Gila County includes road name, area, beginning point, end point, functional classification, number of lanes, segment length, roadway width, area, and Pavement Condition Index (PCI) values from 2005.

The roadway pavement conditions were visually rated on a scale of 0 to 100 with a rating of 81-100 being Excellent, 61-80 being Good, 41-60 being Fair, 21-40 being Poor, and 0-20 being Failed. Overall, the majority of the roadways within the Timber region are in Good to Fair condition with the most common distresses observed being low-severity longitudinal and transverse (L&T) cracking, alligator cracking, edge cracking, and weathering/raveling. The majority of the paved roadways within the Copper region are in Fair to Poor condition with the most common distresses observed being medium-severity block and alligator cracking in addition to low- to medium-severity weathering/raveling.

The roadway segments rated as Failed or Poor in both the Timber and Copper regions generally exhibit a significant amount of medium- to high-severity alligator cracking, medium- to high-severity edge-cracking, and patching, resulting in a loss of surface integrity and ability to safely and efficiently accommodate the vehicular traffic being applied to the roadway surface.

The information regarding the type, severity, and extent of pavement distresses was entered into Gila County's existing Cartegraph system to generate a pavement condition rating called the Overall Condition Index (OCI) that is calculated based on equations within Cartegraph. The initial visual condition ratings were compared to the OCI ratings to generate a final overall pavement condition rating.

In a majority of cases, the two ratings were within a reasonable and expected standard of error assumed to be +/- 20 points. For these cases, the OCI rating was utilized as the overall pavement condition rating. When the comparison of ratings exceeded the expected standard of error, the visual condition rating was utilized as the overall pavement condition rating because Cartegraph OCI ratings can vary significantly depending on the relationship between segment length and pavement distress coverage area. For segments with no OCI rating due to the segment not being included in Cartegraph, the visual condition rating was utilized as the overall pavement condition rating.



Pavement condition ratings are shown graphically in **Figure 11**. A summary of pavement condition ratings by number of miles of paved roadways is shown in **Table 18**. More detailed information from the pavement condition inventory is provided in **Appendix C**.

Region	Miles of Road with Excellent Rating (81-100)	Miles of Road with Good Rating (61-80)	Miles of Road with Fair Rating (41-60)	Miles of Road with Poor Rating (21-40)	Miles of Road with Failed Rating (0-20)
Copper	2.86	8.23	17.63	31.88	13.49
Timber	13.70	37.93	31.12	16.43	1.89
Total	16.56	46.16	48.75	48.31	15.38

### Table 18 – Pavement Ratings Summary

Source: Kimley-Horn and Associates, Inc.

## 3.9 Bicycle and Pedestrian Facilities

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).

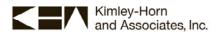
### 3.9.1 Bicycle Facilities

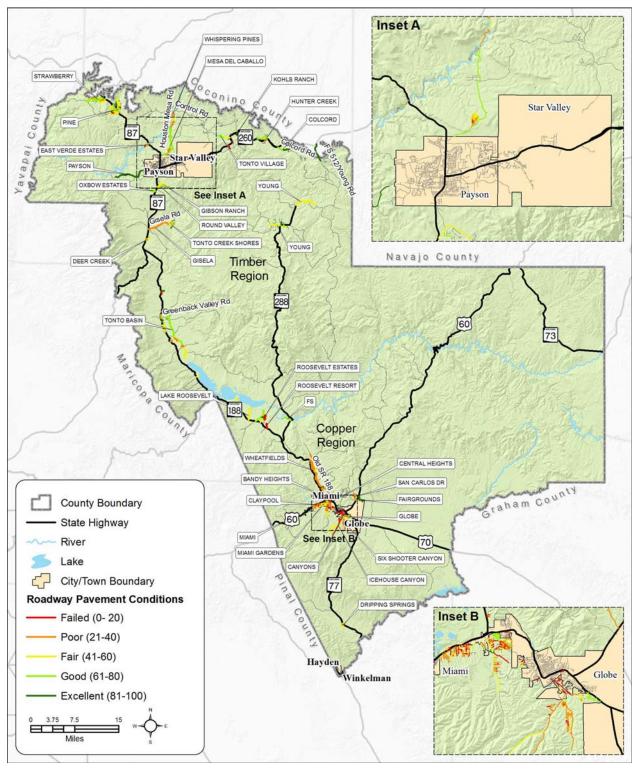
Elements that make up bicycle networks can include designated bike routes, striped bike lanes, paved shoulders along roadways, wide outside lanes, shared use paths, and sidewalks.

Per the AASHTO Guide for the Development of Bicycle Facilities (2012), paved shoulders provide adequate bicycle facilities on rural highways (speed limits of 45 to 55 miles per hour (mph)) that connect town centers and other major attractors. Shoulder width should be a minimum of 4 feet on uncurbed sections with no vertical obstructions immediately adjacent to the roadway. Shoulder width of 5 feet is recommended from the face of guardrail, curb, or other roadside barrier to provide additional operating width. Additional shoulder width is desirable on roadways with higher vehicle speeds, or if use by heavy vehicles, recreational vehicles, or buses is considerable. In constrained locations, where right-of-way width is limited, a paved shoulder could be considered only on uphill sections.

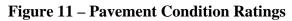
The Oregon Department of Transportation publishes a bike lane decision matrix (see **Figure 12**) to help determine what types of roadways should include bicycle lanes or striped paved shoulders. The matrix shows that roadways with less than 1,000 vehicles per day typically do not require bicycle lanes/striped paved shoulder. The matrix also shows that roads with traffic volumes that exceed 5,000 vehicles per day generally should be considered for bicycle lanes/striped paved shoulders.

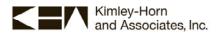
There are limited existing bicycle facilities on Gila County roads. Fairgrounds Road has a wide shoulder that is marked as a bicycle lane. Several of the state highways that connect to County roadways have wide shoulders. State highways and their shoulder widths are noted in the ADOT Bicycle Route Map shown herein as **Figure 13**. ADOT recently updated its Bicycle and Pedestrian Plan for state highways.

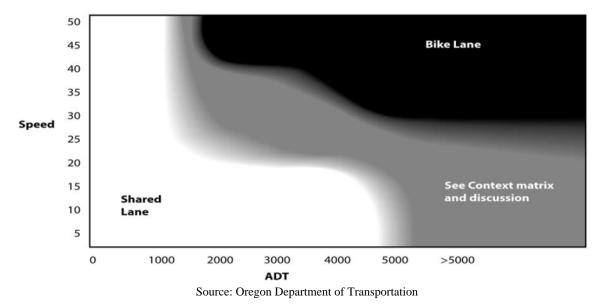




Source: Kimley-Horn and Associates, Inc.







**Figure 12 – Bike Lane Decision Matrix** 

### 3.9.2 Pedestrian Facilities



Source: Google

3.9.3 Trails

Pedestrian networks are typically comprised of sidewalks, trails, and shared use paths. Few sidewalks exist on County roadways. Those that do exist are generally located within or near the incorporated communities of Globe, Miami, and Payson and there are often gaps in the sidewalk network. County roadways containing sidewalks include Broadway Street from 2<sup>nd</sup> Street to Old Oak Street, several roadways adjacent to the Miami Public Schools complex, and Six Shooter Canyon Road from Winchester Road to Remington Road. The sidewalk segment on Six Shooter Canyon Road provides access between residential areas and Gila Pueblo College Road and is planned to be extended from Remington Road to Cherokee Road through a Transportation Enhancement grant. Another approved Transportation Enhancement project is the construction of sidewalks along Main Street in Globe from US 60 to the intersection of Golden Hill Road.

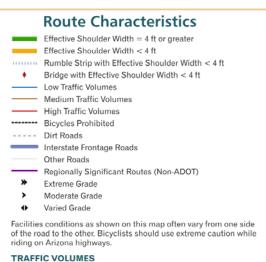
Gila County has also received a Transportation Enhancement grant to install eleven pedestrian rest shelters in the Pine-Strawberry area. The structures can also be used as bus shelters for school children.

The Town of Payson has adopted a *Trails Plan* that proposes the creation of additional trail systems, routes, and access facilities for hiking, biking, equestrian, and other recreational uses. The plan proposes preserving trail linkages between the Town of Payson and the surrounding National Forests. The Trail System Map is shown in **Figure 14**.

The Tonto National Forest provides a number of hiking trails in Gila County, which are shown in **Figure 15**. These include trail systems in the Globe and Miami areas, such as the Ferndell Trail, East Mountain Trail, Icehouse Canyon Trail, Six Shooter Canyon Trail, and Mill Creek Trail.







All traffic volumes on this map are Annual Average Daily Traffic (AADT). AADT is the total number of vehicles passing a given point, in both directions, during a year, divided by 365 days, given in vehicles per day (vpd).



A typical hourly traffic volume in one direction is approximately equal to 6% of the AADT, so a 7,500 AADT is aproximately 450 vehicles per hour (vph), and a 2,500 AADT is approximately 150 vph.

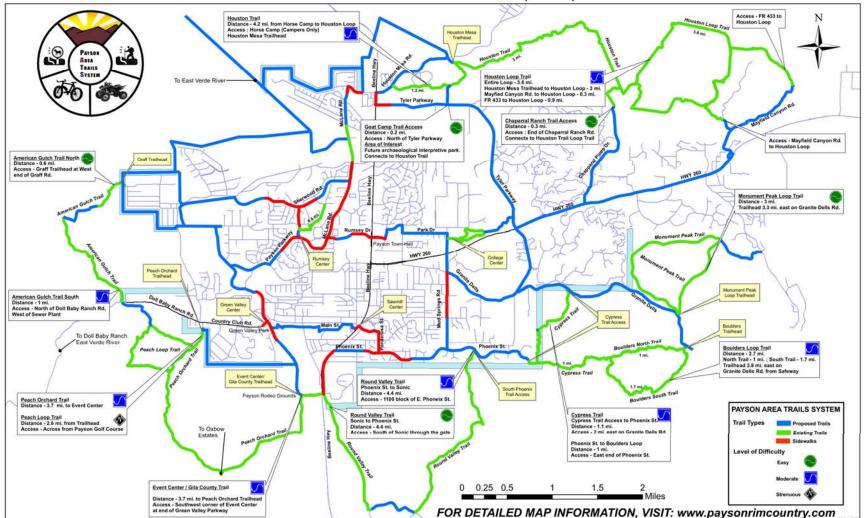
#### GRADES

Arrows are shown in direction of grade ascent. Gradient information is provided as a general aid to cyclists in planning tours and is not intended to be all inclusive of grade conditions along the bicycle routes shown. Their purpose is merely to advise cyclists of some of the steeper climbs which may be encountered throughout the state.

Source: ADOT

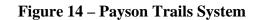


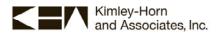


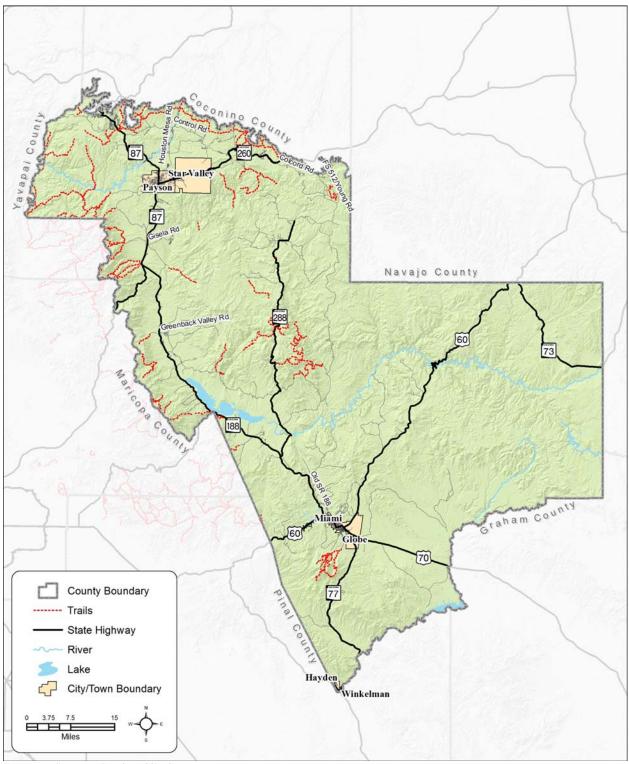


### PAYSON AREA TRAILS SYSTEM (PATS)

Source: Town of Payson

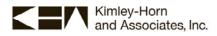






Source: U.S. Forest Service, Gila County





## 3.9.4 Goals, Objectives, and Policies Regarding Multimodal Facilities

Existing planning documents were reviewed regarding existing goals, objectives, and policies associated with multimodal facilities.

#### **Gila County Comprehensive Plan – Transportation Element**

The Gila County Comprehensive Plan Circulation Element considers not only roadway networks, but also a regional effort to create a multimodal system to accommodate future pedestrians, bicycles, and public transportation. Goals from the document relating to multimodal and pedestrian and bicycle facilities are presented below (with bolding of text added for emphasis):

Goal 5: A safe, efficient and cost effective multimodal circulation system that provides for adequate mobility and access.

Objective 5.1: Provide a balanced transportation system that promotes multimodal transportation opportunities and ensures adequate emergency access. Policy 5.1a: The County shall utilize street design and construction standards that could incorporate multimodal elements, such as **bikeways and pedestrian facilities**, within the developed rural communities. Policy 5. Ib: The County shall employe opportunities for the use and incorporation of multimod

Policy 5.1b: The County shall explore opportunities for the use and incorporation of multimodal elements such as natural surface pedestrian trails and horse paths in-lieu of traditional pedestrian elements such as sidewalks where appropriate.

Policy 5.1c: The County shall incorporate safe crossing points for major non-vehicular circulation routes along major and minor arterial traffic routes within the County. Policy 5.1d: The County shall work with the Central Association of Governments and the incorporated cities and towns to extend and enhance existing multimodal transportation elements in a regional manner.

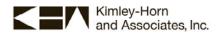
Policy 5.1h: The County shall encourage new development to provide adequate facilities for non-motorized and alternative transportation modes.

The Gila County Comprehensive Plan states that:

"Alternative modes of transportation should be strongly encouraged to play a larger role in the transportation system. The vast majority of trips are currently by automobile. Other modes for a balanced circulation system include bicycling, walking, and transit alternatives with efficient placement of future employment and services."

It further states that with respect to pedestrian facilities:

"With proper design and adequate facilities, walking can be a mode of travel for school, convenience shopping, recreation, social, and even work trips. Pedestrian facilities can be accommodated as enhancements with new roadways or maintenance. All new developments within urbanized areas will be required to construct sidewalks adjacent to the roadway, as per the Gila County Roadway Design Standards Manual. This will encourage development of a pedestrian system."



# **4 TRANSPORTATION FINANCE**

This section includes an assessment of revenue sources that can be used to fund transportation improvements.

# 4.1 Gila County Transportation Excise Tax Program

### **4.1.1** Revenues from the Transportation Excise Tax

In 1994, Gila County voters passed a half-cent excise tax to pay for highway and street improvements and transportation projects. The Gila County Transportation Excise Tax program has a sunset date of December 31, 2014. At the start of the program, excise tax revenues were not identified separately from Highway User Revenue Fund (HURF) revenue funds, and data was not available on the revenues from the excise tax individually. Since January 1999, however, information on the excise tax revenues is available separately and totals \$38,815,263.

Since July 2002, excise tax revenues total \$31,570,836. These data indicate that revenues have generated approximately \$3 million per year. For the most current fiscal year, excise tax revenues and estimates for 2013 and 2014 are summarized in **Table 19**.

Тах	Estimated Revenues, 2012	Actual Revenues, 2012	Estimated Revenues 2013 <sup>1</sup>	Estimated Revenues 2014 <sup>2</sup>
<sup>1</sup> / <sub>2</sub> cent Transportation Excise tax	\$2,818,450	\$2,851,371	\$2,915,834	\$2,981,732
1/2 cent interest	\$16,000	\$24,635	-	-
Total	\$2,834,450	\$2,876,006	\$2,915,834	\$2,981,732

Table 19 – 2012 and 2013 Estimates Excise Tax Revenues

1. Source: Gila County, Arizona Adopted budget, 2012/2013, Schedule C, page 27,

http://www.gilacountyaz.gov/documents/finance/docs/Budgets/Final\_Adopted\_2012\_2013\_Budget.pdf, referenced 2/18/13 2. Estimated by Kimley-Horn and Associates, Inc., based on growth rate from 2012 to 2013 excise tax revenues of 2.26%

# 4.1.2 Transportation Excise Tax Expenditures

Transportation excise tax expenditures have included major transportation projects, paving projects, maintenance projects, and funding for projects to support transportation public works, such as equipment, a maintenance yard in Star Valley, capital purchases related to transportation, and related expenses. A summary of projects completed with transportation excise tax funds are provided in **Table 20**.



### Table 20 – Projects Completed with Transportation Excise Tax Funds

#### STRAWBERRY

- Fossil Creek Road (paving and drainage)
- Louthian Road (paving and drainage)
- Strawberry Lane (paving)
- Nash Trail (paving and drainage improvements)
- Lost Oak Road (roadway drainage improvements)
- Juniper Road (roadway drainage improvements)
- Diane Circle (roadway drainage improvements)
- Judy Lane (paving and drainage improvements)
- Rimwood Road (paving)
- Elk Road (paving)
- Parkinson Drive (paving)
- Western Way (paving and drainage improvements)
- Lufkin Drive (paving)
- Strawberry Pond Dam (retention basin)

#### PINE

- · Pine Creek Canyon Road Improvement Project
- Fuller Drive (paving and alignment)
- Randall Road (intersection improvement and paving)
- · South Road (intersection improvement and paving)
- Valley View Drive (paving)
- · Apache Trail (paving)
- Mistletoe Road (paving)
- Holly Drive (paving)
- Cedar Meadow Lane (Built Bridge and paving)
- Pine Cone Trail (paving and drainage improvements)
- Cyprus Street (paving and drainage improvements)
- Mohawk Street (paving and drainage improvements)
- Apache Trail (paving and drainage improvements)
- Ute Trail (paving and drainage improvements)
- Prince Drive (paving)
- Robbin Lane (paving)
- Fara Drive (paving)

#### PAYSON/STAR VALLEY AREA

- Detroit Drive (paving)
- Oxbow Trail (paving)
- Gibson Ranch Road (paving)
- Round Valley Road (paving)
- Moonlight Drive (re-align and paving)
- SR 260 turn lanes to Star Valley Yard
- Access Road to Beaver Valley Estates (paving)
- Houston Mesa Road (realignment at Red Hill)
- Houston Mesa Road (paving)

#### TONTO VILLAGE/CHRISTOPHER CREEK AREA

- Control Road (paving)
- · Johnson Blvd. (paving)
- Standage Drive (paving)
- Tonto Trail, Cedar Circle, Village Circle, Woodland Circle, Ponderosa Circle, Windy Grove Circle, Oak Circle (paving)
- Ashby or Apple (drainage improvements)
- · Colcord Road (paving)

098236006

January 2014

#### YOUNG AREA

- Young Road (FS 512) north end (paving)
- Young Road (FS 512) south end (purchase r/w for CFLHD project)
- Young Road (FS 512) south end (chip seal)
- Midway Road (paving)
- Hazelwood Road (paving)
- Puma Road (paving)
- Tewksbury Boulevard (paving)
- Graham Boulevard (paving)
- Baker Ranch Road (paving)

#### **TONTO BASIN/GISELA**

- Tonto Bridge DesignGisela Road Sycamore Lane (intersection
- improvement)
- Greenback Valley Road (paving)
- Ewing Trail (paving)
- Shreve Lane (box culvert)
- Cline Boulevard (paving)
- Fluorspar Road (paving)
- Bonanza Circle (paving)
- Sally Mae Circle (paving)
- Packard Drive (paving)
- Circle D Circle (paving)
- Roxie's Circle (paving)
- Dooley Drive (paving)
- Forrest Drive (paving)
- Christopher Lane (paving)
- Lake Vista Drive (paving)
- Tonto Creek Trail (paving)

#### GLOBE AREA

- · Bixby Road (paving and drainage improvements)
- Quail Ridge Road (paving)
- Railroad Ave. New Street (intersection improvement)
- Maple Leaf Street (roadway and drainage improvement)
- Ragus Road (curb gutter and sidewalk)
- Russell Road (paving)
- Hospital Drive (reconstruct and pave before Globe annexed)
- Golden Street (paving)
- Hope Lane (purchased R/W)
- Copper Hills Road (paving)
- Alamo Way (low water crossing drainage improvement)
- Alberta Drive (paving)
- Jesse Hayes Road/Oil Circle (paving and intersection improvement)
- McMillan Wash (drainage improvements)
- Johnson Road (paving)
- Blue Ridge Drive (paving)

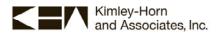
Source: Gila County

38

- Monterey Road (drainage improvement)
- Courthouse Parking Lot Expansion
- Wheatfields Road (Murray Wash drainage improvement project)

Gila County Transportation Study

Final Report



Some of the more major of these projects are summarized in Table 21 along with their associated costs.

Road Projects (New and Reconstructed)	Cost
Arcadia Drive	\$220,221
Bixby Road	\$146,523
Cline Boulevard	\$272,912
Colcord Road	\$188,081
Control Road	\$340,575
Copper Hills Road	\$114,690
Fairgrounds Road	\$343,536
Fossil Creek Road Phase 1 & 2	\$3,354,071
Hospital Road (Besich)-Rose Mofford Way	\$924,654
Icehouse Canyon Bridge	\$1,440,174
Kellner Canyon	\$87,841
Pine Creek Canyon	\$1,586,694
Russell Road Turn Lanes	\$903,433
Six Shooter Canyon Road	\$2,217,869
Star Valley Left Turn Bay	\$413,411
Tonto Creek Bridge Engineering	\$369,402
Wheatfield Road (Old 188)	\$431,086
Young Road (FS 512)	\$543,571
Total Cost	\$13,898,744

Table 21 – Major Projects Implemented Using Transportation Excise Taxes

Source: Gila County

Other major transportation-related expenditures that were funded through the Transportation Excise Tax funds are summarized in **Table 22**.

<b>Table 22</b> –	- Other Expe	enditures Fund	led Through	the Transpo	ortation Excis	e Tax Funds

Project	Cost	
Star Valley Maintenance Yard built in 1996	\$1,414,000	
Approximate Maintenance costs for Chip Seal/Paving and supplies since 2002 (average cost \$600,000 per year)	\$5,400,000	
Capital Equipment purchases since July 2007	\$1,975,171	
Indirect costs from 9/2009 to 2/2013	\$2,063,596	
Public Works Buildings contribution	\$1,400,000	
Total Cost	\$12,252,767	

Source: Gila County



# 4.2 Other Transportation Revenue Sources

## 4.2.1 Arizona Highway User Revenue Funds

The State of Arizona taxes motor fuels and collects a variety of fees relating to the registration and operation of motor vehicles in the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license taxes, motor vehicle registration fees, and other miscellaneous fees. These HURF revenues are distributed to the cities, towns and counties of the State and to the State Highway Fund, which is administered by ADOT. These taxes and fees represent a source of revenues available for highway-related expenses. In fiscal year 2012, the HURF distribution to Gila County was \$3.25 million.

ADOT Financial Management Services prepared a forecast of expected values for future HURF revenues for the state as a whole in a document entitled Arizona Highway User Revenue Fund Forecasting Process and Results, FY 2013-2022. HURF revenues statewide are projected to increase at an average annual compound rate of 3.4% in the 2013-2022 timeframe. Per input from Gila County staff, however, the anticipated annual growth rate in HURF revenues in Gila County is in the 1%-2% range.

# 4.2.2 Moving Ahead for Progress in the 21st Century (MAP-21)

Federal programs authorized under MAP-21 include Surface Transportation Program (STP), Highway Safety Improvement Program (HSIP), Federal Lands Transportation and Access Programs, Tribal Transportation Program, Railway-Highway Crossings (RHC), Transportation Alternatives (TA) Program, National Highway Performance (NHP) Program, and other relevant programs. Federal funding for transportation improvements is available through these programs, subject to eligibility requirements and approval by ADOT and FHWA. Utilizing federal funds requires obtaining environmental, utility, and right-of-way clearances before proposed improvements can be implemented.

## 4.2.3 Gila County General Revenue Funds

General fund revenues can be used on any type of project and come from a number of sources, including property taxes, licenses and permits, intergovernmental revenues, and special revenue funds.

## 4.2.4 Developer Participation

Developer participation in terms of impact fees is another potential revenue source for improvements.

# 4.3 Programmed Transportation Expenditures

**Table 23** summarizes the projects that Gila County is planning to carry out over the next five years perthe Gila County 2013-2018 Capital Improvement Program (CIP) .



Location		Cost by Year (\$)					
Project Name	or Region	2013	2014	2015	2016	2017	2018
Planned Capital Projects		I	ł				
Bridge Load Rating	All County			100,000			
Pine Creek Canyon Phase 2	Timber				50,000	1,500,000	
Rim Trail Bridge Design	Timber		50,000				
RAC FR 423 Eng Cline Blvd	Timber	117,703					
Develop/Permit Materials Pit	Copper	28,700	40,000	50,000			
Broadway & El Camino Intersection Improvement	Copper		55,500	100,000			
Young 512 Resurfacing	Timber		135,538				
Colcord Overlay	Timber		300,000				
FS Russell Road to Kellner Canyon	Copper		227,022				
Houston Mesa Bridges	Timber		320,000				
Lion Springs-ADOT match	Timber			440,000	440,000	440,000	440,000
Mesa Del subdivision paving	Timber		500,000				
Pine-Strawberry Pedestrian Shelters	Timber	13,495	58,894				
Sidewalk Main Street	Copper		54,706				
Sidewalk Six Shooter	Copper		55,192				
Broad Street Ext Phase 2	Copper		400,325				
Cemetery Road	Timber	34,909	-	150,000			
Gisela Road	Timber		500,000				
Ice House Canyon overlay	Copper				300,000		
Monroe Reconstruction	Copper				890,000		
Pine Creek Canyon Phase 1	Timber	1,196,475	163,695				
Russell Rd/Hope Ln Intersection and wall	Copper	886,778					
Oak Creek Bridge & Approaches	Timber				150,000	150,000	150,000
Tonto Creek Bridge (Eng)	Timber	9,229	476,499	100,000	100,000	100,000	100,000
Russell Rd - Pedestrian Stop / One Way Traffic	Copper		300,000				
Planned Capital Projects	All County	2,287,289	3,637,371	940,000	1,930,000	2,190,000	690,000

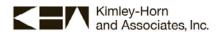
### Table 23 – Gila County 2013-2018 Capital Improvement Program



	Location	Cost by Year (\$)					
Project Name	or Region	2013	2014	2015	2016	2017	2018
Planned Maintenance Projects							
Indirect Costs	All County	732,301	798,766	798,766	798,766	798,766	798,766
Road Maintenance < \$200,000 not in project	All County	434,239	514,510	350,000	350,000	350,000	350,000
Capital Equipment/Machinery	All County	264,067	356,682	300,000	300,000	300,000	300,000
Capital Bridge Infrastructure	All County		20,000				
Non-Project Road Maintenance Expense	All County	904,175	800,000	800,000	800,000	800,000	800,000
Planned Maintenance Projects	All County	2,334,782	2,489,958	2,248,766	2,248,766	2,248,766	2,248,766
Contingency Reserve	All County	0	100,000	100,000	100,000	100,000	100,000
Total Planned Capital and Maintenance Projects	All County	4,622,071	6,227,329	3,188,766	4,178,766	4,438,766	2,938,766

### Table 23 – Gila County 2013-2018 Capital Improvement Program (continued)

Source: Gila County



# **5 TRANSPORTATION NEEDS**

Transportation system needs (e.g., safety issues, infrastructure gaps or deficiencies, and unmet demand for transportation facilities or services) were identified from an analysis of current and future transportation conditions and comments received from the general public, the TAC, and stakeholders regarding transportation system needs. Based on the needs identified and the comments received, areas for improvements were identified, evaluation measures were defined, and potential improvement projects and recommendations were developed.

# 5.1 Roadway Needs

### 5.1.1 Paving Needs

Unpaved roadways that have average daily traffic volumes approaching or exceeding 400 vpd were identified as candidates for new paving, with those roadways that are also federally functionally classified considered the highest-priority candidates. Based on traffic count data and input from Gila County staff, paving Control Road (FS 64) between SR 87 and SR 260 and paving Young Road (FS 512) between SR 260 and SR 288 are the highest-priority paving needs.

## 5.1.2 Bridge Needs

Eight bridges have ADOT-assessed sufficiency ratings below 80, indicating the need for rehabilitation to current standards or replacement (reconstruction). These bridges are:

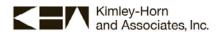
- Pinal Creek Reinforced Concrete Box Culvert (rehabilitate);
- Pinal Creek Bridge (rehabilitate);
- Christopher Creek Bridge (rehabilitate);
- Icehouse Canyon Bridge 1 (rehabilitate);
- Icehouse Canyon Bridge 2 (rehabilitate);
- Bloody Tanks Wash Bridge (replace);
- Tonto Village Bridge (replace); and
- Rim Trail Bridge (replace).

# 5.2 Safety Needs

The predominant type of crashes in the five-year analysis period (2008-2012) is single vehicle crashes in which vehicle speed was a contributing factor. Furthermore, five of the six fatal crashes involved motorcycles or ATVs on rural roadways. These statistics demonstrate a need to improve enforcement and driver education on rural roadways. Speed limits should be adhered to and the public should be warned about the dangers of alcohol consumption while driving.

The crash analysis identified the need to conduct more detailed safety evaluations (e.g., RSAs) at the following locations:

- Broadway Street/El Camino Street intersection (a RSA has since been conducted at this location and is discussed later in this document);
- Young Road (FS 512) 0.7-mile segment east of FS 202;
- Russell Road (FS 55) 5.5-mile segment from Roberts Drive to Kellner Canyon Road; and
- Houston Mesa Road 9.64-mile segment from SR 87 to Control Road.



Another identified need is the development of a more consistent procedure for reporting crash data collected by Gila County and USFS to ADOT so that the ADOT Safety Data Mart can be a more comprehensive dataset.

# 5.3 Pavement Management Needs

The roadway segments whose pavement condition is rated as Failed or Poor need to be rehabilitated to prevent further deterioration and to improve circulation, safety, emergency vehicle access, and drainage. Because pavement conditions are generally expected to deteriorate over time, even the roadways rated as Excellent, Good, or Fair will likely need to be rehabilitated within the next 20 years.

# 5.4 Bicycle and Pedestrian Needs

The need was identified for bike lanes or paved shoulders to promote bike and pedestrian safety and comfort. For locations with limited right-of-way, bike lanes/paved shoulders could be considered only on the uphill sections of roadways.

Bike lanes/paved shoulders should be provided on roadways that connect urbanized areas, activity centers, and recreational destinations, particularly if these routes have high traffic volumes, high speeds, or are used by trucks or recreational vehicles.

Roadways that have over 2,000 vpd should be considered for bike lanes/paved shoulders. The roadways with daily traffic volumes over 2,000 vpd are shown in **Table 24**. The segment limits in the table should be reviewed to establish logical beginning and ending points for bike lanes/paved shoulders to establish connectivity to adjacent roadways.

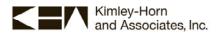
Roadway Name	From	То	Current Daily Traffic Volume (Rounded)
Old Oak Street	Locomotive Drive	US 60	2,000
Six Shooter Canyon Road	Cherokee Road	Icehouse Canyon Road	2,000
Fossil Creek Road	Rimwood Road	SR 87	2,200
Golden Hill Road	Russell Road	Main Street	2,200
Houston Mesa Road	SR 87	Control Road	3,700
Jesse Hayes Road	0.09 miles northwest of Beer Tree Crossing	Oil Circle Drive	4,200
Main Street	Golden Hill Road	Short Avenue	4,700

Table 24 – Potential Bike Lane/Paved Shoulder Candidate Roadways

Source: Kimley-Horn and Associates, Inc.

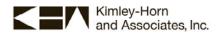
Gila County staff has identified two roadways that are high-priority candidates for bike lanes/paved shoulders: Christopher Creek Loop is a recreational roadway with sufficient pavement width that a bike lane/paved shoulder could be created if the roadway were restriped to remove the center turn lanes; and Houston Mesa Road (already in **Table 24**) has sufficient right-of-way that the roadway could be widened to create bike lanes/paved shoulders without needing additional right-of-way.

Another identified need was to fill in gaps and expand the sidewalk network, particularly in the vicinity of the incorporated communities of Globe, Miami, and Payson.



# 5.5 Transportation Finance Needs

The cost of needed improvements is expected to exceed projected available revenue from traditional revenue sources. A key identified need is extending the transportation excise tax or identifying other funding sources to construct the projects currently in the Gila County 2013-2018 CIP and the improvement projects recommended in this study.

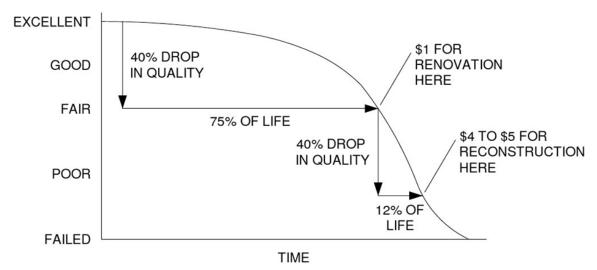


# **6 IMPROVEMENT CONSIDERATIONS**

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

# 6.1 Pavement Maintenance

Pavement generally deteriorates over time regardless of the level of maintenance activities. Pavement typically performs well over the first 75% of the pavement's life, but deterioration rapidly accelerates during the final 25% of the pavement's life, as shown in **Figure 16**. Although it's difficult to determine the "positive signal" at the juncture between the first 75% and the final 25%, 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 16 – Pavement Life Cycle

The level of deterioration and resulting future pavement condition for the roadway segments identified within Gila County are dependent upon various factors including climate, traffic, and general site conditions. There are many pavement segments within Gila County 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. Generally speaking, Gila County has historically been proactive in applying preventive maintenance to deteriorating roadways in the form of single or double chip seal applications. Gila County has an annual chip seal program to address these preventive maintenance needs.

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 Gila County to make cost-effective decisions and protect the investment in the roadway network. It is important that Gila County 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.



# 6.2 Complete Street Cross-Sections

Nationally, interest continues to increase regarding accommodating all roadway users (e.g., motorists, bicyclists, pedestrians, and transit riders) by creating "complete streets" that provide facilities (e.g., sidewalks, bike lanes, and transit amenities) for all user groups (see <u>www.completestreets.org</u>). Roadway users of all ages and abilities should be able to safely move along and across complete streets.

Elements of complete streets can include sidewalks, shared use paths, bike lanes or wide paved shoulders, special bus lanes, 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 a different cross-section than a complete street in an urban area, but both should be designed to balance safety and convenience for everyone using the roadway.

The Gila County Roadway Design Standards Manual (revised 2005) has both rural and urban typical cross-sections for the following roadway types:

#### **Urban Roadway Types**

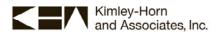
Urban Principal Arterial Urban Major Collector Urban Collector Urban Minor Collector Urban Local

### **<u>Rural Roadway Types</u>** Rural Major Arterials Rural Arterials Rural Collectors Rural Local Rural Very Low Volume

These cross-sections were reviewed to determine if they contain provisions for sidewalks or paths and bike lanes or paved shoulders. With respect to sidewalks, the design standards state that pedestrian walkways (sidewalks and paths) may be incorporated in a roadway cross-section if requested or approved by the Gila County Engineering Department. The standard width for walkways is five feet for all urban collector and arterial roadways. For urban local roadways, a sidewalk width of four feet may be used. Shared use paths may be used, if desired. The design of shared use paths will be based on applicable, current standards. Sidewalks are to be provided on all new urban streets except on single-family residential local streets where all lots or parcels are one net acre or more in area and shoulders are provided. The Roadway Design Standards state that sidewalks will be provided on rural roadways adjacent to lots smaller than one net acre unless otherwise approved by the Gila County Board of Supervisors.

With respect to bike lanes, the County's Roadway Design Standards include provisions for 6-foot bike lanes on all of the urban cross-sections except for the urban local roadway. On the rural cross-sections, there is an 8-foot minimum shoulder area that can be used as a bike lane on the rural major arterial roadway, and a 5-foot minimum shoulder area that can be used as a bike lane on the rural arterial roadway. On rural collector roadways, there is a 12-foot sloping shoulder area that is not suitable for bike travel. Similarly, there is a 4-foot minimum sloping shoulder area on the rural local roadway and a 2-foot-minimum sloping shoulder area on the rural very low volume roadway that are not suitable for a bike travel. Existing rural cross-sections for arterial, collector and local roadways are shown in **Figure 17**.

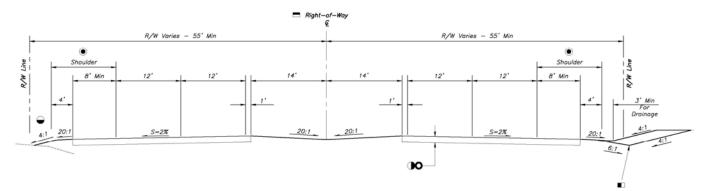
It is recommended that Gila County consider updating its rural collector, rural local, and rural very low volume roadway cross-sections to provide sufficient accommodation for bike travel (i.e., a minimum 5-foot flat paved shoulder or bike lane). It is also recommended that Gila County consider adopting a complete streets policy that emphasizes the importance of providing transportation facilities that accommodate all users.



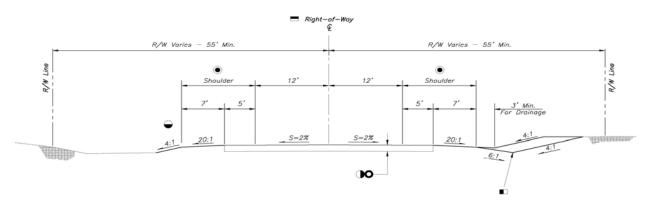
# 6.3 Road Safety Assessment at Broadway Street / El Camino Street

A RSA of the Broadway Street/El Camino Street intersection was conducted by ADOT in June 2013 at the request of the Gila County Public Works Department. Gila County Public Works Department requested the RSA because the roadway ranks high on Gila County Public Works Department's crash list and has a high level of pedestrian activity. The study limits included the segment of Broadway Street from US 60 to just east of El Camino Street, and El Camino Street from US 60 to just south of Broadway Street. The issues and recommended countermeasures for consideration that were identified as a result of the RSA are summarized in **Table 25**. Gila County provided a response letter indicating that Gila County intends to implement the recommended countermeasures as funding and staff resources become available. More detailed information on the RSA is available in **Appendix D**.

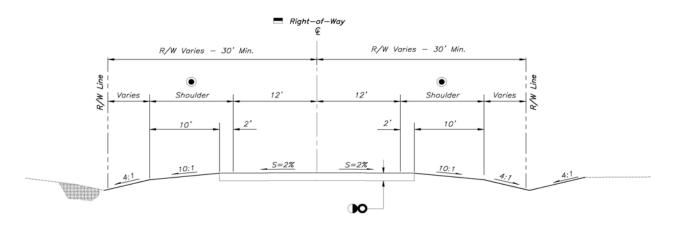




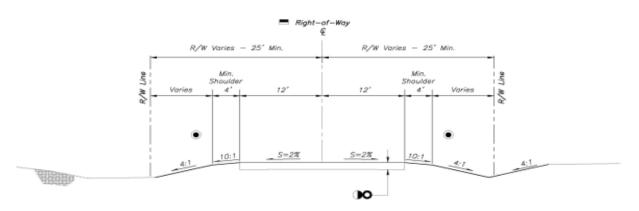
TYPICAL SECTION - RURAL MAJOR ARTERIAL ROAD



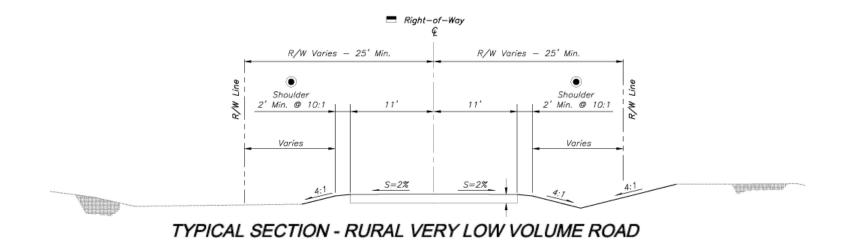
TYPICAL SECTION - RURAL ARTERIAL ROAD



TYPICAL SECTION - RURAL COLLECTOR ROAD



### TYPICAL SECTION - RURAL LOCAL ROAD



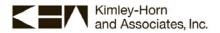
Source: Gila County Roadway Design Standards Manual

Figure 17 – Gila County Rural Cross-sections

Potential Safety Issue	Description	Countermeasure for Consideration
Backing Crashes at Post Office	42% of the crashes in the study area are backing crashes at the Post Office, with half of these occurring on the north side and half on the east side of the Post Office.	Install pavement markings for angle parking on north side of Post Office. Consider using back-in angle parking, which provides motorists with better vision of roadway users as they exit the parking space. Back-in angle parking also removes the difficulty that drivers, particularly older drivers, have when backing into moving traffic.
		Install pavement markings for perpendicular parking on east side of Post Office.
		Install edgelines along Broadway Street.
		Refresh the double yellow centerline on Broadway Street.
		Eliminate parking on northeast corner of Post Office through the installation of a raised bulb out or pavement markings.
		Reconstruct sidewalk area in front of Post Office, relocating sidewalk closer to the Post Office to gain additional maneuvering space outside of the travel lane for backing vehicles; this will also provide an opportunity to address the elevation difference between the sidewalk and the parking area.
Speeds on Eastbound Broadway Street	Motorists turning from eastbound US 60 to Broadway Street have a short distance (approximately 150 feet) to decelerate from a 40 mph speed zone to a 25 mph speed zone. Because Broadway Street intersects US 60 at skew, motorists do not	Use pavement markings to narrow the Broadway Street lane widths to 10 or 11 feet. These could include edge lines, angle parking stalls at the Post Office, parallel parking stalls at the Fire Department, and refreshed centerlines.
	have to slow down to make the right-turn maneuver onto Broadway Street. Additionally, Broadway Street is very wide and straight, which may encourage higher speeds.	If speeding on eastbound Broadway Street is still an issue after marking improvements, consider reconstructing the intersection of US 60 and Broadway Street to force motorists to make more of a 90-degree right-turn movement from a deceleration lane.
Pedestrians	The RSA Team observed numerous pedestrians, and some bicyclists, of varying ages and abilities during the daytime and nighttime field reviews. There are no sidewalks along the Circle K frontage.	Construct sidewalks along the Circle K frontage to line up with the existing curb on El Camino Street near US 60.
Pavement Markings	Pavement markings, including centerlines, stop bars, and parking stalls, are faded or non-existent	Refresh all pavement markings

### Table 25 – Broadway Street/El Camino Street RSA Suggested Countermeasures

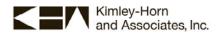
Source: ADOT



Potential Safety Issue	Description	Countermeasure for Consideration
Circle K Access	Access at Circle K is uncontrolled, with no defined driveways, which can produce unpredictable motorist behavior related to entering, exiting, and parking maneuvers. The RSA team observed several motorists making diagonal movements across the Broadway Street/El Camino Street intersection into and out of the Circle K property. Other motorists were observed making higher speed left-turns into Circle K after turning right from US 60. The bollards and utility pole on the southwest corner of the Circle K lot have been struck numerous times. The disorganized parking on the Circle K lot can contribute to sight distance and traffic flow issues.	Provide defined accesses for the Circle K frontage with standard commercial driveways on Broadway Street and El Camino Street, which can be accomplished in combination with sidewalk construction. These driveways need to accommodate fuel trucks and other large vehicles; location and width of the driveways should be evaluated to meet these needs. The El Camino Street driveway should be located as far from US 60 as possible. A second Broadway Street driveway may be needed for accessing the garbage dumpsters.
Parking	There is on-street parking on El Camino Street and Broadway Street. Parked vehicles can create sight obstructions for motorists. Parking demand for the Post Office and Fire Department appears to be greater than the parking supply.	<ul> <li>Prohibit parking within 20 feet of intersection with the use of raised or painted bulb-outs on the corners.</li> <li>Relocate the stop bars closer to the edge of the through travel lane to improve motorists' view around parked vehicles.</li> <li>Provide additional on-street parking along the right-turn ramp onto US 60.</li> <li>Pursue an agreement (possibly a land swap) between the Mormon Church and Freeport-McMoRan to provide parking along the west side of the Post Office.</li> <li>Install a street light for the north end of the Mormon Church parking lot to make it more secure for nighttime parking of Fire Department employee vehicles.</li> <li>If sight restrictions persist at the Broadway Street/El Camino Street intersection, evaluate the need for all-way stop control.</li> </ul>
Left-Turns onto US 60	Angle crashes involving left-turns from El Camino Street onto US 60 make up 25% of the crashes in the study area. The skewed angle of the intersection makes it more difficult to look left from the El Camino Street approach. The median bullnose has been struck and run over numerous times. Several raised pavement markers (RPMs) are missing from the median bullnose, and the paint on the bullnose is faded.	Decrease the length of the median bullnose to provide a better turn radius for vehicles turning left from El Camino Street. Replace the missing RPMs and refresh the reflective paint on the median. Install an angled stop bar and centerline to align vehicles on El Camino Street perpendicular to US 60.

### Table 25 – Broadway Street/El Camino Street RSA Suggested Countermeasures (continued)

Source: ADOT



# 7 RECOMMENDED IMPROVEMENTS

Recommended improvements have been developed to address the study area's identified current and future needs. Recommended improvements are grouped by type of improvement and are discussed below. Roadway, safety, bicycle, and pedestrian improvements are collectively considered capital improvements and are shown graphically in **Figure 18**. Pavement improvements are displayed separately later in the document.

## 7.1 Roadway Improvements

This section discusses the roadway improvements recommended in the following areas:

- Paving and improving existing unpaved roadways;
- Bridge improvements; and
- Other roadway improvements.

## 7.1.1 Paving and Improving Existing Unpaved Roadways

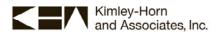
A paved roadway surface provides a number of benefits over an unpaved surface, including reduced levels of dust, more efficient and comfortable travel, reduced vehicle maintenance costs, and improved safety. **Table 26** identifies the locations where improvement projects are recommended to pave and improve existing unpaved roadways. These projects assume that the roadway will be paved with asphalt that covers the width of the unpaved roadway, which is generally 24 feet wide. These recommendations are based on the needs identified as part of this study and projects already identified in the Gila County five-year CIP.

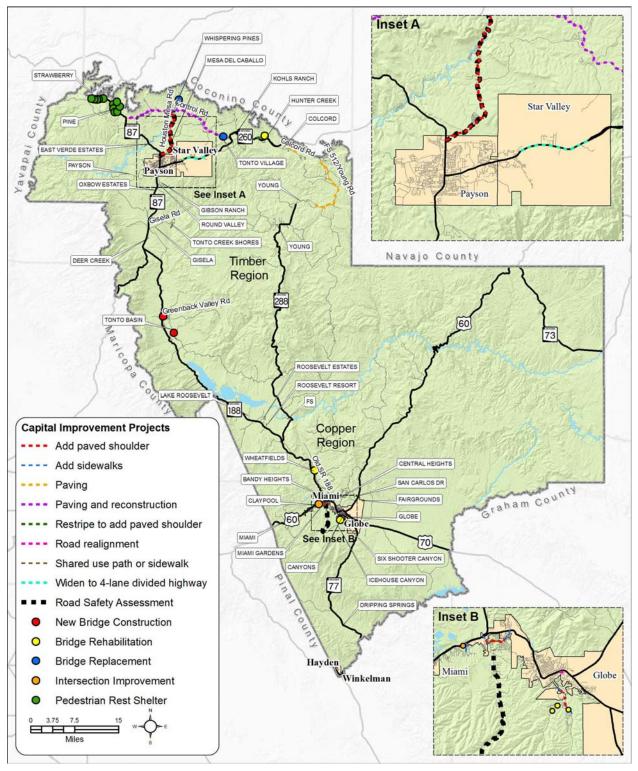
## 7.1.2 Bridge Improvements

The bridge improvement projects in **Table 27** are recommended based on the needs identified as part of this study and projects already identified in the Gila County five-year CIP. These projects include replacing or rehabilitating the eight bridges that had sufficiency ratings below 80, providing new bridges across Oak Creek and Tonto Creek in the Tonto Basin community, and conducting a bridge load rating study that will evaluate the maximum load each Gila County bridge can carry.

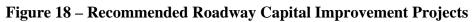
## 7.1.3 Other Roadway Improvements

The other miscellaneous roadway improvement projects in **Table 28** are recommended based on the fact that these projects are already identified in the Gila County five-year CIP.





Source: Kimley-Horn and Associates, Inc.



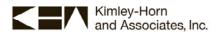


Table 26 – Recommended Roadway Improvement	ents - Paving Unpaved Roadways
--	--------------------------------

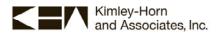
Project Location	Improvement Description	Comments
Control Road (FS 64): SR 87 to Houston Mesa Road	Paving and reconstruction	Identified need in this study
Control Road (FS 64): Houston Mesa Road to end of pavement 2 miles west of SR 260	Paving and reconstruction	Identified need in this study
Young Road (FS 512): Colcord Road to Crouch Mesa (FS 116)	Paving	Identified need in this study
Pine Creek Canyon Drive: Pine Lane to campground entrance	Paving	In County 5-year plan
Colcord Road (FS 291): end of pavement for 1.3 miles	Paving	In County 5-year plan
Mesa Del Caballo Subdivision: multiple roadways	Paving	In County 5-year plan
Icehouse Canyon Road: Six Shooter Canyon Road to end of pavement	Paving	In County 5-year plan

Source: Kimley-Horn and Associates, Inc., Gila County

<b>Table 27</b> –	Recommended	Roadway	Improvements	- Bridges

Project Location	Improvement Description	Comments
Bridge Load Rating Study	Rate each bridge in County for maximum load	In County 5-year plan
Rim Trail Bridge	Replacement	Identified need in this study In County 5-year plan
Tonto Village Bridge	Replacement	Identified need in this study
Bloody Tanks Wash Bridge	Replacement	Identified need in this study
Pinal Creek Reinforced Concrete Box Culvert	Rehabilitation	Identified need in this study
Pinal Creek Bridge	Rehabilitation	Identified need in this study
Christopher Creek Bridge	Rehabilitation	Identified need in this study
Icehouse Canyon Bridge 1	Rehabilitation	Identified need in this study
Icehouse Canyon Bridge 2	Rehabilitation	Identified need in this study
Oak Creek Bridge	New construction	Identified need in this study In County 5-year plan
Tonto Creek Bridge	New construction	Identified need in this study In County 5-year plan

Source: Kimley-Horn and Associates, Inc., Gila County



Project Location	Improvement Description	Comments
SR 260: Lion Springs Section	Widen to 4-lane divided highway	Local contribution to ADOT project In County 5-year plan
Monroe Street Reconstruction: 7 <sup>th</sup> Street to Gila County Courthouse	Realign road to improve horizontal and vertical alignment of roadway	In County 5-year plan
Cemetery Road: SR 87 to end of pavement	Paving and reconstruction	In County 5-year plan

### Table 28 – Other Recommended Roadway Improvements

Source: Kimley-Horn and Associates, Inc., Gila County

## 7.2 Safety Improvements

The following safety improvement projects are recommended based on the safety needs identified in this study, the findings of the RSA at Broadway Street/El Camino Street, and projects already identified in the Gila County five-year CIP.

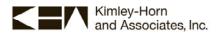
- Enforcement and driver education campaign on rural roadways;
- Broadway Street/El Camino Street RSA recommendations;
- Future RSA studies and subsequent safety improvements; and
- Improved crash reporting procedures.

## 7.2.1 Enforcement and Driver Education Campaign on Rural Roadways

A driver education campaign is recommended that focuses on motorcycle/ATV safety and the negative consequences of excessive speed and alcohol consumption. Increased enforcement of traffic laws is also recommended.

## 7.2.2 Road Safety Assessment Recommendations at Broadway/El Camino

A summary of the RSA recommendations developed by ADOT at the Broadway Street/El Camino Street intersection is provided in **Table 29**. While Gila County has indicated it intends to implement the recommendations as funding and staff resources become available, the recommendations are subject to review and refinement by Gila County. Gila County already has some funding set aside in the five-year CIP for implementing safety improvements at this intersection.



### Table 29 – Broadway Street/El Camino Street RSA Recommendations

Safety Concern	Recommended Improvement
Backing Crashes at Post Office	Striping for angle and perpendicular parking, install edge lines, refresh pavement markings, install bulb outs at corners, reconstruct sidewalk in front of Post Office
Speeds on Eastbound Broadway St	Pavement markings to narrow lane widths, thereby slowing drivers down when entering Broadway Street from US 60
Pedestrians	Construct sidewalks
Circle K Access	Construct driveways on El Camino Street and on Broadway Street
Parking	Prohibit parking near corners, relocate stop bars to improve visibility, provide parking (through land swap) on west side of Post Office, parking lot lighting, evaluate all-way stop sign at El Camino/Broadway if needed
Left Turns onto US 60	Reconfigure median bullnose on US 60 at El Camino Street
Pavement Markings	Refresh all pavement markings

Source: ADOT

## 7.2.3 Future Road Safety Assessment Studies

It is recommended that RSAs be conducted on the following three roadway segments. Subsequent construction improvement projects should be developed that implement the agreed upon improvements recommended by the RSAs.

- Young Road (FS 512) 0.7-mile segment east of FS 202;
- Russell Road (FS 55) 5.5-mile segment from Roberts Drive to Kellner Canyon Road; and
- Houston Mesa Road 9.64-mile segment from SR 87 to Control Road.

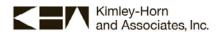
## 7.2.4 Improved Crash Reporting Procedures

It is recommended that personnel from Gila County Public Works, Gila County Sheriff's Office, USFS, and ADOT work together to develop reporting procedures that will result in a more consistent and accurate crash dataset in the future.

## 7.3 Pavement Maintenance and Resurfacing Improvements

### 7.3.1 Pavement Preventive Maintenance

Preventive maintenance activities slow the rate of pavement deterioration and extend the life of the pavement. The application of preventive maintenance activities to significantly deteriorated pavement segments is typically expensive and not cost-effective. Typical preventive maintenance improvements include crack sealing, patching, fog seals, and chip seals. These treatments are most cost-effective when applied to a pavement that is not significantly deteriorated and exhibiting climate-related distresses such as longitudinal cracking, weathering, and raveling. Applying these treatments to pavement that is exhibiting load-related distress does not correct the underlying deficiency but can extend the life of the pavement to some degree. Gila County typically applies chip seals to roadways exhibiting low to moderate load-related distresses to extend the life of the pavement. Preventive maintenance improvements also include stop-gap



maintenance. Stop-gap maintenance addresses safety issues, such as severe potholes, for roadways that are either significantly deteriorated or to address localized pavement failure for roadways that are otherwise rated Good or better.

It is recommended that the County consider preventive maintenance activities such as crack sealing and patching for pavements between three and five years old with overall pavement condition ratings of 70 or greater and chip seal surface treatments for pavements between six and ten years old or when a pavement reaches a condition rating of Good with the predominant distress types being climate-related. Chip seal surface treatments can be considered for segments with a condition rating of Poor if the amount of load-related distress is limited; however, chip seal surface treatments should not be considered for segments with a condition rating of Failed. **Table 30** provides general guidelines for the application of preventive maintenance treatments.

Preventive Maintenance Activity	2013 Pavement Condition Rating	Approximate Age at Initial Treatment (Years)	Treatment Interval (Years)
Asphalt Crack Sealing	70 or greater	3 – 5	3 – 5
Asphalt Patching	Varies	As necessary	As necessary
Surface Treatment - Chip Seal	Varies*	6 - 10 <sup>#</sup>	5 – 7

Table 30 – General Guidelines for Applying Preventive Maintenance

\* Effectiveness is dependent on condition of roadway and distress types present

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

## 7.3.2 Pavement Resurfacing

Pavement resurfacing, or reconstruction of the pavement surface, is recommended to correct or improve structural deficiencies and/or functional deterioration. Resurfacing should be considered when a segment of pavement has deteriorated to a point where preventive maintenance activities are no longer cost-effective.

Resurfacing should be considered 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 roadway traffic is different than what the pavement was designed to accommodate.

## 7.3.3 Pavement Improvement Recommendations

To determine what type of pavement improvements are needed, the decision matrix shown as **Table 31** was developed that indicates whether a particular roadway segment needs resurfacing, chip sealing, or preventive maintenance based on the overall pavement condition rating and the degree of severity and extent of load-related pavement distress present.

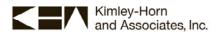


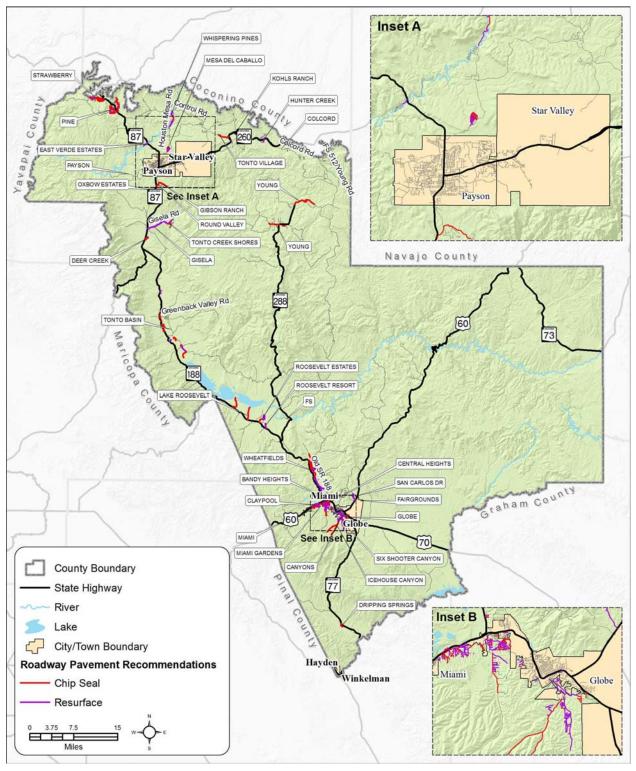
Overall	Load-Related Pavement Distress Present		Recommended Pavement Improvement	
Pavement Condition Rating	Degree of Severity and% of Area ExhibitingAlligator CrackingAlligator Cracking			
0-30	N/A	N/A	Resurface	
31-70	Low Severity ≥ 50% or Medium or High Severity ≥ 30%	Low Severity ≥ 50% or Medium or High Severity ≥ 30%	Resurface	
	Low Severity < 50% or Medium or High Severity < 30%	Low Severity < 50% or Medium or High Severity < 30%	Chip Seal	
≥ 70	N/A	N/A	Preventive Maintenance	

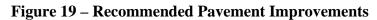
### Table 31 – Pavement Improvement Decision Matrix

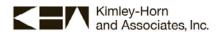
Source: Kimley-Horn and Associates, Inc.

Recommended pavement improvements were determined based on the aforementioned decision matrix. The roadway segments recommended for resurfacing or chip sealing are displayed graphically in **Figure 19**. **Appendix E** provides more detailed information on each roadway segment in the Copper and Timber regions that is recommended for resurfacing or chip sealing.









## 7.4 Bicycle and Pedestrian Facility Improvements

The adoption of complete streets policies and design concepts will help promote the implementation of additional bicycle and pedestrian facilities in Gila County. Recommended improvements to serve these non-vehicular modes of travel are discussed below. Where recommended bicycle and pedestrian improvements apply to the same roadway segments as recommended roadway improvements, the improvements should be constructed at the same time if cost-effective to do so.

## 7.4.1 Recommended Bicycle Improvements

Roadways recommended for shoulder improvements to provide a designated area for bicycle travel are summarized in **Table 32**. These improvement projects are recommended based on the needs identified in this study and projects already identified in the Gila County five-year CIP. These bicycle improvements will provide connections to activity centers, such as residential areas and schools, and in the case of US 60, Main Street, Russell Road, and Golden Hills Road, will provide a bicycle loop system when implemented.

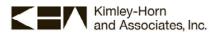
## 7.4.2 Recommended Pedestrian Improvements

The pedestrian improvements shown in **Table 33** are recommended based on the needs identified in this study and projects already identified in the Gila County five-year CIP or programmed through the ADOT Transportation Enhancement program. These projects include new sidewalks, pedestrian rest shelters, and a potential shared use path, and provide connectivity to existing pedestrian facilities. Any new sidewalk facilities that are constructed should comply with the latest Americans with Disabilities Act (ADA) requirements. It should be noted that Gila County does not currently own or maintain trails. Trails outside of the Payson town limits are within the Tonto National Forest and as such are the responsibility of USFS.

## 7.5 Recommended Transportation Finance Strategies

To be able to fund the recommended improvements, Gila County will need to utilize existing revenue sources as well as identify new potential funding sources. Recommended transportation finance strategies include:

- Support extension of the transportation excise tax;
- Identify other potential funding sources such as local/regional taxes and federal funding programs;
- Integrate this study's near-term recommended improvements into the next iteration of the Gila County five-year CIP;
- Develop various funding scenarios showing what can be funded depending on various levels of anticipated revenues; and
- Continue to coordinate with ADOT regarding funding for widening SR 260: Lion Springs section.



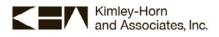
Project Location	Improvement Description	Comments
Christopher Creek Loop: SR 260 to SR 260	Restripe to add paved shoulder	Identified need in this study Provides shoulders on this recreational route
Russell Road: Hospital Drive to Golden Hill Road	Add paved shoulder	Identified need in this study Provides continuity between US 60 and Golden Hill Rd
Old Oak Street: Locomotive Drive to US 60	Add paved shoulder	Identified need in this study Connects US 60 to residential and school areas
Six Shooter Canyon Road: Cherokee Road to Icehouse Canyon Road	Add paved shoulder	Identified need in this study Provides a designated space for bicyclists/pedestrians on this narrow, higher-volume roadway
Fossil Creek Road: Rimwood Road to SR 87	Add paved shoulder	Identified need in this study Provides a designated space for bicyclists/pedestrians on this narrow, higher-volume roadway
Golden Hill Road: Russell Road to Main Street	Add paved shoulder	Identified need in this study Establishes a "loop" connecting US 60, Main St, Golden Hill Rd, and Russell Rd
Houston Mesa Road: SR 87 to Control Road	Add paved shoulder or shared use path	Identified need in this study Provides a designated space for bicyclists/pedestrians on this narrow, higher-volume roadway
Jesse Hayes Road: Beer Tree Crossing to Oil Circle Road	Add paved shoulder	Identified need in this study Provides a designated space for bicyclists/pedestrians on this narrow, higher-volume roadway
Main Street: Golden Hill Road to Short Avenue	Add paved shoulder	Identified need in this study Establishes a "loop" connecting US 60, Main St, Golden Hill Rd, and Russell Rd

### Table 32 – Recommended Bicycle Facility Improvements



Table 33 – Recommended Pedestr	rian Facility Improvements
--------------------------------	----------------------------

Project Location	Improvement Description	Comments
Six Shooter Canyon Road: Cherokee Road to Remington Road	Add sidewalks	Programmed Transportation Enhancement project in County 5- year plan Connects to existing sidewalk
Pine-Strawberry area	Add pedestrian rest shelters	Programmed Transportation Enhancement project in County 5- year plan Provides pedestrian refuge areas
Main Street: Golden Hill Road to US 60	Add sidewalks	Programmed Transportation Enhancement project in County 5- year plan Connects to existing sidewalk
Jesse Hayes Road: Beer Tree Crossing to Oil Circle Road	Add sidewalks	Identified need in this study Connects to existing sidewalk
Russell Road: US 60 to Golden Hill Road	Add sidewalks	Identified need in this study Connects to programmed Transportation Enhancement project
Golden Hill Road: Russell Road to Main Street	Add shared use path or sidewalks	Identified need in this study Connects to programmed Transportation Enhancement project
Old Oak Street: US 60 to Railroad Avenue, Railroad Avenue to Maple Street	Add sidewalks	Identified need in this study Connects US 60 sidewalks to schools
Broadway Street: Existing sidewalk to Old Oak Street	Add sidewalks	Identified need in this study Connects Broadway Street sidewalks to schools



# 8 EVALUATION CRITERIA AND PRIORITIZATION

Evaluation criteria are factors that are considered in the analysis of a proposed improvement project to identify potential benefits, impacts, and constraints as input to the prioritization of improvement projects. The criteria are not all quantifiable; some are purely qualitative. More detailed analysis of evaluation criteria will be required during project scoping, design concept development, and the design phase of an improvement project. The following is a description of the evaluation criteria used in this study to prioritize capital and pavement improvements.

## 8.1 Prioritization of Recommended Capital Improvements

Capital improvement project recommendations are based on an assessment of need. Prioritization of those projects reflects the degree to which the projects meet the following evaluation criteria:

- Already programmed or designed;
- Promotes safety;
- Preserves existing infrastructure;
- Improves system continuity and efficiency;
- Encourages multimodal travel;
- Improves air quality;
- Design is not overly complex; and
- Functionally classified as a collector or arterial.

These criteria were used to assist in prioritizing the recommended projects. A brief description of these criteria is provided below:

#### Already programmed or designed

This criterion assesses if the recommended improvement project is already programmed in a document such as the Gila County 5-year CIP or is already designed or under design. This criterion recognizes where effort has already been completed or is underway and where agency support for the project already exists.

#### **Promotes safety**

This criterion assesses the impact the recommended improvement project is expected to have on safety. Factors considered include improving locations with identified safety issues or upgrading facilities to meet current design standards.

#### Preserves existing infrastructure

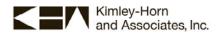
This criterion assesses whether the recommended improvement project will preserve existing infrastructure by extending its useful life, thereby protecting existing investments.

#### **Improves system continuity and efficiency**

This criterion assesses the impact the recommended improvement project is expected to have on system continuity and efficiency. System continuity can be improved by eliminating gaps that may exist in the current system. Efficiency can be improved by reducing travel time through actions such as paving unpaved roadways or providing more direct or redundant connections between points.

#### **Encourages multimodal travel**

This criterion assesses whether the recommended improvement project encourages multiple modes of travel by providing transit, bicycle, or pedestrian facilities.



#### **Improves air quality**

This criterion assesses whether the recommended improvement project has the potential to improve air quality, particularly particulate matter (dust), through actions such as paving unpaved facilities, reducing congestion or travel time, or reducing automobile travel demand.

#### Design is not overly complex

This criterion assesses how complex the engineering design of the recommended improvement project is anticipated to be. Complex engineering issues could include bridges, drainage, terrain, utilities, environmental resources, institutional issues, and right-of-way considerations. More complex projects typically require more time, effort, and funding than less complex projects.

#### **Functionally classified as a collector or arterial**

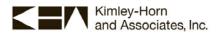
This criterion considers whether the recommended improvement project is on a roadway functionally classified as a collector or arterial as these facilities have been identified as critical components of the roadway network.

**Table 34** summarizes the degree to which each recommended capital improvement project addresses the evaluation criteria and provides a suggested prioritization timeframe. For those criteria with gradations of compliance, more check-marks indicate a higher degree of compliance.

The prioritized projects were grouped into the following timeframes based on fiscal years:

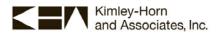
- Near-term: FY2015-FY2019;
- Mid-term: FY2020-FY2024; and
- Long-term: FY2025-FY2034.

The improvement projects in **Table 34** are sorted in priority order by timeframe within each improvement type.

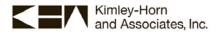


				Pr	oject Evalu	ation Crit	teria			
Project Name	Project Type	Already Programmed or Designed	Promotes Safety	Preserves Existing Infrastructure	Improves System Continuity and Efficiency	Encourages Multimodal Travel	Improves Air Quality	Design is not Overly Complex	Functionally Classified as a Collector or Arterial	Prioritization Timeframe
Roadway Improvements - Paving	Existing Unpave	ed Roadway	/s							
Colcord Rd (FS291): end of pavement for 1.3 miles	Paving	1	V	$\sqrt{\sqrt{2}}$	$\sqrt{1}$	√	$\sqrt{1}$	$\checkmark$	~	2014: Prior to Near-term
Mesa Del Caballo Subdivision: multiple roadways	Paving	1	V	1	$\checkmark$	1	$\sqrt{1}$	$\checkmark$		2014: Prior to Near-term
Pine Creek Canyon Dr: Pine Ln to campground entrance	Paving	V	V	1	V	1	$\sqrt{1}$	$\checkmark$		Near-term
Icehouse Canyon Rd: Six Shooter Canyon Rd to end of pavement	Paving	1	1	V	1	1	$\sqrt{1}$	$\checkmark$		Near-term
Control Rd (FS 64): Houston Mesa Rd to FS 144	Paving and reconstruction		V	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	1	444		~	Mid-term
Young Rd (FS 512): Colcord Rd to FS 128	Paving		1	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	1	<b>NN</b>		~	Mid-term
Young Rd (FS 512): FS 128 to FS 101	Paving		<b>NN</b>	$\sqrt{1}$	$\sqrt{\sqrt{2}}$	1	444		√	Long-term
Control Rd (FS 64): FS 144 to 2 miles west of SR 260	Paving and reconstruction		V	$\sqrt{1}$	$\sqrt{\sqrt{2}}$	1	~~~		√	Long-term
Young Rd (FS 512): FS 101 to Crouch Mesa Rd (FS 116)	Paving		V	۸	$\sqrt{\sqrt{2}}$	1	$\sqrt{\sqrt{2}}$		√	Long-term
Control Rd (FS 64): SR 87 to Houston Mesa Rd	Paving and reconstruction		V	~	$\sqrt{\sqrt{2}}$	1	イイイ		√	Long-term

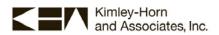
## Table 34 – Capital Improvement Project Prioritization



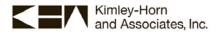
				Pr	oject Evalu	ation Cri	teria			
Project Name	Project Type	Already Programmed or Designed	Promotes Safety	Preserves Existing Infrastructure	Improves System Continuity and Efficiency	Encourages Multimodal Travel	Improves Air Quality	Design is not Overly Complex	Functionally Classified as a Collector or Arterial	Prioritization Timeframe
Roadway Improvements – Bridg	es									
Oak Creek Bridge	New construction	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$		111	√	√		V	2014: Prior to Near-term
Tonto Creek Bridge	New construction	$\sqrt{\sqrt{1}}$	$\sqrt{\sqrt{2}}$		111	1	1		$\checkmark$	Near-term, mid- term, long-term
Bridge Load Rating Study	Study	$\checkmark$	√	$\checkmark$				<b>N</b>		Near-term
Rim Trail Bridge	Replacement	$\checkmark$	44					1		Near-term
Bloody Tanks Wash Bridge	Replacement		44					1		Near-term
Tonto Village Bridge	Replacement		$\sqrt{1}$					1		Near-term
Icehouse Canyon Bridge 1	Rehabilitation		$\checkmark$	$\checkmark$				1	1	Mid-term
Icehouse Canyon Bridge 2	Rehabilitation		$\checkmark$	$\checkmark$				1	1	Mid-term
Christopher Creek Bridge	Rehabilitation		$\checkmark$	1				1		Mid-term
Pinal Creek Bridge	Rehabilitation		$\checkmark$	$\checkmark$				1		Mid-term
Pinal Creek Reinforced Concrete Box Culvert	Rehabilitation		V	1				1		Mid-term
Roadway Improvements – Other										
SR 260: Lion Springs Section	Widen to 4- lane highway	$\sqrt{1}$	$\sqrt{\sqrt{2}}$		V	V	V		V	Near-term
Cemetery Rd: SR 87 to end of pavement	Paving and reconstruction	$\checkmark$	$\checkmark$	$\checkmark$	V	√	4	V		Near-term



				Pr	oject Evalu	ation Crit	eria			
Project Name	Project Type	Already Programmed or Designed	Promotes Safety	Preserves Existing Infrastructure	Improves System Continuity and Efficiency	Encourages Multimodal Travel	Improves Air Quality	Design is not Overly Complex	Functionally Classified as a Collector or Arterial	Prioritization Timeframe
Roadway Improvements – Other	(continued)								•	
Monroe St Reconstruction: 7 <sup>th</sup> St to Gila County Courthouse	Roadway realignment	1	V		$\checkmark$			$\checkmark$		Near-term
Safety Improvements										
Broadway St/El Camino St RSA	Modifications	1	<b>V</b> VV					1		Near-term
Houston Mesa Rd RSA	Modifications		$\sqrt{\sqrt{2}}$					1	√	Near-term
Russell Rd (FS 55) RSA	Modifications		$\sqrt{\sqrt{2}}$					1	√	Near-term
Young Rd (FS 512) RSA	Modifications		$\sqrt{\sqrt{2}}$					1	√	Near-term
Driver Education / Enforcement Campaign	Outreach		1					$\sqrt{1}$		Near-term
Bicycle Facility Improvements										
Houston Mesa Rd: SR 87 to Control Rd	Add paved shoulder or shared use path		111		1	~~~	V	V	V	Near-term
Christopher Creek Loop: SR 260 to SR 260	Add paved shoulder		V		$\checkmark$	44	$\checkmark$	$\sqrt{\sqrt{2}}$		Near-term
Six Shooter Canyon Rd: Cherokee Rd to Icehouse Canyon Rd	Add paved shoulder		V		4	44	1	4	V	Mid-term
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add paved shoulder		V		$\checkmark$	$\sqrt{1}$	V	$\checkmark$	1	Mid-term



				Pr	oject Evalu	ation Crit	eria			
Project Name	Project Type	Already Programmed or Designed	Promotes Safety	Preserves Existing Infrastructure	Improves System Continuity and Efficiency	Encourages Multimodal Travel	Improves Air Quality	Design is not Overly Complex	Functionally Classified as a Collector or Arterial	Prioritization Timeframe
Bicycle Facility Improvements (	continued)			•	•	•				
Fossil Creek Rd: Rimwood Rd to SR 87	Add paved shoulder		V		√	44	V	1	~	Mid-term
Russell Rd: Hospital Dr to Golden Hill Rd	Add paved shoulder		1		√	44	$\checkmark$	1	~	Long-term
Main St: Golden Hill Rd to Short Ave	Add paved shoulder		1		√	44	V	1	1	Long-term
Golden Hill Rd: Russell Rd to Main St	Add paved shoulder		1		√	44	$\checkmark$	1		Long-term
Old Oak St: Locomotive Dr to US 60	Add paved shoulder		1		√	44	$\checkmark$	1		Long-term
Pedestrian Facility Improvement	ts									
Six Shooter Canyon Rd: Cherokee Rd to Remington Rd	Add sidewalks	√	V		√	44	$\checkmark$	1	~	2014: Prior to Near-term
Main St: Golden Hill Rd to US 60	Add sidewalks	√	V		√	$\sqrt{1}$	V	1		2014: Prior to Near-term
Pine-Strawberry area	Add pedestrian rest shelters	1	1			44	1	1		2014: Prior to Near-term
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add sidewalks		V		√	44	V	1	V	Mid-term
Russell Rd: US 60 to Golden Hill Rd	Add sidewalks		1		√	44	V	1	V	Long-term



Project Name	Project Type	Already Programmed or Designed	Promotes Safety	Preserves Existing Infrastructure	Improves System Continuity and Efficiency	Encourages Multimodal Travel	Improves Air Quality	Design is not Overly Complex	Functionally Classified as a Collector or Arterial	Prioritization Timeframe
Pedestrian Facility Improvemen	ts (continued)									
Golden Hill Rd: Russell Rd to Main St	Add shared use path or sidewalks		V		1	44	V	V		Long-term
Broadway St: Existing sidewalk to Old Oak St	Add sidewalks		1		1	$\sqrt{1}$	1	1		Long-term
Old Oak St: US 60 to Railroad Ave, Railroad Ave to Maple St	Add sidewalks		V		1	44	V	V		Long-term



## 8.2 Prioritization of Recommended Pavement Improvements

To provide the framework necessary to make informed decisions regarding pavement improvement priorities, a set of prioritization criteria was developed. The primary factors considered in the development of the prioritization criteria were functional classification, overall pavement condition rating, and the type, severity, and amount of load-related distress observed (measured as a percentage of the overall area experiencing the distress).

Per input from the TAC, functional classification was an important factor in prioritization as resources should be focused on maintaining those roadways identified as collectors or arterials. To that end, those roadway segments classified as collectors or arterials were evaluated separately from the remaining roadways and given a higher priority for maintenance and rehabilitation. The overall pavement condition rating was also an important factor in determining priorities for pavement improvements. The third factor was the quantity (percentage of area) and severity of visually observed load-related distresses, specifically alligator cracking and rutting.

Nine pavement improvement categories were developed consisting of "Resurface – Priority #1" through "Resurface – Priority #4", "Chip Seal – Priority #1" through "Chip Seal – Priority #4", and "Preventive Maintenance". Resurface improvements refer to an asphalt pavement overlay and are for those segments with low overall pavement condition ratings or high degrees of load-related distresses. Chip seal improvements are for those segments with moderate overall pavement condition ratings or moderate degrees of load-related distresses. Preventive maintenance improvements such as crack sealing, fog sealing, and asphalt patching are for those segments with high overall pavement condition ratings or low degrees of load-related distresses. **Table 35** summarizes the prioritization criteria for the functionally classified collectors and arterials while **Table 36** summarizes the prioritization criteria for all other types of roadways.

Roadway segments with a priority of "Resurface – Priority #1", "Resurface – Priority #2", and "Chip Seal – Priority #1" have been assigned to the near-term implementation timeframe.

Roadway segments with a priority of "Resurface – Priority #3", "Resurface – Priority #4", "Chip Seal – Priority #2", "Chip Seal – Priority #3", and "Chip Seal – Priority #4" have been assigned to the mid-term implementation timeframe.

Roadways with a priority of "Preventive Maintenance" are not assigned to a specific implementation timeframe – rather, preventive maintenance on these segments should be conducted at regular intervals or as needed to address specific issues that arise. It is anticipated that some of the roadways with a priority of "Preventive Maintenance" that receive regular preventive maintenance treatment in the near-term and mid-term implementation timeframes will still likely need resurfacing or chip seal treatment in the long-term timeframe.

The locations of the recommended chip seal and resurfacing projects with their designated priorities are shown in **Figure 20**. Prioritizations and timeframes are shown in **Table 37** for the Timber and Copper regions, along with estimated costs based on Gila County unit cost data, and in **Table 38** and **Table 39** for the various communities within the Copper and Timber regions, respectively. Detailed chip seal and resurfacing pavement improvement and prioritization information by individual roadway segment is provided in **Appendix E**.

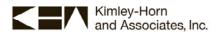


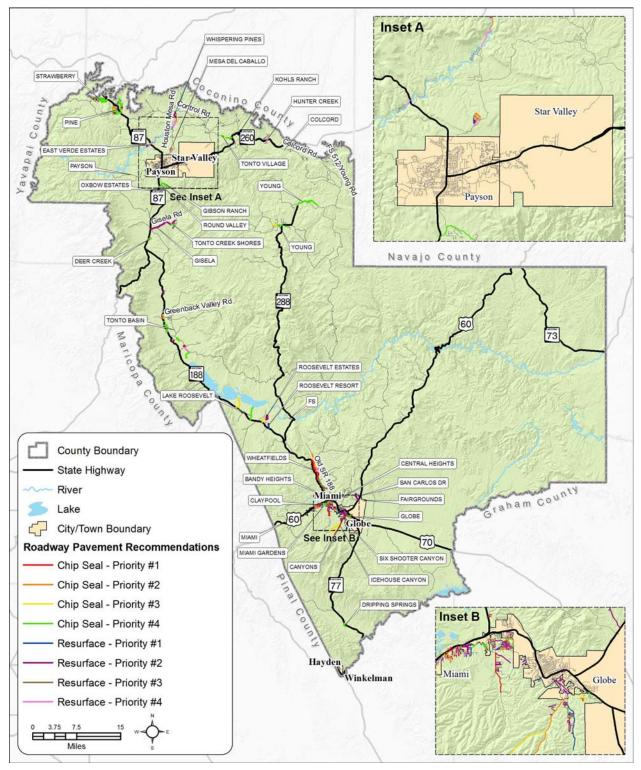
Table 35 – Pavement Maintenance Prioritization Criteria	for Arterials and Collectors
---	------------------------------

Overall	Load-Related Paven	nent Distress Present	
Pavement Condition Rating	Degree of Severity and Percentage of Area Exhibiting Alligator Cracking	Degree of Severity and Percentage of Area Exhibiting Rutting	Maintenance Action and Priority
0-30	N/A	N/A	Resurface - Priority #1
31-70	Low Severity ≥ 50% or Medium or High Severity ≥ 30%	Low Severity ≥ 50% or Medium or High Severity ≥ 30%	Resurface - Priority #1
	Low Severity < 50% or Medium or High Severity < 30%	Low Severity < 50% or Medium or High Severity < 30%	Chip Seal - Priority #1
≥ 70	N/A	N/A	Preventive Maintenance

Overall	Load-Related D	Distress Present	
Pavement Condition Rating	Degree of Severity and Percentage of Area Exhibiting Alligator Cracking	Degree of Severity and Percentage of Area Exhibiting Rutting	Maintenance Action and Priority
0-30	N/A	N/A	Resurface - Priority #2
31-60	Any Severity ≥ 50%	Any Severity ≥ 50%	Resurface - Priority #3
	Medium or High Severity ≥ 30%	Medium or High Severity ≥ 30%	Resurface - Priority #4
	Low Severity ≥ 30%	Low Severity ≥ 30%	Chip Seal - Priority #2
31-50	Medium or High Severity < 30%	Medium or High Severity < 30%	Chip Seal - Priority #2
51-70	Medium Severity < 30%	Medium Severity < 30%	Chip Seal - Priority #3
31-70	Low Severity < 30% or no Severity	Low Severity < 30% or no Severity	Chip Seal - Priority #4
≥ 70	N/A	N/A	Preventive Maintenance

Table 36 – Pavement Maintenance Prioritization C	Criteria for All Other Roadways
--	---------------------------------









Pavement	Timbe	er Region	Сорр	er Region	Total for	Gila County
Improvement Type and Priority	Miles	Estimated Cost	Miles	Estimated Cost	Miles	Estimated Cost
Near-term		·			·	
Resurface – Priority #1	0.67	\$280,000	4.49	\$1,865,000	5.16	\$2,145,000
Resurface – Priority #2	9.67	\$4,020,000	18.90	\$7,860,000	28.57	\$11,880,000
Chip seal – Priority #1	0.17	\$5,000	6.02	\$220,000	6.19	\$225,000
Near-term Subtotal	10.51	\$4,305,000	29.41	\$9,945,000	39.92	\$14,250,000
Mid-term					·	
Resurface – Priority #3	0.00	\$0	7.69	\$3,195,000	7.69	\$3,195,000
Resurface – Priority #4	6.26	\$2,600,000	1.85	\$770,000	8.11	\$3,370,000
Chip seal – Priority #2	4.06	\$150,000	9.80	\$360,000	13.86	\$510,000
Chip seal – Priority #3	2.13	\$80,000	6.13	\$225,000	8.26	\$305,000
Chip seal – Priority #4	26.21	\$960,000	4.46	\$160,000	30.67	\$1,120,000
Mid-term Subtotal	38.66	\$3,790,000	29.93	\$4,710,000	68.59	\$8,500,000
Long-term					·	
Long-term Subtotal	-	-	-	-	-	-
Total	49.17	\$8,095,000	59.34	\$14,655,000	108.51	\$22,750,000

### Table 37 – Recommended Pavement Maintenance Improvement Priorities by Region



	Approx	kimate Mi	ileage by	Paveme	nt Improv	ement T	ype and F	Priority	Total Mi	leage by
	A	sphalt R	esurfacin	g		Chip	Seal		nunity	
Community	Priority #1	Priority #2	Priority #3	Priority #4	Priority #1	Priority #2	Priority #3	Priority #4	Resurface	Chip Seal
Bandy Heights		0.18				0.18		0.10	0.18	0.28
Canyons	0.15	0.24							0.39	0.00
Central Heights	0.52	6.11	0.99	0.18	1.63	1.30	0.10	1.48	7.80	4.51
Claypool	0.67	4.59	0.41	0.44	0.37	1.90		1.10	6.11	3.37
Dripping Springs								0.75	0.00	0.75
Fairgrounds									0.00	0.00
FS									0.00	0.00
Globe	0.29	2.02	0.48	0.26	0.18	0.28	0.49	0.22	3.05	1.17
lcehouse Canyon	0.07	0.31	0.41			3.20	2.09		0.79	5.29
Lake Roosevelt							2.38	0.01	0.00	2.39
Miami		0.11							0.11	0.00
Miami Gardens								0.51	0.00	0.51
Roosevelt Estates		2.23					1.07		2.23	1.07
Roosevelt Resort	0.86	0.22							1.08	0.00
San Carlos Dr.	0.15	1.41							1.56	0.00
Six Shooter Canyon	1.57	1.39	1.96	0.33				0.27	5.25	0.27
Wheatfields	0.21	0.09	3.44	0.64	3.84	2.94		0.02	4.38	6.80
Total	4.49	18.90	7.69	1.85	6.02	9.80	6.13	4.46	32.93	26.41

## Table 38 – Pavement Maintenance Improvements by Copper Region Community



	Appro	oximate N	lileage by	Paveme	nt Improv	ement Ty	pe and P	riority	Total Mileage by	
	4	sphalt R	esurfacin	g		Chip	Community			
Community	Priority #1	Priority #2	Priority #3	Priority #4	Priority #1	Priority #2	Priority #3	Priority #4	Resurface	Chip Seal
Bear Flats									0.00	0.00
Christopher Creek									0.00	0.00
Colcord									0.00	0.00
Deer Creek		0.04		1.18		0.15		0.36	1.22	0.51
East Verde Estates		0.03		0.42					0.45	0.00
Gibson Ranch								2.56	0.00	2.56
Gisela		5.23							5.23	0.00
Hunter Creek				0.78					0.78	0.00
Kohls Ranch									0.00	0.00
Lake Roosevelt								0.73	0.00	0.73
Mesa Del Caballo	0.67	1.84		3.67		1.57	0.46	0.14	4.95	2.17
Oxbow Estates									0.00	0.00
Payson									0.00	0.00
Pine		0.51		0.32		1.25	0.07	5.73	0.83	7.05
Round Valley									0.00	0.00
Strawberry		0.40				0.23		5.27	0.40	5.50
Tonto Basin		1.62		1.12	0.17	0.86	0.08	4.50	2.74	5.61
Tonto Creek Shores								0.52	0.00	0.52
Tonto Village							0.50	0.60	0.00	1.10
Whispering Pines									0.00	0.00
Young							1.02	5.80	0.00	6.82
Total	0.67	9.67	0.00	6.26	0.17	4.06	2.13	26.21	16.60	32.57

### Table 39 – Pavement Maintenance Improvements by Timber Region Community



# 9 PLAN FOR IMPROVEMENTS

## 9.1 Implementation Plan

An implementation plan has been developed to group the recommended improvements into near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years) timeframes based on the aforementioned prioritization process for capital and pavement maintenance improvement projects. Implementation timeframes are based on fiscal years. 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 Gila County's budget processes or as needed if conditions and travel patterns change significantly.

**Table 40, Table 41,** and **Table 42** present the implementation plan, split into near-term (FY2015-FY2019), mid-term (FY2020-2024), and long-term (FY2025-2034) timeframes. These tables include project cost estimates. Project cost estimates include, where applicable, planning-level construction costs (based on recent bid prices on similar types of projects) as well as "soft" costs such as planning, design, construction engineering, and contingency costs. Right-of-way costs are not included in the estimates. All cost estimates are in 2013 dollars, do not account for inflation, and are rounded to the nearest \$5,000.

For recommended improvement projects that already had developed cost estimates from other documents, those cost estimates were utilized in this study to maintain consistency. For recommended improvement projects that did not have developed cost estimates, planning-level cost estimates were developed based on the following construction unit costs and soft cost factor:

- Paving and reconstructing unpaved 24-foot roadway: \$200 per lineal foot;
- Bridge replacement: \$180 per square foot plus \$25,000 for removal of existing bridge;
- Bridge rehabilitation: Varies from \$10,000 to \$35,000 depending on extents;
- Safety improvements: Varies depending on extents and RSA findings;
- Restripe to add paved shoulder on both sides of roadway: \$2.09 per lineal foot;
- Add paved shoulder on both sides of roadway: \$85 per lineal foot;
- Add 5-foot sidewalk or path on one side of roadway: \$30 per lineal foot;
- Chip seal paved 24-foot roadway: \$0.17 per square foot;
- Resurface paved 24-foot roadway with 2-inch asphalt overlay: \$1.88 per square foot; and
- Soft costs (e.g., planning, design, construction engineering, contingency) factor: 1.75.

To be conservative, the cost estimates developed as part of this study assume federal funding will be utilized in case federally funded grants can be obtained. The exception to this assumption is that the cost estimates developed for the pavement maintenance improvement projects (i.e., chip seal, resurface, and miscellaneous preventive maintenance and equipment) assume Gila County funding will be utilized as pavement maintenance activities have historically been funded by Gila County.

The total cost estimate for the implementation plan is:

- Near-term (FY2015-FY2019) improvement projects: \$32.8 million;
- Mid-term (FY2020-FY2024) improvement projects: \$41.9 million;
- Long-term (FY2025-FY2034) improvement projects: \$91.5 million; and
- Total implementation plan cost: \$166.2 million.

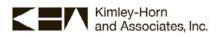
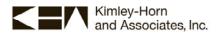


Table 40 – Recommended Near-term Improvement Pro	iects
Tuble to Recommended total mapporement ito	Jeeus

Project Name	Project Type	Project Cost Estimate		
Roadway Improvements - Paving and Improving Existing Unpaved Roadways				
Pine Creek Canyon Dr: Pine Ln to campground entrance	Paving	\$1,550,000		
Icehouse Canyon Rd: Six Shooter Canyon Rd to end of pavement	Paving	\$300,000		
Roadway Improvements - Bridges	·			
Tonto Creek Bridge (assumed \$100k per year of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$500,000		
Bridge Load Rating Study	Study	\$100,000		
Rim Trail Bridge	Replacement	\$195,000		
Bloody Tanks Wash Bridge	Replacement	\$205,000		
Tonto Village Bridge	Replacement	\$265,000		
Roadway Improvements - Other				
SR 260: Lion Springs Section (Gila County contribution)	Widen to 4-lane highway	\$2,200,000		
Cemetery Rd: SR 87 to end of pavement	Paving and reconstruction	\$150,000		
Monroe St. Reconstruction: 7th St to Gila County Courthouse	Roadway realignment	\$890,000		
Safety Improvements				
Broadway St/EI Camino St Intersection RSA	Modifications per RSA	\$100,000		
Houston Mesa Rd RSA – 9.64-mile segment from SR 87 to Control Rd	Modifications per RSA	\$250,000		
Russell Rd (FS 55) RSA – 5.5-mile segment from Roberts Dr to Kellner Canyon Rd	Modifications per RSA	\$200,000		
Young Rd (FS 512) RSA – 0.7-mile segment east of FS 202	Modifications per RSA	\$150,000		
Driver Education Campaign	Outreach	\$25,000		
Bicycle Facility Improvements				
Houston Mesa Rd: SR 87 to Control Rd	Add paved shoulder or shared use path	\$160,000		
Christopher Creek Loop: SR 260 to SR 260	Add paved shoulder	\$45,000		
Pavement Maintenance Improvements				
Chip seal projects	Chip seal - Priority #1	\$225,000		
Resurface projects	Resurface - Priority #1 and #2	\$14,025,000		
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$11,250,000		
Total Near-term (FY2015-FY2019) Improvement Costs		\$32,785,000		



Project Name	Project Type	Project Cost Estimate
Roadway Improvements - Paving and Improving Existing U	paved Roadways	
Control Rd (FS 64): Houston Mesa Rd to FS 144	Paving and reconstruction	\$8,970,000
Young Rd (FS 512): Colcord Rd to FS 128	Paving	\$10,230,000
Roadway Improvements - Bridges		
Icehouse Canyon Bridge 1	Rehabilitation	\$20,000
Icehouse Canyon Bridge 2	Rehabilitation	\$65,000
Christopher Creek Bridge	Rehabilitation	\$20,000
Pinal Creek Bridge	Rehabilitation	\$45,000
Pinal Creek Reinforced Concrete Box Culvert	Rehabilitation	\$20,000
Tonto Creek Bridge (assumed \$100k per year of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$500,000
Bicycle Facility Improvements		
Six Shooter Canyon Rd: Cherokee Rd to Icehouse Canyon Rd	Add paved shoulder	\$335,000
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add paved shoulder	\$1,245,000
Fossil Creek Rd: Rimwood Rd to SR 87	Add paved shoulder	\$595,000
Pedestrian Facility Improvements		
Jesse Hayes Rd: Beer Tree Crossing to Oil Circle Rd	Add sidewalks	\$105,000
Pavement Maintenance Improvements		
Chip seal projects	Chip seal - Priority #2, #3, and #4	\$1.935,000
Resurface projects	Resurface - Priority #3 and #4	\$6,565,000
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$11,250,000
Total Mid-term (FY2020-FY2024) Improvement Project Costs		\$41,900,000

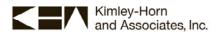


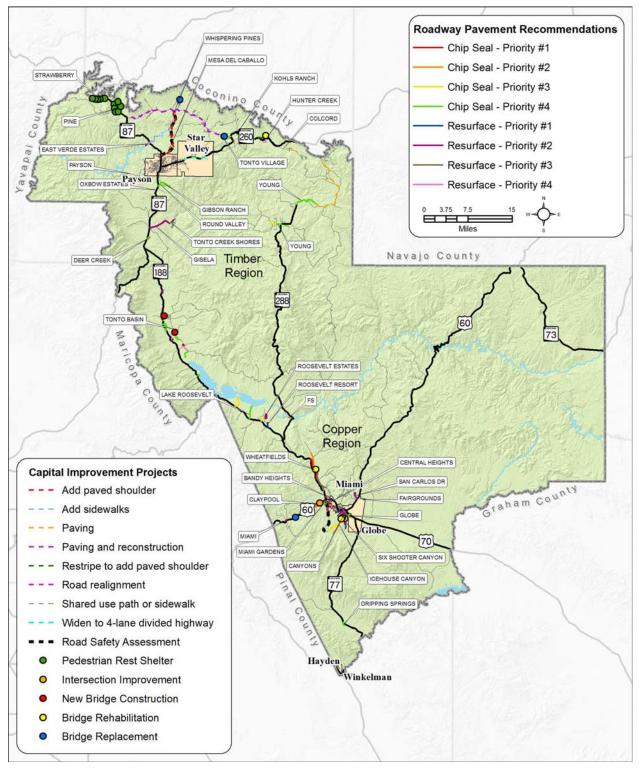
Project Name	Project Type	Project Cost Estimate
Roadway Improvements - Paving and Improving Existing Un	paved Roadways	
Young Rd (FS 512): FS 128 to FS 101	Paving	\$8,140,000
Control Rd (FS 64): FS 144 to 2 miles west of SR 260	Paving and reconstruction	\$11,930,000
Young Rd (FS 512): FS 101 to Crouch Mesa Rd (FS 116)	Paving	\$9,100,000
Control Road (FS 64): SR 87 to Houston Mesa Road	Paving and reconstruction	\$18,195,000
Roadway Improvements - Bridges		
Tonto Creek Bridge (assumed remaining \$140k of total \$1.14M for 5.7% share of \$20M total cost)	New construction	\$140,000
Bicycle Facility Improvements		
Russell Rd: Hospital Dr to Golden Hill Rd	Add paved shoulder	\$240,000
Main St: Golden Hill Rd to Short Ave	Add paved shoulder	\$280,000
Golden Hill Rd: Russell Rd to Main St	Add paved shoulder	\$450,000
Old Oak St: Locomotive Dr to US 60	Add paved shoulder	\$170,000
Pedestrian Facility Improvements		
Russell Rd: US 60 to Golden Hill Rd	Add sidewalks	\$100,000
Golden Hill Rd: Russell Rd to Main St	Add shared use path or sidewalks	\$170,000
Broadway St: Existing sidewalk to Old Oak St	Add sidewalks	\$55,000
Old Oak St: US 60 to Railroad Ave, Railroad Ave to Maple St	Add sidewalks	\$65,000
Pavement Maintenance Improvements		•
Chip seal and resurface projects for roadways in good condition now that will need rehabilitation in 10-20 years	Assumes \$2.00M per year	\$20,000,000
Miscellaneous preventive maintenance and equipment	Assumes \$2.25M per year	\$22,500,000
Total Long-term (FY2025-FY2034) Improvement Project Cost	S	\$91,535,000

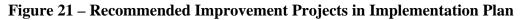
### Table 42 – Recommended Long-term Improvement Projects

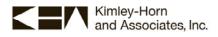
Source: Kimley-Horn and Associates, Inc.

The locations of the recommended improvement projects included in the implementation plan are shown in **Figure 21**. **Appendix F** contains a mapbook that provides more detailed maps showing the locations of the recommended improvement projects.









## 9.2 Existing Revenues Sources

## 9.2.1 Transportation Excise Tax Revenues

As described previously, the half-cent transportation excise tax has historically generated revenues of approximately \$3.0 million per year. The Gila County transportation excise tax program has a sunset date of December 31, 2014.

## 9.2.2 Highway User Revenue Fund (HURF) Revenues

As described previously, HURF revenues distributed to Gila County from the state gas tax and motor vehicle fees have historically been approximately \$3.3 million per year. Gila County staff anticipates future HURF revenue to increase at an estimated annual growth rate of approximately 1.0%.

## 9.2.3 Future Excise Tax Revenue Scenarios

Three scenarios were developed to assess potential future transportation project funding opportunities:

- *Scenario 1*: The transportation excise tax is extended for another 20 years and Gila County applies the full revenue amount to Gila County projects. HURF revenues continue as a funding source;
- *Scenario 2*: The transportation excise tax is extended for another 20 years and Gila County shares revenues with the other jurisdictions in Gila County. This scenario assumes that Gila County will get one-half of the transportation excise tax revenues of Scenario 1. HURF revenues continue as a funding source; and
- *Scenario 3*: The transportation excise tax is not extended and Gila County depends solely on HURF revenues for funding.

It is assumed that transportation excise tax and HURF revenues will grow 1.0% per year over the preceding year. This assumption provides the revenues shown in **Table 43** for FY 2015 through FY 2034, the analysis period for the Gila County Transportation Study. It should be noted that costs are not indexed to inflation and are based on today's dollars.

For the analysis period (FY 2015-2034), projected total revenues vary from approximately \$139.0 million to \$73.7 million, depending on whether the excise tax extension is approved by voters, and if approved, how the revenues would be distributed. The total cost of recommended improvement projects and corresponding projected revenue shortfall for each of the three revenue scenarios are also shown in **Table 43**.

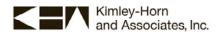
Revenue Source	Scenario 1 Revenues (Excise Tax + HURF)	Scenario 2 Revenues (1/2 Excise Tax + HURF)	Scenario 3 Revenues (HURF Only)	Total Cost of Recommended Improvement Projects	Projected Revenue Shortfall
Near-term (FY2015-FY	′2019)			Near-term (FY2015	-FY2019)
Excise Tax Revenues	\$15,120,000	\$7,560,000	\$0		Scenario 1: <b>\$585,000</b>
HURF Revenues	\$17,080,000	\$17,080,000	\$17,080,000	\$32,785,000	Scenario 2: \$8,145,000
Total Near-term Revenues	\$32,200,000	\$24,640,000	\$17,080,000		Scenario 3: <b>\$15,705,000</b>
Mid-term (FY2020-FY2	2024)			Mid-term (FY2020-I	FY2024)
Excise Tax Revenues	\$15,890,000	\$7,945,000	\$0	\$41,900,000	Scenario 1: \$8,060,000
HURF Revenues	\$17,950,000	\$17,950,000	\$17,950,000		Scenario 2: <b>\$16,005,000</b>
Total Mid-term Revenues	\$33,840,000	\$25,895,000	\$17,950,000		Scenario 3: \$23,950,000
Long-term (FY2025-FY2034)			Long-term (FY2025	5-FY2034)	
Excise Tax Revenues	\$34,240,000	\$17,120,000	\$0	\$91,535,000	Scenario 1: \$18,595,000
HURF Revenues	\$38,700,000	\$38,700,000	\$38,700,000		Scenario 2: \$35,715,000
Total Long-term Revenues	\$72,940,000	\$55,820,000	\$38,700,000		Scenario 3: \$52,835,000
Total (FY2015-FY2034)			Total (FY2015-FY20	034)	
Total Revenues	\$138,980,000	\$106,355,000	\$73,730,000	0,000 Total Cost \$166,220,000	Total Revenue Shortfall
					Scenario 1: <b>\$27,240,000</b>
			φ13,130,000		Scenario 2: <b>\$59,865,000</b>
					Scenario 3: <b>\$92,490,000</b>

### Table 43 – Revenue Projections

Source: Kimley-Horn and Associates, Inc.

## 9.3 Potential Revenue Sources

Based on revenue projections, Gila County will not have sufficient revenue to complete all of the recommended improvements in this study within the recommended timeframes. For the three aforementioned revenue scenarios, the projected total revenue shortfall for FY2015 through FY2034 is estimated to be approximately \$27.2 million with Scenario 1, \$59.9 million with Scenario 2, and \$92.5 million with Scenario 3. Additional revenue sources will be needed if all of the recommended improvements are to be constructed within the recommended timeframes.



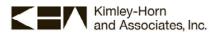
Potential existing and new revenue sources include, but are not limited to:

- Bonds;
- General funds;
- Property tax;
- Sales or excise tax;
- Impact fees;
- Community facilities districts;
- Improvement districts;
- Community development block grant program (CDBG);
- Federal Emergency Management Agency (FEMA) grant program;
- Governor's Office of Highway Safety grant program; and
- Secure Rural School Program on Federal Lands grant program.

These potential revenue sources are described in more detail in Table 44.

#### Table 44 – Other Revenue Opportunities

Funding Source	Description
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 is called the general fund. 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, and 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.

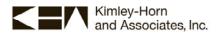


Funding Source	Description
Governor's Office of Highway Safety	The Arizona Governor's Office of Highway Safety (GOHS) is the focal point for highway safety issues in Arizona. Funding is available for issues considered high priorities at a statewide level. Projects typically funded include public education and awareness campaigns.
Community Development Block GrantThe Arizona Department of Housing administers the federal CDBG program for non-entitlement communities with a population below 50,000). Communities receiving CDBG funds from the Sta 	
	A local funding match is typically required. <u>http://portal.hud.gov/hudportal/HUD?src=/program_offices/</u> comm_planning/communitydevelopment/programs
Federal Emergency Management Agency (FEMA) Grant Program	<ul> <li>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: <ul> <li>Pre-Disaster Mitigation Program;</li> <li>Hazard Mitigation Grant Program;</li> <li>Flood Mitigation Assistance Program;</li> <li>Repetitive Flood Claims Program; and</li> <li>Severe Repetitive Loss Program.</li> </ul> </li> <li>A local funding match is typically required. http://www.fema.gov/government/grant/index.shtm</li> </ul>
Secure Rural Schools Program on Federal Lands (SRS Act)	This federal program provides funding for schools and roadways in areas with a concentration of federal lands, makes investments in projects that enhance forest ecosystems, and improves cooperative relationships among those that use and care for federal lands. Title I of the SRS Act includes payments to states and counties containing federal land to help fund schools and roadways. Title II funds special projects on federal lands. Title II includes funds for counties for specific purposes. Title IV discusses miscellaneous provisions.

### Table 44 – Other Revenue Opportunities (continued)

Source: Kimley-Horn and Associates, Inc., Gila County, ADOT, and FHWA

As described previously, another potential revenue source is the programs under MAP-21, the federal transportation legislation. Federal programs authorized under MAP-21 include STP, HSIP, Federal Lands Transportation and Access Programs, Tribal Transportation Program, RHC, TA Program, NHP Program, and other relevant programs. Federal funding for transportation improvements is available through these programs, subject to eligibility requirements and approval by ADOT and FHWA. Utilizing federal funds requires obtaining environmental, utility, and right-of-way clearances before proposed improvements can be implemented. The federal programs under MAP-21 are described in more detail in **Table 45**.



Program Name	Description
National Highway Performance Program (NHPP)	Under MAP-21, the enhanced National Highway System (NHS) is composed of approximately 220,000 miles of rural and urban roadways serving major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. It includes the Interstate System, all principal arterials (including some not previously designated as part of the NHS) and border crossings on those routes, highways that provide motor vehicle access between the NHS and major intermodal transportation facilities, and the network of highways important to U.S. strategic defense (STRAHNET) and its connectors to major military installations. MAP-21 establishes a performance basis for maintaining and improving the NHS.
Surface Transportation Program (STP)	MAP-21 continues the STP, providing an annual average of \$10 billion in flexible funding that may be used by States and localities for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for nonmotorized transportation, transit capital projects and public bus terminals and facilities.
Highway Safety Improvement Program (HSIP)	Safety throughout all transportation programs remains the number one priority. MAP-21 continues HSIP, with average annual funding of \$2.4 billion, including \$220 million per year for the Rail-Highway Crossings program. HSIP emphasizes a data-driven, strategic approach to improving highway safety on all public roadways that focuses on performance. The foundation for this approach is a safety data system, which each State is required to have to identify key safety problems, establish their relative severity, and then adopt strategic and performance-based goals to maximize safety.
Congestion Mitigation and Air Quality (CMAQ)	The CMAQ program provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act.
Transportation Alternatives (TA)	<ul> <li>MAP-21 establishes a new program to provide for a variety of alternative transportation projects that were previously eligible activities under separately funded programs. Eligible activities include:</li> <li>Transportation alternatives (new definition incorporates many transportation enhancement activities and several new activities)</li> <li>Recreational trails program (program remains unchanged)</li> <li>Safe routes to schools program</li> <li>Planning, designing, or constructing roadways within the right-of way of former Interstate routes or other divided highways.</li> </ul>
Federal Lands and Tribal Transportation Programs	MAP-21 creates a unified program for Federal lands transportation facilities, Federal lands access transportation and tribal facilities. The Federal Lands Transportation Program provides funding annually for projects that improve access within the Federal estate, such as national forests and national recreation areas, on infrastructure owned by the Federal government. This program combines the former Park Roads and Refuge Roads programs, and adds three new Federal land management agency (FLMA) partners. The Federal Lands Access Program provides funding annually for projects that improve access to Federal lands on infrastructure owned by States and local governments.
Emergency Relief	The Emergency Relief (ER) program assists Federal, State, tribal and local governments with the expense of repairing serious damage to Federal-aid, tribal, and Federal Lands highways resulting from natural disasters or catastrophic failures.
Workforce Development and DBE	MAP-21 continues current law goals for use of small business concerns owned and controlled by socially and economically disadvantaged individuals. On-the-Job Training and DBE Supportive Services programs are continued without change.
Bridge and Tunnel Inspection	To provide for continued improvement to bridge and tunnel conditions essential to protect the safety of the traveling public and allow for the efficient movement of people and goods on which the U.S. economy relies, MAP-21 requires inspection and inventory of highway bridges and tunnels on public roadways. No dedicated funds are provided for inspections, but it is an eligible use of NHPP, STP, HSIP, FHWA administrative, Tribal Transportation, and Research funds.
Projects of National and Regional Significance	MAP-21 authorizes funding in FY 2013 only, to fund critical high-cost surface transportation capital projects that will accomplish national goals. States, tribes, transit agencies, and multi-State or multi-jurisdictional groups of these entities are eligible to apply for competitive grant funding.



## 9.4 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 Gila County Transportation Study is a long-range multimodal planning study that addresses the transportation needs in the study area for the near-term, mid-term, and long-term transportation planning horizons. 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.

## 9.5 Recommended Next Steps

Recommended next steps include the following:

- Present the Gila County Transportation Study to the Gila County Board of Supervisors for approval;
- Support extension of the transportation excise tax and identify other potential funding sources such as local/regional taxes and federal funding programs;
- Develop various funding scenarios showing what can be funded depending on various levels of anticipated revenues;
- Continue to coordinate with ADOT regarding funding for widening SR 260: Lion Springs section;
- Integrate the implementation plan into the next update of the Gila County five-year CIP as available funding allows; and
- Coordinate the implementation of the Gila County Transportation Study with the previously completed Payson Transportation Study and Cobre Valley Comprehensive Transportation Study.



## **10 PUBLIC PARTICIPATION**

## 10.1 Public Open House – Round 1

To inform and involve Gila County residents in the study and to obtain public input on study objectives and transportation needs, Round 1 public meetings were held in Payson on June 18, 2013 and in Globe on June 19, 2013. A summary of public input from those meetings is provided below. The Public Involvement Summary Report for the Round 1 meetings is provided in **Appendix G**.

## 10.1.1 Public Meeting Round 1 – Payson

Nine people attended the public meeting held in Payson. Public comments included:

- What are the bridges that need to be reconstructed?
- Tonto Creek Bridge needs to be built;
- Suggest adding Forest Service Road 414 to roadways maintained by Gila County;
- Need more pedestrian-friendly roadway shoulders;
- Need to make narrow roadways one-way;
- Would like an alternate route west from Payson to go south to Rye for whenever SR 87 is closed due to crashes; and
- Any plans to pave Young Rd?

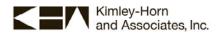
## 10.1.2 Public Meeting Round 1 – Globe

Thirteen people attended the public meeting held in Globe. Public comments included:

- What are the bridges that need to be reconstructed?
- Would like to see a more detailed map of roadways in southern Gila County;
- Would like to see a scope of a road safety assessment;
- Concerned about Broadway / El Camino intersection, consider installing traffic signal;
- People sometimes don't see the signal at 3rd Street while on US 60;
- Pedestrian hybrid beacon (also known as a HAWK crossing) confuses people;
- Intersection of US 60/US 70 is a safety concern may need a traffic signal;
- US 60: Westbound near the hilltop there is a blind spot;
- US 60: Near hilltop area there is a drop-off at roadway edge;
- South Broad Street/Walliman Road at US 60 underpass near the community center in Globe has no sidewalk or shoulder on one side and on-street parking reduces visibility;
- Jesse Hayes Road at Beer Tree Crossing where it turns into Ice House Canyon Road has visibility issues;
- Need a bridge on Besich Boulevard at the low-water crossing that floods when it rains;
- When it floods at Pinal Creek, traffic has nowhere to go; and
- On Ice House Canyon Road before Albany Way, there are drainage issues when it rains.

## 10.2 Public Open House – Round 2

To inform and involve Gila County residents in the study and to obtain public input on recommended improvements, Round 2 public meetings were held in Payson on October 1, 2013 and in Globe on October 2, 2013. A summary of public input from those meetings is provided below. The Public Involvement Summary Report for the Round 2 meetings is provided in **Appendix G**.



### 10.2.1 Public Meeting Round 2 – Payson

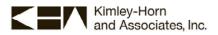
Five people attended the public meeting held in Payson. Public comments included:

- Worried that construction vehicles will ruin pavement on Houston Mesa Road while working on water pipe project near Mesa Del Caballo;
- Elevate low-water crossings or replace them with bridges on Houston Mesa Road;
- While Houston Mesa Road is under construction, no passing should be allowed and the speed limit should be lowered;
- Make sure this study accounts for projects already under construction;
- Make Payson area prominently displayed on maps so not overshadowed by Globe area;
- Need more speed limit signage, enforcement, and crash analysis on Control Road because drivers are speeding on it now that it has been paved;
- Need to explain how pavement management needs are prioritized;
- Indicate that the excise tax is a voter-authorized sales tax;
- Define what an RSA is and explain who conducts the RSA;
- Are there any new roadways planned? Mention in report that there are not any and why not;
- As part of ongoing Tonto National Forest travel management plan, some roadways are being closed Gila County needs to identify which roadways need to stay open;
- Debatable whether Tonto National Forest does a good job managing and maintaining roadways maybe they should be taken over by ADOT;
- Explain what an improvement district is and how it works;
- Does Gila County have a plan of what to do about getting the half-cent sales tax extended like how to promote it, do advertisements, get a citizen committee together, etc.? and
- Liked the presentation everything was simple and easy to understand.

### 10.2.2 Public Meeting Round 2 - Globe

Two people attended the public meeting held in Globe. Public comments included:

- Why is the focus on maintenance instead of new projects?
- Not much air quality issue in Gila County, so why was air quality an evaluation criteria?
- Why is Gila County helping ADOT with SR 260 as it is a state highway?
- The amount of recommended chip sealing for the first five years seems low;
- It is critical to have the towns, cities, and Gila County come together to push the sales tax extension before the election would be nice to have an agreed upon approach to include in this study; and
- Do the HURF projections assume that the HURF allocation to towns, cities, and counties will return to the same levels they used to be before the legislature reallocated some of the HURF to other uses?



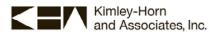
## APPENDIX A – FOREST SERVICE ROADS MAINTAINED BY GILA COUNTY

Road Number	Forest Service Roads Maintained by Gila County	Gila County Maint Miles	Gila County Maint. Level	Gila County BMP/EMP Description	Additional Description BMP or EMP Logical Termini
	COPPER				
73	Jordan's Rd	0.5	2	SR 188 to Private Land	
85	Grapevine Extension	0.3	2	Parking lot - Lake	
87	Dagger Ranch	1	2	FR 203 - Private Land	Dagger Ranch
97	Jack Shoe (FR 97)	3	2	FDR 60 - Private Land	Jack Shoe Ranch
189	Coon Creek Trail	4.8	2	SR 288 - Oak Cr. TH	
202	Rock House	5.7	2	Springs	Corrals
203	Cherry Ck	1	2	Pens	Ellison Ranch
203A	Bull Canyon Trailhead	5.9	2	FR 203 - Trailhead	
216	FDR 216 (Pinky Norris)	1.4	2	SR 60 - End	
219	Horseshoe Bend	8.9	2	13/14	Top of Hill
220	Richmond Basin	7.2	2	FDR 219 to End	Richmond Basin
223	Shute Spring	4.7	2	FR 219 to Private Land	Shute Springs
224	Copper Hill	6.8	2	US 60 to Forest Boundary	
238	FDR 238	3	2	SR 288 - Private Land	
287A	Miles Ranch	1.2	2	FR 287 - County Line	
287B	Castle Dome	3.4	2	FR 287 to FR 608	
303A	Gleason Flat	2.1	2	FDR 303 - Top of Hill	Not to the River
304	Chrysotile	3.8	2	SR 60 - End	
395	Kings Canyon	4.7	2	Forest Bndry to FR 594	
396	Eads Wash	0.5	2	SR 288 - Parking Lot	
429	Mill Ridge	6	2	SR 188 - TH	
449A	Campaign Creek Spur	5.1	2	FR 449 to TH	
473	Regal Mine	6.7	2	Forest Boundary to Private Land	Regal Mine
584	Winters Ranch	1.6	2	SR 60 - Winters Ranch	
594	Nugget Mesa	4.9	2	County Road to Dead End	
	Bohme Ranch	2.7	2	FR 2608 to Private Land	Bohme Ranch
644	Redmond Flat	3.7	2	FR 223 to End	
647	Game Loop	0.5	2	SR 188 - MP .5	To FS water System
2568	FDR 2568	0.4	2	FR 349 to Private Land	
2619	FDR 2619	1.4	2	395 - Private Land	
	LEVEL 2 TOTAL	102.9			
55	Russel Gulch	4.3	3	Forest BDY - Forest BDY	EOP Kellner Canyon
	Black Brush Ranch	2.4	3	SR 188 - Black Brush Hdqtrs.	
	Frazier Trailhead	0.2	3	SR 188 - Trailhead	
	Cherry Creek	19.6	3	SR 288 to Private Land	Ellison Ck Ranch
	Haystack	14.1	3	US 60 - FDR 1052	
	Fraizer Campground	0.4	3	SR 188 - Campground	
	Simpson Lake	5.8		US 60 to FR 2568	1

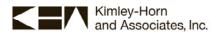
Road Number	Forest Service Roads Maintained by Gila County	Gila County Maint Miles	Gila County Maint. Level	Gila County BMP/EMP Description	Additional Description BMP or EMP Logical Termini
	COPPER				
377	Jones Water	0.7	3	SR 60 - End	
445	Three Bar Cabin	3.2	3	SR 188 - FR 445A	
446	Estates	0.5	3	FR 447 - Roosevelt Estates	
448	Tidwell	1.4	3	SR 188 - Private Land	Tidwell Ranch
449	Campaign Creek	3.2	3	SR 188 - TH	
321A	Fraizer Campground Main	0.1	3	FR 321 - Picnic Site	
321B	Frazier Rec Site	0.2	3	FR 321 - Picnic site	
	LEVEL 3 TOTAL	56.1			
82	Windy Hill	2.4	5	SR 188 - Boat Ramp	
	Grapevine Main Entry Road	2.2	5	SR 188 - Campground	
447	Schoolhouse	3.7	5	SR 88 - campground	
465	River	1.8	5	SR 288 to End of Pavement	
	LEVEL 5 TOTAL	10.1			
	TOTAL MILES	169.1			
	TOTAL MILLES	109.1			

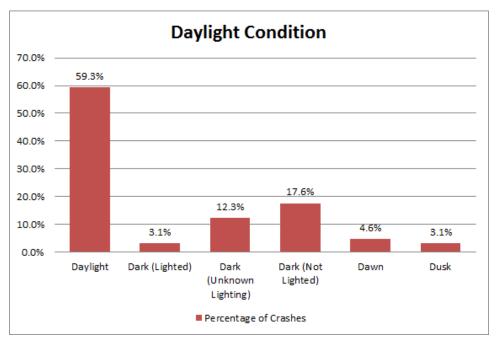
Road Number	Forest Service Roads Maintained by Gila County	Gila County Maint Miles	Gila County Maint. Level	Gila County BMP/EMP Description	Additional Description BMP or EMP Logical Termini
	TIMBER				
54	P.V. Wilson	17.1	2	SR 288 - Private Land	QRanch
	A-Cross	23.9	2	EOP to SR 288	
	Nail Ranch	0.5	2	FDR 512 - Private Land	South to Nail Ranch
	Crouch Mesa	2.7	2	FR 512 -FR 512	
128	Nagelin Rim	3	2	FR 512 - MP3.0	
	Big Walnut	7.2	2	Land	Marsh Creek Ranch
	Jim Sam	4.6	2	FR 486 - end	
134	Flying W	6.4	2	FR 129 to Private Land	Flying W Ranch
198	Pyeatt Draw	7.8	2	FR 199 - FR 64	
249	Ellinwood Segment	4	2	FR 200 -Private Land	Ellinwood Ranch
	Colcord Road	7.4	2	FDR 512 - Private land	
409	Fort Reno	2	2	SR 188 to FR 1382	
411	Nagelin Canyon	5.8	2	FR 187 to FR 291	
411C	Nagelin Spur C	2.5	2	FR 411 - FR512	
424	Bouquet	2.9	2	FR 423 to FR 1405	
428	Hardscrabble	7.8	2	FDR 708 - Forest Bndry	
430	Pyle Ranch	0.5	2	FR64 - Private	Pyle Ranch
484	Mail Box	1	2	FR 130 to FR 134	
485	Turkey Creek Mine (Rock Cr.)	3.4	2	FR 486 to End	Mine
485	Turkey Ck Mine	3.2	2	FR 486 to End	
486	Buzzard Roost	7.3	2	SR 288 to FR 485	
604	Lambing Creek	6.5	2	FR 71 - dead end	
609	Bear Head Spring (Malicious Gap)	6.3	2	FR 71 to FR 416	
648	Lone Pine Saddle	1.3	2	FR 143 - TH	
778	Naeglin Rim Bypass	0.8	2	FR 128 to FR 411	
778	Nagelin Rim Bypas	3	2	FR 128 to FR 411	
896	Juniper	4.9	2	FR 423 to FR 71	
	Roscoe	4	2	FR 200 to FR 2985	
	76 Ranch	0.2	2	FR 184 - Private Land	76 Ranch
2990	FDR 2990	0.6	2	FR 200 - Private	
3253	FDR 3253	1.8	2	FR 485 - Private Land	Buzzard Roost Camp
202A	FDR 202A	2	2	Fr 202 to Private Land	Q Ranch
	LEVEL 2 TOTAL	152.4			
20	Roberts Mesa Road	6.8	3	FR 64 - Tonto Cr. Road	
	Washington Park	3.9		FR 64 - Private Land	+
	Valentine Canyon	2.2	3	FR 33 - FR 188	+
	Greenback Crossing	12.9		SR 188 - Private Land	Conway Ranch
	Nail Ranch	12.9	3	FDR 202 - Private Land	North to Nail Ranch
	Nail Ranch	1.4		Fr 202 to Private Land	Nail Ranch from south
	Reservation	4.3		FR 512 - FR 188	
	El Oso	9.3		SR 188 - FR 648	

Road Number	Forest Service Roads Maintained by Gila County	Gila County Maint Miles	Gila County Maint. Level	Gila County BMP/EMP Description	Additional Description BMP or EMP Logical Termini
	TIMBER				
184	Rye Creek	7.6	3	SR 188 - FR 417	
188	OW ranch	5.3	3	FR 512 to Private Land	OW Ranch
190	A Cross Admin	0.8	3	FR 60 - Admin Site	
200	Chamberlin Trail	8.8	3	Camp Ground	Camp Ground
202	Rock House	6	3	FH 12 to FR 202A	
202	Rock House	6	3	Fr 512 to FR 202A	
	Bishop Knoll	1.7	3	SR 87 - Shooting Range	
405	Bear Flat	4.4	3	SR 260 - private	Bottom level 2?
405A	Little Green Valley	2.7	3	SR 260 - FR 405	
411	Nagelin Canyon	3.7	3	FR 512 to FR187	
	Rye Cypress	0.5	3	SR 87 - Private Land	
	Barnhardt TrailHead	5.2	3	SR 87 - TH	
423	Cline Bouquet	6.7	3	SR 60 - FR 71	
426	Grantham Ranch	2.8	3	FR 423 - Private Land	Grantham Ranch
440	Camp Geronimo	2.1	3	FR 64 - Camp	
445A	Three Bar Cabin	0.7	3	FR 445 - End	
458	Geronimo Estates	0.6	3	FR 64 to Private Land	Geronimo Estates
470	Bar X	1	3	SR 188 - FR 423	
526	Cholla Bay	0.3	3	SR 188 - Lake	
1190	Verde Glen	1.4	3	FR 64 - Private Land	
	LEVEL 3 TOTAL	110.5			
			4		
	Mule Springs	6	4	FR 512 - Canyon Ck LWC	
	A-Cross	2.1	4	SR 188 - EOP	Indian Pt CG Entrance
	Control RD	12.6	4	SR 87 to FR 430	
	Flowing Springs	1.6	4	SR 87 - FR 1579	
	Doll Baby Young Llighway	6.3	4	Payson Limits to Private	Ends at Simonton Flat
512	Young Highway LEVEL 4 TOTAL	15.2	4	Boundary	North direction
	LEVEL 4 IOTAL	43.8			
661	Indian Point	2	5	FR 60 - Campground	
	Cholla Entry Road to Shower 3	0.7	5	SR 188 - Campground	To Shower #3
	Cholla Boating	0.5	5	FR 874 - Boat Ramp	
	LEVEL 5 TOTAL	3.2		т 	
	TOTAL MILES	309.9			

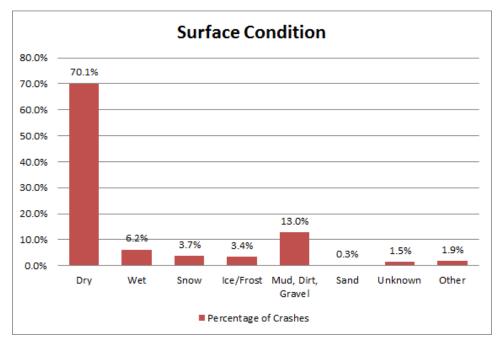


## **APPENDIX B – DETAILED CRASH DATA**

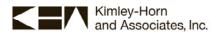


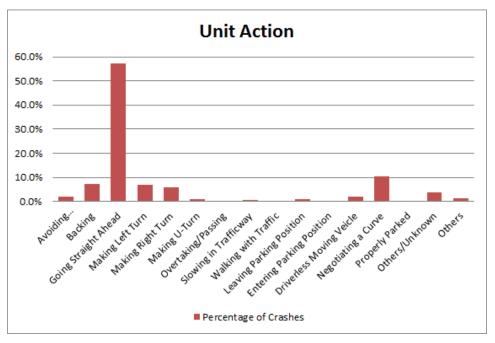


Gila County Roadways, Crashes, 2008-2012 – Unit Action

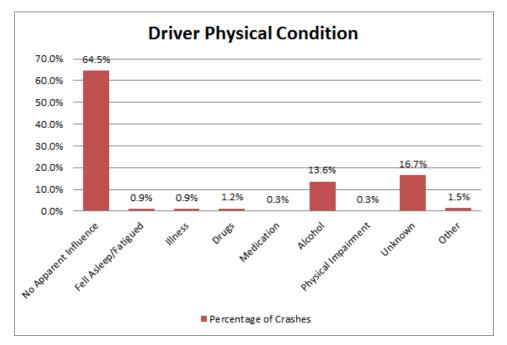


Gila County Roadways, Crashes, 2008-2012 – Unit Action

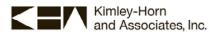




Gila County Roadways, Crashes, 2008-2012 – Unit Action



Gila County Roadways, Crashes, 2008-2012 – Driver Physical Condition



## **APPENDIX C – DETAILED PAVEMENT CONDITION DATA**

#### Gila County Paved Roadway Inventory and Conditions

Copper Region

									Paveme	ent Dist	resses (1	Typical S	Severity)			Gen	eral Site	e Conditi	ions		
												[									
						ROAD	&T Cracking	lligator Cracking	lock Cracking	dge Cracking	atching	otholes	leath/Rav	utting	n/Shld Drop Off	ashboard	rosion	rainage	ailing Surface	Initial Visual Condition	Final Overall Condition
	LENGTH		REGION	BEGIN REF	END REF.	NUMBER	<u> </u>	<b>A</b>		ш	ě	ď	3	Ř		3	Ē	ā	Ë	Rating	Rating
AZURITE DR BORNITE LN	0.10	BANDY HEIGHTS BANDY HEIGHTS	COPPER COPPER	AZURITE DR AZURITE DR	AZURITE DR TURQUOISE DR	253 257	M(40) L(90)	L(10) M(10)		M(5)	M(E)		L(60) L(80)							60 40	40 40
MALACHITE LN	0.09	BANDY HEIGHTS	COPPER	AZURITE DR	AZURITE DR	257	L(90)	M(10)	M(40)	101(5)	101(5)		M(60)				-			30	10
MINERAL LN	0.08	BANDY HEIGHTS	COPPER	SR 188	AZURITE DR	258	L(70)	M(80)	H(60)				M(90)				1			20	0
TURQUOISE DR	0.09	BANDY HEIGHTS	COPPER	BORNITE LN	MALACHITE LN	256	L(80)	M(10)	M(90)		M(5)		L(10)							40	40
BEER TREE XING	0.15	CANYONS	COPPER	WALLIMAN RD	UPPER PINAL CREEK RD	507		M(70)		M(20)	( )		M(90)		M(10)					20	30
UPPER PINAL CREEK RD	0.24	CANYONS	COPPER	BEER TREE XING	DEAD END	283	M(60)		H(90)		L(10)	M(1)	H(99)							10	0
1ST AVE	0.15	CENTRAL HEIGHTS	COPPER	CYPRESS DR	CHERRY AVE	1,308		M(5)	M(90)				L(10)							80	80
1ST AVE	0.14	CENTRAL HEIGHTS	COPPER	CHERRY AVE	N ARBOR AVE	1,369		M(5)	M(80)				L(20)							80	80
	0.15	CENTRAL HEIGHTS	COPPER	CHERRY AVE	N ARBOR AVE	1,367	L(5)		M(80)				1 (10)							80	60
3RD AVE 4TH AVE	0.15	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	N ARBOR AVE CHERRY AVE	CHERRY AVE N ARBOR AVE	1,366 1,364	M(1)		M(70) M(90)				L(10) L(30)							80 80	80 80
ALBERTA DR	0.15	CENTRAL HEIGHTS	COPPER	YUMA TR	GOLDEN HILL RD	495	M(80)	M(70)		L(10)			M(100)							20	30
ALBERTA DR	0.12	CENTRAL HEIGHTS	COPPER	COUNTRY CLUB TERRACE	END	1.379	L(40)	( )	L(10)	L(10)	M(2)		M(40)							60	60
ALCOTT DR	0.05	CENTRAL HEIGHTS	COPPER	GOLDEN HILL RD	UNKNOWN #2	1,378	M(60)		1 - 1	L(30)		M(1)	M(90)							30	30
ALCOTT DR	0.08	CENTRAL HEIGHTS	COPPER	GOLDEN ST	GOLDEN HILL RD	1,403	L(60)	M(40)		_(==)	L(10)		M(80)							40	40
ALDER DR	0.10	CENTRAL HEIGHTS	COPPER	GOLDEN HILL RD	DEAD END	1,405	M(60)	M(10)	L(10)		L(5)		M(90)		L(5)					50	60
ALLEY	0.20	CENTRAL HEIGHTS	COPPER	MAIN ST	DEAD END	1,349		M(95)		M(10)	M(10)	H(5)	H(95)				✓		✓	10	0
ALLEY	0.14	CENTRAL HEIGHTS	COPPER	CENTRAL DR	APACHE ST	1,932								M(60)		√	✓	✓	✓	0	10
APACHE HILLS LN	0.19	CENTRAL HEIGHTS	COPPER	ROBERTS DR	ROBERTS DR	1,317	. ,		M(80)	. ,	. ,		M(90)							30	30
APACHE ST	0.19	CENTRAL HEIGHTS	COPPER	MAIN ST	HILLCREST ST	1,337	L(80)	L(5)	· · ·	L(10)	· · ·		M(50)							50	60
ARROYA AVE BESICH BLVD	0.10	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	ENGLISH AVE HOSPITAL DR	BLACK WARRIOR RUSSELL RD	1,323	L(30)	L(20)	M(70)		L(10)		M(80)		1 (00)					30	40
BLACK WARRIOR	0.31 0.20	CENTRAL HEIGHTS	COPPER	GLOBE CANYON RD	MOUNTAIN VIEW DR	2,001	L(1)	1(10)	M(70)	1(10)	1 (20)		L(100) H(80)		L(20)					90 30	90 20
BLOCK AVE	0.20	CENTRAL HEIGHTS	COPPER	NELL ST	SUNRISE MH PARK	1,319	M(80)		M(70)				L(90)		H(50)					40	40
BOYLES AVE	0.05	CENTRAL HEIGHTS	COPPER	MOUNTAIN VIEW	INSPIRATION DR	1,310			M(30)	L(20)	E(10)		M(100)		11(00)					30	10
BRALEY ST	0.20	CENTRAL HEIGHTS	COPPER	APACHE ST	COBB ST	1,339	L(40)		(00)	L(20)	L(10)		L(90)							30	30
BURNHAM ST	0.16	CENTRAL HEIGHTS	COPPER	YUMA TR	END OF PAVEMENT	492	M(60)			L(10)	, í	L(1)	M(90)		L(5)			✓		20	10
BUTTERFLY LN	0.08	CENTRAL HEIGHTS	COPPER	SNEDDEN ST	END OF PAVEMENT	1,388		M(40)	H(40)	H(30)			M(40)							30	30
CAMPBELL AVE	0.05	CENTRAL HEIGHTS	COPPER	HUNT AVE	SHELTON DR	1,327	L(20)								M(20)			✓		60	60
CARPENTER LN	0.04	CENTRAL HEIGHTS	COPPER	LANCASTER ST	DEAD END	1,391			L(30)				L(10)		L(5)					60	50
	0.42	CENTRAL HEIGHTS	COPPER	EDDY ST	MAIN ST	1,332	L(30)	M(10)	M(70)	L(20)	M(5)		L(50)		L(5)					40	20
CHERRY AVE COBB ST	0.33 0.08	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	MANOR DR BRALEY ST	N ARBOR AVE ROBERTS DR	1,377 1,338	L(5) L(40)		M(90) L(70)		L(5)		L(20)				-			80 50	80 60
COUNTRY CLUB LN	0.08	CENTRAL HEIGHTS	COPPER	FIRST AVE	PAXTON AVE	1,338	H(5)		M(30)		L(3)		L(20)							80	80
COUNTRY CLUB TERRACE	0.18	CENTRAL HEIGHTS	COPPER	GOLDEN HILL RD	CORSO DRIVE	496	L(60)		L(5)		M(1)		L(0)		M(10)					60	50
COUNTRY CLUB TERRACE	0.05	CENTRAL HEIGHTS	COPPER	COUNTRY CLUB TERRACE	END OF PAVEMENT	1,401	_(==)	H(80)	H(70)	H(5)	~ / /		H(90)		(					20	0
CROSS DR	0.14	CENTRAL HEIGHTS	COPPER	CENTRAL DR	END	1,325	L(40)	M(30)	M(60)	L(30)			L(80)		H(1)					30	30
CYPRESS DR	0.19	CENTRAL HEIGHTS	COPPER	CHERRY AVE	CUL DE SAC	1,372		L(5)					L(10)							80	80
DOMINION ST	0.07	CENTRAL HEIGHTS	COPPER	COBB ST	ENGLISH AVE	1,326		M(40)	M(80)				L(70)							40	20
EDDY ST	0.05	CENTRAL HEIGHTS	COPPER	MCKINNEY AVE	CENTRAL DR	1,333	L(30)		M(70)	L(10)			L(60)				ļ			50	50
	0.09	CENTRAL HEIGHTS	COPPER	GOLDEN HILL RD	N CHERRY ST	1,376	L(30)	<u> </u>		M(5)	1.(5)		L(10)							80	80
ENGLISH AVE FRONTAGE RD	0.15	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	CROSS DR ALDER DR	GLOBE CANYON RD ALCOTT DR	1,324	L(20)	M(5)	-	+	L(5) L(2)		M(90)				<u> </u>			70	70
GLENDALE AVE	0.06 0.20	CENTRAL HEIGHTS	COPPER	HILL LANE	MAIN ST	1,929 1,329	L(70)		M(30)	+	L(2) L(5)	1	L(90) L(50)				<u> </u>			30 60	30 70
GLENDALE AVE	0.20	CENTRAL HEIGHTS	COPPER	HUNT AVE	END OF PAVEMENT	1,329			M(30)	M(10)			L(80)		L(10)					50	50
GLOBE CANYON RD	0.19	CENTRAL HEIGHTS	COPPER	ROBERTS DR	END OF PAVEMENT	691	· · ·	· · · /	· · ·		L(10)	L(1)	M(90)		L(10)		1			40	50
GOLDEN HILL RD	0.60	CENTRAL HEIGHTS	COPPER	US 60	MAIN ST	493	L(80)		H(80)			_(.)	L(20)		L(5)					40	20
GOLDEN ST	0.06	CENTRAL HEIGHTS	COPPER	ALCOTT DR	END OF PAVEMENT	271		M(30)					M(80)		. /					40	20
HILL LN	0.10	CENTRAL HEIGHTS	COPPER	MCKINNEY AVE	APACHE ST	1,336	L(60)	M(30)	L(40)		L(10)	L(5)			M(50)					30	30
HOPE LN	0.75	CENTRAL HEIGHTS	COPPER	RUSSELL RD	DEAD END	1,383			M(70)				M(90)	M(5)	H(3)					10	0
HUIE ST	0.15	CENTRAL HEIGHTS	COPPER	RUSSELL RD	END	1,384	· · /	· · ·	M(30)	L(40)			L(90)							30	40
HUNT AVE	0.13	CENTRAL HEIGHTS	COPPER	GLENDALE AVE	DEAD END	1,328			M(50)	<u> </u>			M(100)				ļ			40	40
INSPIRATION DR	0.26	CENTRAL HEIGHTS	COPPER	CENTRAL DR	DEAD END	489	L(70)	M(5)	M(30)			M(5)	M(80)							50	30

## Gila County Paved Roadway Inventory and Conditions

Copper Region

									Paven	nent Dist	resses (	Typical S	Severity)	)		Ger	neral Site	e Condit	ions		
DO 4D NAME			PEOLON			ROAD	&T Cracking	lligator Cracking	lock Cracking	dge Cracking	atching	otholes	leath/Rav	utting	n/Shld Drop Off	ashboard	rosion	rainage	ailing Surface	Initial Visual Condition	Final Overall Condition
ROAD NAME JOHNSON RD	<b>LENGTH</b> 0.04	COMMUNITY CENTRAL HEIGHTS	COPPER	JOHNSON RD	END REF. JOHNSON RD	<b>NUMBER</b> 1,346	L(60)	▲ M(30)	<u> </u>	Щ	L(2)	<u> </u>	<u>≤</u> H(100)	Ř			Ш		ш	Rating 10	Rating 0
LANCASTER ST	0.04	CENTRAL HEIGHTS	COPPER	RUSSELL RD	END	1,340	L(00)	M(60)		) L(20)			L(30)							30	40
MAIN ST	0.05	CENTRAL HEIGHTS	COPPER	US 60	MAIN ST	690	L(70)						L(00)	L(20)						60	30
MAIN ST	0.19	CENTRAL HEIGHTS	COPPER	CENTRAL DR	ROBERTS DR	1,871	L(80)	M(5)						_(;)						50	50
MCKINNEY AVE	0.48	CENTRAL HEIGHTS	COPPER	MAIN ST	END OF PAVEMENT	1,334	L(90)			, , ,		H(2)	L(60)							40	30
MENDOZA ST	0.10	CENTRAL HEIGHTS	COPPER	GLENDALE AVE	CENTRAL DR	1,330	L(90)		M(30				L(80)							50	70
MILL ST	0.08	CENTRAL HEIGHTS	COPPER	ALDER DR	END	1,404		L(20)	/						L(5)					50	30
	0.10	CENTRAL HEIGHTS	COPPER	MCKINNEY AVE	END END	1,331		M(30)		, , ,			L(70)							40	50
MOUNTAIN VIEW N ARBOR AVE	0.19 0.28	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	CENTRAL DR GOLDEN HILL	PAXTON AVE	1,313 1,375	L(5)	M(40)	M(50 M(80		M(5)		H(90)							10 80	0 80
NEILSON ST	0.20	CENTRAL HEIGHTS	COPPER	THOMAS RD	END OF PAVEMENT	1,373		L(10)			L(5)		L(90)			-				40	30
NELL ST	0.05	CENTRAL HEIGHTS	COPPER	GLOBE CANYON RD	END OF PAVEMENT	1,321		M(30)				L(5)	M(100)							30	20
PALM LN	0.09	CENTRAL HEIGHTS	COPPER	PAXTON AVE	DEAD END	1,370	H(2)			M(2)										80	80
PAXTON AVE	0.11	CENTRAL HEIGHTS	COPPER	N ARBOR AVE	MANOR DR	1,309	L(10)					M(1)								80	80
PAXTON AVE	0.14	CENTRAL HEIGHTS	COPPER	CHERRY AVE	COUNTRY CLUB LN	1,374			M(90	/			L(10)							80	80
PINAL CANYON DR	0.31	CENTRAL HEIGHTS	COPPER	RUSSELL RD x 2	UNK 8 9 x 2	274	L(90)	M(20)	M(80	) H(30)	M(5)		M(80)		M(20)					30	30
	0.08	CENTRAL HEIGHTS	COPPER	APACHE ST	SHORT AVE	1,340	1 (00)		M/20	) M(10)			L(60)							60	60
RANDAL AVE ROBERTS DR	0.03	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	END MAIN ST	SHORT AVE RUSSELL RD	2,471 491	L(80)	M(30)	(	) M(10) ) M(20)			H(100) M(100)		M(2)					40 30	40 20
ROSE AVE	0.47	CENTRAL HEIGHTS	COPPER	SECOND AVE	THIRD AVE	1,365	L(90)	L(2)	L(10	/ (-/	L(3)		L(10)		111(2)					80	80
ROSE MOFFORD WAY	0.03	CENTRAL HEIGHTS	COPPER	RUSSELL RD	HOPE LN	2.012		L(Z)	L(10	,			L(10)							90	90
RUSSELL RD	1.63	CENTRAL HEIGHTS	COPPER	END OF SEGMENT	END OF PAVEMENT	2,481	L(60)	L(40)	M(30	) M(5)	M(1)		M(60)		H(3)			~		50	60
RUSSELL RD	0.60	CENTRAL HEIGHTS	COPPER	HOSPITAL DR	ROBERTS DR	2,480				) L(10)			M(90)		M(2)					30	50
RUSSELL RD	0.20	CENTRAL HEIGHTS	COPPER	ROBERTS DR	END OF SEGMENT	2,467														100	100
SCOTT ST	0.16	CENTRAL HEIGHTS	COPPER	INSPIRIATION DR	MOUNTAIN VIEW	1,312		M(20)			( )		M(60)							40	40
SHORT AVE	0.38	CENTRAL HEIGHTS	COPPER	MAIN ST	END	1,343	L(30)				L(5)		L(90)		H(5)					50	40
SNEDDEN ST SOUTH MAIN ST	0.24	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	RUSSELL RD COBB ST	END OF PAVEMENT	1,390		M(60)		/ -/	~ ~ /		M(70)							20	30
SPADAFORE WAY	0.07	CENTRAL HEIGHTS	COPPER	RUSSELL RD	END UNK9	1,314 273		M(30) L(20)		/ / /	L(10)		H(100) M(90)							10 40	0 40
SPRUCE LN	0.12	CENTRAL HEIGHTS	COPPER	FIRST AVE	CYPRESS DR	1,371	L(60)	L(20)	101(30	)			L(10)			-				80	80
STORY ST	0.12	CENTRAL HEIGHTS	COPPER	RUSSELL RD	END OF PAVEMENT	932	L(20)						L(10)							80	80
THOMASINA LN	0.06	CENTRAL HEIGHTS	COPPER	SNEDDEN ST	END OF PAVEMENT	1,387		M(60)	M(50	) M(40)			M(20)		L(5)					20	10
UNK 112003	0.06	CENTRAL HEIGHTS	COPPER	GOLDEN HILL RD	WEST ST	1,931			,	, , , , , , , , , , , , , , , , , , ,										0	0
UNK5	0.06	CENTRAL HEIGHTS	COPPER	ALBERTA DR	ALCOTT DR	1,402				) L(30)			L(80)							20	10
UNK9	0.03	CENTRAL HEIGHTS	COPPER	SPADAFORE WAY	PINAL CANYON DR	2,275		M(50)		) L(30)			L(90)		M(5)					40	20
UNK9	0.03	CENTRAL HEIGHTS	COPPER	PINAL CANYON DR	ALAMEDA DR	275		M(50)		) L(30)			L(90)		M(5)					40	20
UTILITY ST WASHBURN ST	0.11	CENTRAL HEIGHTS CENTRAL HEIGHTS	COPPER COPPER	RUSSELL RD THOMAS RD	DEAD END DEAD END	1,386 486		M(40)		) ) L(5)	L(2)		L(80) M(60)		H(5)					50 40	30 20
WOODWARD ST	0.14 0.19	CENTRAL HEIGHTS	COPPER	RUSSELL RD	DEAD END DEAD END	1,385				) L(5) ) M(5)			M(70)		п(э)					30	30
YOUNG ST	0.06	CENTRAL HEIGHTS	COPPER	ALCOTT DR	ALDER ST	494				) L(10)			M(80)							40	20
YUMA TR	0.18	CENTRAL HEIGHTS	COPPER	THOMAS RD	END	1,380	L(30)			, _(,	_(_/		M(60)							50	50
2ND ST	0.07	CLAYPOOL	COPPER	LOCOMOTIVE DR	US 60	513	L(90)	H(5)	M(60	) L(60)			M(90)					√		50	50
ALLEY	0.19	CLAYPOOL	COPPER	NEW ST	VERNON ST	1,901		L(1)		H(10)		H(5)	H(95)	H(20)					✓	0	0
ALLEY	0.09	CLAYPOOL	COPPER	COPPER LN	PINEWAY ST	1,925													✓	0	0
	0.13	CLAYPOOL	COPPER	OLD OAK ST		1,902	1 (00)	MAGO	N4/00	\ \					1 (4.0)				~	0	0
AVENIDA DE ED PASTOR BERRY WAY	0.15	CLAYPOOL CLAYPOOL	COPPER COPPER	GROVER CYN MORROW AVE	RAILROAD AVE DEAD END	1,209	L(80)	M(20)		) )) M(40)			L(80) L(20)		L(10) L(10)					30 30	50 20
BOARD DR	0.08	CLAYPOOL	COPPER	EL CAMINO	DEAD END DEAD END	1,214	1 (00)			) L(10)		L(5)	L(20)		L(10)			~		30	20 30
BROADWAY	0.13	CLAYPOOL	COPPER	2ND ST	REAR BROADWAY	523				) L(30)			M(80)							40	30
CALLE DE LOMA	0.50	CLAYPOOL	COPPER	US 60	END	1,227		M(20)			(10)		M(100)							40	40
CALLE PEQUENA	0.06	CLAYPOOL	COPPER	MAPLE LEAF ST	DAWDY ST	518		M(60)		) M(30)			L(100)							30	10
CLEVELAND AVE	0.19	CLAYPOOL	COPPER	CALLE DE LOMA	DEAD END	1,224	M(70)	L(20)	M(30	)								✓		60	60
COPPER LN	0.10	CLAYPOOL	COPPER	COPPER ST	DEAD END	1,205		M(50)		) M(10)			L(70)		M(5)					40	20
COPPER ST	0.36	CLAYPOOL	COPPER		LONG ST	1,204	L(90)			) L(40)			L(50)		1 ( 1					30	20
COPPER ST	0.05	CLAYPOOL	COPPER	DEAD END (EAST)	WILSON PL	1,188	L	M(60)	M(90	) L(30)	1	ļ	L(80)	ļ	L(10)	ll	Ļ	l		40	20

									Pavem	ent Distr	esses (	Typical S	Severity)			Ger	eral Site	Conditi	ons		
						ROAD	t Cracking	ligator Cracking	ock Cracking	lge Cracking	Itching	tholes	eath/Rav	itting	/Shid Drop Off	ashboard	osion	ainage	iling Surface	Initial Visual Condition	Final Overall Condition
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	NUMBER	L8	A	ā	Щ	Ра	Рс	Š	Rı	Ľ	ŝ	ш	ā	Fa	Rating	Rating
COPPER ST	0.08	CLAYPOOL	COPPER	MAPLE LEAF ST	END	1,187	,	M(40)		M(20)		L(10)	L(80)		M(5)			~		30	10
DAWDY DR	0.06	CLAYPOOL	COPPER	GLOBE AVE		1,196	M(90)		M(00)	L(80)	N4(4.0)		M(80)							30	30
	0.11	CLAYPOOL	COPPER	US 60	LOCOMOTIVE DR	1,193	( )	H(70)	M(60)	-	M(10)		H(70)							20	0
EL CAMINO ELAM AVE	0.24	CLAYPOOL CLAYPOOL	COPPER COPPER	WILSON ST MILL ST	DEAD END MILL ST	1,199 793	L(90)		M(70)	1 (20)	M(40)	L(5)	L(90)							40 50	40
FRONT ST	0.07 0.05	CLAYPOOL	COPPER	RANSBERGER HILL	END OF PAVEMENT	1,211	M(80)	M(30) M(30)	L(20)	L(30)	IVI(40)		L(70)			-	+ +			50 40	50 20
GLOBE AVE	0.03	CLAYPOOL	COPPER	DAWDY ST	END OF PAVEMENT	1,211	( )	M(40)	L(20)	L(30)	L(10)		L(70)							40	20
GOLDEN WAY	0.24	CLAYPOOL	COPPER	DAWDY ST	END (WEST)	2.472	M(30)	( )	( )		L(10)		L(90)		L(10)					40	40
GOLDEN WAY	0.03	CLAYPOOL	COPPER	DAWDY ST	END (EAST)	517	M(90)		11(00)	2(20)	2(10)		L(90)		E(10)					60	60
GORDON ST	0.19	CLAYPOOL	COPPER	NEW ST	DEAD END	1.208		L(30)	M(90)	L(30)		L(2)	L(80)							50	50
GREER ST	0.04	CLAYPOOL	COPPER	VANWINKLE AVE	KINNEMUR AVE	2,468	L(80)	( )	L(20)	(/	L(5)		L(90)				1 1			70	70
GREGOVICH DR	0.05	CLAYPOOL	COPPER	CALLE PEQUENA	DEAD END	519	L(20)	M(80)	M(30)		L(10)		M(80)		M(2)			✓		30	20
GROVER CYN	0.43	CLAYPOOL	COPPER	US 60	END OF PAVEMENT	1,210	M(70)	L(30)	L(30)				L(80)					$\checkmark$		40	20
HAMILTON LN	0.05	CLAYPOOL	COPPER	CALLE DE LOMA	DEAD END	1,220	M(60)	( )	M(70)		L(2)		L(90)							50	40
HAMMOND ST	0.22	CLAYPOOL	COPPER	DEAD END W. OF EL CAMINO	DEAD END E. OF OLD OAK	1,195		M(50)		M(20)			L(30)							30	50
JEFFERSON ST	0.02	CLAYPOOL	COPPER	CALLE DE LOMA	END OF PAVEMENT	1,226	M(50)		M(20)		M(30)		M(100)							40	40
KINNEMUR AVE	0.09	CLAYPOOL	COPPER	VANWINKLE AVE	RUTH AVE	1,217	M(50)		L(20)			M(5)	L(90)							60	60
LOCOMOTIVE DR	0.10	CLAYPOOL	COPPER	OLD OAK ST	END	1,200		M(10)		L(10)			M(100)		. (=)					40	40
LOCOMOTIVE DR	0.28	CLAYPOOL	COPPER	PINEWAY ST	OLD OAK	1,200	L(30)		L(30)	1 (10)	-		L(40)		L(2)					70	30
	0.07	CLAYPOOL	COPPER	COPPER ST	END	1,203		M(40)	11(00)	L(10)		14(10)	14(4.0.0)							50	50
MACKEYS HILL MAPLE LEAF ST	0.16	CLAYPOOL	COPPER COPPER	MILL ST RAGUS RD		792		M(20)	H(90)	M(10)		M(10)	M(100)		H(5)					30	30
MAPLE LEAF ST MAPLE LEAF ST	0.12	CLAYPOOL CLAYPOOL	COPPER	STARVIEW RD	STARVIEW RD CALLE PEQUENA	516 1.192	( )	M(60)	M(30) M(20)	( )		L(5)	L(80) L(70)		L(5)					20 30	20 30
MAPLE LEAF ST MARION CYN	0.19	CLAYPOOL	COPPER	MARION ST	END OF PAVEMENT	1,192		M(60)	M(40)	~ /	M(70)	L(2)	L(100)		L(5)			~		40	40
MARION ST	0.13	CLAYPOOL	COPPER	US 60	WASHINGTON AVE	1,105		M(00)	M(40)	L(30)	M(5)	L(Z)	L(100)					•		60	40
MILL ST	0.27	CLAYPOOL	COPPER	RR TRACKS	END OF PAVEMENT	694		M(30)	· · ·	L(20)	M(40)									50	30
MONROE LN	0.06	CLAYPOOL	COPPER	CALLE DE LOMA	DEAD END	1.221	M(90)	( )	L(90)	=(=0)	L(10)		M(100)							60	60
MORROW AVE	0.15	CLAYPOOL	COPPER	VANWINKLE AVE	END OF PAVEMENT	1,215		L(40)		L(10)	L(20)		L(70)							50	50
NEW ST	0.40	CLAYPOOL	COPPER	TRUCK SCALES ENTRANCE	END	1,219	M(30)	L(10)	M(90)	M(10)	L(1)				M(5)					30	20
OBSCURE WAY	0.03	CLAYPOOL	COPPER	EL CAMINO	END OF PAVEMENT	525	L(80)	L(10)	M(80)				L(20)							40	20
OLD OAK ST	0.46	CLAYPOOL	COPPER	US 60	GLOBE AVE	1,194	M(40)	H(60)	M(80)	L(70)	L(2)		M(80)							30	10
PINEWAY ST	0.34	CLAYPOOL	COPPER	US 60	END OF PAVEMENT	1,201		L(10)	M(80)	M(20)		L(2)	L(30)		L(30)					50	50
PUERTO RICO AVE	0.15	CLAYPOOL	COPPER	CALLE DE LOMA	DEAD END	1,222	. ,	M(30)	M(30)		M(40)		M(40)					✓		30	30
RAGUS RD	0.33	CLAYPOOL	COPPER	RAILROAD CROSSING	RAILROAD AVE	1,186	L(40)		L(5)				L(30)							70	60
RAILROAD AVE	0.12	CLAYPOOL	COPPER	MAPLE LEAF ST	WILSON AV	515		M(80)	M(60)				M(90)							30	30
	0.10	CLAYPOOL	COPPER	MARION ST	CALLE DE LOMA	1,228	· · · /	M(20)	M(50)		M(50)		L(80)		1 (50)	╟───				30	30
RAILROAD AVE RANSBERGER HILL	0.64		COPPER COPPER		CALLE DE LOMA DEAD END	512		M(20) M(30)					L(80)		L(50) L(10)		<b>├</b>			50	40 30
REAR BROADWAY	0.20	CLAYPOOL CLAYPOOL	COPPER	RAILROAD AVE BROADWAY	OLD OAK ST	1,212 514		M(30) ) H(90)			M(20)		L(40) H(90)		L(10)		├──┤			30 10	30 10
RUTH AVE	0.15	CLAYPOOL	COPPER	KINNEMUR AVE	END OF PAVEMENT	1,216	M(90)		L(10)	1	IVI(20)		L(70)		L(5)		╞──┤			60	60
SHORT ST	0.10	CLAYPOOL	COPPER	RAILROAD AVE	COPPER ST	1,210		M(20)		M(30)			L(70)		L(30)		├			40	20
STAR VIEW RD	0.03	CLAYPOOL	COPPER	MAPLE LEAF ST	STARVIEW DR	1,200	M(60)		L(10)	(00)	ł		L(80)		=(00)		<del>   </del>			40 60	50
UPPER WILSON ST	0.00	CLAYPOOL	COPPER	WILSON ST	END	520	L(70)		L(30)	1	L(5)		M(90)					✓		50	30
VANWINKLE AVE	0.22	CLAYPOOL	COPPER	NEW ST	GREER ST.	1,218		L(10)	()	1	(-)		M(100)		1					70	70
VERNON ST	0.09	CLAYPOOL	COPPER	GORDON ST	US 60	1,207		M(30)	M(90)	L(70)			M(90)							30	30
WILSON PL	0.20	CLAYPOOL	COPPER	OLD OAK ST	DEAD END	522	L(30)			L(30)	M(40)	L(20)	L(90)		L(10)			✓		30	30
WILSON ST	0.03	CLAYPOOL	COPPER	OLD OAK ST	WILSON PL	521		L(40)				L(80)	L(90)							30	30
WILSON ST	0.15	CLAYPOOL	COPPER	EL CAMINO	END W. OF PINE WAY	1,202	L(80)	L(20)	M(30)											40	40
COOLEY RANCH RD	0.66	DRIPPING SPRINGS	COPPER	SR-77	DEAD END	683				L(20)			L(10)							50	60
COOLEY RANCH RD	0.09	DRIPPING SPRINGS	COPPER	COOLEY RANCH RD	DEAD END	684				L(20)	ļ				H(10)	∥		✓		40	40
FAIRGROUND ENTRANCE RD	1.39	FAIRGROUNDS	COPPER	US-60	PRISON RD	465			ļ	M(1)					H(2)	┣───				90	90
FAIRGROUND EXIT RD	0.12	FAIRGROUNDS	COPPER	US-60	BOYKIN DR / UNK 27	2,465	1 (22)			14/20	L(5)				11(10)		$ \vdash  $			90	90
FS 465/EADS WASH	1.20	FS	COPPER	SR-288	NF-465	2,005		L(5)		M(30)		H(2)	1 (40)		H(10)	╟───				70	70
	0.16	GLOBE	COPPER COPPER	ARCADIA DR		499	M(30)			L(10)	L(5)		L(10)		H(2)		<u> </u>			80	60 60
ALHAMBRA DR	0.06	GLUBE	COFPER	US 70	ARCADIA DR	693	L(30)	1	L(10)	L(10)	ļ	<u> </u>	L(40)	<u> </u>	H(10)	11	$\vdash$			70	00

									Paveme	ent Distr	esses (	Typical S	Severity)			Gen	eral Site	Conditi	ons		
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	ROAD	&T Cracking	lligator Cracking	lock Cracking	dge Cracking	atching	otholes	/eath/Rav	utting	n/Shld Drop Off	/ashboard	rosion	rainage	ailing Surface	Initial Visual Condition Rating	Final Overall Condition
	0.25	GLOBE	COPPER	MONTECITO DR	ALHAMBRA DR	501	L(10)	4	<u> </u>	<u>ш</u> L(10)			<u> </u>	2	L(30)	5	ш		ш	70	Rating 70
BASHAM RD	0.25	GLOBE	COPPER	MONTECITO DR	END OF PAVEMENT	498	L(60)		L(60)	L(10)			L(10)		L(30)					80	80
BLAKE ST	0.15	GLOBE	COPPER	MOORE ST	END	263		M(40)			L(5)	H(5)	M(80)					✓		30	10
BLUE RIDGE DR	0.10	GLOBE	COPPER	MONTECITO DR	DEAD END	503		M(10)	(	M(5)	=(0)	M(5)	M(90)		M(10)			✓		40	40
CENTRAL AVE	0.20	GLOBE	COPPER	TREMONT BLVD	TREMONT BLVD	34	L(80)	M(30)	H(80)	M(30)			M(80)		M(30)		✓	✓		30	10
COPLEN AVE	0.11	GLOBE	COPPER	INDIAN AVE	END OF PAVEMENT	265	L(80)	L(2)	M(10)				L(90)							60	70
COPPER HILLS RD	0.12	GLOBE	COPPER	COPPER HILLS RD	COPPER HILLS RD	1,868									H(10)					80	70
DAOU DR	0.07	GLOBE	COPPER	ARCADIA DR	DEAD END @ ALAHAMBRA	500	. (						. (= .)							80	80
DAYBREAK DR HUNT RIDGE DR	0.49	GLOBE	COPPER COPPER			504		M(20)			L(5)		L(70)		H(2)					60	60
INDIAN AVE	0.08	GLOBE GLOBE	COPPER	JOSHUA TREE AVE BANKER AVE	END OF PAVEMENT INDIAN AVE	46 2,473		M(20) M(60)	M(20) M(70)	H(5)	L(50) L(5)		L(50) H(99)		M(5)					40 20	40 30
	0.09	GLOBE	COPPER	INDIAN AVE	COPLEN AVE	2,473		M(10)		L (10)	L(3)		M(90)		H(10)					20 50	30
JESSE HAYES RD - COUNTY	0.10	GLOBE	COPPER	GLOBE CITY LIMITS	FIRE STATION	666		L(10)		_(10)	L(5)	L(5)	( )	M(50)	( )					60	60
MONROE ST	0.20	GLOBE	COPPER	US-60	7TH ST	1,009		M(50)	H(40)	L(20)	L(60)	L(1)	M(40)	(20)						40	20
MONTECITO DR	0.17	GLOBE	COPPER	DAYBREAK DR	BLUE RIDGE DR	1,016	L(60)	M(20)	M(40)	M(5)			L(20)		L(5)					50	50
MONTECITO DR	0.42	GLOBE	COPPER	US 70	END OF PAVEMENT	1,043	L(60)		M(70)				L(30)		H(10)					70	70
MONTEREY DR	0.09	GLOBE	COPPER	MONTECITO DR	DEAD END	502	L(10)		M(10)				L(10)		L(2)					80	80
NOBLE DR	0.38	GLOBE	COPPER	SAGUARO DR	DEAD END	989												,	,	0	0
PIMA ST	0.09	GLOBE	COPPER	BEG. OF PAVEMENT	DEAD END	487		M(10)	14(70)			M(40)	M(10)		14(10)		~	$\checkmark$	~	0	0
SAGUARO DR SILICATE ST	0.48	GLOBE	COPPER COPPER	WALLIMAN RD BLAKE ST	END COUNTY RD END OF PAVEMENT	505 262	L(80) M(70)		M(70)	M(5)			M(90)		M(10)					20	40
SNELL ST	0.04	GLOBE GLOBE	COPPER	COPLEN AVE	END OF PAVEMENT END OF PAVEMENT	913		M(20)	M(20)	M(20)			H(100) L(80)		M(6)					10 40	10 50
WALLIMAN RD	1.03	GLOBE		SAGUARO DR to GLOBE'S WALLIM		1.872		M(70)			L(10)		M(90)		H(5)		√	✓		20	20
ALAMO WY	0.09	ICEHOUSE CANYON	COPPER	ICEHOUSE CYN RD	DEAD END	511	M(80)		11(00)	L(5)	H(2)		M(80)		11(0)			-		30	10
GRAND VIEW DR	0.16	ICEHOUSE CANYON	COPPER	PINALVIEW DR	DEAD END	955		M(40)	H(60)		L(30)		M(70)							30	20
ICEHOUSE CYN RD	3.59	ICEHOUSE CANYON	COPPER	HAGAN	END OF PAVEMENT/TONTO NAT.FOR.	947	M(90)	M(20)	H(60)	M(30)	M(30)		L(100)		H(5)					30	40
KELLNER CYN	2.09	ICEHOUSE CANYON	COPPER	ICEHOUSE CYN RD	NF-55	948	L(40)	M(5)	L(30)	M(5)	L(5)		M(70)		H(2)					50	60
PINAL VIEW DR	0.41	ICEHOUSE CANYON	COPPER	ICEHOUSE CYN RD	COLES WAY	668	L(80)	M(50)	H(70)	M(5)	L(10)		L(80)		L(5)					30	40
PINAL VIEW DR	0.06	ICEHOUSE CANYON	COPPER	COLES WAY	DEAD END	951	L(70)		H(60)				L(80)							30	30
	0.07	ICEHOUSE CANYON	COPPER	WEVER CIR	WEVER CIR	510		M(20)	1	M(5)	L(5)		M(90)							30	30
FS 477/SCHOOL HOUSE PT FS 82/WINDY HILL	2.56 2.38	LAKE ROOSEVELT	COPPER COPPER	SR-188 SR-188	SCHOOL HOUSE PT DEAD END	56 2,008	L(80)	M(5)	L(1) M(80)	L(5)	L(5)		L(100)							80 50	80 60
FS 84/GRAPE CAMPGROUND	0.01	LAKE ROOSEVELT	COPPER	FS 84/GRAPEVINE RD	FS 84/GRAPE CAMPGROUND	2,008	M(100)	101(3)	L(20)	L(3)	L(3)		L(100)							60	60
FS 84/GRAPEVINE RD	2.24	LAKE ROOSEVELT	COPPER	SR-188	DEAD END	2,000	M(90)		L(20)	M(1)			L(20)							70	60
FS 287 - PINTO VALLEY	0.11	MIAMI	COPPER	US-60 RIGHT OF WAY	NF287B	1,892	~ /	H(50)	M(60)				M(60)		L(30)					20	20
CHEROKEE ST	0.17	MIAMI GARDENS	COPPER	HOSPITAL DR	END	1,400	M(70)	L(10)	M(30)				M(40)							60	40
MIAMI GARDENS	0.34	MIAMI GARDENS		DEAD END N. OF CHEROKEE ST	END OF PAVEMENT	261	M(60)	L(10)		L(20)			L(40)							50	50
ASH ST		ROOSEVELT ESTATES		MESQUITE ST	PALO VERDE DR	1,236		M(80)												20	30
CHOLLA ST	0.15	ROOSEVELT ESTATES		PALM ST	END DALO VERDE DD	1,242			L(80)				L(100)							20	20
COTTON WOOD ST	0.23	ROOSEVELT ESTATES ROOSEVELT ESTATES		MESQUITE ST SCHOOLHOUSE	PALO VERDE DR	449		M(80)	L(80)	M(10)			L(100)							20	20
FS 446 IRONWOOD DR	0.49	ROOSEVELT ESTATES		PALM ST	CHOLLA ST DEAD END	1,241 1,237		M(80)	L(70)				L(100)							90 20	90 20
MESQUITE ST	0.27	ROOSEVELT ESTATES		PALM ST PALM ST	DEAD END	1,243		M(100)	L(70)	L(10)			L(100)							20	20
ORANGE ST	0.13	ROOSEVELT ESTATES		PALO VERDE DR	PINE DR	1,243		M(90)	L(15)	L(10)		1				l	┝──┤			20	20
PALM ST	0.16	ROOSEVELT ESTATES		CHOLLA ST	PALO VERDE DR	1,240	L(60)	. ,	()	1		1	1		1					30	30
PALO VERDE DR	0.27	ROOSEVELT ESTATES	COPPER	PALM ST	CATTLEGUARD	1,235		M(80)	L(80)	M(10)										20	30
PALO VERDE DR	0.18	ROOSEVELT ESTATES		ASH ST	COTTON WOOD ST	1,239		M(70)	L(30)											20	20
PINE DR	0.14	ROOSEVELT ESTATES		ORANGE ST	ASH ST	1,233		M(80)	L(30)											20	20
PINE DR	0.04	ROOSEVELT ESTATES		PALM ST	END	1,238						M(50)								20	20
ROOSEVELT ESTATES RD	1.07	ROOSEVELT ESTATES		SR 188	COTTON WOOD ST	450	L(80)	M(20)	M(40)	. ,			. ,	L(10)	L(5)					40	60
	0.11	ROOSEVELT RESORT	COPPER			1,254		M(70)	<u> </u>	L(20)			M(100)				┝───┤			20	20
QUAIL DR STAGECOACH TR	0.11 0.86	ROOSEVELT RESORT	COPPER COPPER	STAGECOACH TR SR 88	JAVELINA TR ANTELOPE TR	1,253 451		M(40) M(100)		L(30)	H(30)									20 20	10 20
SAN CARLOS DR	1.41	SAN CARLOS DR	COPPER	AZ 77	DEAD END	451	M(50)	M(100)	H(70)	L(30)	L(10)		1 (90)	L(5)	H(5)					30	30
SAN CARLOS DR	0.08	SAN CARLOS DR	COPPER		CUL DE SAC	473		M(40)		1(20)	=(10)	+	L(90)	-(3)	1(3)					20	30
	0.00		JOINER				(00)	(Jor 10)			l	I	-(10)	l	ļ	u	L			20	

## Gila County Paved Roadway Inventory and Conditions

Copper Region

									Pavem	ent Distr	esses (T	ypical Severity			Gen	eral Site	Conditi	ions		
											L,									
								b												
							_	iki	p	5				Off				e		
							ing	rac	acking.	kin				do	σ			rfac	Initial	Final
							ack	U U	Crac	rac	5	3av 3a		Ď	ban	-	e	Sui	Initial	
						ROAD	ö	ato	0 ¥	Ū	Itching	tholes ath/R	ing	/Shld	hbc	ion	nag	bu	Visual	Overall Condition
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	NUMBER	ът	llig	0	dg	atc	vea vet	ntt	s/u	las	ros	rai	aili	Condition Rating	Condition Rating
SAN CARLOS WAY	0.07	SAN CARLOS DR	COPPER	SAN CARLOS DR	END REF.	472	M(60)	 M(30)	M(90)	ш	<u>م</u>	<u> </u>	L(90)	-	5	ш		<u> </u>	30	10
ACOMA AVE		SAN CARLOS DR	COPPER	TAOS ST	PUEBLO ST	981	L(70)		H(40)	L(30)		L(30)	L(90)						40	30
BROWNING AVE		SIX SHOOTER CANYON	COPPER	COLT AVE	DEAD END	508	L(70)	· · · /	M(90)	L(30)		L(30)							40	30
CHEROKEE RD		SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	SPRINGFIELD RD	976	L(90)	( )	( )	( )	L(10)	L(80)				~			30	40
COLT AVE		SIX SHOOTER CANYON	COPPER	WINCHESTER RD	SPRINGFIELD RD	970	L(70)	· · ·	M(40)	L(20)	L(10)	L(30)				v			30	40 50
COLT DR		SIX SHOOTER CANYON	COPPER	REMINGTON RD	WINCHESTER RD	909	M(20)		M(40)	M(10)		L(40)							30	40
DERRINGER DR		SIX SHOOTER CANYON	COPPER	SPRINGFIELD RD	DEAD END	975		M(30)			L(10)	L(40)							30	30
HOPIAVE		SIX SHOOTER CANYON	COPPER	PUEBLO AVE	CHEROKEE RD	977	L(90)	101(30)	L(30)	L(10)	L(10)	L(70)	L .	l(50)					60	60
HOPI AVE		SIX SHOOTER CANYON	COPPER	PUEBLO AVE	KIVA AVE	2,470	. ,	M(50)	( )	L(10)	ł	M(80)		1(30)					30	30
KIVA AVE	-	SIX SHOOTER CANYON	COPPER	ZUNI ST	HOPIAVE	978	L(80)				L(10)	M(90)							30	10
MARLIN DR		SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	SHARPS AVE	966	L(80)	· · ·		L(20)	L(10)	L(60)							30	50
NAVAJO AVE		SIX SHOOTER CANYON	COPPER	PUEBLO ST	ZUNI ST	982	L(40)	( )	( )	M(5)	L(10)	M(70)							30	20
PUEBLO ST	0.00	SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	CUL DE SAC	979	L(70)	· · ·	M(50)		L(10)	L(90)							30	40
REMINGTON RD		SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	SUPAI RD	509	L(70)	( )		M(5)	L(10)	M(90)		_(5)					30	30
SAVAGE DR	• •	SIX SHOOTER CANYON	COPPER	SHARPS AVE	DEAD END	965	M(30)		( - /	101(3)		L(70)		_(3)					30	50
SHARPS AVE		SIX SHOOTER CANYON	COPPER	SAVAGE DR	SPRINGFIELD RD	667	L(80)	( )	( )		L(5)	L(30)							20	30
SHARPS AVE	÷.= .	SIX SHOOTER CANYON	COPPER	SAVAGE DR	DEAD END	967			M(30)	L(30)	L(5)	M(70)							20	20
SIX SHOOTER CANYON RD	-	SIX SHOOTER CANYON	COPPER	ICEHOUSE CYN RD	GILA PUEBLO COLLEGE RD	2.484	L(00)	101(70)	101(00)	L(00)	L(0)	101(70)							80	80
SIX SHOOTER CANYON RD		SIX SHOOTER CANYON	COPPER	GILA PUEBLO COLLEGE RD	END OF PAVEMENT/CATTLEGUARD	993	1 (70)	M(40)	H(60)	M(10)	L(10)	L(70)							30	30
SMITH DR		SIX SHOOTER CANYON	COPPER	SPRINGFIELD RD	WESSON RD	974			H(40)	L(20)	_()	L(60)							30	10
SPRINGFIELD RD		SIX SHOOTER CANYON	COPPER	WINCHESTER RD	SHARPS AVE	960		M(90)		=(=0)	L(5)	M(70)							30	40
SPURLOCK DR		SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	DEAD END	964	L(80)	( )	M(70)	H(5)	L(5)	M(90)	H	H(5)		✓			30	30
SUPAI RD		SIX SHOOTER CANYON	COPPER	REMINGTON RD	END OF PAVEMENT	970	L(90)	( )	M(50)	M(10)	_(-)	L(100)		H(5)					30	40
TAOS ST		SIX SHOOTER CANYON	COPPER	NAVAJO AVE	ACOMA DR	980	M(70)	· · ·	· · · ·	L(40)		L(20)		.(-)					40	40
UNK96		SIX SHOOTER CANYON	COPPER	SHARPS AVE	SPRINGFIELD RD	968	L(90)	· · /	M(40)	M(20)	L(5)	L(90)							20	10
WESSON RD		SIX SHOOTER CANYON	COPPER	SMITH DR	END OF PAVEMENT	973	M(50)	( )	H(40)	L(20)	(-)	L(60)							30	10
WINCHESTER RD	0.08	SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	SPRINGFIELD RD	972	L(80)	M(60)	M(40)	L(20)	L(5)	M(70)							30	40
ZUNI ST	0.11	SIX SHOOTER CANYON	COPPER	SIX SHOOTER CANYON RD	NAVAJO AVE	983	L(70)		M(40)	M(20)	<u> </u>	M(60)							20	40
BIGHORN TR	0.02	WHEATFIELDS	COPPER	GREEN AVE	DEAD END	244	L(80)			,		L(100)							50	40
BIXBY RD	3.06	WHEATFIELDS	COPPER	PINAL CREEK RD	END OF PAVEMENT/QUARRY	474	M(70)	H(60)	L(60)	L(10)	M(1)	L(100)	n	M(2)					40	40
COBALT DR	0.04	WHEATFIELDS	COPPER	GREEN AVE	END	1,258	M(70)					, í		<u>,                                    </u>					50	30
GREEN AVE	0.29	WHEATFIELDS	COPPER	BIG HORN TER	COLBALT DR	1,259	M(60)	M(40)	M(50)	M(5)		L(100)		L(2)					20	40
HICKS DR	2.94	WHEATFIELDS	COPPER	WILBANKS DR	HICKS DR	461	· · ·	M(20)	( )	L(30)	L(1)	L(100)		۸(4)					40	40
HICKS RD	0.21	WHEATFIELDS	COPPER	OLD HWY 188	WILBANKS DR	462	M(30)	M(40)	M(30)	M(5)	l `´		N	Й(5)					50	50
HOOPES RD	0.38	WHEATFIELDS	COPPER	BIXBY RD	END/PAVEMENT/PINAL CREEK RD	483	× /	H(80)		L(40)	M(1)	L(30)	L	.(10)					30	40
QUAIL RIDGE RD	0.25	WHEATFIELDS	COPPER	BIXBY RD	END	479	L(5)					L(100)		· /					80	90
SAFFRON DR	0.05	WHEATFIELDS	COPPER	GREEN AVE	DEAD END	1,257	. ,	L(10)	M(20)	1			F	l(10)					40	20
VERMILION DR	0.14	WHEATFIELDS	COPPER	WILBANKS DR	END	1,260		M(30)		1				L(1)					40	60
WHEATFIELDS RD	3.84	WHEATFIELDS	COPPER	CATTLEGUARD	SR 188 CATTLEGUARD	246	M(20)	( )	H(70)	1	t	L(93)		M(2)					40	40
WILBANKS DR	0.21	WHEATFIELDS	COPPER	HICKS DR	VERMILION DR	460	/	( )	( )	M(10)		(	( )	<u>М(5)</u>					30	50

## Gila County Paved Roadway Inventory and Conditions

Timber Region

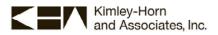
									Paveme	nt Distres	ses (Ty	pical Se	verity)			Gen	eral Site	Conditi	ions		l I
						ROAD	T Cracking	igator Cracking	ock Cracking	ge Cracking	tching	tholes	eath/Rav	Itting	/Shld Drop Off	ashboard	osion	ainage	iling Surface	Initial Visual Condition	Final Overall Condition
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	NUMBER	L&	AII	Bie	Еd	Ра	Ро	Ň	Ru	Ľ	Ň	ц Ш	Ď	Fa	Rating	Rating
FS 405/BEAR FLATS	0.07	BEAR FLATS	TIMBER	SR-260	END OF PVMT	1,167														100	0
FS 199A/BEAVER FLAT RD	0.30	BEAVER FLATS	TIMBER	FS199	BEAVER VALLEY ESTATES	325	L(10)								M(10)					80	80
SLEEPY HOLLOW DR	0.80	BEAVER FLATS	TIMBER	BEAR FLAT	END	1593	L(5)								M(10)			✓		80	80
CHRISTOPHER CREEK LOOP	2.09	CHRISTOPHER CREEK	TIMBER	SR-260	SR-260	2,002	L(30)			L(10)	L(2)									80	80
COLCORD RD	1.00	COLCORD	TIMBER	1.1 MILE MARKER	2.1 MILE MARKER	2474	L(10)													90	90
FS 291/COLCORD RD BUS LOOP	1.10	COLCORD	TIMBER	SR-260	1.1 MILE MARKER	1,145	L(40)	L(5)		M (50)					L(30)					80	80
BLACK MTN RD	0.03	DEER CREEK	TIMBER	DEER CREEK DR	CUL DE SAC	1,180	1 ( 1 0 )	L(5)	L(100)		M(5)		L(30)							60	50
BUGGY WHEEL CRT	0.09	DEER CREEK	TIMBER	WINDMILL RD	DEAD END	1,175	L(40)		1 (100)	L(10)			L(30)							70	60
CATCLAW RD	0.03	DEER CREEK	TIMBER	DEER CREEK DR	DEAD END	1,178	1 (00)		L(100)	1 (00)	1 (5)		L(30)						1	70	70
	1.18	DEER CREEK	TIMBER	SR 87 SOUTHBOUND	END OF LOOP	1,048	L(60)	L/M(40)	L(20)	L(20)	L(5)		L(30)					✓	$\checkmark$	40	40
FOUR PEAKS	0.09	DEER CREEK	TIMBER	DEER CREEK DR	CUL DE SAC	1,179	L(50)	L(20)		M(10)	M(5)		L(40)		M(10)					60	60 50
LUCKY LN MT ORD CIR	0.15 0.04	DEER CREEK DEER CREEK	TIMBER	DEER CREEK DR DEER CREEK DR	CUL DE SAC CUL DE SAC	1,177	L(50)	L(15)	1 (20)	M(20)	M(5)		L(30)		M(10)			~	~	50	50
WINDMILL RD	0.04	DEER CREEK	TIMBER	DEER CREEK DR	CUL DE SAC	1,176 1,047	L(60)	L/M(40) M(15)	L(30)	M(30) M(20)	L(5) L(10)		L(30) L(30)						v	10 50	10 50
DETROIT DR	0.15	EAST VERDE ESTATES	TIMBER	JOAN DR	VERDE ESTATES RD	336	L(50) L(20)	L(10)		M(30)	L(10)		L(30)	├	M(30)		~	~		50 70	50 70
FS 622/E VERDE ESTATES RD	0.18	EAST VERDE ESTATES		SR 87/FS622 E VERDE ESTATES	E VERDE ESTATES RD	330	L(20)	M(30)		M(30)			L(30)	L/M(30)	(/	~	▼ ✓	▼ ✓		40	40
JEP PL	0.42	EAST VERDE ESTATES	TIMBER	CHELSEA DR	ELEANOR DR	1,618	L(20)	H(50)		H(100)			H(100)	· · /	L (30) H(100)	• ✓	▼ ✓	• ✓	~	40	40
FS 412/GIBSON RANCH RD	2.56	GIBSON RANCH	TIMBER	SR-87	END OF PAVEMENT/CATTLEGUARD	706	L(40)	L(10)		M(20)			L(30)		/M(20)	•	· ·	• ✓	•	60	60
FS 417/GISELA RD	5.23	GISELA	TIMBER	CATTLEGUARD AT MP 2	GISELA LANDFILL RD	176	L(40)	M(30)		M(30)	L(10)		L(30)		/M(20)		•	• ✓	✓	30	30
SYCAMORE LN	0.37	GISELA	TIMBER	FS 417/GISELA RD	SYCAMORE LN	1,074	L(20)	101(30)		M(5)	L(10)		L(30)		/101(20)			· ✓	•	80	80
FS 113 - HUNTER CREEK DR	0.37	HUNTER CREEK	TIMBER	CHRISTOPHER CREEK LOOP	WILD CAT CIRCLE	2,003		M/H(20/40)		L(30)			L(20)	L/M(20)				•	~	50	40
CAMP TONTOZONA RD	0.70	KOHLS RANCH	TIMBER	CAMP TONTOZONA	CAMP TONTOZONA	2,003	L(20)	10/11(20/40)		L(30)				L/W(20)						100	100
KOHLS RANCH ACCESS	0.35	KOHLS RANCH	TIMBER	SR-260	DEAD END	1,121	L(10)													80	80
FS 526/CHOLLA BAY	0.73	LAKE ROOSEVELT	TIMBER	SR-200	DEAD END	2,007	L(30)	L(20)		L(20)			L(30)		L(40)			1		60	50
APACHE DR	0.18	MESA DEL CABALLO	TIMBER	BANADA RD	TOYA VISTA RD	1,598	L(20)	L/M(10)		L/M(40)	1 (5)		L(30)		L(10)					60	60
APPLE HILL	0.02	MESA DEL CABALLO	TIMBER	VISTA DEL NORTE	DEAD END	2,000	L(20)	Lim(10)		L(20)	E(0)		L(60)		L(10)					60	70
BANADA RD	0.08	MESA DEL CABALLO	TIMBER	MESCALERO RD	DEAD END	1,599	L(20)	L/M(10)		M(30)			L(30)		L(10)				~	50	50
BARRANCA RD	0.17	MESA DEL CABALLO	TIMBER	MESA DEL CABALLO RD	TOYA VISTA RD	1,600	L(20)	M/H(30)		M(30)		M(5)	L(30)		L(10)				√	30	30
CABALLERO RD	0.67	MESA DEL CABALLO	TIMBER	FS 199/HOUSTON MESA RD	VISTA DEL NORTE	1,610	L(30)	M(40)		M(20)	L(5)	L(5)	L(30)		/M(20)		✓	✓	√	40	40
CAMINO REAL	0.21	MESA DEL CABALLO	TIMBER	TOYA VISTA RD	STALLION RD	1,605	L(20)	M(30)		M/H(30)	. /		L(30)		L(20)			✓	√	40	50
CHERRY ANN LN	0.27	MESA DEL CABALLO	TIMBER	MESA DEL CABALLO RD	TOYA VISTA RD	1,602	L(20)	M(5)		M/H(30)	M(5)	L(1)	L(30)		L(20)			✓		50	50
CORTITA RD	0.07	MESA DEL CABALLO	TIMBER	STALLION RD	CAMINO REAL	1,606	L(30)	M(70)		M(30)		L(2)	L(30)					✓	√	30	30
DEAD EYE RD	0.10	MESA DEL CABALLO	TIMBER	MESA DEL CABALLO RD	HOUSTON MESA RD	328	L(20)	M/H(30)		M(30)		L(2)	L(20)		L(25)				~	40	40
FS 64/CONTROL RD	0.10	MESA DEL CABALLO	TIMBER	NEAL DR	HOUSTON MESA RD	2475	L(20)	L(10)		L(10)					M(10)					70	70
FS 199/HOUSTON MESA RD	6.50	MESA DEL CABALLO	TIMBER	SR-260	BRIDGE	696	L(20)			L(20)					L(10)			✓		80	80
GUNSIGHT RIDGE	0.28	MESA DEL CABALLO	TIMBER	TOYA VISTA RD	MESA DEL CABALLO RD	1,603	L(30)	L/M(10)		M/H(20)			L(30)		L(10)					50	60
HOUSTON MESA RD	1.25	MESA DEL CABALLO	TIMBER	BRIDGE	2ND BRIDGE CROSSING	2478	L(30)	M/H(30)		M(20)	H(5)		M(10)	M(5)	M(20)					40	40
HOUSTON MESA RD	0.71	MESA DEL CABALLO	TIMBER	2ND BRIDGE CROSSING	3RD BRIDGE CROSSING	2477	L(30)	M(20)		M(20)				1	M(20)					50	50
HOUSTON MESA RD	1.27	MESA DEL CABALLO	TIMBER	3RD BRIDGE CROSSING	CONTROL RD	2476	L(30)	M(30)		M(20)	H(30)				M(20)					40	30
MESA VISTA EAST	0.07		TIMBER	STALLION RD	MESA VISTA WEST	333	L(30)	M(10)		M/H(30)	M(5)		L(30)		L(10)			✓	~	40	20
MESA VISTA WEST	0.07	MESA DEL CABALLO	TIMBER	STALLION RD	MESA VISTA EAST	1,604	L(20)			L/M(30)			L(30)		L(10)			√		60	60
MESCALERO RD	0.21	MESA DEL CABALLO	TIMBER	TOYA VISTA RD	MESA DEL CABALLO RD	329	L(30)	M/H(40)		M/H(40)	M(5)	L(3)	L(30)		L(10)			✓	<b>√</b>	30	40
PALOMA VISTA	0.17	MESA DEL CABALLO	TIMBER	MESA DEL CABALLO RD	BARRANCA RD	1,601	L(30)	M/H(30)		M/H(30)		L(5)	L(50)		L(10)				~	40	20
PIEDRA RD	0.07	MESA DEL CABALLO	TIMBER	TOYA VISTA RD	CORTITA RD	1,607	L(20)	L(5)		M(30)			L(20)		L(5)				,	50	50
SEPIA RD	0.09	MESA DEL CABALLO	TIMBER	MESA DEL CABALLO RD	PALOMA VISTA	330	L(20)	M/H(30)		M/H(40)			M/H(30)		L(10)			,	~	30	30
STALLION RD	0.36	MESA DEL CABALLO	TIMBER	VISTA DEL NORTE		327	L(20)	L/M(20)		L/M(20)			L(20)		L(10)			~		60	70
STALLION RD	0.03	MESA DEL CABALLO	TIMBER	HOUSTON MESA RD	VISTA DEL NORTE	1,608	L(20)	M/U/00)		L(10)			L(30)					,		80	70
TOYA VISTA RD	0.67	MESA DEL CABALLO	TIMBER	VISTA DEL NORTE	MESA DEL CABALLO RD	332	L(20)	M/H(30)		M(30)			L/M(30)		L(10)			✓	$\checkmark$	30	30
VAQUERO DR VISTA DEL NORTE	0.10	MESA DEL CABALLO MESA DEL CABALLO		MESA DEL CABALLO RD		1,597	L(20)	N//E)		M(30)	L(5)		L(20)		L(20)			./		60 50	70
	0.51		TIMBER	STALLION RD	TOYA VISTA RD	1,609	L(20)	M(5)		M/H(20)			L(20)		L(20)			✓ ✓		50	60
FS 3585 / OXBOW TRL OX BOW ESTATES RD	0.16	OXBOW ESTATES OXBOW ESTATES	TIMBER TIMBER	SR 87 FS 3585 / OXBOW ESTATES	OX BOW ESTATES RD LEES WAY	173 405				L(10) L(10)			L(20)		L(10) L(10)			✓ ✓		80	90 80
FS 406 / DOLL BABY RANCH RD	0.73 5.87	PAYSON	TIMBER	FS 406 / DOLL BABY RANCH RD	FS 406 / DOLL BABY RANCH RD	2,004	L(5)			L(10) L(5)			L(20)		L(10) L(10)		~	✓ ✓		80 90	80 90
ALVA DR	0.10	PAYSON	TIMBER	WHISPERING PINE RD	SQUIRREL RD	1,736	L(3) L(30)	M/H(50)		L(5) L/M(30)		H(2)	M/H(20)		L(10) M(30)		*	<ul> <li>✓</li> </ul>	~	20	90 10
APACHE TR	0.10	PINE	TIMBER	MOHAWK ST	WARREN DR	1,730	L(30)	M(10)		L/M(20)		(∠) M(1)			M(30)			*	*	60	50
	0.00					1,112	L(10)	W(10)	ı	L/1VI(20)		1/1/	∟(∠0)		vi(30)				l	00	0

									Paveme	nt Distre	sses (Ty	pical Severity)			General	Site Cond	itions		
						ROAD	.T Cracking	igator Cracking	ock Cracking	ge Cracking	tching	tholes ath/Rav	tting	/Shld Drop Off	ashboard	ainage	iling Surface	Initial Visual Condition	Final Overall n Condition
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	NUMBER		Ā	ā	Ш	Ра	Å Š	Rı	Ľ	Š L	i ă	Еa	Rating	Rating
APACHE TR	0.18	PINE	TIMBER	MOGOLLON VISTA	WARREN DR	1,713	L(10)	L/M(10)	- <b> </b> '	L/M(20)		L(20)		M(30)		✓	√	70	50
BARKER DR	0.08	PINE	TIMBER	BEG. OF PAVEMENT	CUL DE SAC	1,671	L(30)	M(30)	'	L/M(10)		L(30)		N4(4.0)		✓		40	60
BLOODY BASIN RD BRADSHAW DR	0.20	PINE PINE	TIMBER	WARREN DR	TONTO DR	1,702	L(30)	M(10)	- <u></u> '	M(10)		M(40)		M(10) L(10)	✓	✓ ✓		50	50
BRADSHAW DR BUNNY HOLLOW DR	1.61 0.13	PINE	TIMBER	SR 87 MISTLETOE DR	SOUTHARD DR CUL DE SAC	1,679 1,536	L(20) L(30)	L(10) L(20)		L/M(10) L(20)	L(5)	L(10) L(20)		L(10)		✓ ✓		70 60	50 40
CEDAR MEADOW LN	0.36	PINE	TIMBER	PINE CREEK CNYN RD	HOLLY DR	1,530	L(30)	L(20)	+	L(20)	L(3)	L(20)		L(20)		· · ·		70	50
CLETUS RAY RD	0.21	PINE	TIMBER	BRADSHAW DR	CUL DE SAC	364	L(40)	L(10)	+	L/M(30)		L(2) L/M(10)		L(20)		· √		60	60
CYPRESS ST	0.25	PINE	TIMBER	PINE CONE TR	VALLEY VIEW DR	358	L(30)	L(10)	+	L/M(20)		L(10)		M(20)	~	<ul> <li>✓</li> </ul>		70	70
FAIRHOLM DR	0.14	PINE	TIMBER	TERRA PINE	CUL DE SAC	368	L(60)	LL(30)	+ +	L(20)		L(10)		L(10)		√		50	50
FARA DR	0.13	PINE	TIMBER	CLETUS RAY RD	CUL DE SAC	1,673	L(40)	L(30)		L/M(10)		L/M(50)		L(30)		√		40	60
FAWN RIDGE DR	0.12	PINE	TIMBER	WHISPERING PINE RD	END OF PAVEMENT	637	L(50)	L(20)		L/M(20)	L(5)	L(20)		L(10)		√		50	60
FULLER DR	0.25	PINE	TIMBER	JAN DR	SOUTH RD	1,662	L(30)			L(10)	L(5)	L(30)		L(10)		√		80	60
HALL LN	0.08	PINE	TIMBER	WARREN DR	HARDSCRABLE MESA RD	636	L(30)	M(40)		L/M(30)		L(2) L(30)		L(30)		√	$\checkmark$	40	40
HARDSCRABBLE MESA RD	0.56	PINE	TIMBER	HALL LN	SOUTHARD DR	363	L(20)			L(10)								80	80
HARDSCRABBLE MESA RD	0.49	PINE	TIMBER	SR 87	HALL LN	1,726	L(20)		_ <b>_</b> '	L(10)	L(5)							80	80
HOLLY DR	0.37	PINE	TIMBER	CEDAR MEADOW LN	MISTLETOE DR	1,543	L(20)	L(5)	- <b>-</b> '	L(10)		L(10)		L(10)		✓		80	60
HUNT DR	0.04	PINE	TIMBER	WARREN DR	END OF PAVEMENT	1,701	L(20)	L(5)	- <b> </b> '	L(20)		L(20)		M(20)		✓		70	70
JAN DR	0.70	PINE	TIMBER	BRADSHAW DR	BRADSHAW DR	1,676	L(30)		'	L(10)		L(5)		L(20)		✓		80	80
	0.66	PINE	TIMBER	TRAILS END DR	TRAILS END DR	1,557	L(10)		1 (11(00)	L(10)		L(30)		L(20)		✓		80	80
KARLA CT	0.07	PINE	TIMBER	MISTLETOE DR	CUL DE SAC	1,532	1 (20)	L(10)	L/M(86)	L(20)		L(30)		L(10)		✓ ✓		40	40
	0.28	PINE PINE	TIMBER	JAN DR BRADSHAW DR	SOUTHARD CIR	1,682	L(20)	M(40)	'	M(20)		L(30)		L(20)		v 	~	40	20
MARCY WAY MARI CIR	0.42	PINE	TIMBER	FARA DR	BRADSHAW DR CUL DE SAC	1,668 1,672	L(50) L(10)	M(40)	'	L(30)		L(20) H(2) M(50)		L(20)		v 		60 40	50 40
MARY GAY CIR	0.06	PINE	TIMBER	BRADSHAW DR	CUL DE SAC	365	L(10)	IVI(40)	+	L/IVI(20)		L(10)		L(20)		•	•	70	70
MISTLETOE DR	0.79	PINE	TIMBER	EVERGREEN PL	WHISPERING PINES	1.537	L(20)	L/M(5)	+	L/M(10)	L(5)	L(10)		L/M(30)		✓		80	80
MOHAWK ST	0.43	PINE	TIMBER	APACHE TR	UTE TR	1,337	L(30)	L(5)	+	L/M(10)	L(3)	L(10)		L(20)		· ·		70	50
NAVAJO DR	0.07	PINE	TIMBER	HARDSCRABBLE MESA RD	END OF PAVEMENT	1,719	L(20)	M(10)	+	L(10)		L(5) L(30)		L(20)		√ 	~	60	60
OAK LEAF CIR	0.04	PINE	TIMBER	PINE CREEK CANYON RD	DEAD END	352	_(_0)		+	_()		=(0) =(00)				✓		100	100
OLD COUNTY RD	0.49	PINE	TIMBER	SR 87	BRADSHAW DR	98	L(5)			L(5)								90	90
PINE CONE TR	0.36	PINE	TIMBER	CYPRESS ST	END OF PAVEMENT W.OF WILBUR AV	359	L(10)			L(10)		L(20)		L(20)		✓		70	70
PINE CREEK CANYON RD	0.94	PINE	TIMBER	SR 87	PINE LN	110						· · · ·						100	100
PRINCE DR	0.13	PINE	TIMBER	HARDSCRABBLE MESA RD	DEAD END	1,690	L(20)	M(10)		M(10)	H(50)	H(20) H(40)				√	√	20	0
QUAIL COVE RD	0.15	PINE	TIMBER	TERRA PINE	CUL DE SAC	1,640	L(65)	L(10)		L(20)		L(20)		L(10)		✓		60	40
RANDALL DR	0.03	PINE	TIMBER	FULLER DR	END OF PAVEMENT	1,661	L(30)			L(10)		L(20)				✓		80	80
ROBBIN LN	0.10	PINE	TIMBER	CLETUS RAY RD	CUL DE SAC	1,674	L(60)	L(30)	<sup>_</sup>	L/M(30)		L(30)		L(20)		√		60	60
SHARYN RD	0.37	PINE	TIMBER	BRADSHAW DR	CUL DE SAC	1,667	L(40)	L(5)	'	<u> </u>	L	L(20)		L(10)			_	70	50
SOLITUDE TR	0.14	PINE	TIMBER	MISTLETOE DR	CUL DE SAC	639	L(30)	L(5)	- <b> </b> '	L(30)	L(5)	L(20)				✓		60	50
SOLITUDE TR	0.05	PINE	TIMBER	WHISPERING PINE RD	MISTLETOE DR	1,535	L(40)	L(10)	'	L(20)	<u> </u>	L(30)		1 (40)		✓	+	60	60
SOUTH RD	0.37	PINE	TIMBER		FULLER DR	1,656	L(20)		+'	L(10)		L(10)		L(10)		~	+	80	80
SOUTHARD DR SUNDANCE CIR	0.06	PINE PINE	TIMBER	HARDSCRABBLE MESA RD MISTLETOE DR	BRADSHAW DR CUL DE SAC	1,686 1,533	L(5) L(50)	L(5)	+'	L(10)	L(10)	L(10) L(30)				~		90 50	90 50
SUNDANCE CIR SUNDANCE DR	0.05	PINE	TIMBER	MISTLETOE DR MISTLETOE DR	END	1,533	L(50)	L(5) L/M(10)	+'	L(10)	L(10)	L(30)				v 	+	50	50
SUNRISE	0.12	PINE	TIMBER	TRANS END	END LN	350	L(40)		+	L(10)		L(30)				 ✓	+	70	70
TERA LYNN WAY	0.00	PINE	TIMBER	CLETUS RAY RD	CUL DE SAC N. OF BRADSHAW DR	1,675	L(20)	L(25)	+	L/M(20)	<u> </u>	L(30)		L(20)			+	60	60
TERRA PINE RD	0.16	PINE	TIMBER	WOODLAND WALK	HILLTOP LN	18	L(00)	L(20)	+	L/M(20)	<u> </u>	L(10)		L(20)		√	+	60	40
TONTO DR	0.06	PINE	TIMBER	ORLOFF RD	BLOODY BASIN RD	1,707	L(30)	M(30)	+	M/H(10)	l	L(30)		M(30)		 ✓	√	40	40
TRAILS END DR	0.06	PINE	TIMBER	PINE CREEK CANYON RD	JUNIPER LP	1,562	L(30)	L(5)	1	L(10)	1	L(20)		(12)		√		80	60
UTE TR	0.07	PINE	TIMBER	BEG. OF PAVEMENT	HALL LN	1,714	L(20)	M(10)		L(30)	İ	L(5) L(30)		L(20)		√	1	70	70
UTE TR	0.24	PINE	TIMBER	MOHAWK ST	END OF PAVEMENT AT NAVAJO DR	1,716	L(20)	M(10)		L(30)	1	L(30)		L(20)		√		70	70
VALLEY VIEW DR	0.13	PINE	TIMBER	SR 87	PINE CONE TR	360	L(10)	· _ ·		L(10)		L(10)		L(10)				80	80
WARREN DR	0.22	PINE	TIMBER	HALL LN	NAVAJO DR	1,696	L(20)			L(10)		L(20)		L(20)				70	60
WHISPERING PINE RD	0.29	PINE	TIMBER	ALVA DR	END OF PAVEMENT AT FOREST TR	355	L(10)			L(10)				M(20)		√		80	60
WHISPERING PINE RD	0.95	PINE	TIMBER	SR 87	ALVA DR	356	L(20)			L(10)				L(10)		√		80	80
ROUND VALLEY RD	0.60	ROUND VALLEY	TIMBER	FS 412/GIBSON RANCH	END OF PMT	705	L(10)			L(20)		L(30)		L(10)	٧	<ul> <li>✓</li> </ul>		70	70
ANTELOPE DR	0.13	STRAWBERRY	TIMBER	COLUMBINE DR	RIMWOOD RD	1,743	L(10)			L(20)				L(10)		✓		70	80
BAY DR	0.15	STRAWBERRY	TIMBER	FOSSIL CREEK RD	DEAD END	1,822	L/M(50)	M/H(30)		M/H(30)		M/H(50)		L(10)	~			10	10

									Paveme	ent Distre	sses (Ty	pical Se	verity)			General	Site Cond	litions		
						ROAD	tT Cracking	ligator Cracking	ock Cracking	lge Cracking	Itching	tholes	eath/Rav	ıtting	/Shid Drop Off	ashboard osion	ainage	iling Surface	Initial Visual Condition	Final Overall Condition
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	NUMBER	<b>–</b>		ā	Ш	Ъа	Рс	š	RL		Š Ū	ā	Fa	Rating	Rating
BOBS BEND	0.19	STRAWBERRY	TIMBER	DANS HWY	TONTO RIM DR	1,790	L(10)		-	L(10)					L(10)		✓		80	80
BONNIE BRAE DR BONNIE BRAE LN	0.22	STRAWBERRY	TIMBER	BONNIE BRAE LN	PARKINSON DR	374	L(20)			L(10)	1 (5)				L/M(10)		✓		80	80
CLEONNA DR	0.15	STRAWBERRY	TIMBER	BONNIE BRAE DR CLEONNA DR	PARKINSON DR STRAWBERRY DR	376	L(20)			L(10)	L(5)				L/M(30)		~		70 90	70
COLTER WY	0.21 0.08	STRAWBERRY STRAWBERRY	TIMBER TIMBER	JUNIPER RD	CORDY ST	1,760 1,819	L(5) L(30)	L(5)		L(20)			L(5)		L(20) L(5)				90 60	90 50
COLUMBINE DR	0.08	STRAWBERRY	TIMBER	ELK RD	ANTELOPE DR	1,019	L(5/10)	L(5)		L(20)			L(5)		L(3)		 ✓		70	60
COYOTE DR	0.03	STRAWBERRY	TIMBER	WILD TURKEY LN	END	1,744	L(30)	L(5)		L(20)	L(5)				L(20)		· ·		60	50
DANS HWY	0.35	STRAWBERRY	TIMBER	RIMWOOD RD	FOSSIL CREEK	1,002	L(20)	L(5)		L(30)	L(J)				L(20)		· ·		80	80
DIME DR	0.09	STRAWBERRY	TIMBER	FOSSIL CREEK RD	CUL DE SAC	1,821	L(30)	L(10)		L(20)	L(5)		L(10)		L(20)		· √		60	40
FOSSIL CREEK RD	3.40	STRAWBERRY	TIMBER	SR 87	END OF PAVEMENT	1,823	L(10)	=(10)		L(10)	L(5)		=(::)		L(20)		✓		80	80
FULLER RD	0.51	STRAWBERRY	TIMBER	FOSSIL CREEK RD	CATTLEGUARD	1,831	L(10)	L(10)		L(20)	L(20)				L(20)		✓		60	40
GLEN STRAUN DR	0.08	STRAWBERRY	TIMBER	BONNIE BRAE LN	END OF PAVEMENT	377	L(10)	\ <del>-</del> /	1	L(20)	L(5)	1		İ	L(10)		✓		70	70
JAMES CIR	0.07	STRAWBERRY	TIMBER	BOBS BEND	CUL DE SAC	1,788	L(10)			L(10)				1	L(5)		✓		80	80
JUDY LN	0.13	STRAWBERRY	TIMBER	CLEONNA DR	LOUTHIAN LN	1762	L(5)			L(10)									80	80
LOUTHIAN LN	0.20	STRAWBERRY	TIMBER	CLEONNA DR	SR 87	1,758	L(10)			L(10)	L(5)				L(10)		✓		80	80
LOUTHIAN LN	0.48	STRAWBERRY	TIMBER	JUDY LN	WINGFIELD WY	1,764	L(10)			L(10)					L(10)		✓		80	80
LUFKIN DR	0.65	STRAWBERRY	TIMBER	STRAWBERRY LN	DEAD END	1,774	L(10)	L(5)		L(10)	L(5)	L(1)			L(10)		✓		70	50
MARYS WY	0.36	STRAWBERRY	TIMBER	TONTO RIM DR	DANS HWY	1,791	L(20)	L(10)		L(10)					L(10)		✓		80	80
NASH TR	0.12	STRAWBERRY	TIMBER	CLEONNA DR	LOUTHIAN LN	1759	L(5)												90	90
PARKINSON DR	0.40	STRAWBERRY	TIMBER	SR 87	END OF PAVEMENT	1,833	L(30)	L(10)		L(30)	L(10)				L(10)		√		60	40
RALLS DR	1.13	STRAWBERRY	TIMBER	SR 87	FULLER RD	1,843	L(10)	L(2)		L(20)	L(10)				L/M(20)		✓		70	60
RIM VIEW LOOP	0.04	STRAWBERRY	TIMBER	RALLS DR	CUL DE SAC	1,841	L(30)	L(10)	L(30)	L/M(20)					L(20)		✓		40	40
RIMWOOD DR	0.16	STRAWBERRY	TIMBER	RIMWOOD RD	TONTO RIM DR	1,783	L(10)	L(5)		L(5)		L(1)			L(10)		~		80	60
RIMWOOD RD	0.16	STRAWBERRY	TIMBER	FOSSIL CREEK RD	COLUMBING	1,742	L(10)	L(5)		L(5)					L(10)				80	80
RIMWOOD RD	0.36	STRAWBERRY	TIMBER	WINGFIELD WY	FOSSIL CREEK RD	1,775	L(10)	L(5)		L(10)					L(10)			-	80	60
SPRUCE TR	0.16	STRAWBERRY	TIMBER	PARKINSON DR		375	L(10)			L(20)	L(5)				L(10)		✓ ✓		70	70
SPUR LN STRAWBERRY LN	0.08	STRAWBERRY STRAWBERRY	TIMBER	WILD TURKEY LN LUFKIN LN	TONTO RIM DR LOUTHIAN LN	1,803	L(10) L(10)			L(10) L(10)	L(2)				L(5)		✓ ✓		80 80	80 80
TONTO RIM DR	0.11	STRAWBERRY	TIMBER	WILD TURKEY LN	WINGFIELD WY	1,773	L(10)	L(5)		L(10)	L(5)				L(10)	-	· ·		80	80
WAGON WHEEL WY	0.30	STRAWBERRY	TIMBER	FOSSIL CREEK RD	WING I LED WI	1,707	L(10)	L/M(20)		L/M(30)	L(10)				L(30)		· ·		50	30
WESTERN WY	0.23	STRAWBERRY	TIMBER	CYOTE DR	END OF PAVEMENT	1,801	L(20)	L(5)		L(20)	L(10)				L(30)		· ·		60	50
WILD TURKEY LN	0.48	STRAWBERRY	TIMBER	SPUR LN	WAGON WHEEL	688	L(20)	L(5)		L(20)					L(30)		√		60	70
WILD TURKEY LN	0.23	STRAWBERRY	TIMBER	WAGON WHEEL	CUL DE SAC	1,805	L(60)	L/M(20)		L/M(30)	L(10)	L(5)	L(30)		L(30)		✓	✓	50	50
WINGFIELD WY	0.05	STRAWBERRY	TIMBER	RIMWOOD RD	LOUTHIAN LN	1,785	L(5)	(,		L(5)	_()	_(-)	_()		L(10)				80	80
WINGFIELD WY	0.06	STRAWBERRY	TIMBER	RIMWOOD DR	RIMWOOD RD	1,786	L(5)			L(5)					L(10)				80	80
BAKER RD	0.10	TONTO BASIN	TIMBER	MULBERRY DR	DEAD END	427	. , ,			L(20)			L(20)						80	80
BONANZA CIR	0.14	TONTO BASIN	TIMBER	FS423	END	446	L(15)	L(85)	L(85)	L(10)			L(80)		L(5)				30	30
BOULDER AVE	0.07	TONTO BASIN	TIMBER	WALNUT SPRINGS BLVD	ROCKY RD	429	L(30)			L(10)			L(30)						70	70
BUCKHORN TR	0.07	TONTO BASIN	TIMBER	SADDLEBACK RD	DEAD END	718	L(10)			M(15)			L(20)						70	70
BULL PEN CIR	0.05	TONTO BASIN	TIMBER	FLOURSPAR RD	END	447													40	40
CHRISTOPHER LN	0.20	TONTO BASIN	TIMBER	CUL-DE-SAC	DOOLEY RD	1447			L(30)	L(20)	M(20)		M(75)			~			60	40
	0.04	TONTO BASIN	TIMBER	PACKARD DR	END	443				ļ			M(100)					_	40	60
	0.02	TONTO BASIN	TIMBER	BUCKHORN TR	CUL DE SAC	233	L(5)			1 (1-5)			L(30)						80	80
DEVIL DOG RD	0.05	TONTO BASIN	TIMBER	DRYER DR	DEAD END	1,420	L(30)	1/45		L(10)			L(30)		M(10)				80	80
	0.45	TONTO BASIN	TIMBER	SR 188	DEAD END	1,421	L(50)	L(15)	+	M(20)		L(2)	L(30)		M(10)	√			50	50
EARL STEVENS RD	0.15	TONTO BASIN	TIMBER	SHREEVE LN	DEAD END	719	L(15)			M(10)		L(2)	L(20)		L(10)	✓	√		70	50
ELM ST FLOURSPAR RD	0.15	TONTO BASIN TONTO BASIN	TIMBER TIMBER	MIMOSA ST FS423	END END	1443 448	L(40)	M(5)		<u> </u>					L(50) M(15)	v			60 40	60 40
FOUR PEAKS RD	0.17	TONTO BASIN	TIMBER	WALNUT SPRINGS BLVD	CUL DE SAC	448	L(40)	M(20)	+	L(20)	+	1 (5)	L(30)	}	(C1)IVI	├		-	60	40 60
FS 423/CLINE BLVD	0.08	TONTO BASIN	TIMBER	FS 423/EWING TRAIL	LAKEVISTA DR	430	L(40)	101(20)	+	L(20)		L(3)	L(30)	L(15)	1 (2)	<u>├</u>			80	80
FS 423/CLINE BLVD	1.73	TONTO BASIN	TIMBER	DOOLEY DR	FLUORSPAR RD	436	L(10)				1 (1)	H(1)		H(1)	L(2) L(3)				80	80
FS 423/CLINE BLVD	0.21	TONTO BASIN	TIMBER	PACKARD DR	NF-60	439	L(70)		L(2)	L(5)	-(1)				L(3)				80	50
FS 423/CLINE BLVD	0.21	TONTO BASIN	TIMBER	FLOURSPAR RD	PACKARD DR	440	L(90)		L(10)	_(0)	1	L		1	-\\$/				80	80
FS 423/CLINE BLVD	0.20	TONTO BASIN	TIMBER	LAKE VISTA	DOOLEY DR	638	_(00)		_()	t		-		1	L(3)				80	50
FS 423/EWING TRAIL	2.46	TONTO BASIN	TIMBER	FS 423/CLINE BLVD	OUTLAW LN	1,461			1	1	1			L(1)	L/M(1)				80	80
FS 423/EWING TRAIL	1.35	TONTO BASIN	TIMBER	OUTLAW LN	FS 71/GREENBACK CROSSING	2,461			1	t	1	1		L(1)	L(5)				80	80
u			•	-		,					•	•	1	/	<b>Λ</b> <sup>−</sup> /		1			u I

RADE MARE         LENGTH         COMMUNITY         EGGIN         BECIN NET         UNDER         LENGTH         NUMBER         LENGTH         LENGTH         NUMBER         LENGTH         LENGTH         NUMBER         LENGTH         LENGTH <thlength< th=""> <thle< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th colspan="4">Pavement Distresses (Typical Severity)</th><th></th><th></th><th colspan="6">General Site Conditions</th></thle<></thlength<>									Pavement Distresses (Typical Severity)						General Site Conditions										
Spit Accessing         Too         TYPE DESIR         IMAGE         CS Cold Design         Media         Line							ROAD	t Cracking	ligator Cracking	ock Cracking	ge Cracking	tching	tholes	aath/Rav	itting	/Shid Drop Off	ashboard	osion	ainage	iling Surface	Visual	Overall			
Selection/Selection         128         TYPE Description         128         1290         1200        1200         1200         <	-	LENGTH			-		NUMBER	L8	All	Ë	Е	Ра	Ро	Š	Ru	Ľ	Ň	Ľ U	ă	Fa	Rating				
S / JOELDACK C/GOSAM         Dist         Disk         Disk <thdisk< th="">         Disk         Disk<!--</td--><td></td><td></td><td></td><td></td><td></td><td></td><td>7 -</td><td>. ,</td><td>. ,</td><td></td><td>( )</td><td>L(5)</td><td></td><td>· /</td><td>L(10)</td><td></td><td></td><td></td><td></td><td>✓</td><td></td><td></td></thdisk<>							7 -	. ,	. ,		( )	L(5)		· /	L(10)					✓					
Bit Notesting All         Disk         Disk         Disk         Bit Nig         Cold MV Nig         Hon         Log         Log <thlog< th="">         Log         <thlog< th="">         L</thlog<></thlog<>							,	L(40)	L(10)		L(30)			L(30)											
Bit REAL         0.07         THERE         PERCENCE         ERCENCE         PER							,									. ,									
SHEPABACK         0.10         TOTO DASAN         MADE         MADE LUMITY         MEAD (FA)         91         145          150        150         150         1		-					1	L(10)								L(5)									
Simple Schwart         011         TOTO SAME         MADE LAINER         MICE SCHWART         00         Log         og <thlog< th="">         &lt;</thlog<>					_			1 (1 0)						1 (00)								_			
endesc Altron War         0.46         TYPE DEASH         TYPE DEASH         SATE CORENTIAL         DEAD RD         416         M200         200 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>( )</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>· · /</td> <td></td> <td>1 (5)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								( )						· · /		1 (5)									
BOXYMODIN         DDD         TYNTO BASH         THESE         SCOLOR PR         WALDEL SPRCE         U.B.         LUD         UD         LUD <t< td=""><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td>(14)00</td><td>1 (40)</td><td></td><td></td><td></td><td></td><td>L(5)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>					_					(14)00	1 (40)					L(5)									
MAXA MAPI         D10         TOMO 648.N         TUBER         MUL RENY DR         CLD D6 86.         1/20         L <d< th="">         L<d< th="">        L<d< th="">         L<d< th=""> <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>( )</td><td>IVI(15)</td><td>(101)60</td><td>. ,</td><td></td><td></td><td>( )</td><td></td><td>1 (10)</td><td></td><td></td><td></td><td>v</td><td></td><td></td></t<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<></d<>							-	( )	IVI(15)	(101)60	. ,			( )		1 (10)				v					
LÁCE USTA         0.6         TUMO BASN         TIMBE         CLILB LAY         END         600         FUE         L <thl< th="">         L        L</thl<>								( )			,			· · /		L(10)		-	•		-				
LONE CIR         6.06         TOTO BASH         TIMES         38.140         DECAD ROM         130         L200         L200 <thl200< th=""> <thl200< th=""> <thl200< td="" th<=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td>,</td><td>L(J)</td><td></td><td>L (10)</td><td>L(J)</td><td></td><td></td><td>· /</td><td></td><td>1 (30)</td><td>1</td><td></td><td></td><td></td><td></td><td></td></thl200<></thl200<></thl200<>					-		,	L(J)		L (10)	L(J)			· /		1 (30)	1								
NCLELLAPR         0.21         TONTO BASN         TIMER         State SHD GR         1.08         ÚZ         L					-			1 (25)	1 (20)	L(10)	L (15)			(= -)		L(00)		-							
DBMORASTI         0.21         TONID RASN         TUBER         F8/23         THAILS PRIVE OB         1441         1<	MCLELLAN DR							. ,	-(-0)		_(10)	1		_(00)							-				
MOULMENT PID         0.68         TONTO GASN         TIMBER         ROCK PD         WALKUT SPRING SULV         4.20         L.00         L.00         M.00         M.00         M.00         L.00         M.00         M.00         M.00         L.00         M.00         L.00         M.00         .00		-					,	-\-/			L(15)	1		M(80)		L(50)	✓								
MICOSE PRINT         0.13         TONTO BASIN         TIMBER         OPERATE DB         4174         L/20         L/20 <thl 20<="" th="">         L/20         <thl 20<="" th=""> <thl< td=""><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td>L(50)</td><td></td><td></td><td></td><td>1</td><td></td><td>(==)</td><td></td><td>()</td><td></td><td></td><td></td><td></td><td></td><td></td></thl<></thl></thl>		-						L(50)				1		(==)		()									
NORTH RD         0.07         TONTO BASN         IMMER         SR 168         OPEN 185         433         L46         M33         L         M33         L <thl< th=""> <thl< th="">         L         <thl< <="" td=""><td>MOOSE POINT</td><td></td><td></td><td>TIMBER</td><td></td><td></td><td></td><td>( )</td><td></td><td></td><td></td><td></td><td></td><td>· · /</td><td></td><td>M(20)</td><td></td><td></td><td></td><td></td><td>70</td><td></td></thl<></thl<></thl<>	MOOSE POINT			TIMBER				( )						· · /		M(20)					70				
OLD HWY 188         OAG         TANTO BASIN         TIMBER         SR-188         SR-188         CR         L00         L00<	MULBERRY DR	0.21	TONTO BASIN	TIMBER	BAKER RD	SUNDANCE LN	1,414	L(30)			L(10)			. /							70	70			
PACKARD PR         0.22         TONTO BASIN         TWBER         PEXAS         PEND         4.44         L(80)         L(80) <thl(8)< th="">         L(80)</thl(8)<>	NORTH RD	0.07	TONTO BASIN	TIMBER	SR 188	ROCKY RD	433	L(40)	M(30)		M(20)	L(10)		L(30)							50	50			
NANBOR UN         0.0         TONTO BASIN         THMER         MULBERRY DR         CULUE SAC         1.411         L/10         L <thl< th=""> <thl< th="">         L         <thl<< td=""><td>OLD HWY 188</td><td>0.86</td><td>TONTO BASIN</td><td>TIMBER</td><td>SR-188</td><td>SR-188</td><td>425</td><td>L(40)</td><td>M(15)</td><td></td><td>L(10)</td><td></td><td></td><td>L(20)</td><td></td><td>L(10)</td><td></td><td></td><td>✓</td><td></td><td>60</td><td>40</td></thl<<></thl<></thl<>	OLD HWY 188	0.86	TONTO BASIN	TIMBER	SR-188	SR-188	425	L(40)	M(15)		L(10)			L(20)		L(10)			✓		60	40			
NEGE RIN.         0.10         TONTO BASN         TIMBER         MCLELLAN DR         DEAD END         192         1/2           1/20 <td>PACKARD DR</td> <td>0.22</td> <td>TONTO BASIN</td> <td>TIMBER</td> <td></td> <td></td> <td>444</td> <td>L(60)</td> <td>L(40)</td> <td>L(80)</td> <td></td> <td></td> <td></td> <td>L(90)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>40</td> <td>20</td>	PACKARD DR	0.22	TONTO BASIN	TIMBER			444	L(60)	L(40)	L(80)				L(90)							40	20			
BOCKY RD         0.25         TONTO BASIN         TMBER         DEAD END N. OF JRON YOODLN         420         L40         L40 <thl40< th="">         L40        L40</thl40<>	RAINBOW LN	0.10	TONTO BASIN	TIMBER	MULBERRY DR	CUL DE SAC	1,411	( )						L(20)							80	80			
ROXES CIR         0.03         TONTO BASIN         TIMBER         PACKARD DR         END         441         C					-			. ,						· · /											
SADDEACK RC         0.16         TONTO BASIN         TIMBER         MULLERRY DR         BUCHHORN TR         1/13         L(D)         T         D         L(10)         C         C         D        D							-	L(40)			L(20)	L(5)		()		L(10)									
SAGUARO RD         0.18         TONTO BASIN         TMBER         WAINUT SPRINGS BLVD         OLUL DE SACC         224         L(20)         H(30)         K(30)         K(30)         K(-7)         R(30)					_									· · /							-				
SALLY MAY CIR         0.16         TONTO BASIN         TIMBER         F5423         END         445         L(20)         L(80)							,		14(00)		11(00)			1 - 1		14(00)									
SHREEVE LN         0.15         TONTO BASIN         TIMBER         EAAL STEVENS RD         END OF PAVEMENT         1.449         L(5)         L <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>( )</td> <td>1 (00)</td> <td>H(30)</td> <td></td> <td></td> <td>( )</td> <td></td> <td>()</td> <td></td> <td>~</td> <td>✓</td> <td></td> <td>==</td> <td>-</td>							-		( )	1 (00)	H(30)			( )		()		~	✓		==	-			
SLATE CREEK TR         0.47         TONTO BASIN         TIMBER         SR 189         END         419         L(5)         C         C         C         C         C         D <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>L(80)</td> <td>L(80)</td> <td></td> <td></td> <td></td> <td>· /</td> <td></td> <td>L(20)</td> <td></td> <td></td> <td>./</td> <td></td> <td></td> <td></td>							-		L(80)	L(80)				· /		L(20)			./						
SOUTH RD         0.04         TONTO BASIN         TMBER         SR 188         WALAUT SPRINGS BLVD         435         L(10)         L(5)         L(20)         M00         <          80         80           TONTO BASIN         TMBER         MLEERRY DR         END OF PAVEMENT         1.430         L(40)         L(20)         L(20)         L(20)         -         . </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>,</td> <td>. ,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>L(10)</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>							,	. ,						L(10)					•						
SYCAMORE LN         0.46         TONTO BASIN         TIMBER         SR 188         END OF PAVEMENT         1.436         L(40)         M(20)         H(20)         L(20)         M(0)         I		-					-				1 (5)			1 (5)											
TONTO CREEK TR         0.12         TONTO BASIN         TIMBER         MULBERRY DR         END OF PAVEMENT         1.410         L         L         L         L         L         D         B0         80         80           TONTO CREEK TR         0.49         TONTO BASIN         TIMBER         SR 188         DEAD END         1.415         L(40)         L(40)         L(30)         L(5)         -         -         60         50           TONTO CREEK RO         0.52         TONTO CREEK ROPES         TIMBER         SAGUARO RD         NORTH RD         434         L(30)         L(40)         L(30)         L(5)         -         -         60         60           CONTROL RD         0.00         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1.111         -         L(10)         L(30)         -         -         -         80         80         80           CONTROL RD         1.00         TONTO VILLAGE         TIMBER         STANDAGE DR         1.111         -         L(10)         -         -         -         -         80         80         60         60         60         60         60         60         60         60         60         60								( - )	M(20)		(-)			(-)		M(30)		~	~						
TONTO CREEK TR         0.49         TONTO BASIN         TIMBER         SR 188         DEAD END         1.415         L(a)							,	L(40)	101(20)		. ,			· · /		101(00)									
WALNUT \$PRINS BLVD         0.34         TONTO RASIN         TIMBER         SAGUARO D         NORTH RD         434         L(30)         L(10)         L(30)         L(6)           70         60           CEDAR CR         0.06         TONTO CREEX SHORES         TIMBER         STANDAGE DR         DEAD END         1.11         L(10)         L(30)         M(10)           80         80           CEDAR CIR         0.06         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1.11         L(10)         L(30)         L(60)           80         80           CONTROL RD         1.04         TONTO VILLAGE         TIMBER         JOHNSON BLVD         END OF PAVEMENT         2479         L(10)         L(30)         L(20)         L(20) <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>1 -</td> <td>1 (40)</td> <td>1 (5)</td> <td></td> <td>1 - 1</td> <td></td> <td></td> <td></td> <td></td> <td>1 (5)</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td>		-					1 -	1 (40)	1 (5)		1 - 1					1 (5)			✓						
TONTO CREEK RD         0.52         TONTO CREEK SHORES         TIMBER         FS417/01SELA RD         SADDLEHORN LM         413         L(50)         MH(10)         L(30)         M(10)         V         500         500           CEDAR CIR         0.06         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD PD         1.111         L(10)         L(10)         L(10)         V         600         60           CONTROL RD         1.04         TONTO VILLAGE         TIMBER         JOHNSON BL/D         END PAVEMENT         2479         L(5)         L(10)         V         V         60         60           CONTROL RD         0.43         TONTO VILLAGE         TIMBER         CONTROL RD         END HD         1109         L(10)         V         V         60         60           JOHNSON BL/D         0.43         TONTO VILLAGE         TIMBER         CONTROL RD         FITCH LN         314         L(10)         L(20)         M(5)         L(20)         M(5)         V         60         60           JOHNSON BL/D         0.50         TONTO VILLAGE         TIMBER         CONTROL RD         FITCH LN         314         L(10)         L(20)         M(6)         L(5)         V         60         60							,	. ,	=(0)		. ,	L(10)		· /		. ,									
CONTROL RD         1.00         TONTO VILLAGE         TIMBER         C.88.280         JOHNSON BLVD         1.847         L(10)         L(30)         C         C         B0         80         80           CONTROL RD         1.04         TONTO VILLAGE         TIMBER         JOHNSON BLVD         END OF PAVEMENT         2479         L(5)         L(10)         C         C         90         80           JOHNSON BLVD         0.43         TONTO VILLAGE         TIMBER         CONTROL RD         END         1109         L(10)         L(20)         M(5)         L(30)         L(2)         L(30)         L(4)         L(40)         L(40)         L(40)         L(40)         L(40)         L(40)         L(40)         L(4)         L(4)	TONTO CREEK RD	0.52	TONTO CREEK SHORES	TIMBER	FS417/GISELA RD	SADDLEHORN LN	413	. ,			M/H(10)	. ,		L(30)					✓		50	50			
CONTROL RD         1.04         TONTO VILLAGE         TIMBER         JOHNSON BLVD         END OF PAVEMENT         2479         L(6)         L(10)         Image         Image         90         80           FITCH LN         0.05         TONTO VILLAGE         TIMBER         CONTROL RD         END         1109         L(10)         Image         Image         90         90         90           JOHNSON BLVD         0.43         TONTO VILLAGE         TIMBER         FITCH LN         STANDAGE DR         313         L(10)         L(20)         M(5)         L(5)         Image         90         90         90           JOHNSON BLVD         0.50         TONTO VILLAGE         TIMBER         JOHNSON BLVD         B10         PAVEMENT         1/10         L(10)         L(20)         M(2)         L(40)         Image         7         7         60         60           MATTHEWS LN         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,116         L(10)         L(40)         Image         80         80           STANDAGE DR         0.41         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,112         L(10)         L(60)         Image         1mag	CEDAR CIR	0.06	TONTO VILLAGE	TIMBER	STANDAGE DR	DEAD END	1,111	. ,			L(10)			L(60)							80	80			
FTCH LN         0.05         TONTO VILLAGE         TIMBER         CONTROL RD         END         1109         L(10)         L(20)         M(5)         L(5)         L(4)         L(5)         L(10)         L(40)         L(4)         L(5)         L(10)         L(4)         L(4)         L(4)         L(4) <thl(6)< th="">         L(5)         L(10)</thl(6)<>	CONTROL RD	1.00	TONTO VILLAGE	TIMBER	SR-260	JOHNSON BLVD	1,847	L(10)			L(30)						✓				60	60			
IDNEON BLVD         0.43         TONTO VILLAGE         TIMBER         FITCH LN         STANDAGE DR         313         L(10)         L(20)         M(5)         L(10)         L(10)         M(5)         L(10)         M(5)         L(10)         M(5)         L(10)         M(5)         L(10)         M(5)         L(10)         M(5)         L(10)         M(2)         L(40)         M(2)         L(40)         M(5)         L(10)         M(2)         L(40)         M(5)         L(10)         M(2)         L(40)         M(6)         M(6)         M(6)         M(7)         M(7) <th< td=""><td>CONTROL RD</td><td>1.04</td><td>TONTO VILLAGE</td><td>TIMBER</td><td>JOHNSON BLVD</td><td>END OF PAVEMENT</td><td>2479</td><td>L(5)</td><td></td><td></td><td>L(10)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>90</td><td>80</td></th<>	CONTROL RD	1.04	TONTO VILLAGE	TIMBER	JOHNSON BLVD	END OF PAVEMENT	2479	L(5)			L(10)										90	80			
JOHNSON BLVD         0.50         TONTO VILLAGE         TIMBER         CONTROL RD         FITCH LN         314         L(10)         M(5)         L(2)         L(30)         C         ✓         ✓         ✓         Ø         60         60           MATTHEWS LN         0.04         TONTO VILLAGE         TIMBER         JOHNSON BLVD         END OF PAVEMENT         1,107         L(10)         L(10)         L(40)           70         70           OAK CIR         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,116          L(10)         L(40)           80         80           PONDEROSA CIR         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,114          L(10)         L(60)           80         80           STANDAGE DR         0.41         TONTO VILLAGE         TIMBER         JOHNSON BLVD         DEAD END         1,110         L(5)         L(10)         L(60)           4         80         80           VILLAGE CIR         0.05         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,115         L(10)<	FITCH LN							· · /														÷ •			
MATTHEWS LN       0.04       TONTO VILLAGE       TIMBER       JOHNSON BLVD       END OF PAVEMENT       1,107       L(10)       M(2)       L(40)       Image       Tonto       Tonto         OAK CIR       0.04       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,116       L(10)       L(40)       Image       80       80         STANDAGE DR       0.44       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,114       L(10)       L(60)       Image       80       80         STANDAGE DR       0.41       TONTO VILLAGE       TIMBER       TONTO TR       END       69       L(5)       L(10)       L(60)       Image       80       80         TONTO TRAIL       0.17       TONTO VILLAGE       TIMBER       JOHNSON BLVD       DEAD END       1,110       L(5)       L(10)       L(60)       Image       Image       70       60         VILLAGE CIR       0.05       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,112       L(10)       L(60)       Image       Image       80       80         WINDY GROVE CIR       0.03       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,112       L(10)	JOHNSON BLVD											M(5)				L(5)									
OAK CIR         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,116         L(10)         L(40)         L(40)         L         80         80           PONDEROSA CIR         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,114         L(10)         L(40)         L(60)         M         80         80           STANDAGE DR         0.41         TONTO VILLAGE         TIMBER         TONTO TR         END         699         L(5)         L(10)         L(60)         M         M         80         80           TONTO TRAIL         0.17         TONTO VILLAGE         TIMBER         JOHNSON BLVD         DEAD END         1,110         L(5)         L(10)         M(5)         L(60)         M         M         80         80           VINDY GROVE CIR         0.03         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,112         L(10)         L(60)         M         M         80         80           WOODLAND CIR         0.05         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,115         L(10)         L(60)         M         M         80         80								. ,	M(5)	_			· · ·		ļ		<u> </u>	✓	√						
PONDEROSA CIR         0.04         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,114          L(10)         L(60)            80         80           STANDAGE DR         0.41         TONTO VILLAGE         TIMBER         TONTO TR         END         699         L(5)         L(10)         L(60)            80         80           TONTO TRAIL         0.17         TONTO VILLAGE         TIMBER         JOHNSON BLVD         DEAD END         1,110         L(5)         L(10)         L(60)            80         80           VILLAGE CIR         0.05         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,112          L(10)         L(60)            80         80           WINDY GROVE CIR         0.03         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,115          L(10)         L(60)           80         80         80           SCOTT DR         0.04         WHISPERING PINES         TIMBER         STANDAGE DR         FS199/HOUSTON MESA         1,582         L(10)							-	L(10)			. ,		M(2)												
STANDAGE DR       0.41       TONTO VILLAGE       TIMBER       TONTO TR       END       699       L(5)       L(10)       L(60)       D       D       D       80       80         TONTO TRAIL       0.17       TONTO VILLAGE       TIMBER       JOHNSON BLVD       DEAD END       1,110       L(5)       L(10)       M(5)       L(60)       D       D       D       0							,																		
TONTO TRAIL       0.17       TONTO VILLAGE       TIMBER       JOHNSON BLVD       DEAD END       1,110       L(5)       L(10)       M(5)       L(60)       Image       Tome       70       60         VILLAGE CIR       0.05       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,112       L(10)       L(10)       L(60)       Image       Image       80       80       80         WINDY GROVE CIR       0.03       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       1,112       L(10)       L(10)       L(60)       Image       Image       80       80       80         WOODLAND CIR       0.05       TONTO VILLAGE       TIMBER       STANDAGE DR       DEAD END       2,014       L(10)       L(10)       L(60)       Image       80       80         SCOTT DR       0.04       WHISPERING PINES       TIMBER       FS199/HOUSTON MESA       FS199/HOUSTON MESA       1,582       L(10)       L(10)       L(20)       Image       Image       80       80       80         BAKER RANCH RD       1.02       YOUNG       TIMBER       SR-288       ZACHARIAE RANCH       1,490       L(10)       M(10)       L(20)       Image       Image       Image <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>,</td><td>1 (5)</td><td></td><td>+</td><td></td><td></td><td></td><td>( )</td><td></td><td></td><td> </td><td></td><td></td><td></td><td></td><td></td></t<>							,	1 (5)		+				( )											
VILLAGE CIR         0.05         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,112         L(10)         L(60)           80         80           WINDY GROVE CIR         0.03         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         1,115         L(10)         L(60)           80         80           WOODLAND CIR         0.05         TONTO VILLAGE         TIMBER         STANDAGE DR         DEAD END         2,014         L(10)         L(60)           80         80           SCOTT DR         0.04         WHISPERING PINES         TIMBER         FS199/HOUSTON MESA         1,582         L(10)         L(10)            80         80           BAKER RANCH RD         1.02         YOUNG         TIMBER         IKE CLARK PKWY         FS129         1,489         L(10)         M(5/10)         L(20)            80         80           BAKER RANCH RD         0.82         YOUNG         TIMBER         SR-288         ZACHARIAE RANCH         1,490         L(10)         M(10) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>L(5)</td> <td>1 (E)</td> <td></td> <td>. ,</td> <td>NA(E)</td> <td></td> <td>. ,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								L(5)	1 (E)		. ,	NA(E)		. ,											
WINDY GROVE CIR0.03TONTO VILLAGETIMBERSTANDAGE DRDEAD END1,115L(10)L(60)II8080WOODLAND CIR0.05TONTO VILLAGETIMBERSTANDAGE DRDEAD END2,014L(10)L(60)II8080SCOTT DR0.04WHISPERING PINESTIMBERFS199/HOUSTON MESAFS199/HOUSTON MESA1,582L(10)L(10)II8080BAKER RANCH RD1.02YOUNGTIMBERIKE CLARK PKWYFS1291,489L(10)M(5/10)L(2)L(60)L(30)✓✓5060BAKER RANCH RD0.82YOUNGTIMBERSR-288ZACHARIAE RANCH1,490L(10)M(5)L(10)L(2)I✓7060FS 512/YOUNG RD4.54YOUNGTIMBERRIFLE BARREL RDCRUCCAR D2,006L(30)L/M(20)L(10)M(10)V/(40)M(10)✓5060FS 512/YOUNG RD3.21YOUNGTIMBERSR-286CRUCCAR D1,518L(10)L(10)L(20)V✓5060GRAHAM BLVD0.30YOUNGTIMBERSR-298TEWKSBURY BLVD1,479L(10)L(5)L(20)VV508080									L(0)			11(5)					┣───		<u> </u>						
WOODLAND CIR0.05TONTO VILLAGETIMBERSTANDAGE DRDEAD END2,014IL(10)IL(60)III8080SCOTT DR0.04WHISPERING PINESTIMBERFS199/HOUSTON MESAFS199/HOUSTON MESA1,582L(10)L(10)L(10)IIII8080BAKER RANCH RD1.02YOUNGTIMBERIKE CLARK PKWYFS1291,489L(10)M(5/10)M/H(5/10)L(2)L(60)L(30)✓✓5060BAKER RANCH RD0.82YOUNGTIMBERSR-288ZACHARIAE RANCH1,490L(10)M(5)L(10)L(20)✓✓7060FS 512/YOUNG RD4.54YOUNGTIMBERRIFLE BARREL RDCROUCH MESA NF-1162,006L(30)L/M(20)L(10)M(10)L/M(40)M(10)✓✓5060FS 512/YOUNG RD3.21YOUNGTIMBERSR-260COLCORD RD1,518✓L(10)L(10)M(10)L/M(40)M(10)✓✓9090GRAHAM BLVD0.30YOUNGTIMBERSR-298TEWKSBURY BLVD1,479L(10)L(5)L(20)✓✓✓8080								├		+		+		( )					v						
SCOTT DR0.04WHISPERING PINESTIMBERFS199/HOUSTON MESAFS199/HOUSTON MESA1,582L(10)L(10)L(10)IIIIIIII8080BAKER RANCH RD1.02YOUNGTIMBERIKE CLARK PKWYFS1291,489L(10)M(5/10)M/H(5/10)L(2)L(60)L(30)III5060BAKER RANCH RD0.82YOUNGTIMBERSR-288ZACHARIAE RANCH1,490L(10)M(5)L(10)L(30)III5060FS 512/YOUNG RD4.54YOUNGTIMBERRIFLE BARREL RDCROUCH MESA NF-1162,006L(30)L/M(15)L/M(20)L(10)M(10)III5060FS 512/YOUNG RD3.21YOUNGTIMBERSR-260COLCORD RD1,518IL(M)5IL(20)II9090GRAHAM BLVD0.30YOUNGTIMBERSR-298TEWKSBURY BLVD1,479L(10)L(5)L(20)III18080												-		( )											
BAKER RANCH RD       1.02       YOUNG       TIMBER       IKE CLARK PKWY       FS129       1,489       L(10)       M(5/10)       L(2)       L(60)       L(30)       ✓       ✓       50       60         BAKER RANCH RD       0.82       YOUNG       TIMBER       SR-288       ZACHARIAE RANCH       1,490       L(10)       M(5)       L(10)       L(30)       ✓       ✓       70       60         FS 512/YOUNG RD       4.54       YOUNG       TIMBER       RIFLE BARREL RD       CROUCH MESA NF-116       2,006       L(30)       L/M(20)       L(10)       M(10)       ✓       50       60         FS 512/YOUNG RD       3.21       YOUNG       TIMBER       SR-260       COLCORD RD       1,518       ✓       L(M)5       L(20)       ✓       90       90       90       90       90       90       90       90       90       90       90       90       90       90       90       90       8							,	1 (10)				1		-(00)	<u> </u>										
BAKER RANCH RD         0.82         YOUNG         TIMBER         SR-288         ZACHARIAE RANCH         1,490         L(10)         M(5)         L(10)         L(30)         Image: Constraint of the state of t	BAKER RANCH RD						,		M(5/10)			)	L(2)	L(60)		L(30)		✓	✓						
FS 512/YOUNG RD       4.54       YOUNG       TIMBER       RIFLE BARREL RD       CROUCH MESA NF-116       2,006       L(30)       L/M(2)       L(10)       M(10)       M(10)       // (0) <th (0)<="" th=""> <th (0)<="" th=""> <th (0)<="" th=""></th></th></th>	<th (0)<="" th=""> <th (0)<="" th=""></th></th>	<th (0)<="" th=""></th>		BAKER RANCH RD						,		( )			,	-(-/			_(20)						
FS 512/YOUNG RD       3.21       YOUNG       TIMBER       SR-260       COLCORD RD       1,518       L(M)5       L(M)5       L(20)       ✓       90       90       90       90         GRAHAM BLVD       0.30       YOUNG       TIMBER       SR-298       TEWKSBURY BLVD       1,479       L(10)       L(5)       L(20)       ✓       90 <td< td=""><td>FS 512/YOUNG RD</td><td></td><td></td><td></td><td></td><td></td><td>,</td><td></td><td></td><td>1</td><td></td><td>L(10)</td><td>M(10)</td><td></td><td></td><td>M(10)</td><td></td><td></td><td>✓</td><td></td><td>-</td><td></td></td<>	FS 512/YOUNG RD						,			1		L(10)	M(10)			M(10)			✓		-				
GRAHAM BLVD 0.30 YOUNG TIMBER SR-298 TEWKSBURY BLVD 1,479 L(10) L(5) L(5) L(20) √ 80 80								, í			,		, , , , , , , , , , , , , , , , , , ,	. /		. ,			✓						
HAZELWOOD RD 0.44 YOUNG TIMBER MIDWAY AVE PUMA LN 399 L(10) L/M(5) L(20) 60 60							,	L(10)	L(5)					L(20)					✓		80				
	HAZELWOOD RD	0.44	YOUNG	TIMBER	MIDWAY AVE	PUMA LN	399	L(10)	L/M(5)		M(5)			L(20)					~		60	60			

							Pavement Distresses (Typical Severity)							Gen	eral Site	Conditions				
ROAD NAME	LENGTH	COMMUNITY	REGION	BEGIN REF	END REF.	ROAD NUMBER	L&T Cracking	Alligator Cracking	Block Cracking	Edge Cracking	Patching	Potholes	Weath/Rav	Rutting	Ln/Shid Drop Off	Washboard	Erosion	Drainage Failing Surface	Initial Visual Condition Rating	Final Overall Condition Rating
MIDWAY AVE	0.25	YOUNG	TIMBER	SR-288	HAZELWOOD RD	400	L(10)			L(10)			L(10)					✓	80	80
PUMA LN	0.06	YOUNG	TIMBER	HAZELWOOD RD	DEAD END	398	L(10)			L(10)			L(20)					✓	80	80
TEWKSBURY BLVD	0.50	YOUNG	TIMBER	SR 288	END	1,499				L(10)		L(1)						✓	80	90



## APPENDIX D – ROAD SAFETY ASSESSMENT INFORMATION

## Broadway Street/El Camino Street Road Safety Assessment



Prepared for: Gila County Public Works Department



Arizona Road Safety Assessment Program Arizona Department of Transportation Traffic Safety Section 1615 West Jackson Street, Mail Drop 065R Phoenix, Arizona 85007-3217 602-712-7601

July 2013

## **Table of Contents**

Project Request	1
RSA Team	1
RSA Process	2
Start-Up Meeting	2
Field Reviews	2
Preliminary Findings Meeting	3
Physical Roadway Characteristics	3
Evaluation of Crash Data	3
Site Review Observations and Initial Recommendations	4
Suggested Improvements/Countermeasures	13
Next Steps	13
Appendix	17

## **Project Request**

The Road Safety Assessment (RSA) of the Broadway Street/El Camino Street intersection was conducted at the request of the Gila County Public Works Department. The study limits included the segment of Broadway Street from US 60 to just east of El Camino Street, and El Camino Street from US 60 to just south of Broadway Street. The road segments being evaluated are shown in Figure 1. The Gila County Transportation Study recommended an RSA at this location, which has traffic conflicts and congestion due to activity at the post office, fire station, Circle K, and other local businesses, with parked vehicles on the intersection corners.

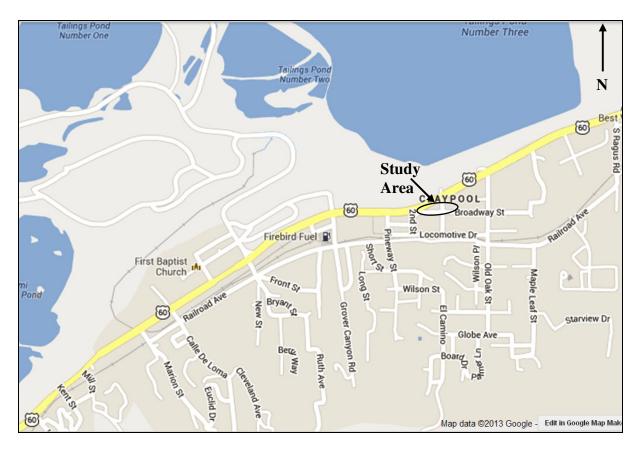


Figure 1: Location Map

## **RSA** Team

The independent, multi-disciplinary RSA team was led by Mike Blankenship, the Arizona RSA Program Manager. The RSA team included:

- Mike Blankenship, P.E., ADOT Traffic Safety Section
- Ruben Casillas, Gila County Public Works
- Brent Crowther, P.E., Kimley-Horn and Associates, Inc.
- Mike Gillette, Gila County Public Works
- Wayne Grainger, ADOT Globe District
- Michael Grandy, P.E., Kimley-Horn and Associates, Inc.
- Mark Guerena, P.E., Gila County Public Works
- Nik Tipuric, ADOT Traffic Design Section

## **RSA Process**

A Road Safety Assessment is a formal examination of user safety of a roadway by an independent, multi-disciplinary team which includes experienced and knowledgeable members. RSAs help promote safety by: identifying a range of safety issues; promoting awareness of safer transportation planning, design, construction, and maintenance practices; integrating multimodal interests; and, more directly considering the effect of human factors, enforcement and education activities, and emergency responder practices.

The RSA team conducted this assessment to the best of its abilities within the time allotted. The initial recommendations are based upon background information provided during the Start-up and Preliminary Findings Meetings, an evaluation of recent crash data, and both day and night field reviews, as discussed in the following paragraphs. This information helped the RSA team identify potential opportunities to improve the safety performance of the Broadway Street/El Camino Street intersection area. These were initially presented at the Preliminary Findings Meeting. While every attempt has been made to identify potential safety issues, the safety performance of the roadway remains the responsibility of the roadway owner and roadway users.

The RSA team is available to provide additional clarification as Gila County Public Works Department reviews and responds to this report and pursues countermeasures.

#### Start-Up Meeting

The assessment team met with Gila County Public Works and other stakeholders to discuss background information on June 25, 2013 at the Gila County Public Works Administration Building in Globe. In addition to the RSA team members, participants included Marco Olsen, Manny DeAnda, Terry Smith, Tony Grainger, and AJ Howell (Tri-City Fire Department), Mike Johnson (Gila County Sheriff's Office), and Linda Warichak (US Postal Service). Background information presented and discussed at the Start-up Meeting included the following:

- Traffic volumes may be down about 25% due to schools closed for the summer
- Trucks and other large vehicles (trucks pulling boats, RV's, 5<sup>th</sup> Wheels) on eastbound US 60 use Broadway Street to access Circle K
- This is the busiest of 4 Circle K's in the Globe area, made even busier by the closing of the AM/PM store
- The empty lot behind the post office is owned by Freeport-McMoRan, Inc.
- The pole and bollards on the southwest corner of the Circle K lot have been struck several times

#### **Field Reviews**

Daytime field visits were conducted on Tuesday, June 25, 2013 and Wednesday, June 26. A nighttime field visit was also conducted on Tuesday, June 25. The specific times of the site visits can be found on the RSA Agenda in the **Appendix**. The weather was hot and dry. Site reviews consisted of driving and walking the study area and observing road users.

The RSA team noted several existing roadway features that appear to enhance safety in the study area, including:

- Good sign retroreflectivity
- On-street parking helps calm traffic

- Street light on corner provides good lighting at night
- New sidewalk project on south side of Broadway Street

#### Preliminary Findings Meeting

The RSA team presented the preliminary findings to Gila County Public Works Department staff on Thursday, June 27, 2013. In addition to the RSA team members, participants included Steve Stratton, Steve Sanders, and Shannon Coons (Gila County Public Works Department), Marco Olsen, Manny DeAnda, and Terry Smith (Tri-City Fire Department), and Mike Johnson (Gila County Sheriff's Office). Observations and potential opportunities for improvements were discussed during this meeting.

#### **Physical Roadway Characteristics**

Broadway Street and El Camino Street are 2-lane urban collectors with posted speed limits of 25 mph. The 2008 annual average daily traffic (AADT) volume on Broadway Street west of El Camino Street was 781 vehicles per day (vpd); the AADT on El Camino Street north of Broadway Street was 1,490 vpd. Pavement widths on Broadway Street range from 60 to 67 feet, including on-street parking; pavement widths on El Camino Street range from 43 to 53 feet, including on-street parking.

#### **Evaluation of Crash Data**

The most recent thirteen years of crash data (2000 through 2012) was obtained from the ADOT Information Technology Group's Safety Data Mart, which is ADOT's crash database. Following is a summary of the crashes occurring during this time period.

According to ADOT data, 24 crashes occurred during the 13-year analysis period on Broadway Street and El Camino Street in the study area. The severity of the 24 crashes is summarized below:

- 2 incapacitating injury
- 2 possible injury
- 20 property damage only

The crash type frequency is summarized below:

- 10 backing (all at the Post Office)
- 9 angle
  - o 6 at US 60/El Camino Street
  - 2 of 3 angle crashes at Broadway Street/El Camino Street/Circle K had vision obscured by vehicles parked on the street
- 1 hit and run involving vehicle parked at Post Office
- 4 other

The light conditions of the 24 crashes are summarized below:

- 21 daylight
- 2 dark
- 1 dusk

## Site Review Observations and Initial Recommendations Backing Crashes at Post Office

Forty two (42) percent of the crashes in the study area are backing crashes at the Post Office, with half of these occurring on the north side and half on the east side of the Post Office. Factors that appear to contribute to these backing crashes include:

- Sight distance of backing motorists is restricted by other parked vehicles (Figure 2)
- Motorists trying to park at the Post Office while vehicles are backing away from the Post Office (Figure 3)
- Higher speeds of eastbound vehicles entering Broadway Street from US 60 (Figure 4)



Figure 2: View of Driver Backing From North Side of Post Office



Figure 3: Motorists Entering and Exiting North Side of Post Office



Figure 4: Eastbound Motorist Approaching Driver Backing From North Side of Post Office

Recommendations to help address backing crashes at the Post Office include:

- Install pavement markings for angle parking on north side of Post Office.
- Install pavement markings for perpendicular parking on east side of Post Office
- Install edgelines along Broadway Street
- Refresh the double yellow centerline on Broadway Street
- Eliminate parking on northeast corner of Post Office through the installation of a raised bulbout or pavement markings
- Reconstruct sidewalk area in front of Post Office, relocating sidewalk closer to the Post Office to gain additional maneuvering space outside of the travel lane for backing vehicles; this will also provide an opportunity to address the elevation difference between the sidewalk and the parking area (Figure 5)



Figure 5: Sidewalk at Post Office

#### Speeds on Eastbound Broadway Street

Motorists turning from eastbound US 60 to Broadway Street have a short distance (approximately 150 feet) to decelerate from a 40 mph speed zone to a 25 mph speed zone. Because Broadway Street intersects US 60 at a skew, motorists do not have to slow down to make the right-turn maneuver onto Broadway Street. Additionally, Broadway Street is very wide and straight, which may encourage higher speeds. Figure 6 shows the motorists' view as they turn right from US 60 to Broadway Street.

Recommendations to help address high vehicle speeds on eastbound Broadway Street include:

- Use pavement markings to narrow the Broadway Street lane widths to 10 or 11 feet and to force drivers to make more of a turning maneuver to enter Broadway Street from US 60. These could include edge lines, painted islands, angle parking stalls at the Post Office, parallel parking stalls at the Fire Department, and refreshed centerlines.
- If speeding on eastbound Broadway Street is still an issue after marking improvements, consider reconstructing the intersection of US 60 and Broadway Street to force motorists to make more of a 90-degree right-turn movement from a deceleration lane



Figure 6: Motorists' View As They Turn Onto Broadway Street from US 60

#### **Pedestrians**

The RSA Team observed numerous pedestrians, and some bicyclists, of varying ages and abilities during the daytime and nighttime field reviews (Figure 7). There are sidewalks in front of the Fire Department, Post Office, and church, and a new sidewalk is being constructed along the south side of Broadway Street south of Circle K. There are no sidewalks along the Circle K frontage. It is recommended that sidewalks be constructed along the Circle K frontage to line up with the existing curb on El Camino Street near US 60.



Figure 7: Pedestrians and Bicyclists Observed by RSA Team Broadway Street/El Camino Street Road Safety Assessment

#### Circle K Access

Access at Circle K is uncontrolled, with no defined driveways, which can produce unpredictable motorist behavior related to entering, exiting, and parking maneuvers. The RSA team observed several motorists making diagonal movements across the Broadway Street/El Camino Street intersection into and out of the Circle K property. Other motorists were observed making higher speed left-turns into Circle K after turning right from US 60 (Figure 8). The bollards and utility pole on the southwest corner of the Circle K lot have been struck numerous times (Figure 9). The disorganized parking on the Circle K lot can contribute to sight distance and traffic flow issues (Figure 10).

The Circle K frontage recommendation is to provide defined accesses with standard commercial driveways on Broadway Street and El Camino Street, which can be accomplished in combination with sidewalk construction. These driveways need to accommodate fuel trucks and other large vehicles; location and width of the driveways should be evaluated to meet these needs. The El Camino Street driveway should be located as far from US 60 as possible without adversely impacting intersection operations/safety at the Broadway Street/El Camino Street cannot be identified, consider not providing any driveway on El Camino Street. A second Broadway Street driveway may be needed for accessing the garbage dumpsters.



*Figure 8: High Speed Left-Turn Movement Into Circle K After Right-Turn from US 60* 



Figure 9: Bollards and Pole on Southwest Corner of Circle K Lot Have Been Struck by Vehicles



Figure 10: Random Parking In Circle K Lot Can Contribute to Sight Distance and Traffic Flow Issues

#### Parking

There is on-street parking on El Camino Street and Broadway Street. Parked vehicles can create sight obstructions for motorists (Figure 11). Parking demand for the Post Office and Fire Department appears to be greater than the parking supply.

Parking recommendations include:

- Prohibit parking within 30 feet of intersection with the use of raised or painted bulb-outs on the corners
- Relocate the stop bars closer to the edge of the through travel lane to improve motorists' view around parked vehicles
- Provide additional on-street parking along the right-turn ramp onto US 60
- Pursue an agreement (possibly a land swap) between the LDS Church and Freeport-McMoRan to provide parking along the west side of the Post Office
- Install a street light at the north end of the LDS Church parking lot to make it more secure for nighttime parking of Fire Department employee vehicles
- If sight restrictions persist at the Broadway Street/El Camino Street intersection, evaluate if all-way stop control is warranted and appropriate for this intersection



Figure 11: Sight Obstructions at the Broadway Street/El Camino Street Intersection Created by Parked Vehicles

Broadway Street/El Camino Street Road Safety Assessment

#### Left-Turns Onto US 60

Angle crashes involving left-turns from El Camino Street onto US 60 make up 25% of the crashes in the study area. The skewed angle of the intersection makes it more difficult to look left from the El Camino Street approach (Figure 12). The median bullnose has been struck and run over numerous times (Figure 13). Several raised pavement markers (RPMs) are missing from the median bullnose, and the paint on the bullnose is faded (Figure 14).



Figure 12: Skewed Intersection of El Camino Street and US 60

Figure 13: Median Bullnose Has Been Struck and Run Over Numerous Times

the last the



Figure 14: Missing RPMs and Faded Paint Make It Difficult to See the Median Bullnose at Night

Recommendations to help address left-turn crashes at the El Camino Street/US 60 intersection include:

- Decrease the length of the median bullnose to provide a better turn radius for vehicles turning left from El Camino Street
- Replace the missing RPMs and refresh the reflective paint on the median
- Install an angled stop bar and centerline to align vehicles on El Camino Street perpendicular to US 60

#### Pavement Markings

Pavement markings, including centerlines, stop bars, and parking stalls, are faded or nonexistent (Figure 15) and should be refreshed. Figure 16 provides a conceptual sketch of the primary recommendations from this report, including a reconstructed US 60/Broadway Street intersection. Figure 17 is a conceptual sketch showing the use of pavement markings to help slow and calm traffic entering Broadway Street from US 60. These sketches are for illustrative purposes only.



Figure 15: Faded Centerlines and Stop Bars

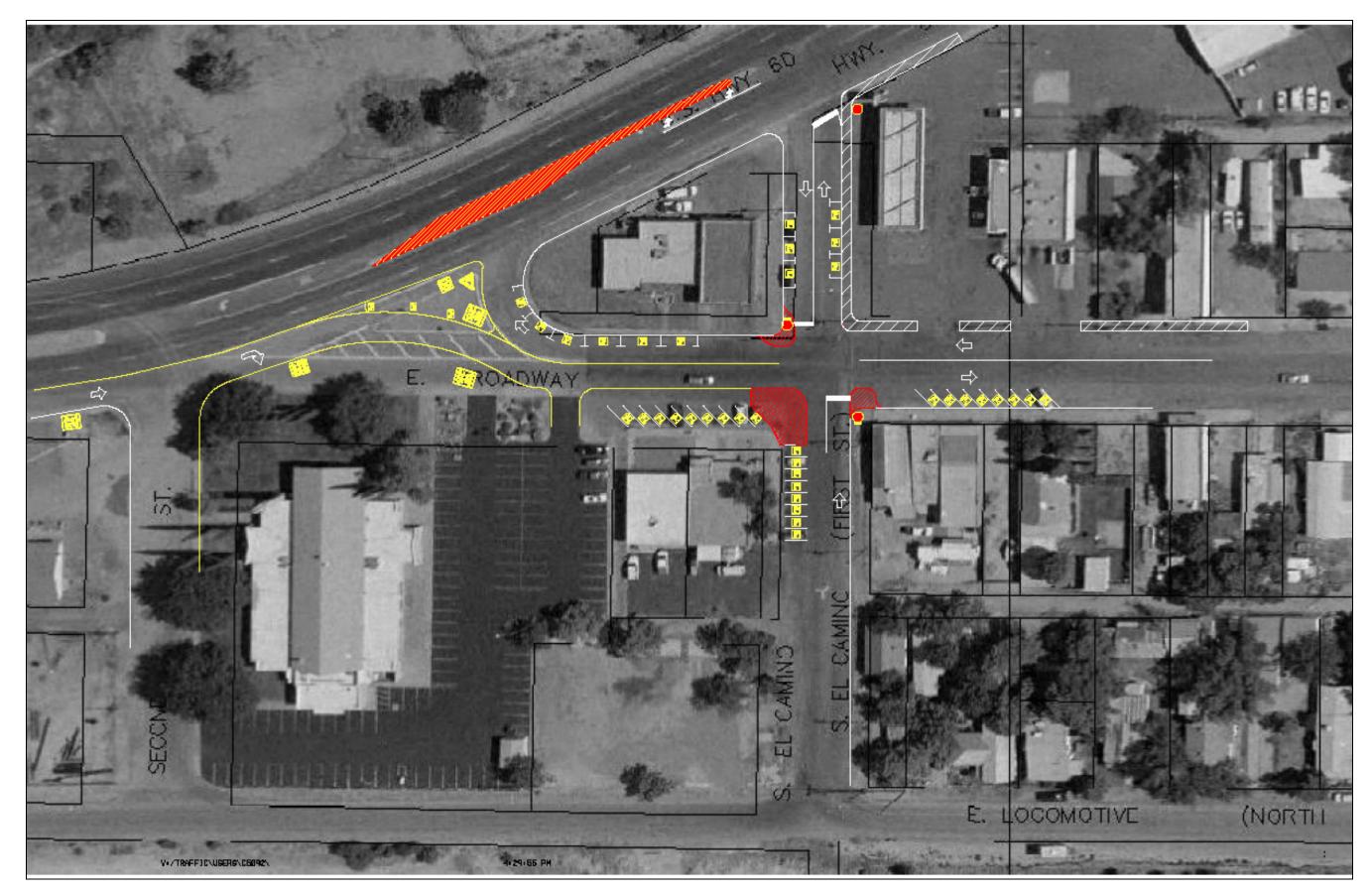


Figure 16: Conceptual Sketch of Suggested Improvements, Including Reconstructed Intersection of US 60/Broadway Street

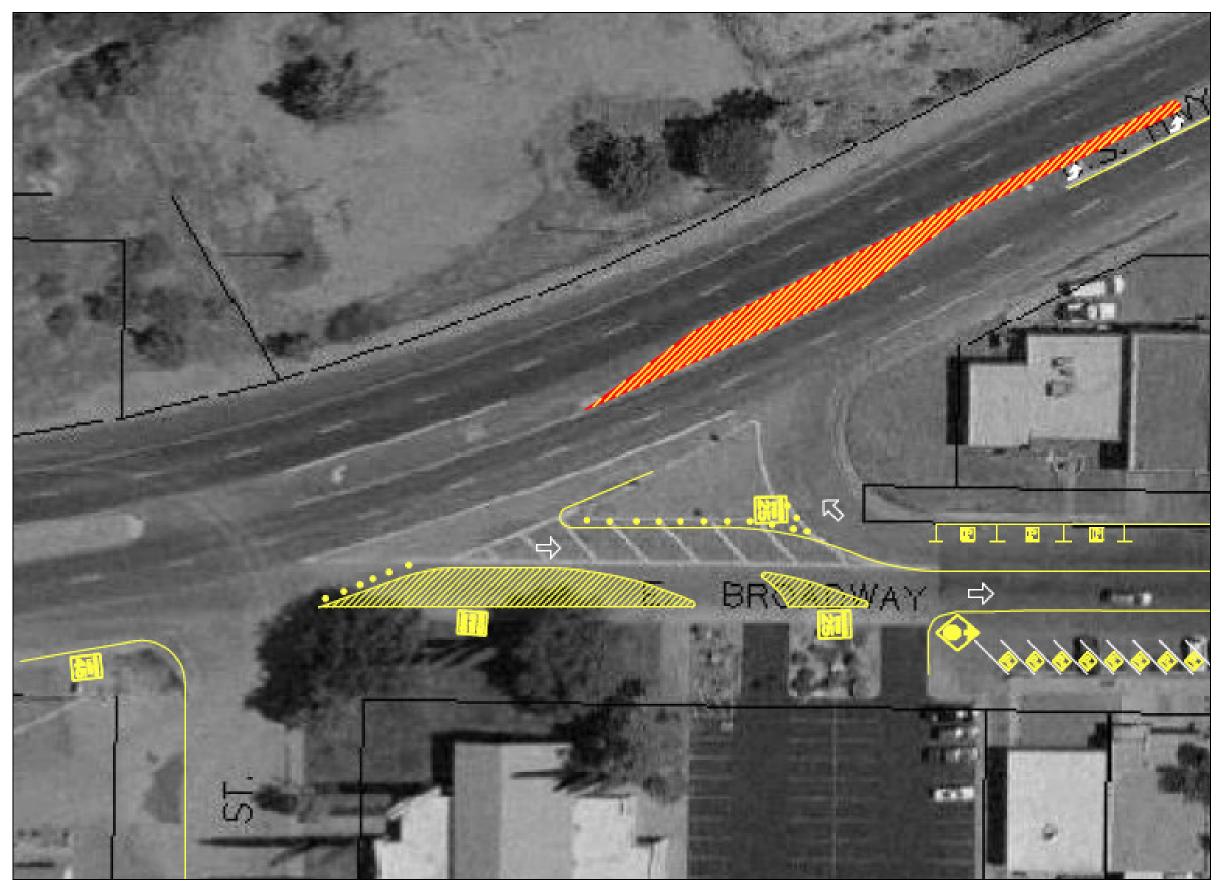


Figure 17: Conceptual Sketch of Suggested Improvements, Including Use of Pavement Markings for a Re-Designed Intersection of US 60/Broadway Street

## Suggested Improvements/Countermeasures

The following table summarizes the RSA team's observations and potential opportunities to improve safety. These suggested improvements/countermeasures are presented as options for consideration; the road owner may also identify other effective alternative improvements and countermeasures. While every attempt has been made to identify potential safety issues and provide countermeasure options, the safety performance of the roadway remains the responsibility of the roadway owner and roadway users.

## **Next Steps**

The RSA Team requests that the road owner prepare a written response that addresses the potential safety issues and countermeasures for consideration highlighted in the following table. This response can be sent to the RSA Program Manager and should identify how each of the safety issues will be addressed or give the basis for why they won't be addressed. The RSA Program Manager can provide an example response letter and the following table in a Word document to assist in the response. Send the response letter to:

Mike Blankenship Arizona RSA Program 1615 W. Jackson St. MD065R Phoenix, AZ 85007 mblankenship@azdot.gov

POTENTIAL SAFETY ISSUE	DESCRIPTION	COUNTERMEASURES FOR CONSIDERATION
Backing Crashes at Post Office	<ul> <li>Forty two (42) percent of the crashes in the study area are backing crashes at the Post Office, with half of these occurring on the north side and half on the east side of the Post Office</li> </ul>	<ul> <li>Install pavement markings for angle parking on north side of Post Office.</li> <li>Install pavement markings for perpendicular parking on east side of Post Office</li> <li>Install edgelines along Broadway Street</li> <li>Refresh the double yellow centerline on Broadway Street</li> <li>Eliminate parking on northeast corner of Post Office through the installation of a raised bulbout or pavement markings</li> <li>Reconstruct sidewalk area in front of Post Office, relocating sidewalk closer to the Post Office to gain additional maneuvering space outside of the travel lane for backing vehicles; this will also provide an opportunity to address the elevation difference between the sidewalk and the parking area</li> </ul>
Speeds on Eastbound Broadway Street	<ul> <li>Motorists turning from eastbound US 60 to Broadway Street have a short distance (approximately 150 feet) to decelerate from a 40 mph speed zone to a 25 mph speed zone. Because Broadway Street intersects US 60 at a skew, motorists do not have to slow down to make the right-turn maneuver onto Broadway Street. Additionally, Broadway Street is very wide and straight, which may encourage higher speeds.</li> </ul>	<ul> <li>Use pavement markings to narrow the Broadway Street lane widths to 10 or 11 feet and to force drivers to make more of a turning maneuver to enter Broadway Street from US 60. These could include edge lines, painted islands, angle parking stalls at the Post Office, parallel parking stalls at the Fire Department, and refreshed centerlines</li> <li>If speeding on eastbound Broadway Street is still an issue after marking improvements, consider reconstructing the intersection of US 60 and Broadway Street to force motorists to make more of a 90-degree right-turn movement from a deceleration lane</li> </ul>
Pedestrians	• The RSA Team observed numerous pedestrians, and some bicyclists, of varying ages and abilities during the daytime and nighttime field reviews. There are no sidewalks along the Circle K frontage.	<ul> <li>Construct sidewalks along the Circle K frontage to line up with the existing curb on El Camino Street near US 60</li> </ul>

Circle K Access	<ul> <li>Access at Circle K is uncontrolled, with no defined driveways, which can produce unpredictable motorist behavior related to entering, exiting, and parking maneuvers. The RSA team observed several motorists making diagonal movements across the Broadway Street/El Camino Street intersection into and out of the Circle K property. Other motorists were observed making higher speed left-turns into Circle K after turning right from US 60.</li> <li>The bollards and utility pole on the southwest corner of the Circle K lot have been struck numerous times</li> <li>The disorganized parking on the Circle K lot can contribute to sight distance and traffic flow issues</li> </ul>	<ul> <li>Provide defined accesses for the Circle K frontage with standard commercial driveways on Broadway Street and El Camino Street, which can be accomplished in combination with sidewalk construction. These driveways need to accommodate fuel trucks and other large vehicles; location and width of the driveways should be evaluated to meet these needs. The El Camino Street driveway should be located as far from US 60 as possible without adversely impacting intersection operations/safety at the Broadway Street/El Camino Street intersection. If an appropriate and safe location for a driveway on El Camino Street cannot be identified, consider not providing any driveway on El Camino Street. A second Broadway Street driveway may be needed for accessing the garbage dumpsters.</li> </ul>
Parking	<ul> <li>There is on-street parking on El Camino Street and Broadway Street. Parked vehicles can create sight obstructions for motorists.</li> <li>Parking demand for the Post Office and Fire Department appears to be greater than the parking supply.</li> </ul>	<ul> <li>Prohibit parking within 30 feet of intersection with the use of raised or painted bulb-outs on the corners</li> <li>Relocate the stop bars closer to the edge of the through travel lane to improve motorists' view around parked vehicles</li> <li>Provide additional on-street parking along the right-turn ramp onto US 60</li> <li>Pursue an agreement (possibly a land swap) between the LDS Church and Freeport-McMoRan to provide parking along the west side of the Post Office</li> <li>Install a street light at the north end of the LDS Church parking lot to make it more secure for nighttime parking of Fire Department employee vehicles</li> <li>If sight restrictions persist at the Broadway Street/El Camino Street intersection, evaluate if all-way stop control is warranted and appropriate for this intersection</li> </ul>

Left-Turns Onto US 60	<ul> <li>Angle crashes involving left-turns from El Camino Street onto US 60 make up 25% of the crashes in the study area.</li> <li>The skewed angle of the intersection makes it more difficult to look left from the El Camino Street approach.</li> <li>The median bullnose has been struck and run over numerous times. Several raised pavement markers (RPMs) are missing from the median bullnose, and the paint on the bullnose is faded.</li> </ul>	<ul> <li>Decrease the length of the median bullnose to provide a better turn radius for vehicles turning left from El Camino Street</li> <li>Replace the missing RPMs and refresh the reflective paint on the median</li> <li>Install an angled stop bar and centerline to align vehicles on El Camino Street perpendicular to US 60</li> </ul>
Pavement Markings	<ul> <li>Pavement markings, including centerlines, stop bars, and parking stalls, are faded or non-existent</li> </ul>	Refresh all pavement markings

Appendix

#### ROAD SAFETY ASSESSMENT AGENDA BROADWAY STREET/EL CAMINO STREET INTERSECTION, CLAYPOOL GILA COUNTY PUBLIC WORKS DEPARTMENT

#### Tuesday, June 25, 2013

2:00 PM	Road Safety Assessment Start-up Meeting	All
	1. Road Safety Assessments: Objectives, Procedures	RSA Team
	2. Background on Broadway/El Camino Intersection	County
	Overview, History, Challenges, Specific Concerns	
	3. Questions and Answers	All
Man John Casi Dept • For t	road safety assessment team will be led by Mike Blankenship, Ariz ager. The RSA Team includes Wayne Grainger (ADOT), Nik Tipu son (Gila County Sheriff's Dept.), Mark Guerena (Gila County Pu llas (Gila County Public Works), Mike Gillette (Gila County Public ., Michael Grandy (Kimley-Horn), and Brent Crowther (Kimley-H the start-up meeting, background information will be provided by County Public Works.	ric (ADOT), Lt. Mike ublic Works), Ruben ic Works), Tri-City Fire Iorn).
3:00 PM	Daytime Site Visit	RSA Team
8:30 PM	Nighttime Site Visit	RSA Team
Wednesday	, June 26	
7:30 AM	Daytime Site Visit	RSA Team
9:30 AM	Work Session/Analysis	RSA Team
12:30 PM	Daytime Site Visit (if needed)/Work Session/Analysis	RSA Team
Thursday,	June 27	
0	Presentation of Preliminary Findings 5 Report to owner: July 25 5 Response to findings: September 6	All

10:00 AM Adjourn

All meetings will be conducted at the Gila County Public Works Administration Building located at 745 N. Rose Mofford Way, Globe.

- Administration
- Auto/Equipment Maintenance
- Consolidated Roads
- Engineering Services
- Facilities and Land Management
- Fleet/Fuel Management
- Floodplain Management
- GIS & Survey Services
- Recycling & Landfill Management



745 N. Rose Mofford Way Globe, Arizona 85501 Phone (928) 425-3231 Ext. 8502 Fax (928) 425-8104

# **GILA COUNTY PUBLIC WORKS DIVISION**

September 27, 2013

Michael Blankenship, P.E. Arizona Road Safety Assessment Program Manager 1615 W. Jackson St. MD065R Phoenix, AZ. 85007

Subject: Response to the Broadway Street/El Camino Street Road Safety

Dear Mr. Blankenship,

On behalf of Gila County I would like to thank you and your team for the Road Safety Assessment (RSA) you conducted at the Broadway Street/El Camino Street Intersection.

Your report identified seven potential safety issues and provided recommendations for countermeasures of each issue.

Some countermeasures such as constructing new sidewalks, relocating and reconstructing existing sidewalks will take planning and budgeting. Gila County has already begun to plan and budget for these recommendations.

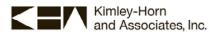
Other countermeasures such as pavement markings can be implemented immediately and plans are underway to implement those recommendations.

Thank you for conducting this RSA and I look forward to working with you and your team again.

Sincerely,

l

Steve Sanders Deputy Director



# **APPENDIX E – DETAILED PAVEMENT IMPROVEMENTS**

Deed Name	Lanath	Community	Dania Bat	End Def	Road	Overall Pavement Condition	Pavement Improvement Recommendation and	Implementation	Unit Cost	Surface Area	Material Cost	Material + Labor Cost	Total Cost Material + Labor + Soft Costs
Road Name AZURITE DR	0.10	Community BANDY HEIGHTS	Begin Ref. AZURITE DR	AZURITE DR	No. Functional Classification	Ranking 40	Priority Chip Seal - Priority #4	Phase Mid-term	(\$ per sq. ft) \$0.11	(sq. ft) 12,672	(Base) \$1,394	(Base*1.5) \$2,091	(M+L*1.75) \$3,659
BORNITE LN	0.09	BANDY HEIGHTS	AZURITE DR	TURQUOISE DR	257 URBAN LOCAL	40	Chip Seal - Priority #2	Mid-term	\$0.11	11,405	\$1,255	\$1,882	\$3,293
MALACHITE LN	0.10	BANDY HEIGHTS	AZURITE DR	AZURITE DR	255	10	Resurface - Priority #2	Near-term	\$1.25	12,672	\$15,840	\$23,760	\$41,580
MINERAL LN	0.08	BANDY HEIGHTS	SR 188		258 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	10,138	\$12,672	\$19,008	\$33,264
TURQUOISE DR BEER TREE XING	0.09	BANDY HEIGHTS CANYONS	BORNITE LN WALLIMAN RD	MALACHITE LN UPPER PINAL CREEK RD	256 RURAL VERY LOW VOLUME 507 RURAL MINOR ARTERIAL FHWA	40	Chip Seal - Priority #2 Resurface - Priority #1	Mid-term Near-term	\$0.11 \$1.25	<u>11,405</u> 19.008	\$1,255 \$23,760	\$1,882 \$35.640	\$3,293 \$62,370
UPPER PINAL CREEK RD	0.13	CANYONS	BEER TREE XING	DEAD END	283 RURAL VERY LOW VOLUME	0	Resurface - Priority #2	Near-term	\$1.25	30,413	\$38,016	\$57,024	\$99,792
2ND AVE	0.15	CENTRAL HEIGHTS	CHERRY AVE	N ARBOR AVE	1,367	60	Chip Seal - Priority #4	Mid-term	\$0.11	19,008	\$2,091	\$3,136	\$5,489
ALBERTA DR	0.12	CENTRAL HEIGHTS	YUMA TR	GOLDEN HILL RD	495 URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	15,206	\$19,008	\$28,512	\$49,896
	0.10	CENTRAL HEIGHTS	COUNTRY CLUB TERRACE		1,379	60	Chip Seal - Priority #4	Mid-term	\$0.11	12,672	\$1,394	\$2,091	\$3,659
ALCOTT DR ALCOTT DR	0.08	CENTRAL HEIGHTS	GOLDEN ST GOLDEN HILL RD	GOLDEN HILL RD UNKNOWN #2	1,403 RURAL LOCAL 1,378 URBAN LOCAL	40	Resurface - Priority #4 Resurface - Priority #2	Mid-term Near-term	\$1.25 \$1.25	<u>10,138</u> 6.336	\$12,672 \$7,920	\$19,008 \$11,880	\$33,264 \$20,790
ALDER DR	0.00	CENTRAL HEIGHTS	GOLDEN HILL RD	DEAD END	1,405 URBAN LOCAL	60	Chip Seal - Priority #3	Mid-term	\$0.11	12,672	\$1,394	\$2,091	\$3,659
ALLEY	0.20	CENTRAL HEIGHTS	MAIN ST	DEAD END	1,349 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
ALLEY	0.14	CENTRAL HEIGHTS	CENTRAL DR	APACHE ST	1,932 URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	17,741	\$22,176	\$33,264	\$58,212
APACHE HILLS LN	0.19	CENTRAL HEIGHTS	ROBERTS DR	ROBERTS DR	1,317 URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	24,077	\$30,096	\$45,144	\$79,002
APACHE ST ARROYA AVE	0.19	CENTRAL HEIGHTS	MAIN ST ENGLISH AVE	HILLCREST ST BLACK WARRIOR	1,337 URBAN LOCAL 1,323 URBAN LOCAL	<u>60</u> 40	Chip Seal - Priority #4 Chip Seal - Priority #4	Mid-term Mid-term	\$0.11 \$0.11	24,077	\$2,648 \$1,394	\$3,973 \$2,091	\$6,952 \$3,659
BLACK WARRIOR	0.10	CENTRAL HEIGHTS	GLOBE CANYON RD	MOUNTAIN VIEW DR	1,322 URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
BLOCK AVE	0.07	CENTRAL HEIGHTS	NELL ST	SUNRISE MH PARK	1,319 URBAN LOCAL	40	Chip Seal - Priority #2	Mid-term	\$0.11	8,870	\$976	\$1,464	\$2,561
BOYLES AVE	0.05	CENTRAL HEIGHTS	MOUNTAIN VIEW	INSPIRATION DR	1,310 URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790
BRALEY ST	0.20	CENTRAL HEIGHTS	APACHE ST	COBB ST	1,339 URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
	0.16	CENTRAL HEIGHTS			492 URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	20,275	\$25,344	\$38,016	\$66,528
BUTTERFLY LN CAMPBELL AVE	0.08	CENTRAL HEIGHTS	SNEDDEN ST HUNT AVE	END OF PAVEMENT SHELTON DR	1,388 URBAN LOCAL 1.327 URBAN LOCAL	<u> </u>	Resurface - Priority #2 Chip Seal - Priority #4	Near-term Mid-term	\$1.25 \$0.11	<u>10,138</u> 6.336	\$12,672 \$697	\$19,008 \$1.045	\$33,264 \$1.830
CARPENTER LN	0.03	CENTRAL HEIGHTS	LANCASTER ST	DEAD END	1,391 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	5,069	\$558	\$836	\$1,464
CENTRAL DR	0.42	CENTRAL HEIGHTS	EDDY ST	MAIN ST	1,332 URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	53,222	\$66,528	\$99,792	\$174,636
COBB ST	0.08	CENTRAL HEIGHTS	BRALEY ST	ROBERTS DR	1,338 URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	10,138	\$1,115	\$1,673	\$2,927
COUNTRY CLUB TERRACE	0.18	CENTRAL HEIGHTS	GOLDEN HILL RD	CORSO DRIVE	496	50	Chip Seal - Priority #4	Mid-term	\$0.11	22,810	\$2,509	\$3,764	\$6,586
COUNTRY CLUB TERRACE	0.05	CENTRAL HEIGHTS	COUNTRY CLUB TERRACE	END OF PAVEMENT	1,401 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790
CROSS DR DOMINION ST	0.14	CENTRAL HEIGHTS	CENTRAL DR COBB ST	END ENGLISH AVE	1,325 URBAN LOCAL 1,326 URBAN LOCAL	<u> </u>	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	<u>17,741</u> 8,870	\$22,176 \$11,088	\$33,264 \$16,632	\$58,212 \$29,106
EDDY ST	0.07	CENTRAL HEIGHTS	MCKINNEY AVE	CENTRAL DR	1,333 URBAN LOCAL	50	Chip Seal - Priority #4	Mid-term	\$0.11	6.336	\$697	\$1.045	\$1.830
FRONTAGE RD	0.06	CENTRAL HEIGHTS	ALDER DR	ALCOTT DR	1,929	30	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
GLENDALE AVE	0.19	CENTRAL HEIGHTS	HUNT AVE	END OF PAVEMENT	1,335 URBAN LOCAL	50	Chip Seal - Priority #2	Mid-term	\$0.11	24,077	\$2,648	\$3,973	\$6,952
GLOBE CANYON RD	0.31	CENTRAL HEIGHTS	ROBERTS DR	END OF PAVEMENT	691 URBAN LOCAL	50	Chip Seal - Priority #2	Mid-term	\$0.11	39,283	\$4,321	\$6,482	\$11,343
GOLDEN HILL RD	0.60	CENTRAL HEIGHTS	HOSPITAL DR		493 RURAL LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	76,032	\$95,040	\$142,560	\$249,480
GOLDEN ST HILL LN	0.06	CENTRAL HEIGHTS	ALCOTT DR MCKINNEY AVE	END OF PAVEMENT APACHE ST	271 URBAN LOCAL 1,336 URBAN LOCAL	20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	7,603	\$9,504 \$15,840	\$14,256 \$23,760	\$24,948 \$41,580
HOPE LN	0.75	CENTRAL HEIGHTS	RUSSELL RD	DEAD END	1,383 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	95,040	\$118,800	\$178,200	\$311,850
HUIE ST	0.15	CENTRAL HEIGHTS	RUSSELL RD	END	1,384 URBAN LOCAL	40	Resurface - Priority #3	Mid-term	\$1.25	19,008	\$23,760	\$35,640	\$62,370
HUNT AVE	0.13	CENTRAL HEIGHTS	GLENDALE AVE	DEAD END	1,328 URBAN LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	16,474	\$1,812	\$2,718	\$4,757
INSPIRATION DR	0.26	CENTRAL HEIGHTS	CENTRAL DR	DEAD END	489	30	Resurface - Priority #2	Near-term	\$1.25	32,947	\$41,184	\$61,776	\$108,108
JOHNSON RD	0.04	CENTRAL HEIGHTS	JOHNSON RD	JOHNSON RD	1,346 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	5,069	\$6,336	\$9,504	\$16,632
LANCASTER ST MAIN ST		CENTRAL HEIGHTS	RUSSELL RD CENTRAL DR	END ROBERTS DR	1,392 1,871 URBAN LOCAL	40		Mid-term Mid-term	\$1.25 \$0.11	30,413 24,077	\$38,016 \$2,648	\$57,024 \$3,973	\$99,792 \$6,952
MAIN ST		CENTRAL HEIGHTS	US 60	MAIN ST	690 URBAN MINOR ARTERIAL_FHWA		Resurface - Priority #1	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790
MCKINNEY AVE		CENTRAL HEIGHTS	MAIN ST	END OF PAVEMENT	1,334	30	Resurface - Priority #2	Near-term	\$1.25	60,826	\$76,032	\$114,048	\$199,584
MILL ST	0.08	CENTRAL HEIGHTS	ALDER DR	END	1,404 RURAL MINOR COLLECTOR_FH		Resurface - Priority #2	Near-term	\$1.25	10,138	\$12,672	\$19,008	\$33,264
MONROE PL		CENTRAL HEIGHTS	MCKINNEY AVE	END	1,331 URBAN LOCAL	50	Resurface - Priority #4	Mid-term	\$1.25	12,672	\$15,840	\$23,760	\$41,580
	0.19	CENTRAL HEIGHTS	CENTRAL DR		1,313 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	24,077	\$30,096	\$45,144 \$16,622	\$79,002
NEILSON ST NELL ST	0.07	CENTRAL HEIGHTS	THOMAS RD GLOBE CANYON RD	END OF PAVEMENT END OF PAVEMENT	1,382 URBAN LOCAL 1,321	<u> </u>	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	8,870 6,336	\$11,088 \$7,920	\$16,632 \$11,880	\$29,106 \$20,790
PINAL CANYON DR		CENTRAL HEIGHTS	RUSSELL RD x 2	UNK 8 9 x 2	274	30	Resurface - Priority #2	Near-term	\$1.25	39,283	\$49,104	\$73,656	\$20,790
RANDAL AVE	0.08	CENTRAL HEIGHTS	APACHE ST	SHORT AVE	1,340 URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	10,138	\$1,115	\$1,673	\$2,927
RANDAL AVE		CENTRAL HEIGHTS	END	SHORT AVE	2,471	40	Chip Seal - Priority #4	Mid-term	\$0.11	3,802	\$418	\$627	\$1,098
ROBERTS DR		CENTRAL HEIGHTS	MAIN ST	RUSSELL RD	491 URBAN MINOR ARTERIAL_FHWA		Resurface - Priority #1	Near-term	\$1.25	59,558	\$74,448	\$111,672	\$195,426
RUSSELL RD		CENTRAL HEIGHTS		END OF PAVEMENT ROBERTS DR	2,481 RURAL MINOR COLLECTOR	60	Chip Seal - Priority #1	Near-term	\$0.11	206,554	\$22,721	\$34,081	\$59,642
RUSSELL RD SCOTT ST	0.60	CENTRAL HEIGHTS	HOSPITAL DR INSPIRIATION DR	MOUNTAIN VIEW	2,480 1,312 URBAN LOCAL	50 40	Resurface - Priority #3 Chip Seal - Priority #2	Mid-term Mid-term	\$1.25 \$0.11	76,032	\$95,040 \$2,230	\$142,560 \$3,345	\$249,480 \$5,854
SHORT AVE	0.16	CENTRAL HEIGHTS	MAIN ST		1,343	40	Chip Seal - Priority #2	Mid-term	\$0.11	48,154	\$5,297	\$3,345 \$7,945	\$5,854 \$13,904
SNEDDEN ST		CENTRAL HEIGHTS	RUSSELL RD	END OF PAVEMENT	1,390 URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	30,413	\$38,016	\$57,024	\$99,792
SOUTH MAIN ST	0.07	CENTRAL HEIGHTS	COBB ST	END	1,314 URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
SPADAFORE WAY		CENTRAL HEIGHTS	RUSSELL RD	UNK9	273	40	Chip Seal - Priority #4	Mid-term	\$0.11	15,206	\$1,673	\$2,509	\$4,391
THOMASINA LN		CENTRAL HEIGHTS	SNEDDEN ST	END OF PAVEMENT	1,387 URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
UNK5	0.06	CENTRAL HEIGHTS	ALBERTA DR	ALCOTT DR	1,402	10	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948

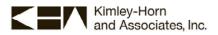
							Overall							Total Cost
					Road		Pavement Condition	Pavement Improvement Recommendation and	Implementation	Unit Cost	Surface Area	Material Cost	Material + Labor Cost	Material + Labor + Soft Costs
Road Name	Length	Community	Begin Ref.	End Ref.	No.	Functional Classification	Ranking	Priority	Phase	(\$ per sq. ft)	(sq. ft)	(Base)	(Base*1.5)	(M+L*1.75)
UNK9	0.03	CENTRAL HEIGHTS	PINAL CANYON DR	ALAMEDA DR	275		20	Resurface - Priority #2	Near-term	\$1.25	3,802	\$4,752	\$7,128	\$12,474
UNK9 UTILITY ST	0.03	CENTRAL HEIGHTS CENTRAL HEIGHTS	SPADAFORE WAY RUSSELL RD	PINAL CANYON DR DEAD END	2,275	URBAN LOCAL	20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	3,802 13,939	\$4,752 \$17,424	\$7,128 \$26,136	\$12,474 \$45,738
WASHBURN ST	0.11	CENTRAL HEIGHTS	THOMAS RD	DEAD END	486		20	Resurface - Priority #2	Near-term	\$1.25	17,741	\$22,176	\$33,264	\$58,212
WOODWARD ST	0.19	CENTRAL HEIGHTS	RUSSELL RD	DEAD END	1,385	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	24,077	\$30,096	\$45,144	\$79,002
YOUNG ST	0.06	CENTRAL HEIGHTS	ALCOTT DR	ALDER ST		URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
YUMA TR 2ND ST	0.18	CENTRAL HEIGHTS	THOMAS RD LOCOMOTIVE DR	END US 60	1,380		50	Chip Seal - Priority #4 Chip Seal - Priority #1	Mid-term	\$0.11	22,810	\$2,509	\$3,764	\$6,586
ALLEY	0.07	CLAYPOOL CLAYPOOL	NEW ST	VERNON ST	1,901	URBAN COLLECTOR_FHWA	50 0	Resurface - Priority #1	Near-term Near-term	\$0.11 \$1.25	8,870 24,077	\$976 \$30,096	\$1,464 \$45,144	\$2,561 \$79,002
ALLEY	0.09	CLAYPOOL	COPPER LN	PINEWAY ST	1,925		0	Resurface - Priority #2	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
ALLEY2	0.13	CLAYPOOL	OLD OAK ST	EL CAMINO	1,902		0	Resurface - Priority #2	Near-term	\$1.25	16,474	\$20,592	\$30,888	\$54,054
AVENIDA DE ED PASTOR	0.15	CLAYPOOL	GROVER CYN	RAILROAD AVE	/	URBAN LOCAL	50	Chip Seal - Priority #2	Mid-term	\$0.11	19,008	\$2,091	\$3,136	\$5,489
BERRY WAY	0.08	CLAYPOOL	MORROW AVE	DEAD END DEAD END	/		20	Resurface - Priority #2	Near-term	\$1.25 \$1.25	10,138	\$12,672	\$19,008	\$33,264 \$54,054
BOARD DR BROADWAY	0.13	CLAYPOOL CLAYPOOL	EL CAMINO 2ND ST	REAR BROADWAY	523	URBAN COLLECTOR	<u> </u>	Resurface - Priority #1 Resurface - Priority #2	Near-term Near-term	\$1.25	16,474 41,818	\$20,592 \$52,272	\$30,888 \$78,408	\$54,054
	0.50	CLAYPOOL	US 60	END		URBAN LOCAL	40	Chip Seal - Priority #2	Mid-term	\$0.11	63.360	\$6,970	\$10,454	\$18,295
CALLE PEQUENA	0.06	CLAYPOOL	MAPLE LEAF ST	DAWDY ST	,	URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
CLEVELAND AVE	0.19	CLAYPOOL	CALLE DE LOMA	DEAD END	/	URBAN MINOR COLLECTOR	60	Chip Seal - Priority #1	Near-term	\$0.11	24,077	\$2,648	\$3,973	\$6,952
	0.10	CLAYPOOL	COPPER ST	DEAD END	,	URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	12,672	\$15,840	\$23,760	\$41,580
COPPER ST COPPER ST	0.36	CLAYPOOL CLAYPOOL	COPPER LN MAPLE LEAF ST	LONG ST END	1,204	URBAN LOCAL	20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	45,619 10,138	\$57,024 \$12,672	\$85,536 \$19,008	\$149,688 \$33,264
COPPER ST	0.08	CLAYPOOL	DEAD END (EAST)	WILSON PL	.,	URBAN COLLECTOR	20	Resurface - Priority #1	Near-term	\$1.25	6.336	\$7,920	\$19,008	\$33,264
DAWDY DR	0.06	CLAYPOOL	GLOBE AVE	CALLE PEQUENA	/	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
EL CAMINO	0.24	CLAYPOOL	WILSON ST	DEAD END	1,199	URBAN LOCAL	40	Resurface - Priority #4	Mid-term	\$1.25	30,413	\$38,016	\$57,024	\$99,792
EL CAMINO	0.11	CLAYPOOL	US 60	LOCOMOTIVE DR	,	URBAN LOCAL	0	Resurface - Priority #2	Near-term	\$1.25	13,939	\$17,424	\$26,136	\$45,738
ELAM AVE	0.07	CLAYPOOL	MILL ST	MILL ST	793		50	Resurface - Priority #4	Mid-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
FRONT ST GLOBE AVE	0.05	CLAYPOOL CLAYPOOL	RANSBERGER HILL DAWDY ST	END OF PAVEMENT END OF PAVEMENT	1,211	URBAN LOCAL	20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	6,336 30,413	\$7,920 \$38,016	\$11,880 \$57,024	\$20,790 \$99,792
GOLDEN WAY	0.24	CLAYPOOL	DAWDY ST	END (WEST)	2.472	URBAN LOCAL	40	Resurface - Priority #4	Mid-term	\$1.25	7,603	\$9,504	\$14,256	\$99,792
GOLDEN WAY	0.03	CLAYPOOL	DAWDY ST	END (EAST)	/	URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	3.802	\$418	\$627	\$1.098
GORDON ST	0.19	CLAYPOOL	NEW ST	DEAD END	1,208	URBAN LOCAL	50	Chip Seal - Priority #2	Mid-term	\$0.11	24,077	\$2,648	\$3,973	\$6,952
GREGOVICH DR	0.05	CLAYPOOL	CALLE PEQUENA	DEAD END		URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790
GROVER CYN	0.43	CLAYPOOL	US 60	END OF PAVEMENT	,	URBAN LOCAL	20	Resurface - Priority #2	Near-term	\$1.25	54,490	\$68,112	\$102,168	\$178,794
HAMILTON LN HAMMOND ST	0.05	CLAYPOOL CLAYPOOL	CALLE DE LOMA DEAD END W. OF EL CAMINO	DEAD END DEAD END E. OF OLD OAK	,	URBAN LOCAL URBAN LOCAL	40	Chip Seal - Priority #4 Resurface - Priority #3	Mid-term Mid-term	\$0.11 \$1.25	6,336 27,878	\$697 \$34,848	\$1,045 \$52,272	\$1,830 \$91,476
JEFFERSON ST	0.02	CLAYPOOL	CALLE DE LOMA	END OF PAVEMENT	1,135	UNDAN LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	2,534	\$279	\$418	\$732
KINNEMUR AVE	0.09	CLAYPOOL	VANWINKLE AVE	RUTHAVE	/ -	URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	11,405	\$1,255	\$1,882	\$3,293
LOCOMOTIVE DR	0.10	CLAYPOOL	OLD OAK ST	END	/	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	12,672	\$15,840	\$23,760	\$41,580
LONG ST	0.07	CLAYPOOL	COPPER ST	END	,	URBAN LOCAL	50	Resurface - Priority #4	Mid-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
MACKEYS HILL MAPLE LEAF ST	0.16	CLAYPOOL CLAYPOOL	MILL ST STARVIEW RD	DEAD END CALLE PEQUENA		URBAN LOCAL URBAN COLLECTOR	<u> </u>	Resurface - Priority #2 Resurface - Priority #1	Near-term Near-term	\$1.25 \$1.25	20,275 24,077	\$25,344 \$30,096	\$38,016 \$45,144	\$66,528 \$79,002
MAPLE LEAF ST MAPLE LEAF ST	0.19	CLAYPOOL	RAGUS RD	STARVIEW RD	,	URBAN MINOR COLLECTOR	20	Resurface - Priority #1	Near-term	\$1.25	15,206	\$19,008	\$28,512	\$19,002
MARION CYN	0.12	CLAYPOOL	MARION ST	END OF PAVEMENT		URBAN LOCAL	40	Resurface - Priority #3	Mid-term	\$1.25	24,077	\$30,096	\$45,144	\$79,002
MARION ST	0.27	CLAYPOOL	US 60	WASHINGTON AVE	1 -	RURAL VERY LOW VOLUME	40	Chip Seal - Priority #2	Mid-term	\$0.11	34,214	\$3,764	\$5,645	\$9,879
MILL ST		CLAYPOOL	RR TRACKS	END OF PAVEMENT		RURAL VERY LOW VOLUME	30		Near-term	\$1.25	13,939	\$17,424	\$26,136	\$45,738
							60	Chip Seal - Priority #4	Mid-term	\$0.11	7,603	\$836	\$1,255	\$2,195
MORROW AVE NEW ST	0.15	CLAYPOOL CLAYPOOL	VANWINKLE AVE TRUCK SCALES ENTRANCE	END OF PAVEMENT END		URBAN LOCAL URBAN LOCAL	<u>50</u> 20	Chip Seal - Priority #2 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	19,008 50.688	\$2,091 \$63,360	\$3,136 \$95,040	\$5,489 \$166,320
OBSCURE WAY	0.40	CLAYPOOL	EL CAMINO	END OF PAVEMENT		RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	3,802	\$4,752	\$95,040 \$7,128	\$12,474
OLD OAK ST	0.46	CLAYPOOL	US 60	GLOBE AVE		URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	58,291	\$72,864	\$109,296	\$191,268
PINEWAY ST	0.34	CLAYPOOL	US 60	END OF PAVEMENT	1,201		50	Chip Seal - Priority #4	Mid-term	\$0.11	43,085	\$4,739	\$7,109	\$12,441
PUERTO RICO AVE	0.15	CLAYPOOL			,	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	19,008	\$23,760	\$35,640	\$62,370
RAGUS RD RAILROAD AVE	0.33	CLAYPOOL CLAYPOOL	RAILROAD CROSSING PINEWAY ST	RAILROAD AVE CALLE DE LOMA	1,186	URBAN LOCAL	<u>60</u> 40	Chip Seal - Priority #4 Chip Seal - Priority #2	Mid-term Mid-term	\$0.11 \$0.11	41,818 81,101	\$4,600 \$8,921	\$6,900 \$13,382	\$12,075 \$23,418
RAILROAD AVE	0.64	CLAYPOOL	MAPLE LEAF ST	WILSON AV	512		30	Resurface - Priority #2	Near-term	\$1.25	15,206	\$0,921	\$13,302 \$28,512	\$49,896
RAILROAD AVE	0.12	CLAYPOOL	MARION ST	CALLE DE LOMA		RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	12,672	\$15,840	\$23,760	\$41,580
RANSBERGER HILL	0.20	CLAYPOOL	RAILROAD AVE	DEAD END	,	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
REAR BROADWAY	0.15	CLAYPOOL	BROADWAY	OLD OAK ST		URBAN COLLECTOR	10	Resurface - Priority #1	Near-term	\$1.25	19,008	\$23,760	\$35,640	\$62,370
	0.11	CLAYPOOL		END OF PAVEMENT	,	URBAN MINOR COLLECTOR	60	Chip Seal - Priority #1	Near-term	\$0.11	13,939	\$1,533	\$2,300	\$4,025
SHORT ST STAR VIEW RD	0.10	CLAYPOOL CLAYPOOL	RAILROAD AVE MAPLE LEAF ST	COPPER ST STARVIEW DR	,	URBAN LOCAL URBAN LOCAL	20	Resurface - Priority #2	Near-term Mid-term	\$1.25 \$0.11	12,672	\$15,840 \$418	\$23,760 \$627	\$41,580 \$1,098
UPPER WILSON ST	0.03	CLAYPOOL	WILSON ST	END	,	URBAN LOCAL	<u> </u>	Chip Seal - Priority #4 Resurface - Priority #2	Near-term	\$0.11 \$1.25	3,802 1,267	\$418 \$1,584	\$627 \$2,376	\$1,098 \$4,158
VERNON ST	0.01	CLAYPOOL	GORDON ST	US 60		URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
WILSON PL	0.20	CLAYPOOL	OLD OAK ST	DEAD END	,	URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
WILSON ST	0.15	CLAYPOOL	EL CAMINO	END W. OF PINE WAY	,	URBAN LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	19,008	\$2,091	\$3,136	\$5,489
WILSON ST	0.03	CLAYPOOL	OLD OAK ST	WILSON PL		URBAN COLLECTOR_FHWA	30	Resurface - Priority #1	Near-term	\$1.25	3,802	\$4,752	\$7,128	\$12,474
COOLEY RANCH RD	0.66	DRIPPING SPRINGS	SR-77	DEAD END	683	RURAL VERY LOW VOLUME	60	Chip Seal - Priority #4	Mid-term	\$0.11	83,635	\$9,200	\$13,800	\$24,150

							Overall							Total Cost
					Deed		Pavement	Pavement Improvement	luun laun au tati au	Unit Coot	Surface	Meterial Cost	Material +	Material + Labor
Road Name	Length	Community	Begin Ref.	End Ref.	Road No.	Functional Classification	Condition Ranking	Recommendation and Priority	Implementation Phase	Unit Cost (\$ per sq. ft)	Area (sq. ft)	Material Cost (Base)	Labor Cost (Base*1.5)	+ Soft Costs (M+L*1.75)
COOLEY RANCH RD	0.09	DRIPPING SPRINGS	COOLEY RANCH RD	DEAD END	684	RURAL LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	11,405	\$1,255	\$1,882	\$3,293
ALHAMBRA DR	0.16	GLOBE	ARCADIA DR	DAOU DR	499		60	Chip Seal - Priority #4	Mid-term	\$0.11	20,275	\$2,230	\$3,345	\$5,854
ALHAMBRA DR BLAKE ST	0.06	GLOBE GLOBE	US 70 MOORE ST	ARCADIA DR END	693 263	URBAN LOCAL	60 10	Chip Seal - Priority #4 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	7,603	\$836 \$23,760	\$1,255 \$35,640	\$2,195 \$62,370
BLUE RIDGE DR	0.10	GLOBE	MONTECITO DR	DEAD END		RURAL MINOR ARTERIAL_FHWA	40	Chip Seal - Priority #1	Near-term	\$0.11	12,672	\$1,394	\$2,091	\$3,659
CENTRAL AVE	0.20	GLOBE	TREMONT BLVD	TREMONT BLVD		URBAN COLLECTOR	10	Resurface - Priority #1	Near-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
DAYBREAK DR HUNT RIDGE DR	0.49	GLOBE GLOBE	SAGUARO DR JOSHUA TREE AVE	MONTECITO DR END OF PAVEMENT	504	RURAL MAJOR COLLECTOR	60 40	Chip Seal - Priority #3 Chip Seal - Priority #1	Mid-term Near-term	\$0.11 \$0.11	62,093 10,138	\$6,830 \$1,115	\$10,245 \$1,673	\$17,929 \$2,927
INDIAN AVE	0.08	GLOBE	INDIAN AVE	COPLEN AVE	266		30	Resurface - Priority #2	Near-term	\$1.25	16,474	\$20,592	\$30,888	\$54,054
INDIAN AVE	0.09	GLOBE	BANKER AVE	INDIAN AVE	2,473	RURAL MAJOR COLLECTOR_FHWA	30	Resurface - Priority #1	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
JESSE HAYES RD - COUNTY	0.26	GLOBE	GLOBE CITY LIMITS	FIRE STATION		RURAL LOCAL	60	Resurface - Priority #4	Mid-term	\$1.25	32,947	\$41,184	\$61,776	\$108,108
MONROE ST MONTECITO DR	0.20	GLOBE GLOBE	US-60 DAYBREAK DR	7TH ST BLUE RIDGE DR	1,009	RURAL VERY LOW VOLUME	20 50	Resurface - Priority #2 Chip Seal - Priority #2	Near-term Mid-term	\$1.25 \$0.11	25,344 21,542	\$31,680 \$2,370	\$47,520 \$3,554	\$83,160 \$6,220
NOBLE DR	0.17	GLOBE	SAGUARO DR	DEAD END	.,	RURAL VERY LOW VOLUME	0	Resurface - Priority #2	Near-term	\$1.25	48,154	\$60,192	\$90,288	\$158,004
PIMA ST	0.09	GLOBE	BEG. OF PAVEMENT	DEAD END	487		0	Resurface - Priority #2	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
SAGUARO DR	0.48	GLOBE	WALLIMAN RD	END COUNTY RD	505		40	Resurface - Priority #3	Mid-term	\$1.25	60,826	\$76,032	\$114,048	\$199,584
SILICATE ST SNELL ST	0.04	GLOBE GLOBE	BLAKE ST COPLEN AVE	END OF PAVEMENT END OF PAVEMENT	-	URBAN LOCAL RURAL LOCAL	10 50	Resurface - Priority #2	Near-term	\$1.25 \$0.11	5,069	\$6,336	\$9,504 \$2,200	\$16,632 \$4,025
WALLIMAN RD	1.03	GLOBE	SAGUARO DR to GLOBE'S WALLIM	-		RURAL LOCAL RURAL VERY LOW VOLUME	20	Chip Seal - Priority #2 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	13,939 130,522	\$1,533 \$163,152	\$2,300 \$244.728	\$4,025 \$428,274
ALAMO WY	0.09	ICEHOUSE CANYON	ICEHOUSE CYN RD	DEAD END	7-	URBAN LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
GRAND VIEW DR	0.16	ICEHOUSE CANYON	PINALVIEW DR	DEAD END	955		20	Resurface - Priority #2	Near-term	\$1.25	20,275	\$25,344	\$38,016	\$66,528
ICEHOUSE CYN RD KELLNER CYN	3.20	ICEHOUSE CANYON	HAGAN ICEHOUSE CYN RD	END OF PAVEMENT/TONTO NAT.FOR.	947 948		40	Chip Seal - Priority #2	Mid-term	\$0.11	405,504	\$44,605	\$66,908	\$117,089
PINAL VIEW DR	2.09 0.41	ICEHOUSE CANYON	ICEHOUSE CYN RD	COLES WAY	948 668		60 40	Chip Seal - Priority #3 Resurface - Priority #3	Mid-term Mid-term	\$0.11 \$1.25	<u>264,845</u> 51,955	\$29,133 \$64,944	\$43,699 \$97,416	\$76,474 \$170,478
PINAL VIEW DR	0.06	ICEHOUSE CANYON	COLES WAY	DEAD END	951		30	Resurface - Priority #2	Near-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
WEVER CIR	0.07	ICEHOUSE CANYON	WEVER CIR	WEVER CIR		URBAN COLLECTOR_FHWA	30	Resurface - Priority #1	Near-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
FS 82/WINDY HILL	2.38	LAKE ROOSEVELT	SR-188	DEAD END	2,008		60	Chip Seal - Priority #3	Mid-term	\$0.11	301,594	\$33,175	\$49,763	\$87,085
FS 84/GRAPE CAMPGROUND FS 287 - PINTO VALLEY	0.01	LAKE ROOSEVELT	FS 84/GRAPEVINE RD US-60 RIGHT OF WAY	FS 84/GRAPE CAMPGROUND NF287B	2,009	URBAN LOCAL	60 20	Chip Seal - Priority #4 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	<u>1,267</u> 13,939	\$139 \$17,424	\$209 \$26,136	\$366 \$45,738
CHEROKEE ST	0.17	MIAMI GARDENS	HOSPITAL DR	END	1	URBAN LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	21,542	\$2,370	\$3,554	\$6,220
MIAMI GARDENS	0.34	MIAMI GARDENS		END OF PAVEMENT	,	URBAN LOCAL	50	Chip Seal - Priority #4	Mid-term	\$0.11	43,085	\$4,739	\$7,109	\$12,441
ASH ST	0.15	ROOSEVELT ESTATES	MESQUITE ST	PALO VERDE DR	1,236		30	Resurface - Priority #2	Near-term	\$1.25	19,008	\$23,760	\$35,640	\$62,370
CHOLLA ST COTTON WOOD ST	0.15	ROOSEVELT ESTATES	PALM ST MESQUITE ST	END PALO VERDE DR		RURAL VERY LOW VOLUME	20 20	Resurface - Priority #2	Near-term	\$1.25 \$1.25	19,008	\$23,760	\$35,640	\$62,370 \$95,634
IRONWOOD DR	0.23	ROOSEVELT ESTATES ROOSEVELT ESTATES	PALM ST	DEAD END		RURAL VERY LOW VOLUME	20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	29,146 34,214	\$36,432 \$42,768	\$54,648 \$64,152	\$95,634
MESQUITE ST	0.51	ROOSEVELT ESTATES	PALM ST	DEAD END	,	RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	64,627	\$80,784	\$121,176	\$212,058
ORANGE ST	0.13	ROOSEVELT ESTATES	PALO VERDE DR	PINE DR	,	RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	16,474	\$20,592	\$30,888	\$54,054
PALM ST	0.16	ROOSEVELT ESTATES	CHOLLA ST	PALO VERDE DR	,	RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	20,275	\$25,344	\$38,016	\$66,528
PALO VERDE DR PALO VERDE DR	0.27	ROOSEVELT ESTATES ROOSEVELT ESTATES	PALM ST ASH ST	CATTLEGUARD COTTON WOOD ST		RURAL VERY LOW VOLUME	30 20	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	34,214 22,810	\$42,768 \$28,512	\$64,152 \$42,768	\$112,266 \$74,844
PINE DR	0.13	ROOSEVELT ESTATES	ORANGE ST	ASH ST		RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	17,741	\$22,176	\$33,264	\$58,212
PINE DR	0.04	ROOSEVELT ESTATES	PALM ST	END	,	RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	5,069	\$6,336	\$9,504	\$16,632
ROOSEVELT ESTATES RD	1.07	ROOSEVELT ESTATES	SR 188	COTTON WOOD ST		RURAL VERY LOW VOLUME	60	Chip Seal - Priority #3	Mid-term	\$0.11	135,590	\$14,915	\$22,372	\$39,152
	0.11	ROOSEVELT RESORT		END OF PAVEMENT JAVELINA TR		RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25 \$1.25	13,939	\$17,424	\$26,136	\$45,738
QUAIL DR STAGECOACH TR	0.11	ROOSEVELT RESORT ROOSEVELT RESORT	STAGECOACH TR SR 88	ANTELOPE TR	,	RURAL VERY LOW VOLUME	10 20	Resurface - Priority #2 Resurface - Priority #1	Near-term Near-term	\$1.25 \$1.25	13,939 108,979	\$17,424 \$136,224	\$26,136 \$204,336	\$45,738 \$357,588
SAN CARLOS DR	1.41	SAN CARLOS DR	AZ 77	DEAD END	473		30	Resurface - Priority #2	Near-term	\$1.25	178,675	\$223,344	\$335,016	\$586,278
SAN CARLOS LN	0.08	SAN CARLOS DR		CUL DE SAC		RURAL MINOR COLLECTOR_FHWA	30	Resurface - Priority #1	Near-term	\$1.25	10,138	\$12,672	\$19,008	\$33,264
SAN CARLOS WAY	0.07	SAN CARLOS DR	SAN CARLOS DR	END		RURAL MINOR COLLECTOR_FHWA	10	Resurface - Priority #1	Near-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
ACOMA AVE BROWNING AVE	0.06		TAOS ST COLT AVE	PUEBLO ST DEAD END	981	RURAL VERY LOW VOLUME	30 30	Resurface - Priority #2 Resurface - Priority #2	Near-term Near-term	\$1.25 \$1.25	7,603	\$9,504 \$6,336	\$14,256 \$9,504	\$24,948 \$16,632
CHEROKEE RD	0.60		SIX SHOOTER CANYON RD	SPRINGFIELD RD	976		40	Resurface - Priority #3	Mid-term	\$1.25	76,032	\$95,040	\$142,560	\$249,480
COLT AVE	0.20		WINCHESTER RD	SPRINGFIELD RD	969		50	Resurface - Priority #3	Mid-term	\$1.25	25,344	\$31,680	\$47,520	\$83,160
COLT DR	0.06			WINCHESTER RD		RURAL VERY LOW VOLUME	40	Resurface - Priority #3	Mid-term	\$1.25	7,603	\$9,504	\$14,256	\$24,948
DERRINGER DR	0.02		SPRINGFIELD RD	DEAD END		URBAN LOCAL	30	Resurface - Priority #2	Near-term	\$1.25	2,534	\$3,168	\$4,752	\$8,316
HOPI AVE HOPI AVE	0.22	SIX SHOOTER CANYON		CHEROKEE RD KIVA AVE	977 2 470	URBAN LOCAL	60 30	Chip Seal - Priority #4 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	27,878 27,878	\$3,067 \$34,848	\$4,600 \$52,272	\$8,050 \$91,476
KIVA AVE	0.22		ZUNI ST	HOPIAVE	978		10	Resurface - Priority #2	Near-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
MARLIN DR	0.16	SIX SHOOTER CANYON	SIX SHOOTER CANYON RD	SHARPS AVE	966		50	Resurface - Priority #4	Mid-term	\$1.25	20,275	\$25,344	\$38,016	\$66,528
NAVAJO AVE	0.09	SIX SHOOTER CANYON			982		20	Resurface - Priority #2	Near-term	\$1.25	11,405	\$14,256	\$21,384	\$37,422
PUEBLO ST REMINGTON RD	0.17		SIX SHOOTER CANYON RD SIX SHOOTER CANYON RD	CUL DE SAC SUPAI RD	979 509		40 30	Resurface - Priority #4 Resurface - Priority #2	Mid-term	\$1.25 \$1.25	21,542	\$26,928	\$40,392 \$40,896	\$70,686 \$87,318
SAVAGE DR	0.21		SIX SHOOTER CANYON RD	DEAD END	509 965		30 50	Resurface - Priority #2 Resurface - Priority #3	Near-term Mid-term	\$1.25 \$1.25	<u>26,611</u> 16,474	\$33,264 \$20,592	\$49,896 \$30,888	\$87,318 \$54,054
SHARPS AVE	0.13	SIX SHOOTER CANYON		SPRINGFIELD RD		RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	30,413	\$38,016	\$57,024	\$99,792
SHARPS AVE	0.21	SIX SHOOTER CANYON	SAVAGE DR	DEAD END	967		20	Resurface - Priority #2	Near-term	\$1.25	26,611	\$33,264	\$49,896	\$87,318
SIX SHOOTER CANYON RD	1.42		GILA PUEBLO COLLEGE RD	END OF PAVEMENT/CATTLEGUARD	993		30	Resurface - Priority #1	Near-term	\$1.25	179,942	\$224,928	\$337,392	\$590,436
SMITH DR	0.05	SIX SHOOTER CANYON	SPRINGFIELD RD	WESSON RD	974		10	Resurface - Priority #2	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790

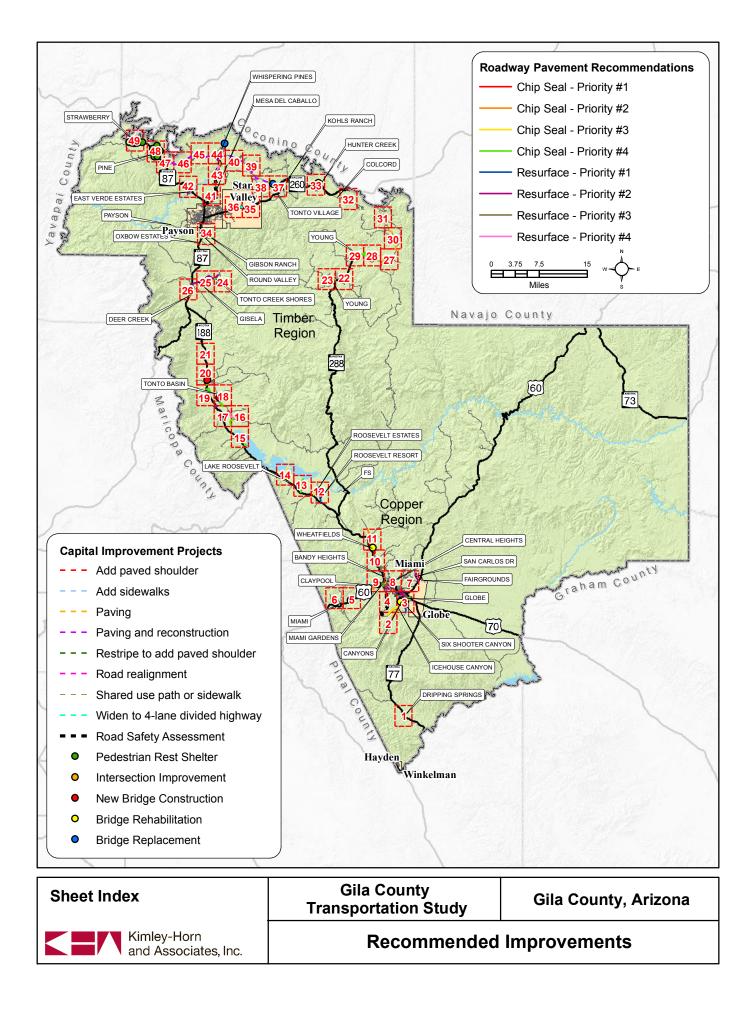
Road Name	Longth	Community	Begin Ref.	End Ref.	Road No.	Functional Classification	Overall Pavement Condition Ranking	Pavement Improvement Recommendation and Priority		Unit Cost	Surface Area	Material Cost	Material + Labor Cost (Base*1.5)	Total Cost Material + Labor + Soft Costs (M+L*1.75)
SPRINGFIELD RD	Length		WINCHESTER RD	SHARPS AVE	960	Functional Classification		Resurface - Priority #3	Mid-term	(\$ per sq. ft) \$1.25	(sq. ft) 98.842	(Base) \$123,552	\$185.328	\$324.324
SPURLOCK DR	0.78		SIX SHOOTER CANYON RD	DEAD END	964		30	Resurface - Priority #3	Near-term	\$1.25	8,870	\$11,088	\$16,632	\$29,106
SUPAI RD	0.15		REMINGTON RD	END OF PAVEMENT		URBAN COLLECTOR FHWA	40	Resurface - Priority #1	Near-term	\$1.25	19.008	\$23,760	\$35.640	\$62,370
TAOS ST	0.05		NAVAJO AVE	ACOMA DR	980	UNDAN COLLECTON_ITIWA	40	Chip Seal - Priority #4	Mid-term	\$0.11	6,336	\$697	\$1.045	\$1,830
UNK96	0.03		SHARPS AVE	SPRINGFIELD RD	968		10	Resurface - Priority #2	Near-term	\$1.25	3.802	\$4,752	\$7.128	\$12,474
WESSON RD	0.08	SIX SHOOTER CANYON	SMITH DR		973		10	Resurface - Priority #2	Near-term	\$1.25	10,138	\$12,672	\$19,008	\$33,264
WINCHESTER RD	0.08	SIX SHOOTER CANYON	SIX SHOOTER CANYON RD	SPRINGFIELD RD	972		40	Resurface - Priority #3	Mid-term	\$1.25	10,138	\$12,672	\$19.008	\$33.264
ZUNI ST	0.11	SIX SHOOTER CANYON	SIX SHOOTER CANYON RD	NAVAJO AVE	983		40	Resurface - Priority #3	Mid-term	\$1.25	13,939	\$17,424	\$26,136	\$45,738
BIGHORN TR	0.02	WHEATFIELDS	GREEN AVE	DEAD END		RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4	Mid-term	\$0.11	2,534	\$279	\$418	\$732
BIXBY RD	3.06	WHEATFIELDS	PINAL CREEK RD	END OF PAVEMENT/QUARRY	474	URBAN LOCAL	40	Resurface - Priority #3	Mid-term	\$1.25	387,763	\$484,704	\$727,056	\$1,272,348
COBALT DR	0.04	WHEATFIELDS	GREEN AVE	END		RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	5,069	\$6,336	\$9,504	\$16,632
GREEN AVE	0.29	WHEATFIELDS	BIG HORN TER	COLBALT DR	1,259	URBAN LOCAL	40	Resurface - Priority #4	Mid-term	\$1.25	36,749	\$45,936	\$68,904	\$120,582
HICKS DR	2.94	WHEATFIELDS	WILBANKS DR	HICKS DR	461	RURAL VERY LOW VOLUME	40	Chip Seal - Priority #2	Mid-term	\$0.11	372,557	\$40,981	\$61,472	\$107,576
HICKS RD	0.21	WHEATFIELDS	OLD HWY 188	WILBANKS DR	462	RURAL VERY LOW VOLUME	50	Resurface - Priority #4	Mid-term	\$1.25	26,611	\$33,264	\$49,896	\$87,318
HOOPES RD	0.38	WHEATFIELDS	BIXBY RD	END/PAVEMENT/PINAL CREEK RD	483	URBAN LOCAL	40	Resurface - Priority #3	Mid-term	\$1.25	48,154	\$60,192	\$90,288	\$158,004
SAFFRON DR	0.05	WHEATFIELDS	GREEN AVE	DEAD END	1,257	RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	6,336	\$7,920	\$11,880	\$20,790
VERMILION DR	0.14	WHEATFIELDS	WILBANKS DR	END	1,260	URBAN LOCAL	60	Resurface - Priority #4	Mid-term	\$1.25	17,741	\$22,176	\$33,264	\$58,212
WHEATFIELDS RD	3.84	WHEATFIELDS	CATTLEGUARD	SR 188 CATTLEGUARD	246	RURAL MINOR COLLECTOR_FHWA	40	Chip Seal - Priority #1	Near-term	\$0.11	486,605	\$53,527	\$80,290	\$140,507
WILBANKS DR	0.21	WHEATFIELDS	HICKS DR	VERMILION DR	460	RURAL MINOR COLLECTOR_FHWA	50	Resurface - Priority #1	Near-term	\$1.25	26,611	\$33,264	\$49,896	\$87,318

							Overall							Total Cost
							Pavement	Pavement Improvement			Surface		Material +	Material + Labor
Road Name	Length	WIDTH	Community	Begin Ref.	End Ref.	Road No. Functional Classification	Condition Ranking	Recommendation and Priority	Implementation Phase	Unit Cost (\$ per sq. ft)	Area (sq. ft)	Material Cost (Base)	Labor Cost (Base*1.5)	+ Soft Costs (M+L*1.75)
BLACK MTN RD	0.03		DEER CREEK	DEER CREEK DR	CUL DE SAC	1,180 URBAN LOCAL	50	Chip Seal - Priority #4	Mid-term	\$0.11	3801.6	\$418	(base 1.5) \$627	\$1,098
BUGGY WHEEL CRT	0.09		DEER CREEK	WINDMILL RD	DEAD END	1,175	60	Chip Seal - Priority #4	Mid-term	\$0.11	11404.8		\$1,882	\$3,293
DEER CREEK DR	1.18		DEER CREEK	SR 87 SOUTHBOUND	END OF LOOP	1,048 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	149529.6	. ,	\$280,368	\$490,644
FOUR PEAKS	0.09		DEER CREEK	DEER CREEK DR	CUL DE SAC	1,179 URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	11404.8	\$1,255	\$1,882	\$3,293
	0.15		DEER CREEK	DEER CREEK DR	CUL DE SAC	1,177 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	19008.0	\$2,091	\$3,136	\$5,489 \$16.632
MT ORD CIR WINDMILL RD	0.04		DEER CREEK DEER CREEK	DEER CREEK DR DEER CREEK DR	CUL DE SAC	1,176 RURAL VERY LOW VOLUME	10 50	Resurface - Priority #2 Chip Seal - Priority #2	Near-term Mid-term	\$1.25 \$0.11	5068.8 19008.0	\$6,336 \$2,091	\$9,504 \$3,136	\$16,632
FS 622/E VERDE ESTATES RD	0.42		EAST VERDE ESTATES	SR 87/FS622 E VERDE ESTATES	E VERDE ESTATES RD	337 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	53222.4	\$66,528	\$99,792	\$174,636
JEP PL	0.03		EAST VERDE ESTATES	CHELSEA DR	ELEANOR DR	1,618 RURAL VERY LOW VOLUME	0	Resurface - Priority #2	Near-term	\$1.25	3801.6	\$4,752	\$7,128	\$12,474
FS 412/GIBSON RANCH RD	2.56		GIBSON RANCH	SR-87	END OF PAVEMENT/CATTLEGUARD	706 URBAN LOCAL	60	Chip Seal - Priority #4	Mid-term	\$0.11	324403.2	\$35,684	\$53,527	\$93,671
FS 417/GISELA RD	5.23		GISELA	CATTLEGUARD AT MP 2	GISELA LANDFILL RD	176 RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	662745.6	+/ -	\$1,242,648	\$2,174,634
FS 113 - HUNTER CREEK DR	0.78		HUNTER CREEK	CHRISTOPHER CREEK LOOP		2,003 URBAN LOCAL	40	Resurface - Priority #4	Mid-term	\$1.25	98841.6	+ -/	\$185,328	\$324,324
FS 526/CHOLLA BAY APACHE DR	0.73		LAKE ROOSEVELT MESA DEL CABALLO	SR-188 BANADA RD	DEAD END TOYA VISTA RD	2,007 1.598 RURAL VERY LOW VOLUME	50 60	Chip Seal - Priority #4 Chip Seal - Priority #3	Mid-term Mid-term	\$0.11 \$0.11	92505.6 22809.6	ŧ - / -	\$15,263 \$3,764	\$26,711 \$6,586
BANADA RD	0.18		MESA DEL CABALLO	MESCALERO RD	DEAD END	1,599 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #3	Mid-term	\$0.11	10137.6	+ /	\$3,764	\$0,380
BARRANCA RD	0.00		MEGA DEL CABALLO	MESA DEL CABALLO RD	TOYA VISTA RD	1,600 RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	21542.4	. ,	\$40,392	\$70,686
CABALLERO RD	0.67		MESA DEL CABALLO	FS 199/HOUSTON MESA RD	VISTA DEL NORTE	1,610 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	84902.4	. ,	\$159,192	\$278,586
CAMINO REAL	0.21		MESA DEL CABALLO	TOYA VISTA RD	STALLION RD	1,605 RURAL VERY LOW VOLUME	50	Resurface - Priority #4	Mid-term	\$1.25	26611.2	\$33,264	\$49,896	\$87,318
CHERRY ANN LN	0.27		MESA DEL CABALLO	MESA DEL CABALLO RD	TOYA VISTA RD	1,602 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #2	Mid-term	\$0.11	34214.4	+-) -	\$5,645	\$9,879
CORTITA RD	0.07		MESA DEL CABALLO	STALLION RD		1,606 RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	8870.4	\$11,088	\$16,632	\$29,106
	0.10		MESA DEL CABALLO	MESA DEL CABALLO RD	HOUSTON MESA RD	328 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	12672.0	\$15,840	\$23,760	\$41,580
GUNSIGHT RIDGE HOUSTON MESA RD	0.28		MESA DEL CABALLO MESA DEL CABALLO	TOYA VISTA RD 3RD BRIDGE CROSSING	MESA DEL CABALLO RD CONTROL RD	1,603 RURAL VERY LOW VOLUME	60 30	Chip Seal - Priority #3 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	35481.6 160934.4	\$3,903 \$201,168	\$5,854 \$301,752	\$10,245 \$528,066
HOUSTON MESA RD	1.27		MESA DEL CABALLO	BRIDGE	2ND BRIDGE CROSSING	2,478	40	Resurface - Priority #4	Mid-term	\$1.25	158400.0	\$198,000	\$297,000	\$519,750
HOUSTON MESA RD	0.71		MESA DEL CABALLO	2ND BRIDGE CROSSING	3RD BRIDGE CROSSING	2477	50	Chip Seal - Priority #2	Mid-term	\$0.11	89971.2	\$9,897	\$14.845	\$25,979
MESA VISTA EAST	0.07		MESA DEL CABALLO	STALLION RD	MESA VISTA WEST	333 RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	8870.4	. ,	\$16,632	\$29,106
MESA VISTA WEST	0.07		MESA DEL CABALLO	STALLION RD	MESA VISTA EAST	1,604 RURAL VERY LOW VOLUME	60	Chip Seal - Priority #4	Mid-term	\$0.11	8870.4	\$976	\$1,464	\$2,561
MESCALERO RD	0.21		MESA DEL CABALLO	TOYA VISTA RD	MESA DEL CABALLO RD	329 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	26611.2	. ,	\$49,896	\$87,318
PALOMA VISTA	0.17		MESA DEL CABALLO	MESA DEL CABALLO RD	BARRANCA RD	1,601 RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	21542.4	+ - /	\$40,392	\$70,686
PIEDRA RD	0.07		MESA DEL CABALLO	TOYA VISTA RD			50 20	Chip Seal - Priority #4	Mid-term	\$0.11	8870.4	\$976	\$1,464	\$2,561
SEPIA RD TOYA VISTA RD	0.09		MESA DEL CABALLO MESA DEL CABALLO	MESA DEL CABALLO RD VISTA DEL NORTE	PALOMA VISTA MESA DEL CABALLO RD	330 RURAL VERY LOW VOLUME 332 RURAL MINOR COLLECTOR FHWA	==	Resurface - Priority #2 Resurface - Priority #1	Near-term Near-term	\$1.25 \$1.25	11404.8 84902.4	\$14,256 \$106,128	\$21,384 \$159,192	\$37,422 \$278,586
VISTA DEL NORTE	0.51		MEGA DEL CABALLO	STALLION RD	TOYA VISTA RD	1.609 RURAL VERY LOW VOLUME	60	Chip Seal - Priority #2	Mid-term	\$0.11	64627.2	. ,	\$10.663	\$18.661
ALVA DR	0.10		PINE	WHISPERING PINE RD	SQUIRREL RD	1,736	10	Resurface - Priority #2	Near-term	\$1.25	12672.0	\$15,840	\$23,760	\$41,580
APACHE TR	0.38		PINE	MOHAWK ST	WARREN DR	1,712 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #2	Mid-term	\$0.11	48153.6	\$5,297	\$7,945	\$13,904
APACHE TR	0.18		PINE	MOGOLLON VISTA	WARREN DR	1,713	50	Chip Seal - Priority #2	Mid-term	\$0.11	22809.6	\$2,509	\$3,764	\$6,586
BARKER DR	0.08		PINE	BEG. OF PAVEMENT	CUL DE SAC	1,671 RURAL VERY LOW VOLUME	60	Resurface - Priority #4	Mid-term	\$1.25	10137.6	+ /-	\$19,008	\$33,264
BLOODY BASIN RD BRADSHAW DR	0.20		PINE PINE	WARREN DR SR 87	TONTO DR SOUTHARD DR	1,702	50 50	Chip Seal - Priority #2	Mid-term	\$0.11	25344.0 204019.2	\$2,788	\$4,182	\$7,318
BUNNY HOLLOW DR	1.61 0.13		PINE	MISTLETOE DR	CUL DE SAC	1,579 1.536 RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4 Chip Seal - Priority #4	Mid-term Mid-term	\$0.11 \$0.11	16473.6	÷ /	\$33,663 \$2,718	\$58,911 \$4,757
CEDAR MEADOW LN	0.36		PINE	PINE CREEK CNYN RD	HOLLY DR	1,544	50	Chip Seal - Priority #4	Mid-term	\$0.11	45619.2	\$5,018	\$7,527	\$13,173
CLETUS RAY RD	0.21		PINE	BRADSHAW DR	CUL DE SAC	364	60	Chip Seal - Priority #4	Mid-term	\$0.11	26611.2	\$2,927	\$4,391	\$7,684
FAIRHOLM DR	0.14		PINE	TERRA PINE	CUL DE SAC	368 RURAL LOCAL	50	Chip Seal - Priority #2	Mid-term	\$0.11	17740.8	\$1,951	\$2,927	\$5,123
FARA DR	0.13		PINE	CLETUS RAY RD	CUL DE SAC	1,673 RURAL VERY LOW VOLUME	60	Chip Seal - Priority #2	Mid-term	\$0.11	16473.6	\$1,812	\$2,718	\$4,757
FAWN RIDGE DR	0.12		PINE	WHISPERING PINE RD	END OF PAVEMENT	637	60	Chip Seal - Priority #4	Mid-term	\$0.11	15206.4	\$1,673	\$2,509	\$4,391
FULLER DR	0.25		PINE		SOUTH RD		60	Chip Seal - Priority #4	Mid-term	\$0.11	31680.0	+-,	\$5,227	\$9,148
HALL LN HOLLY DR	0.08		PINE	WARREN DR CEDAR MEADOW LN	HARDSCRABLE MESA RD MISTLETOE DR	636 RURAL VERY LOW VOLUME	40 60	Resurface - Priority #4 Chip Seal - Priority #4	Mid-term Mid-term	\$1.25 \$0.11	10137.6 46886.4		\$19,008 \$7,736	. ,
KARLA CT	0.37		PINE	MISTLETOE DR	CUL DE SAC	1,532 RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4	Mid-term	\$0.11	8870.4		\$1,464	
KYSAR WAY	0.28		PINE	JAN DR	SOUTHARD CIR	1,682 RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	35481.6		\$66,528	. ,
MARCY WAY	0.42		PINE	BRADSHAW DR	BRADSHAW DR	1,668 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	53222.4	+ - /	\$8,782	. ,
MARICIR	0.10		PINE	FARA DR	CUL DE SAC	1,672 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	12672.0	. ,	\$23,760	. ,
	0.43		PINE		UTE TR END OF PAVEMENT		50	Chip Seal - Priority #4	Mid-term	\$0.11	54489.6	+ - /	\$8,991	
NAVAJO DR PRINCE DR	0.07		PINE PINE	HARDSCRABBLE MESA RD HARDSCRABBLE MESA RD	DEAD END	1,719 RURAL VERY LOW VOLUME 1,690 RURAL VERY LOW VOLUME	60 0	Chip Seal - Priority #3 Resurface - Priority #2	Mid-term Near-term	\$0.11 \$1.25	8870.4 16473.6		\$1,464 \$30,888	
QUAIL COVE RD	0.15		PINE	TERRA PINE	CUL DE SAC	1,640 RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4	Mid-term	\$0.11	19008.0	\$2,091	\$3,136	
ROBBIN LN	0.10		PINE	CLETUS RAY RD	CUL DE SAC	1,674 RURAL VERY LOW VOLUME	60	Chip Seal - Priority #2	Mid-term	\$0.11	12672.0	\$1,394	\$2,091	\$3,659
SHARYN RD	0.37		PINE	BRADSHAW DR	CUL DE SAC	1,667	50	Chip Seal - Priority #4	Mid-term	\$0.11	46886.4	\$5,158	\$7,736	\$13,538
SOLITUDE TR	0.14		PINE	MISTLETOE DR	CUL DE SAC	639 RURAL LOCAL	50		Mid-term	\$0.11	17740.8		\$2,927	
SOLITUDE TR	0.05		PINE	WHISPERING PINE RD	MISTLETOE DR	1,535 RURAL VERY LOW VOLUME	60	Chip Seal - Priority #4	Mid-term	\$0.11	6336.0	+	\$1,045	. ,
SUNDANCE CIR	0.05		PINE		CUL DE SAC	1,533 RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11 \$0.11	6336.0		\$1,045 \$2,509	
SUNDANCE DR TERA LYNN WAY	0.12 0.27		PINE PINE	MISTLETOE DR CLETUS RAY RD	END CUL DE SAC N. OF BRADSHAW DR	1,534 RURAL VERY LOW VOLUME 1.675	50 60	Chip Seal - Priority #2 Chip Seal - Priority #4	Mid-term Mid-term	\$0.11 \$0.11	15206.4 34214.4	. ,	\$2,509 \$5,645	+ )
TERRA PINE RD	0.27		PINE	WOODLAND WALK	HILLTOP LN	18 URBAN LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	20275.2	. ,	\$3,045	. ,
TONTO DR	0.06		PINE	ORLOFF RD	BLOODY BASIN RD	1,707 RURAL VERY LOW VOLUME	40	Resurface - Priority #4	Mid-term	\$1.25	7603.2	+ /	\$14,256	¥ - )
TRAILS END DR	0.06		PINE	PINE CREEK CANYON RD	JUNIPER LP	1,562	60		Mid-term	\$0.11	7603.2	. ,	\$1,255	. ,
WARREN DR	0.22		PINE	HALL LN	NAVAJO DR	1,696	60		Mid-term	\$0.11	27878.4		\$4,600	. ,
WHISPERING PINE RD	0.29		PINE	ALVA DR	END OF PAVEMENT AT FOREST TR	355	60	Chip Seal - Priority #4	Mid-term	\$0.11	36748.8	\$4,042	\$6,064	\$10,611

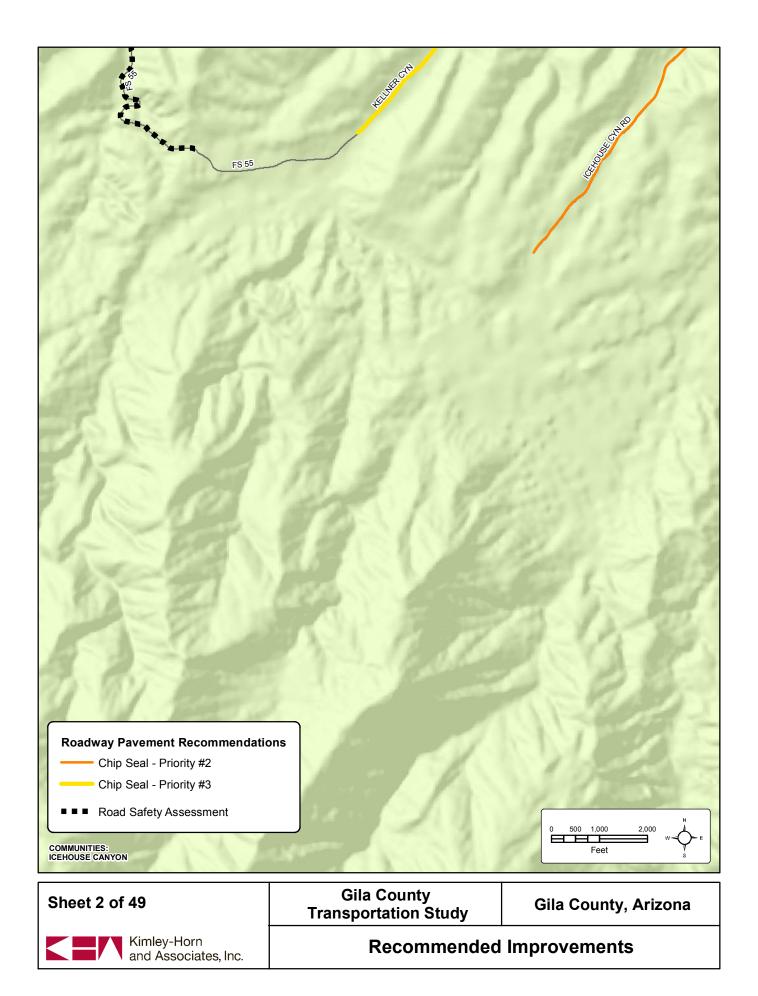
							Overall							Total Cost
							Pavement	Pavement Improvement			Surface		Material +	Material + Labor
					Road		Condition	Recommendation and	Implementation	Unit Cost	Area	Material Cost	Labor Cost	+ Soft Costs
Road Name	Length	WIDTH Community	Begin Ref.	End Ref.	No.	Functional Classification	Ranking	Priority	Phase	(\$ per sq. ft)	(sq. ft)	(Base)	(Base*1.5)	(M+L*1.75)
BAY DR	0.15	STRAWBERRY	FOSSIL CREEK RD	DEAD END	7-	RURAL LOCAL	10	Resurface - Priority #2	Near-term	\$1.25	19008.0	\$23,760	\$35,640	\$62,370
COLTER WY	0.08	STRAWBERRY	JUNIPER RD	CORDY ST	,	RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	10137.6	\$1,115	\$1,673	\$2,927
COLUMBINE DR	0.09	STRAWBERRY	ELK RD	ANTELOPE DR	1,744		60	Chip Seal - Priority #4	Mid-term	\$0.11	11404.8	\$1,255	\$1,882	\$3,293
COYOTE DR	0.93	STRAWBERRY	WILD TURKEY LN	END	1	RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	117849.6	\$12,963	\$19,445	\$34,029
DIME DR	0.09	STRAWBERRY	FOSSIL CREEK RD	CUL DE SAC	,	RURAL LOCAL	40	Chip Seal - Priority #4	Mid-term	\$0.11	11404.8	. ,	\$1,882	\$3,293
FULLER RD	0.51	STRAWBERRY	FOSSIL CREEK RD	CATTLEGUARD	,	RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4	Mid-term	\$0.11	64627.2	\$7,109	\$10,663	\$18,661
LUFKIN DR	0.65	STRAWBERRY	STRAWBERRY LN	DEAD END	1,774		50	Chip Seal - Priority #4	Mid-term	\$0.11	82368.0	\$9,060	\$13,591	\$23,784
PARKINSON DR	0.40	STRAWBERRY	SR 87	END OF PAVEMENT	1,833		40	Chip Seal - Priority #4	Mid-term	\$0.11	50688.0	\$5,576	\$8,364	\$14,636
RALLS DR	1.13	STRAWBERRY	SR 87	FULLER RD	1,843		60	Chip Seal - Priority #4	Mid-term	\$0.11	143193.6		\$23,627	\$41,347
RIM VIEW LOOP	0.04	STRAWBERRY	RALLS DR	CUL DE SAC	1,841		40	Chip Seal - Priority #4	Mid-term	\$0.11	5068.8	\$558	\$836	\$1,464
RIMWOOD DR	0.16	STRAWBERRY	RIMWOOD RD	TONTO RIM DR	1,783		60	Chip Seal - Priority #4	Mid-term	\$0.11	20275.2	\$2,230	\$3,345	\$5,854
RIMWOOD RD	0.36	STRAWBERRY	WINGFIELD WY	FOSSIL CREEK RD	1,775		60	Chip Seal - Priority #4	Mid-term	\$0.11	45619.2	\$5,018	\$7,527	\$13,173
	0.80	STRAWBERRY	WILD TURKEY LN	WINGFIELD WY	1,787		60	Chip Seal - Priority #4	Mid-term	\$0.11	101376.0		\$16,727	\$29,272
WAGON WHEEL WY	0.25	STRAWBERRY	FOSSIL CREEK RD	WILD TURKEY LN	,	RURAL VERY LOW VOLUME	30	Resurface - Priority #2	Near-term	\$1.25	31680.0	\$39,600	\$59,400	\$103,950
WESTERN WY	0.03	STRAWBERRY	CYOTE DR	END OF PAVEMENT	1	RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	3801.6	\$418	\$627	\$1,098
WILD TURKEY LN	0.23	STRAWBERRY	WAGON WHEEL	CUL DE SAC	/	RURAL VERY LOW VOLUME	50	Chip Seal - Priority #2	Mid-term	\$0.11	29145.6	\$3,206	\$4,809	\$8,416
BONANZA CIR	0.14	TONTO BASIN	FS423	END	446		30	Resurface - Priority #2	Near-term	\$1.25	17740.8	¥ ) -	\$33,264	\$58,212
BULL PEN CIR	0.05	TONTO BASIN	FLOURSPAR RD	END		RURAL VERY LOW VOLUME	40	Chip Seal - Priority #4	Mid-term	\$0.11	6336.0	\$697	\$1,045	\$1,830
CHRISTOPHER LN	0.20	TONTO BASIN	CUL-DE-SAC	DOOLEY RD	1447		40	Chip Seal - Priority #4	Mid-term	\$0.11	25344.0	+ /	\$4,182	\$7,318
CIRCLE D CIR	0.04	TONTO BASIN	PACKARD DR	END	443		60	Chip Seal - Priority #4	Mid-term	\$0.11	5068.8	\$558	\$836	\$1,464
DRYER DR	0.45	TONTO BASIN	SR 188	DEAD END	1,421		50	Chip Seal - Priority #4	Mid-term	\$0.11	57024.0	. ,	\$9,409	\$16,466
EARL STEVENS RD	0.15	TONTO BASIN	SHREEVE LN	DEAD END	719		50	Chip Seal - Priority #4	Mid-term	\$0.11	19008.0	\$2,091	\$3,136	\$5,489
ELM ST	0.15	TONTO BASIN	MIMOSA ST	END	1443		60	Chip Seal - Priority #4	Mid-term	\$0.11	19008.0	\$2,091	\$3,136	\$5,489
FLOURSPAR RD	0.17	TONTO BASIN	FS423	END		RURAL MINOR COLLECTOR	40	Chip Seal - Priority #1	Near-term	\$0.11	21542.4	\$2,370	\$3,554	\$6,220
FOUR PEAKS RD	0.08	TONTO BASIN	WALNUT SPRINGS BLVD	CUL DE SAC		RURAL VERY LOW VOLUME	60	Chip Seal - Priority #3	Mid-term	\$0.11	10137.6		\$1,673	\$2,927
FS 423/CLINE BLVD	0.21	TONTO BASIN	PACKARD DR	NF-60	439		50	Chip Seal - Priority #4	Mid-term	\$0.11	26611.2	\$2,927	\$4,391	\$7,684
FS 423/CLINE BLVD	0.19	TONTO BASIN		DOOLEY DR	638		50	Chip Seal - Priority #4	Mid-term	\$0.11	24076.8	\$2,648	\$3,973	\$6,952
FS 60 / A CROSS RD	1.05	TONTO BASIN	FS 423/CLINE BLVD	NF-60 A-CROSS RD	1,462		50	Resurface - Priority #4	Mid-term	\$1.25	133056.0	\$166,320	\$249,480	\$436,590
FS 661/INDIAN POINT	1.35	TONTO BASIN	NF-60 A-CROSS RD	DEAD END	,	RURAL VERY LOW VOLUME	60	Chip Seal - Priority #4	Mid-term	\$0.11	171072.0	+ -/	\$28,227	\$49,397
GEORGES CIR	0.02	TONTO BASIN	PACKARD DR	END	442		40	Chip Seal - Priority #4	Mid-term	\$0.11	2534.4	\$279	\$418	\$732
HORSE CANYON WAY	0.45	TONTO BASIN	SLATE CREEK TRAIL			RURAL VERY LOW VOLUME	20	Resurface - Priority #2	Near-term	\$1.25	57024.0	. ,	\$106,920	\$187,110
	0.09	TONTO BASIN	ROCKY RD	WALNUT SPRINGS BLVD	431		60	Chip Seal - Priority #4	Mid-term	\$0.11	11404.8	\$1,255	\$1,882	\$3,293
	0.18	TONTO BASIN	CLINE BLVD SR-188	END		RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	22809.6	+ /	\$3,764	\$6,586
	0.05	TONTO BASIN			193		50	Chip Seal - Priority #4	Mid-term	\$0.11	6336.0	\$697	\$1,045	\$1,830 \$7.684
MIMOSA ST MONUMENT RD	0.21	TONTO BASIN	FS423 ROCKY RD	TRAILS END DR WALNUT SPRINGS BLVD	1444		40	Chip Seal - Priority #4	Mid-term Mid-term	\$0.11 \$0.11	26611.2 6336.0	\$2,927 \$697	\$4,391 \$1.045	\$7,684 \$1.830
NORTH RD	0.05	TONTO BASIN TONTO BASIN	SR 188	ROCKY RD	420		60 50	Chip Seal - Priority #4	Mid-term	\$0.11		+	¥ )	+ )
			SR 188 SR-188	SR-188				Resurface - Priority #4		\$1.25	8870.4	\$11,088	\$16,632	\$29,106 \$31,468
OLD HWY 188 PACKARD DR	0.86	TONTO BASIN TONTO BASIN	FS423	END	423	RURAL VERY LOW VOLUME	40	Chip Seal - Priority #2 Resurface - Priority #2	Mid-term Near-term	+ -	108979.2 27878.4	\$11,988 \$34,848	\$17,982 \$52,272	\$31,468
ROCKY RD	0.22	TONTO BASIN	DEAD END N. OF NORTH RD	DEAD END S. OF IRON WOOD LN	442		60	Chip Seal - Priority #4	Mid-term	\$1.25 \$0.11	31680.0	\$3.485	\$52,272 \$5.227	\$91,476
ROCKY RD ROXIES CIR		TONTO BASIN	PACKARD DR		432					<b>45</b>		<i>t - /</i>	ŧ - )	\$9,148
SAGUARO RD	0.03		-	END CUL DE SAC		RURAL VERY LOW VOLUME	60	Chip Seal - Priority #4	Mid-term	\$0.11 \$1.25	3801.6 22809.6		\$627	\$1,098
SAGUARO RD SALLY MAY CIR			WALNUT SPRINGS BLVD	END	-		ů	Resurface - Priority #2	Near-term	+ -		\$28,512	\$42,768	\$74,844
	0.18	TONTO BASIN	FS423		445		30	Resurface - Priority #2	Near-term	\$1.25	22809.6	\$28,512	\$42,768	+ /-
SYCAMORE LN	0.45		SR 188	END OF PAVEMENT	1,436		30	Resurface - Priority #2	Near-term	\$1.25	57024.0		\$106,920	\$187,110
	0.49	TONTO BASIN	SR 188	DEAD END	, -	RURAL VERY LOW VOLUME	50	Chip Seal - Priority #4	Mid-term	\$0.11	62092.8	\$6,830	\$10,245	\$17,929
WALNUT SPRINGS BLVD	0.34	TONTO BASIN	SAGUARO RD		434		60	Chip Seal - Priority #4	Mid-term Mid-term	\$0.11	43084.8	\$4,739	\$7,109	\$12,441
	0.52	TONTO CREEK SHORES		SADDLEHORN LN			50	Chip Seal - Priority #4		\$0.11		\$7,248	\$10,873	\$19,027
	0.50		CONTROL RD			RURAL VERY LOW VOLUME	60	Chip Seal - Priority #3	Mid-term	\$0.11	63360.0	\$6,970	\$10,454	\$18,295
JOHNSON BLVD	0.43	TONTO VILLAGE		STANDAGE DR	313		60	Chip Seal - Priority #4	Mid-term	\$0.11	54489.6	4 - 7	\$8,991	\$15,734
	0.17	TONTO VILLAGE		DEAD END	1,110		60	Chip Seal - Priority #4	Mid-term	\$0.11	21542.4	\$2,370	\$3,554	\$6,220
BAKER RANCH RD	1.02	YOUNG	IKE CLARK PKWY	FS129	,	RURAL VERY LOW VOLUME	60	Chip Seal - Priority #3	Mid-term	\$0.11	129254.4	\$14,218	\$21,327	\$37,322
BAKER RANCH RD	0.82	YOUNG	SR-288		1,490		60	Chip Seal - Priority #4	Mid-term	\$0.11	103910.4	\$11,430	\$17,145	\$30,004
FS 512/YOUNG RD	4.54	YOUNG	RIFLE BARREL RD	CROUCH MESA NF-116	2,006		60	Chip Seal - Priority #4	Mid-term	\$0.11	575308.8	\$63,284	\$94,926	\$166,120
HAZELWOOD RD	0.44	YOUNG	MIDWAY AVE	PUMA LN	399	1	60	Chip Seal - Priority #4	Mid-term	\$0.11	55756.8	\$6,133	\$9,200	\$16,100

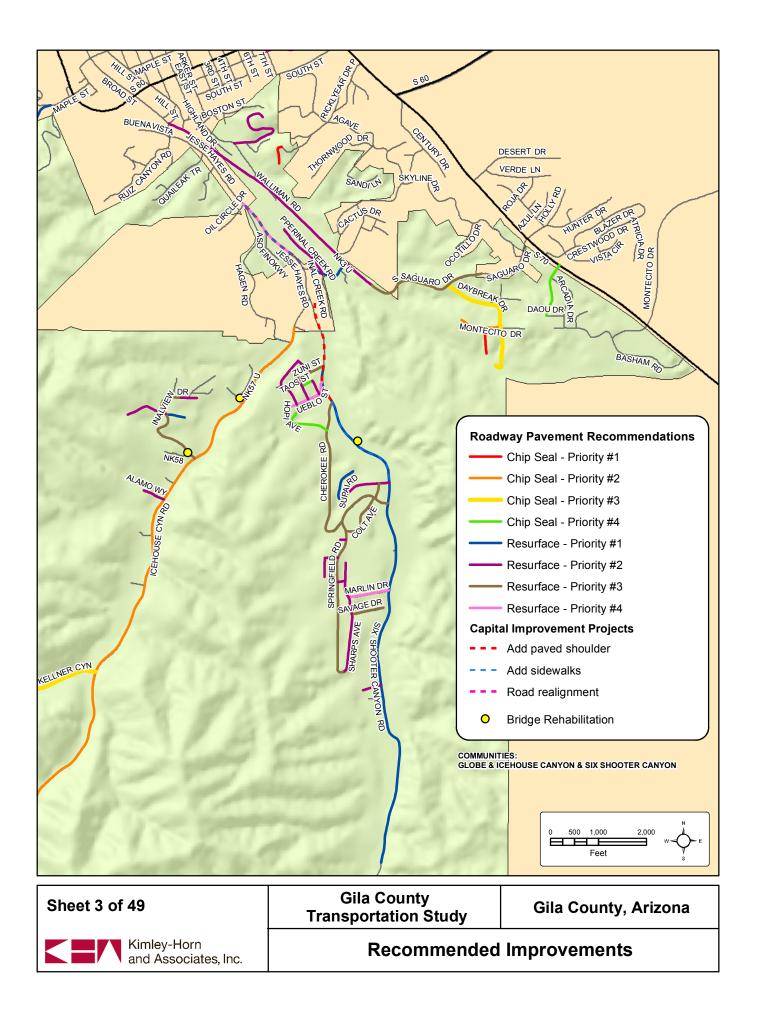


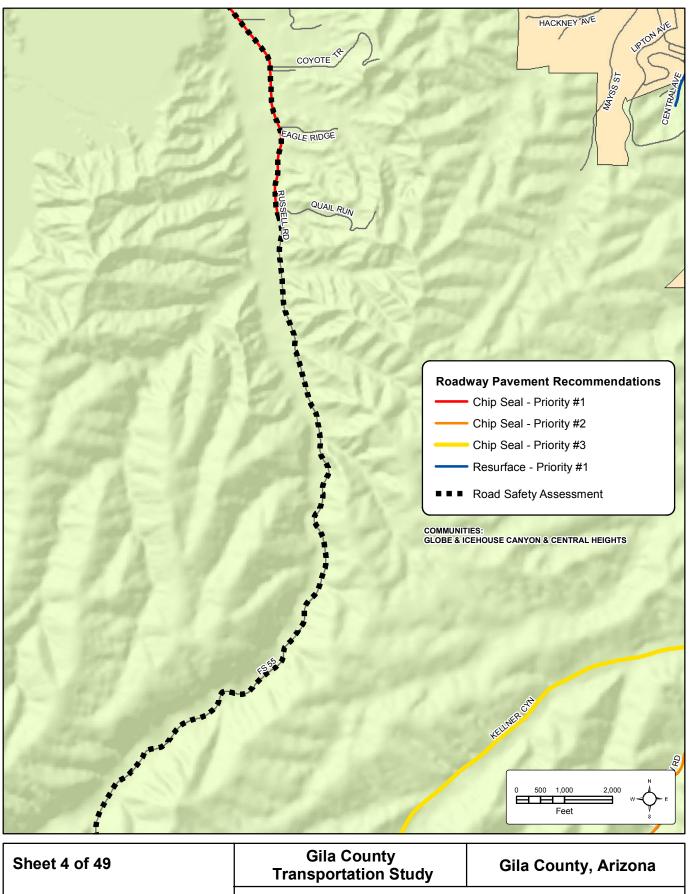
# APPENDIX F – MAPBOOK OF RECOMMENDED IMPROVEMENTS



		1 f an
		1.5
	COOLEY PRIVITE	
	the parties	
Roadway Pavement Recommendation Chip Seal - Priority #4	ons	$\overbrace{Feet}^{0  500  1,000  2,000  w  \downarrow_{F}} w  \downarrow_{S}$
Sheet 1 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended	Improvements



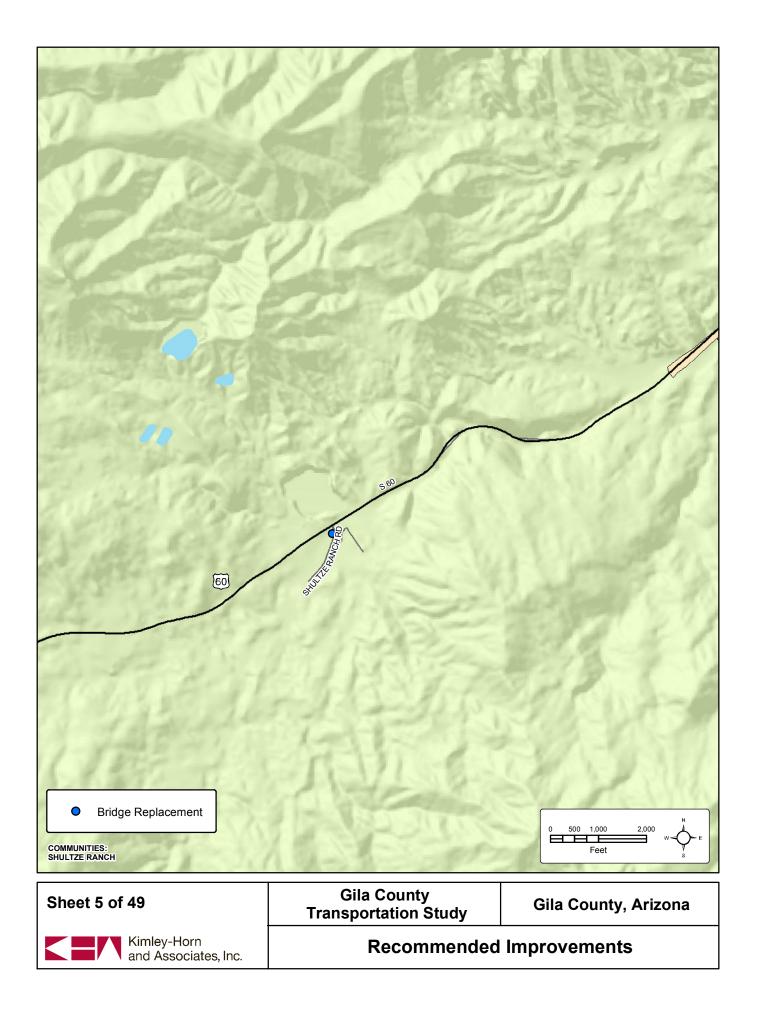




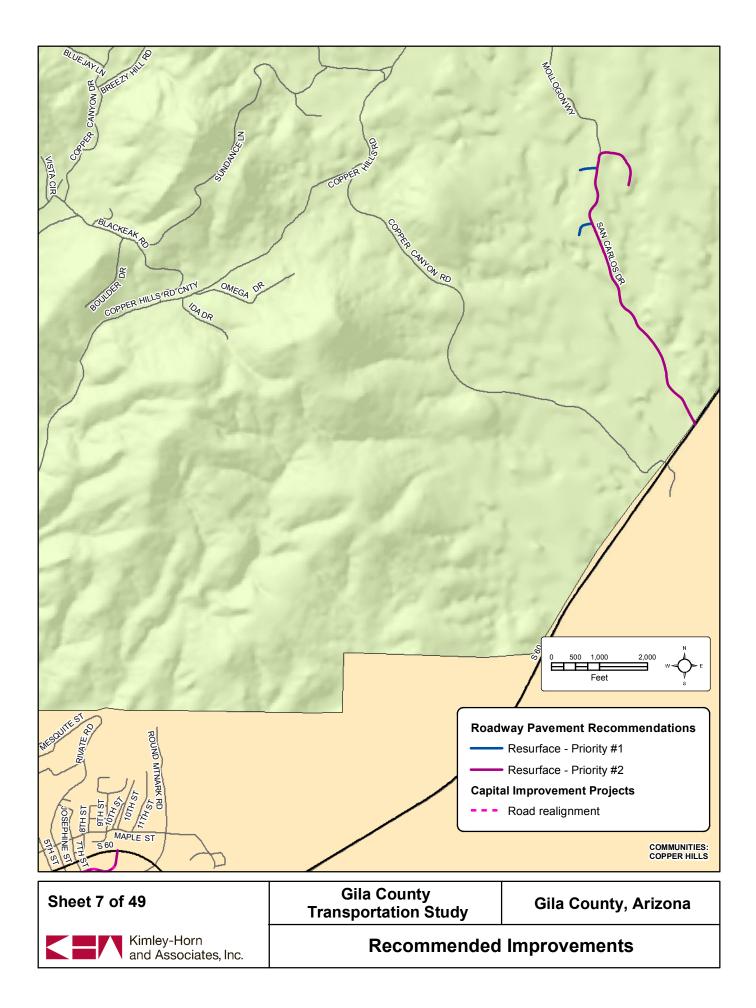
# Kiml and

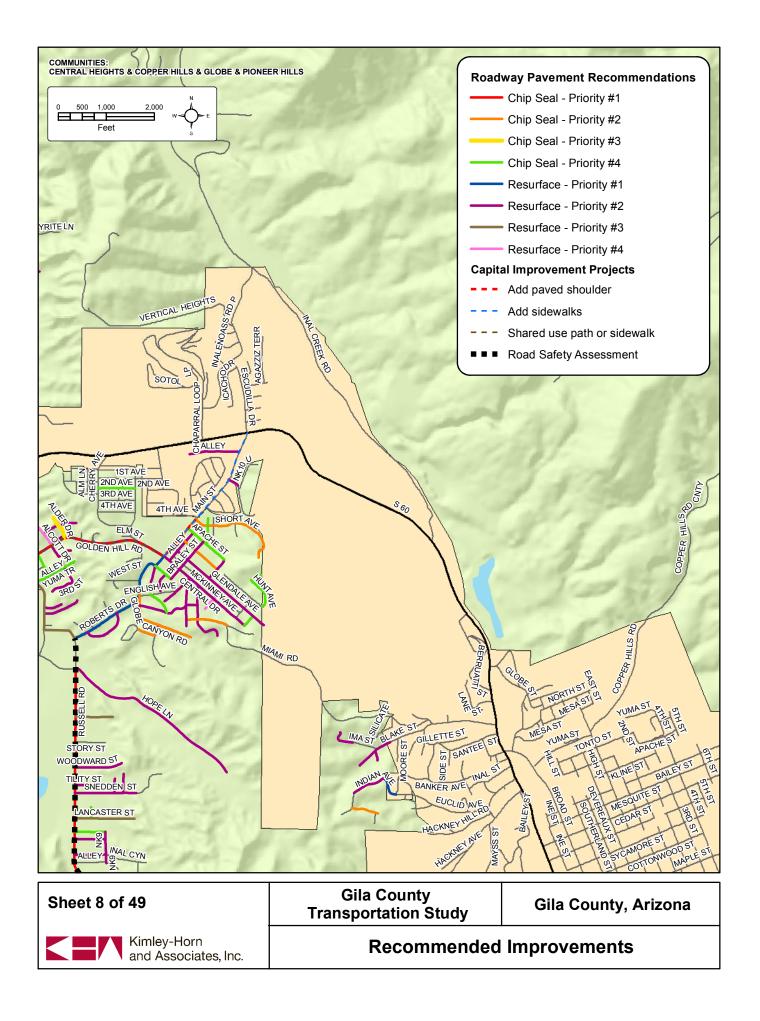
Kimley-Horn and Associates, Inc.

**Recommended Improvements** 

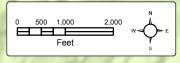


Kimley-Horn and Associates, Inc.	Recommended	Improvements				
Sheet 6 of 49	Gila County Transportation Study	Gila County, Arizona				
Roadway Pavement Recommendation Resurface - Priority #2	ons de la constante de la constante de la constante de la constante de la constante de la constante de la const	FS theorem is the solution of				
Roadway Pavement Recommendation	ons	A State of the sta				
Feet						
0 500 1,000 2,000 W	S.S.					
3-10-	- 15-1	and the second se				
3 TY 1 3	A AND					
ET A TONS						
and the second						
TROPAL I	A BALLY					
and so in	MER P	VE SALARIA				
NA TAN	FS 281 INTO VALLEY	<u> </u> <u>Z</u> '				
	TO VALLEY	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1				
3	78 15					
The second second	AN STATION	All all all all all all all all all all				
Contract (	- Aller	( second )				
	65 6 6 3 6	1 AM				
All the set						
1 - Jacob	611 Jacob	Par all				
UP ON						
CHARD V	ATT - 62.91					









#### **Roadway Pavement Recommendations**

Chip Seal - Priority #1		
Chip Seal - Priority #2		
Chip Seal - Priority #4		
Resurface - Priority #1		
Resurface - Priority #2		
Resurface - Priority #3		
Resurface - Priority #4		
<b>Capital Improvement Projects</b>		
Add paved shoulder		
Add sidewalks		

- --- Shared use path or sidewalk
- Road Safety Assessment
- Intersection Improvement

Gila County Transportation Study

VER CYN

AVF

RROW

COPPER

Gila County, Arizona

YRITE DR

HOSPITAL DR

SICHBLVD



Sheet 9 of 49

Kimley-Horn and Associates, Inc.

### **Recommended Improvements**

ADW

SONI

MIL

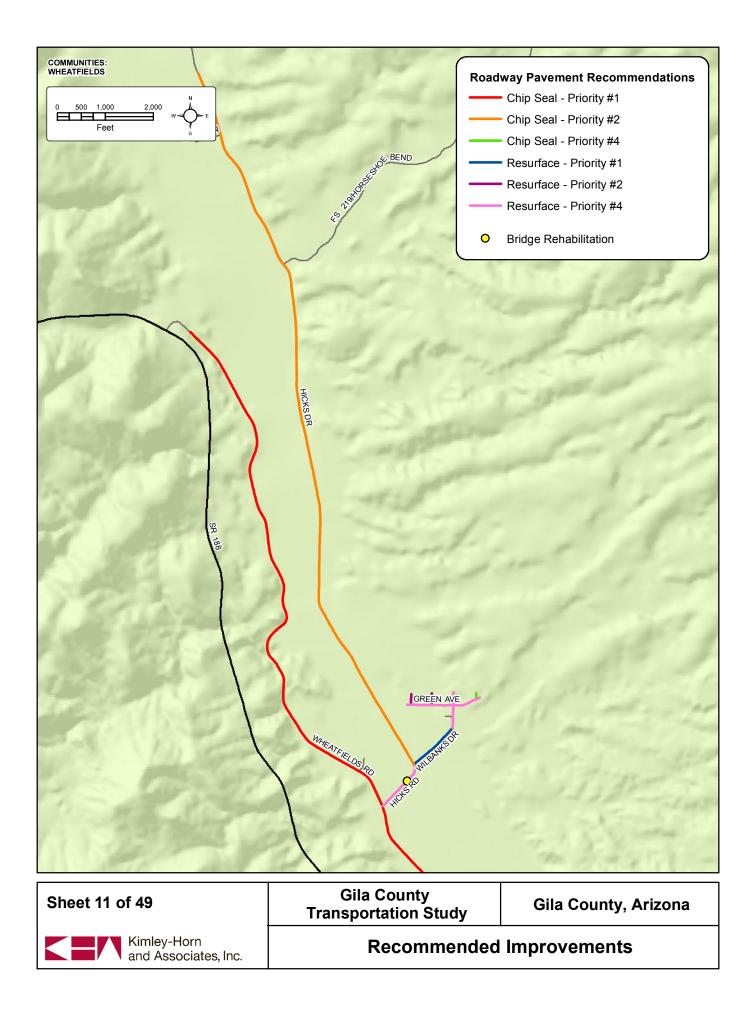
GLOBE

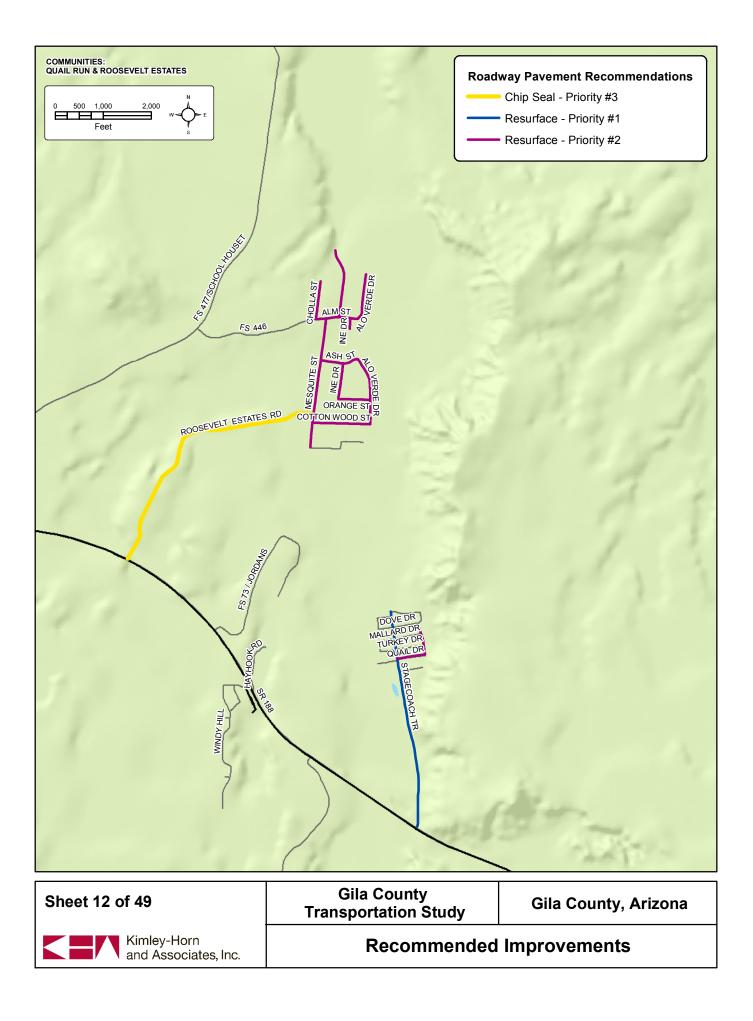
ALLE

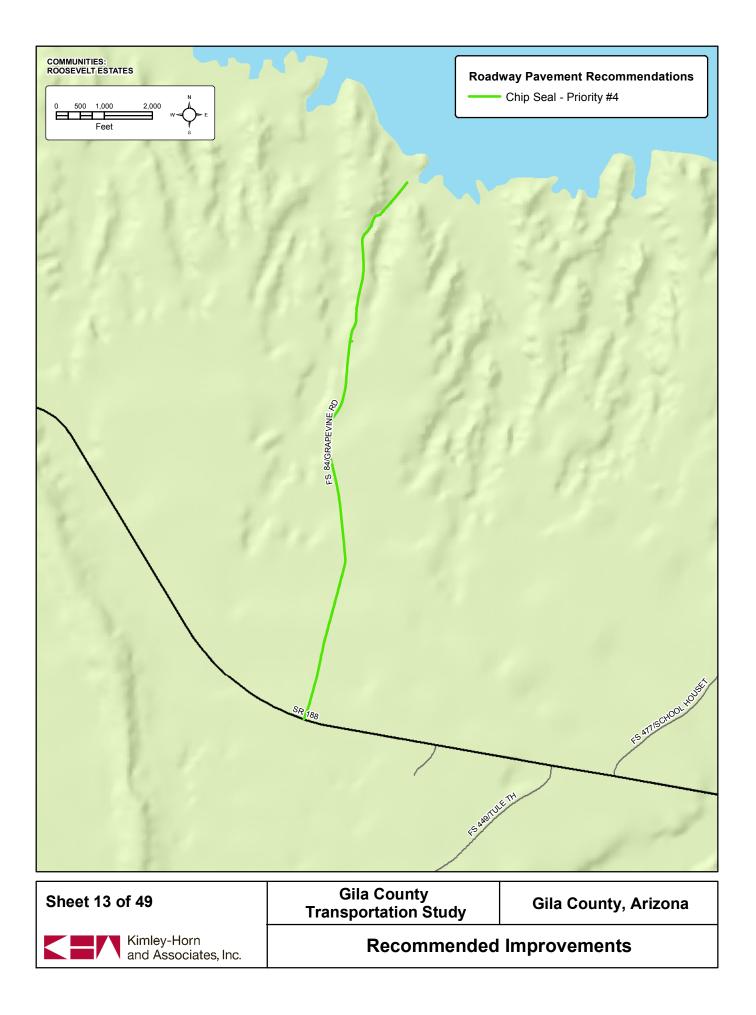
**AVE** 

STAR VIEW DR

COMMUNITIES: WHEATFIELDS	The Frage	12-20
0 500 1,000 2,000 w→ Feet	02 KD	
s	BIXBYRD	
No FRU:	N N N N N N N N N N N N N N N N N N N	13-23-00 - 13-23-000 - 13-20-000
31828	1. 1 24	FS BAINUSEET MEA
	8	FS 83
and the second	WHEATFIELLDS	
71 1 10 -		1700
Carles All		di-
14144 V2	en la	the get
Sec. Sec. 6	EIX AT TO	6 2 13
State Str		STAC
18 Barris		
019182		QUAL ROGE RD
A Contraction		NCH RD
Statter -		HOOPES RD
Roadway Pavement Recommendation	ons	
Chip Seal - Priority #1 Resurface - Priority #3	agent of	1 12-1
	Gila County	
Sheet 10 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended Improvements	

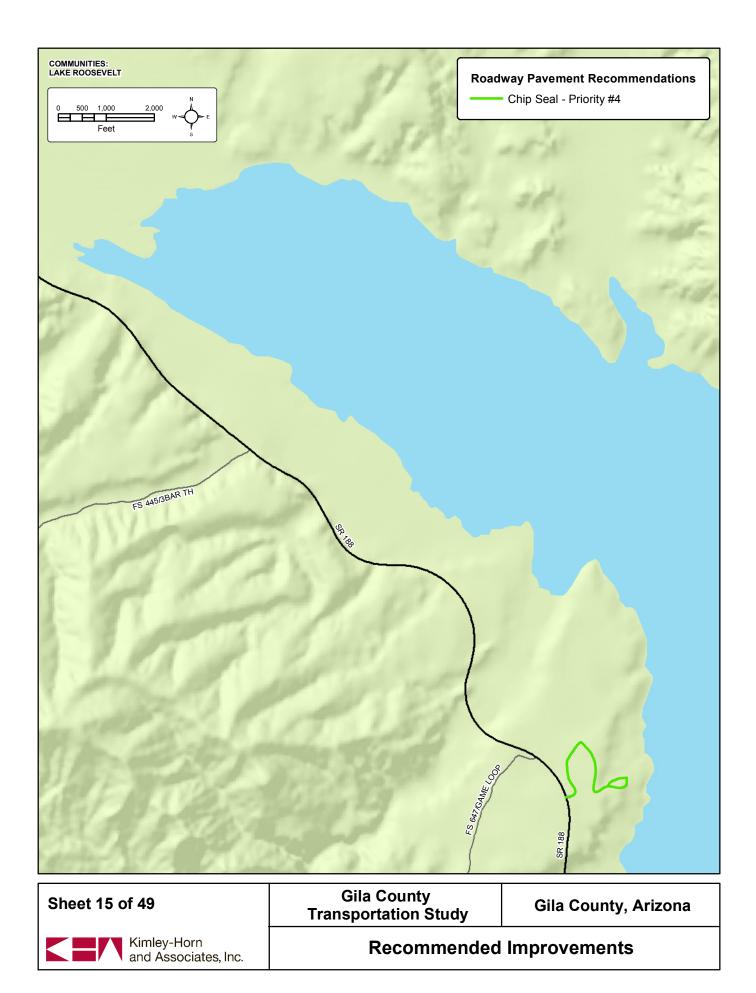


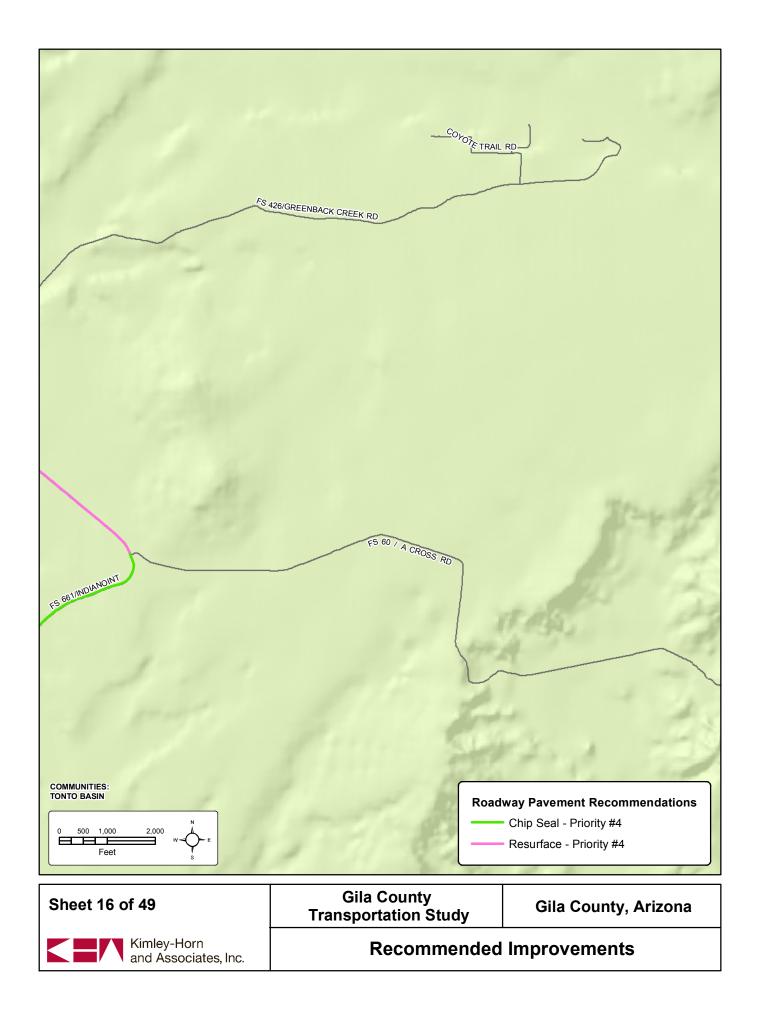


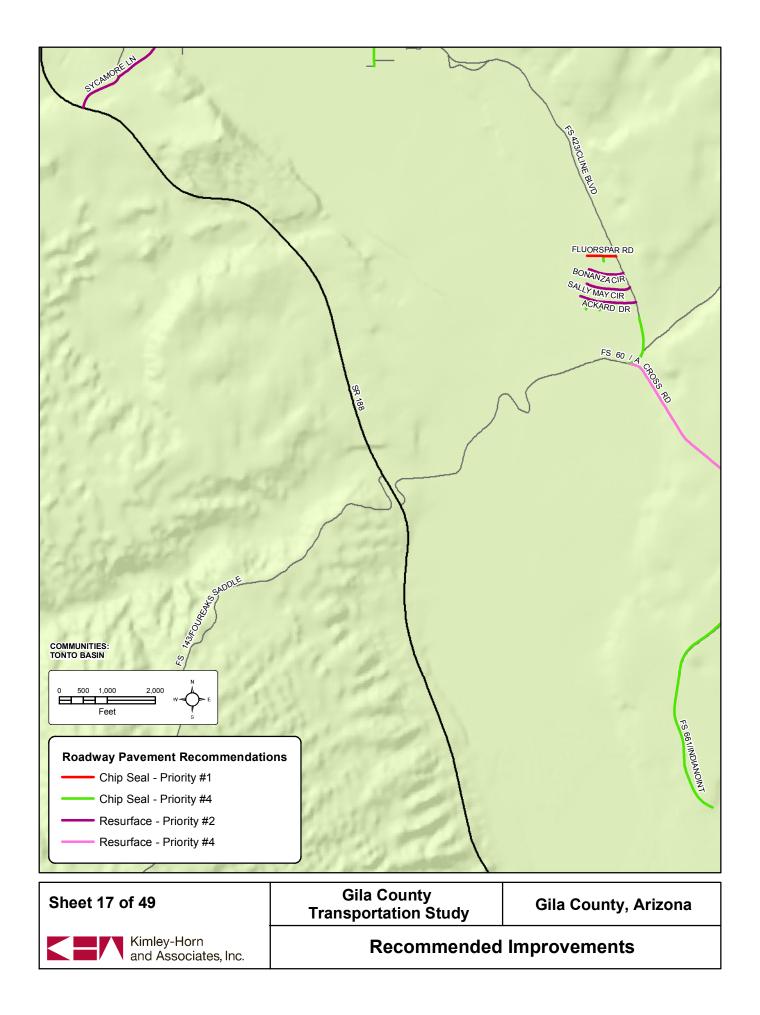


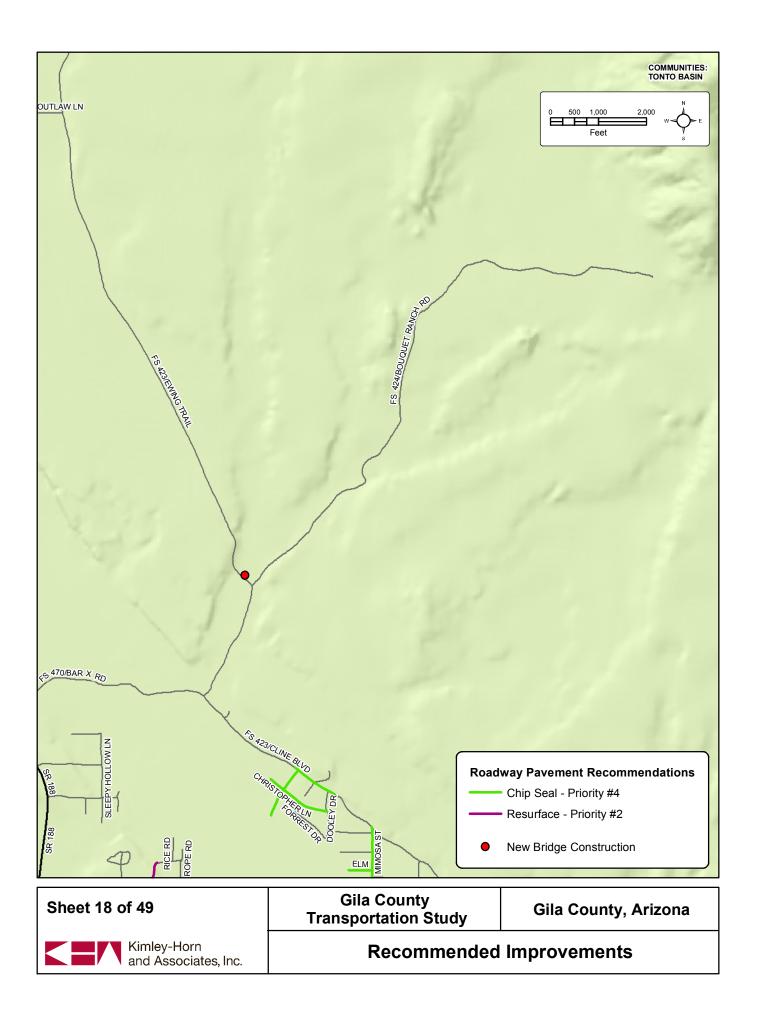


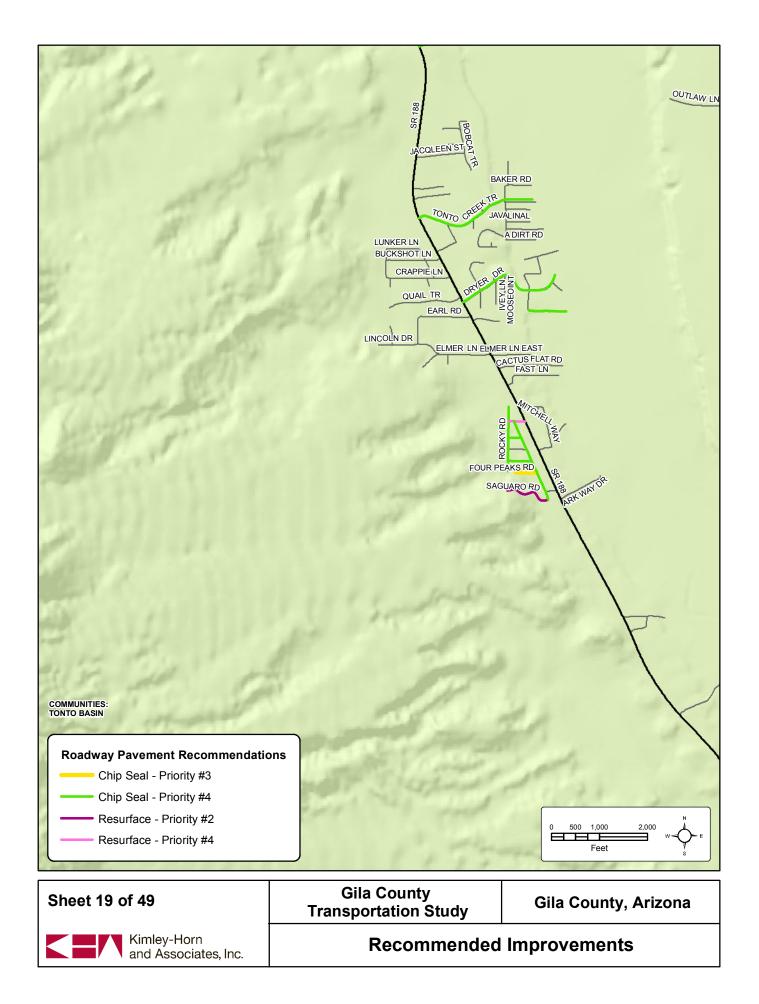
Kimley-Horn and Associates, Inc. **Recommended Improvements** 

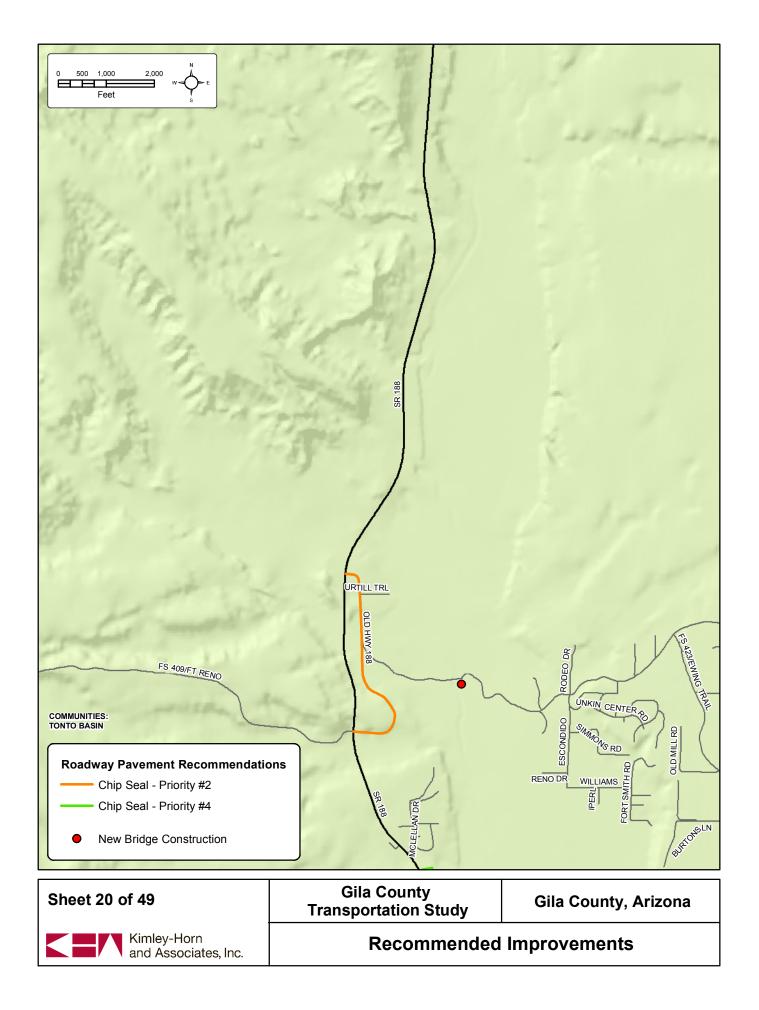


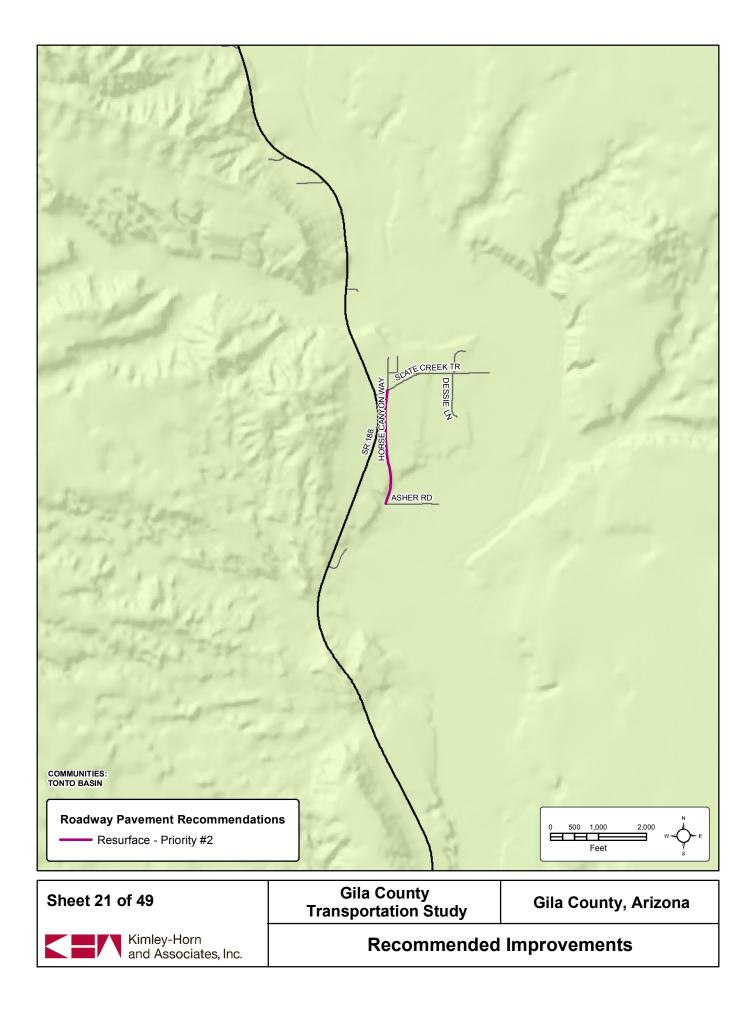


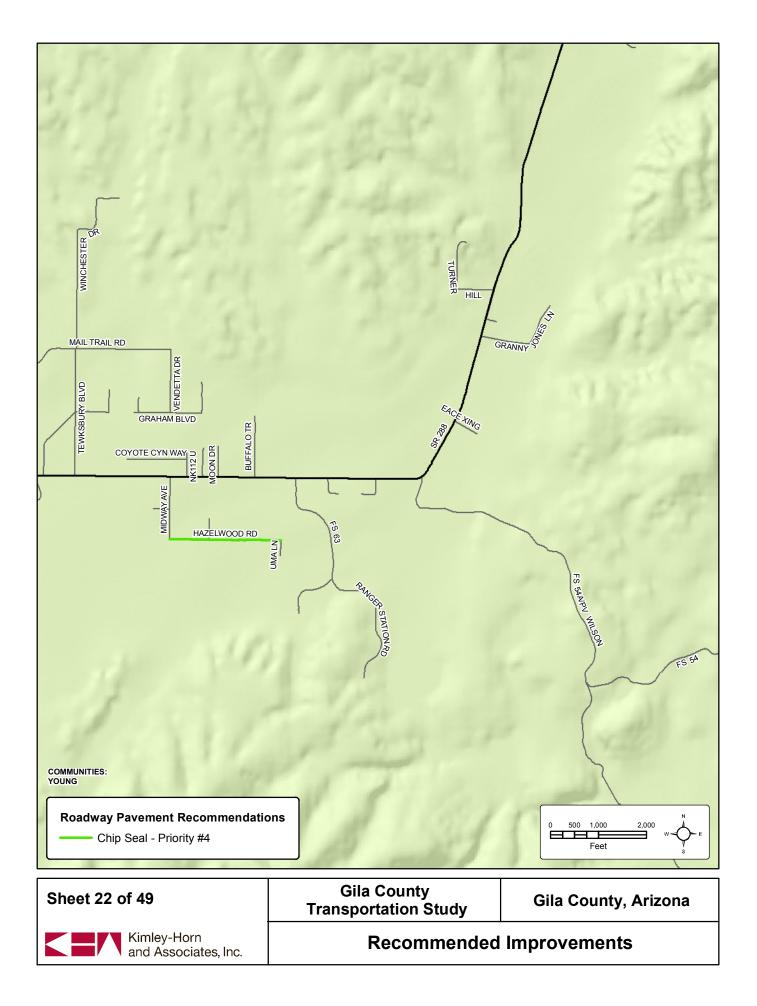


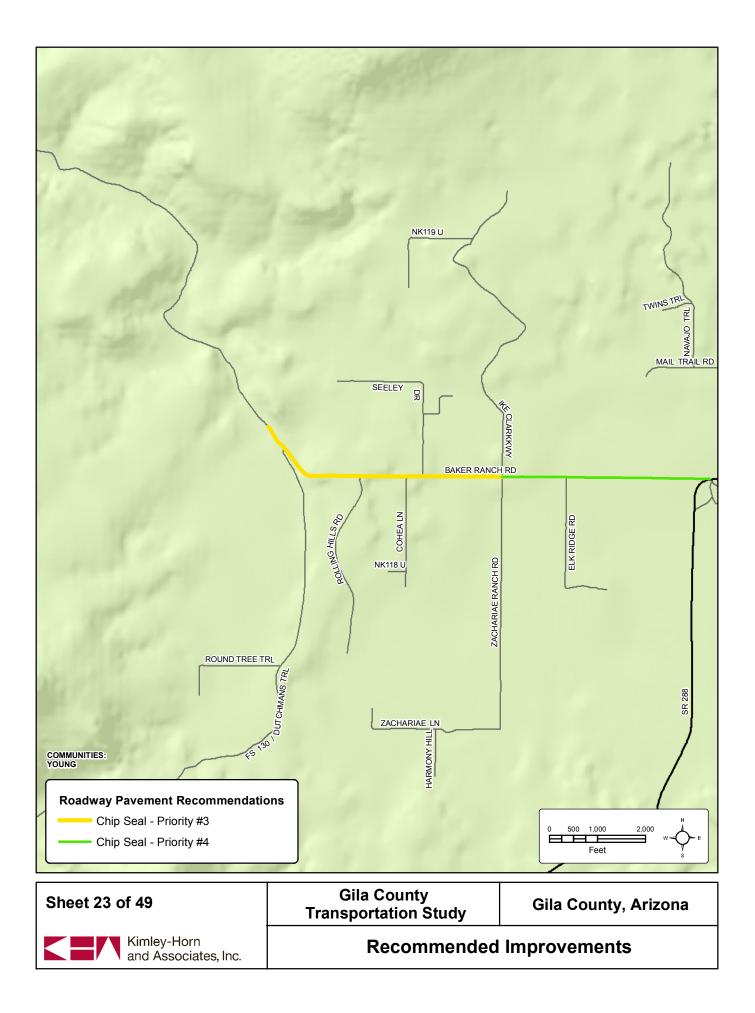




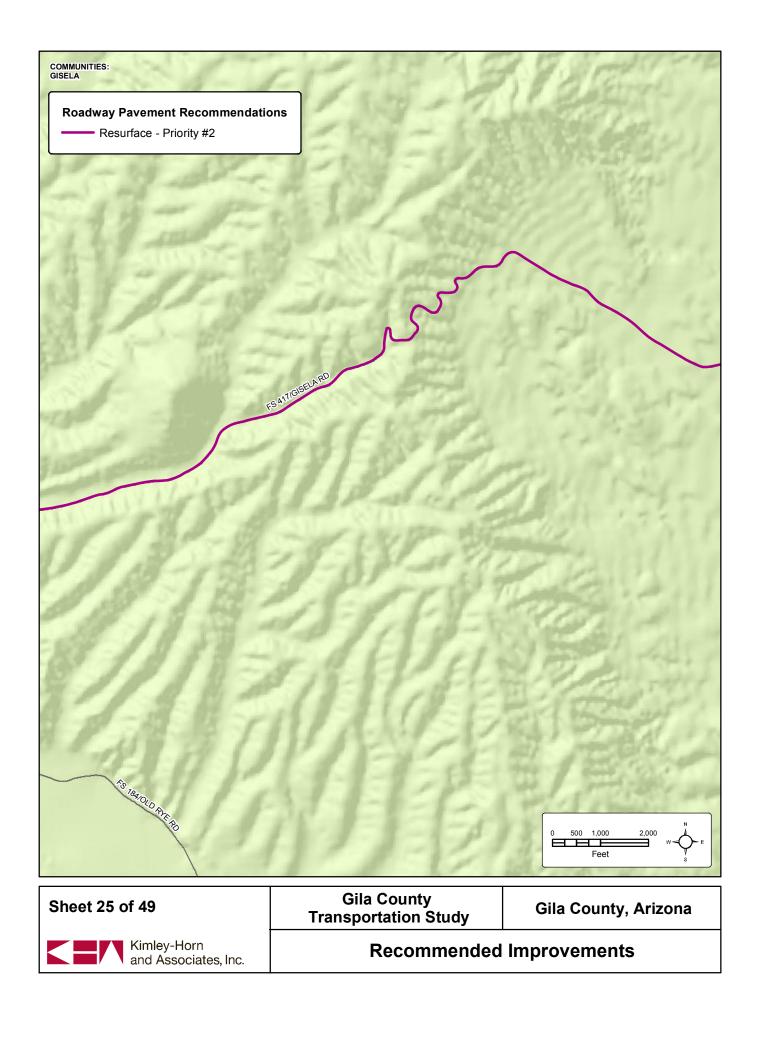


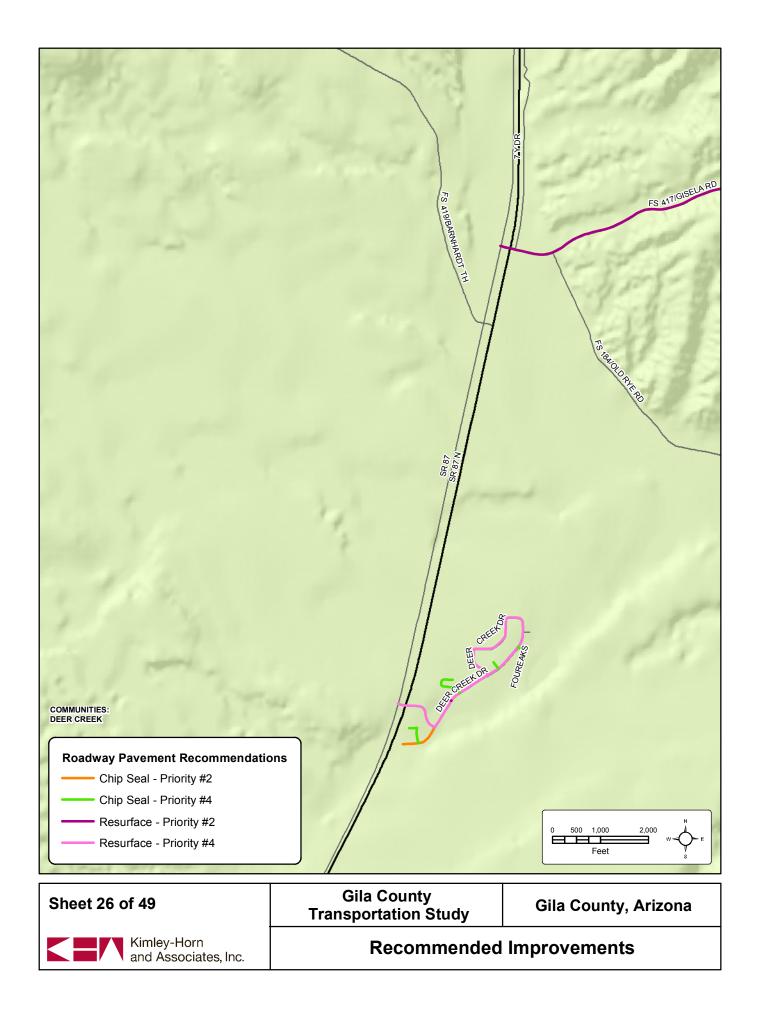


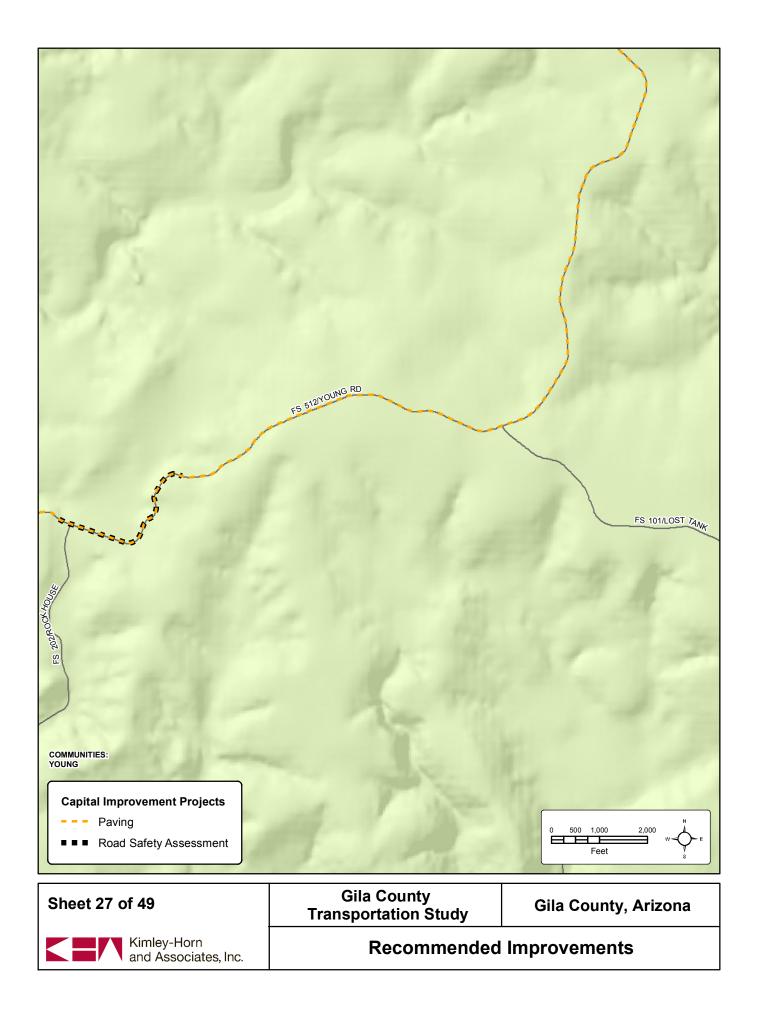




COMMUNITIES: GISELA & TONTO CREEK SHORES COMMUNITIES: GISELA & TONTO CREEK SHORES		
		Feet
Sheet 24 of 49	Gila County Transportation Study Recommended	Gila County, Arizona Improvements
and Associates, Inc.		· · · · · · · · · · · · · · · · · · ·







The count of the		Constant and a second second
TPUT I		S 100 110
and the second		
St Contraction		
1 4/2		and the second second
	5-10-1-	
	0	
		1. Ce
	TIME	
		1 1
3		
	AS 512YOUNG RD	155
	Ro	1100
	$\lambda$	No.
1 1 1 1		
1 1 1 F		
COMMUNITIES: YOUNG	The second	5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Roadway Pavement Recommendation	ons	1
Chip Seal - Priority #4 Capital Improvement Projects	1	0 500 1,000 2,000 Å
Paving		Feet s
Sheet 28 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended	Improvements



# **Roadway Pavement Recommendations**

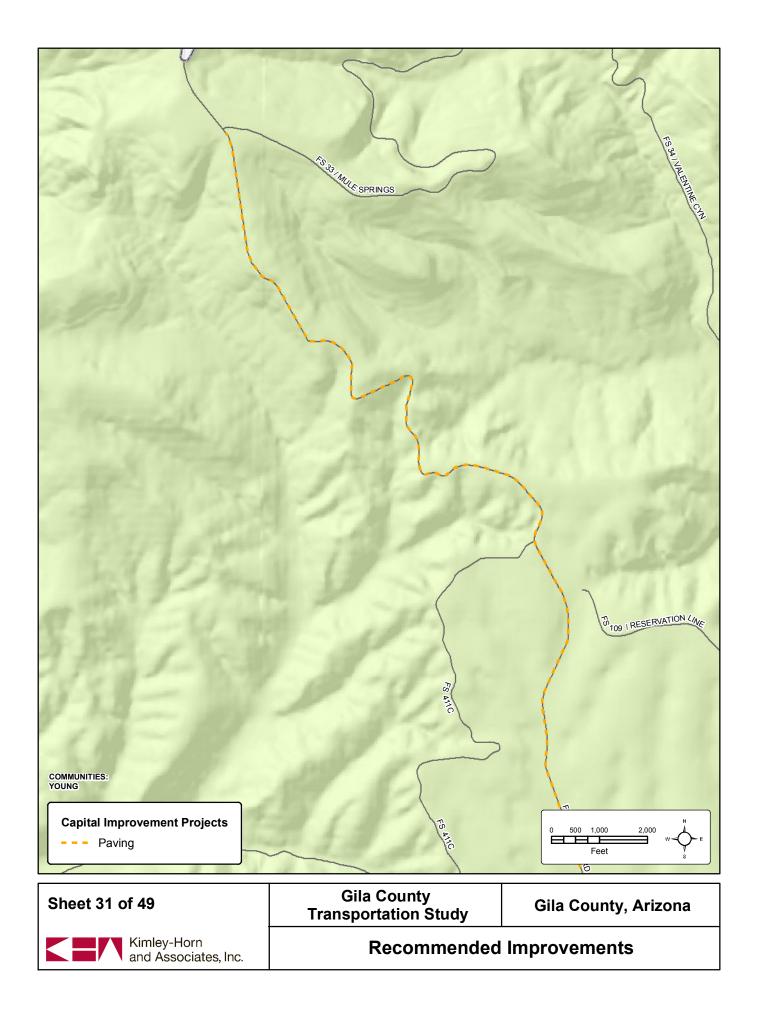
- Chip Seal - Priority #4

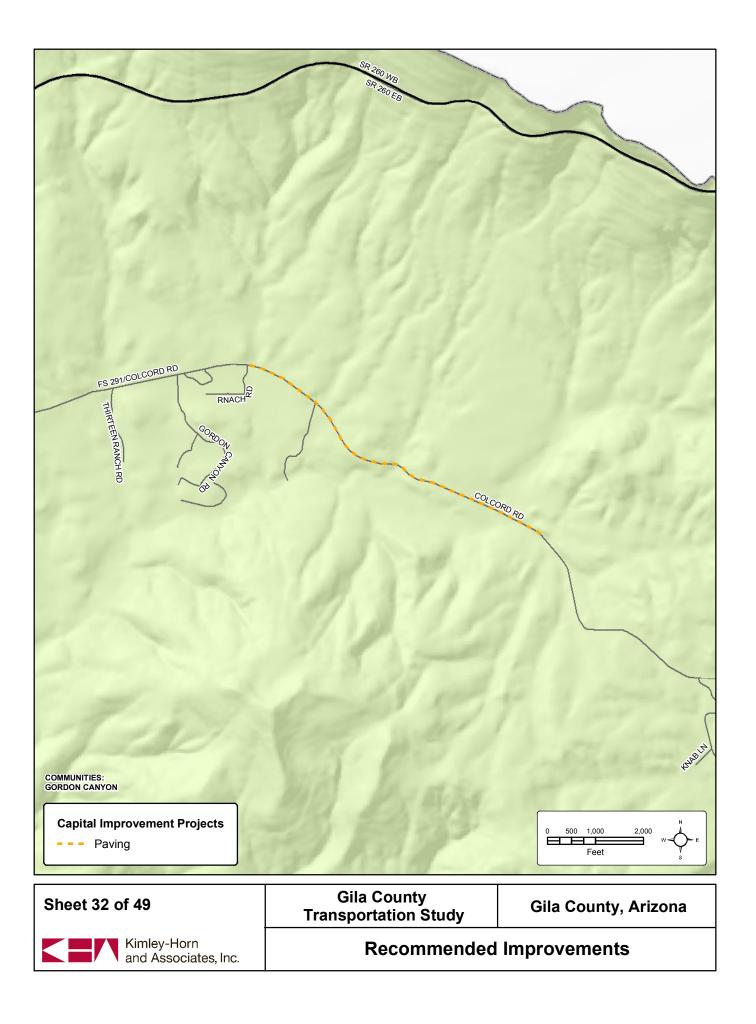
F5512YOUNGRD SHARPS DR FS 2001CHAMPERLAIN TRAIL BARRELRD RD HACIENDA ST SR 288 FREDSRD 0 500 1,000 2,000 EFF Feet Gila County Sheet 29 of 49 Gila County, Arizona Transportation Study

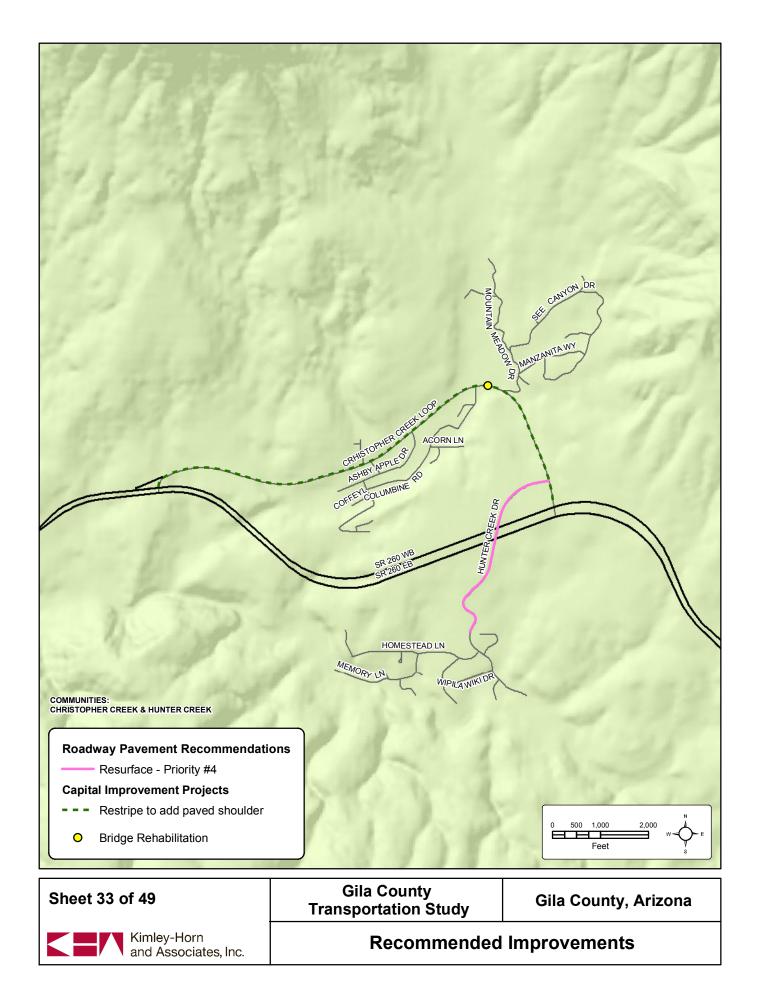


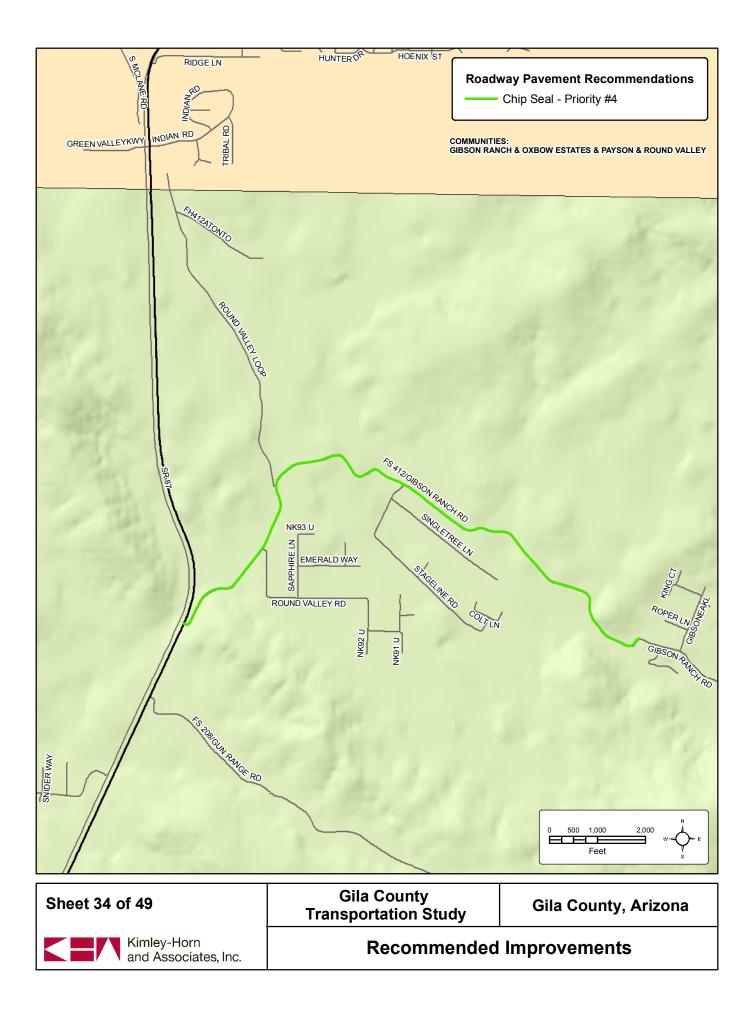
Kimley-Horn and Associates, Inc. **Recommended Improvements** 

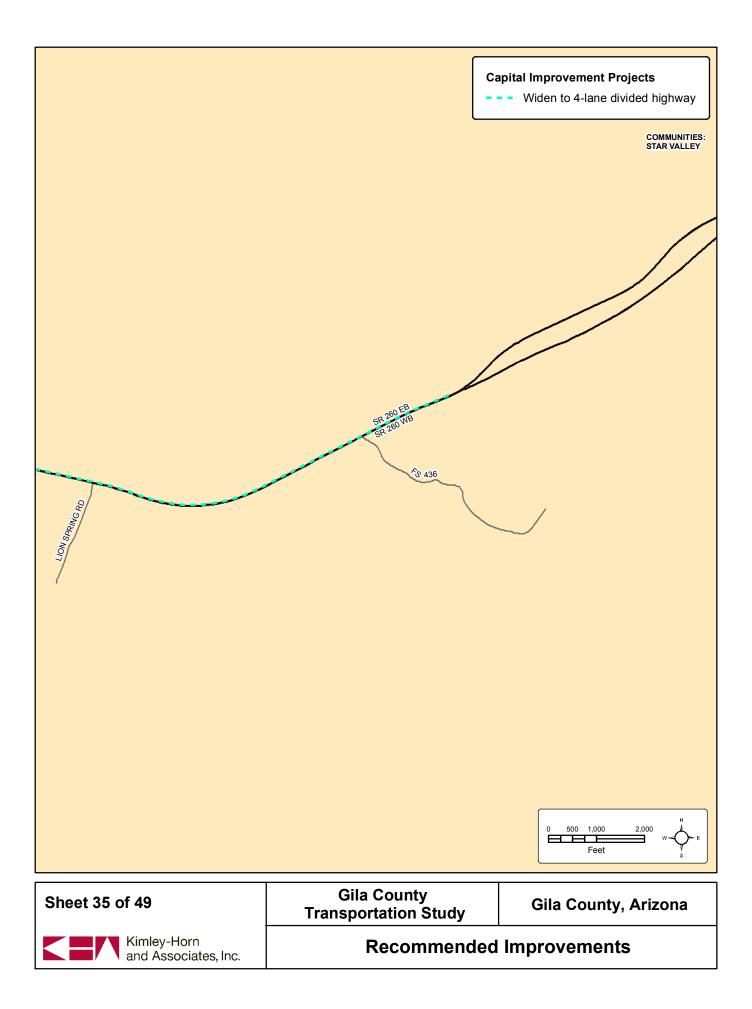
FS 128 / MAGEIN RM	ts stanoune ro	ES 100-100.000
COMMUNITIES: YOUNG Capital Improvement Projects		0 500 1,000 2,000 M
Paving		0 500 1,000 2,000 Feet s
Sheet 30 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended	Improvements

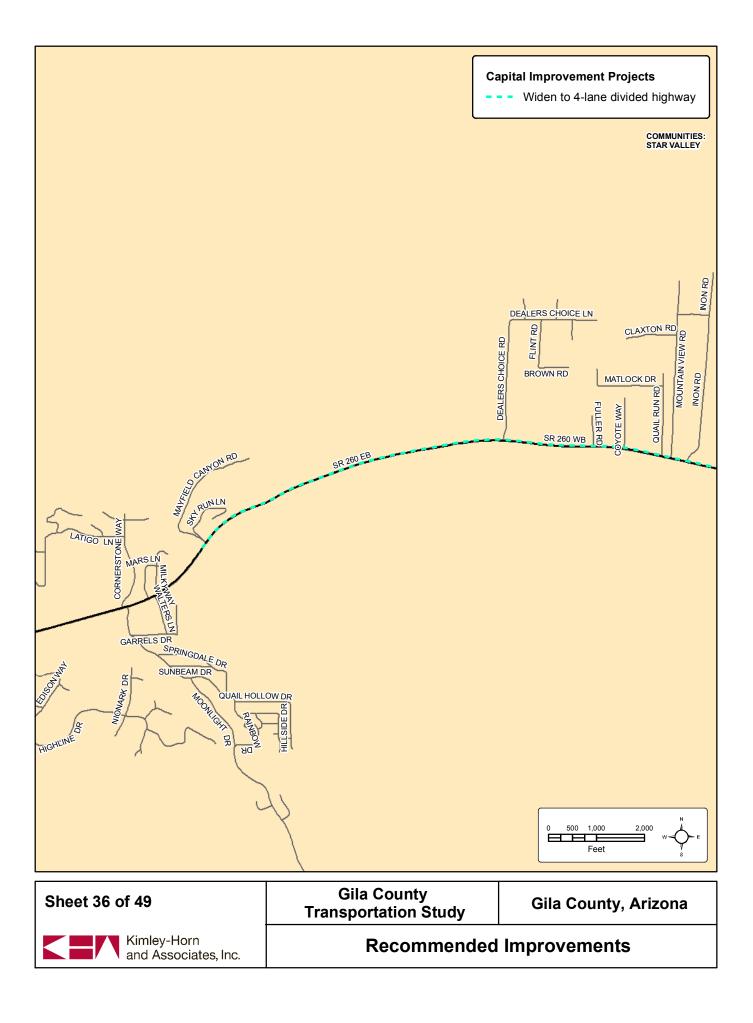


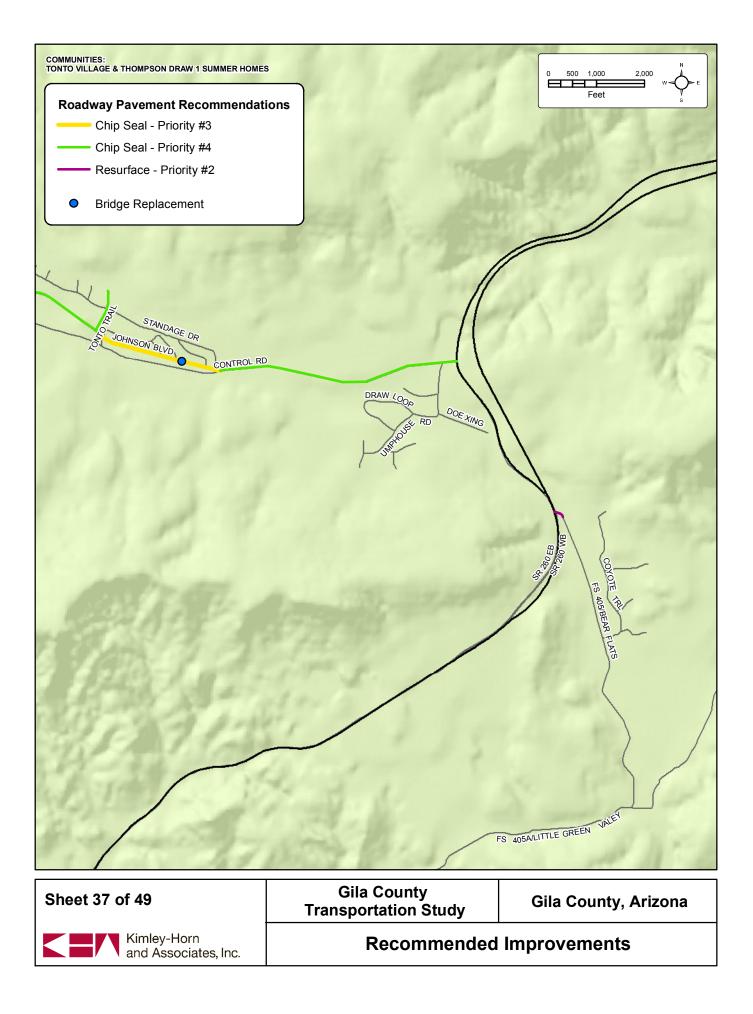


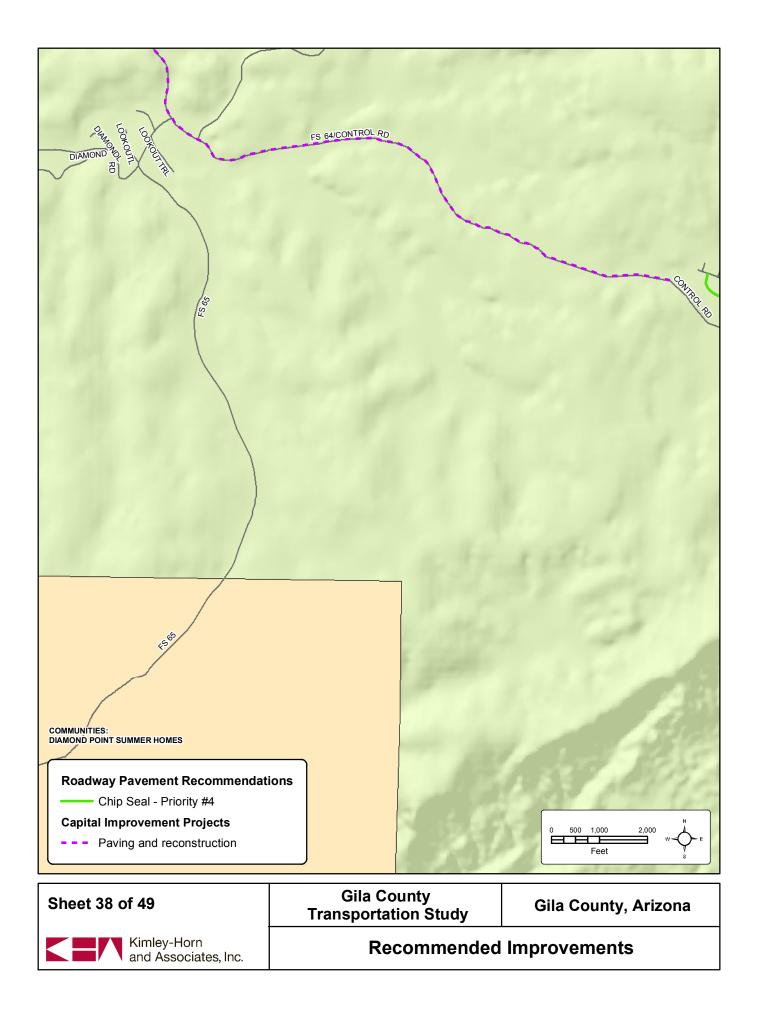




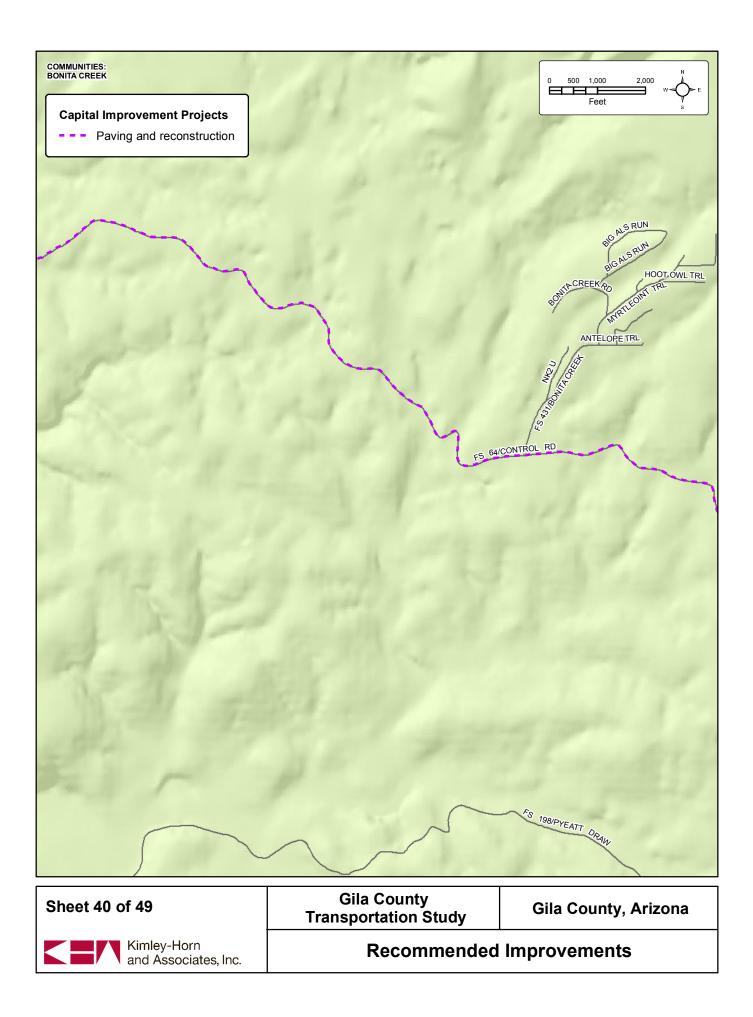


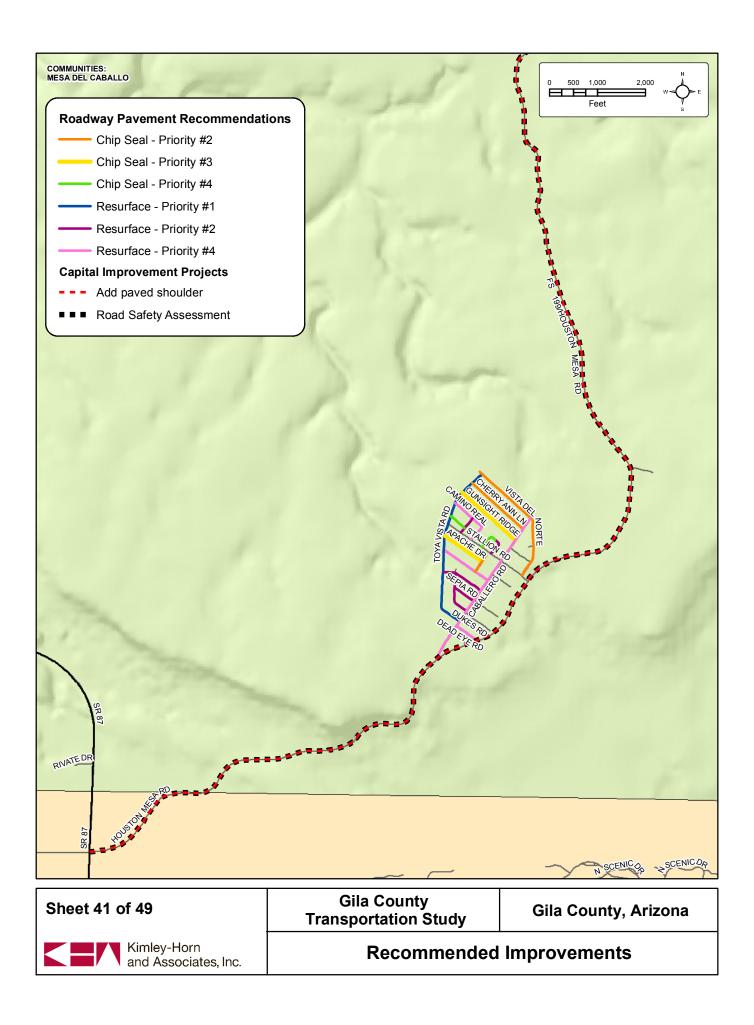


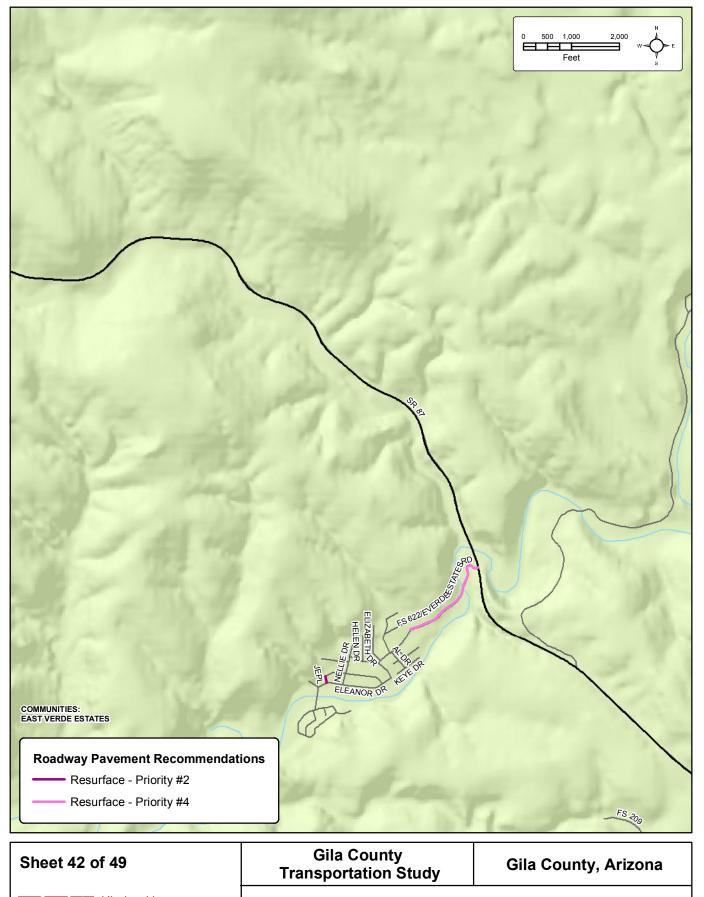




ELISON CR	BELT TRL	A REAL AND A REAL AND
COMMUNITIES: ELLISON CREEK SUMMER HOMES & PYLE RANCH Capital Improvement Projects Paving and reconstruction		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Sheet 39 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended	Improvements







# Recommended Improvements

Kimley-Horn and Associates, Inc.

### COMMUNITIES: BEAVER FLATS

### **Roadway Pavement Recommendations**

- Chip Seal Priority #2
- Resurface Priority #4

### **Capital Improvement Projects**

- - Add paved shoulder
- Road Safety Assessment

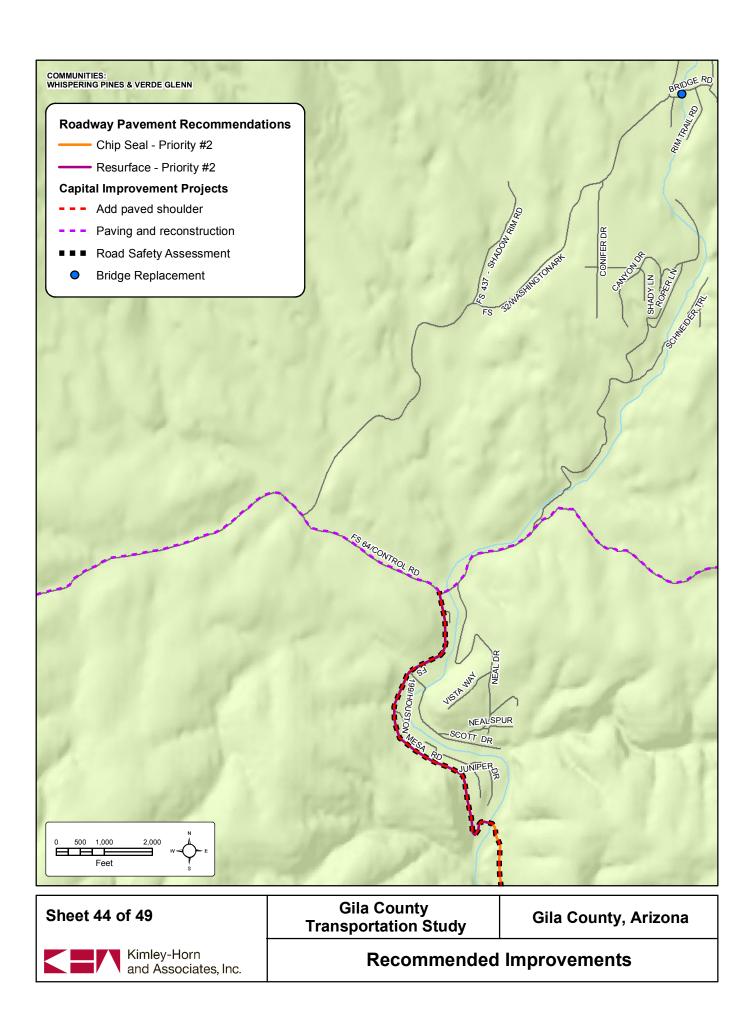


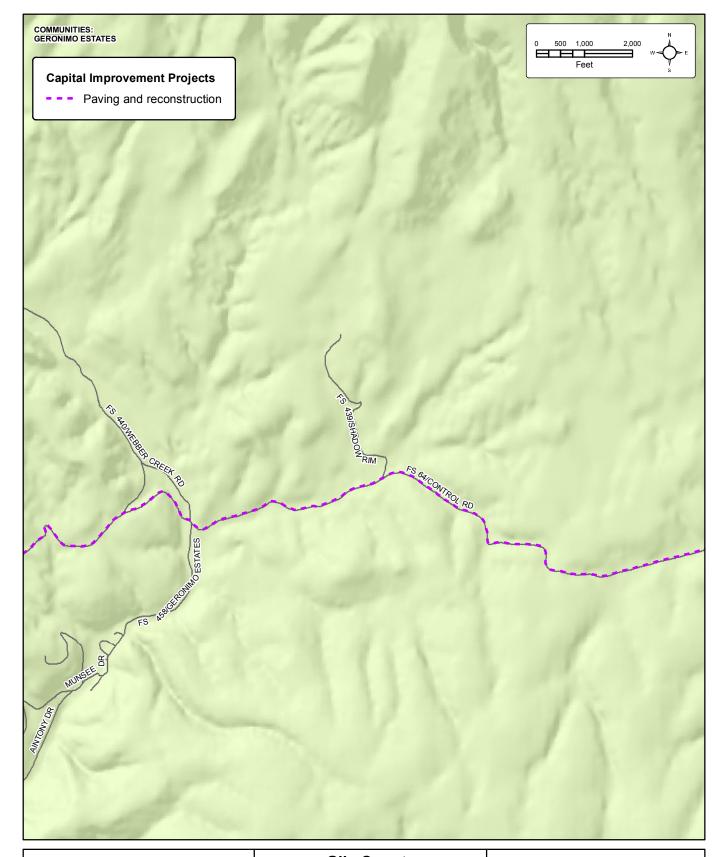
2 EEF

0 500 1,000

Feet

2,000





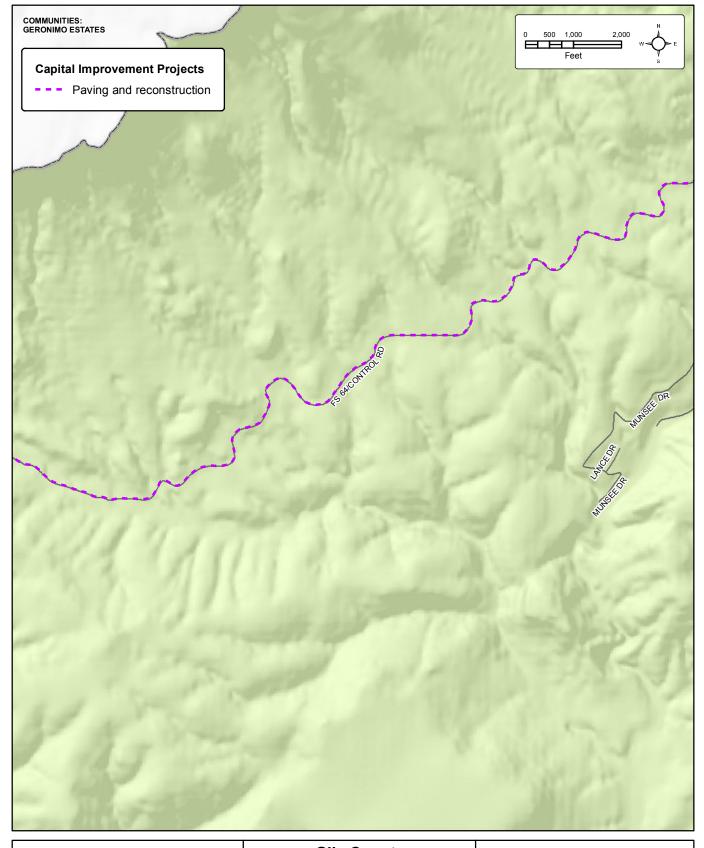
Sheet 45 of 49

Gila County Transportation Study

Gila County, Arizona



Kimley-Horn and Associates, Inc. **Recommended Improvements** 



Sheet 46 of 49

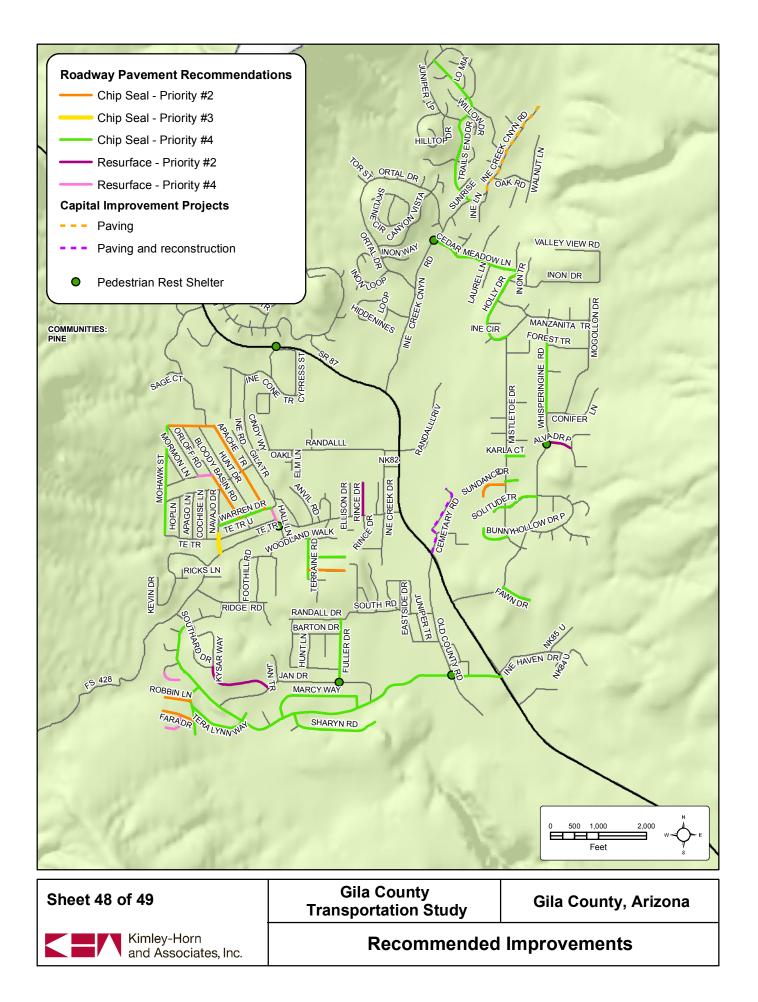
Gila County Transportation Study

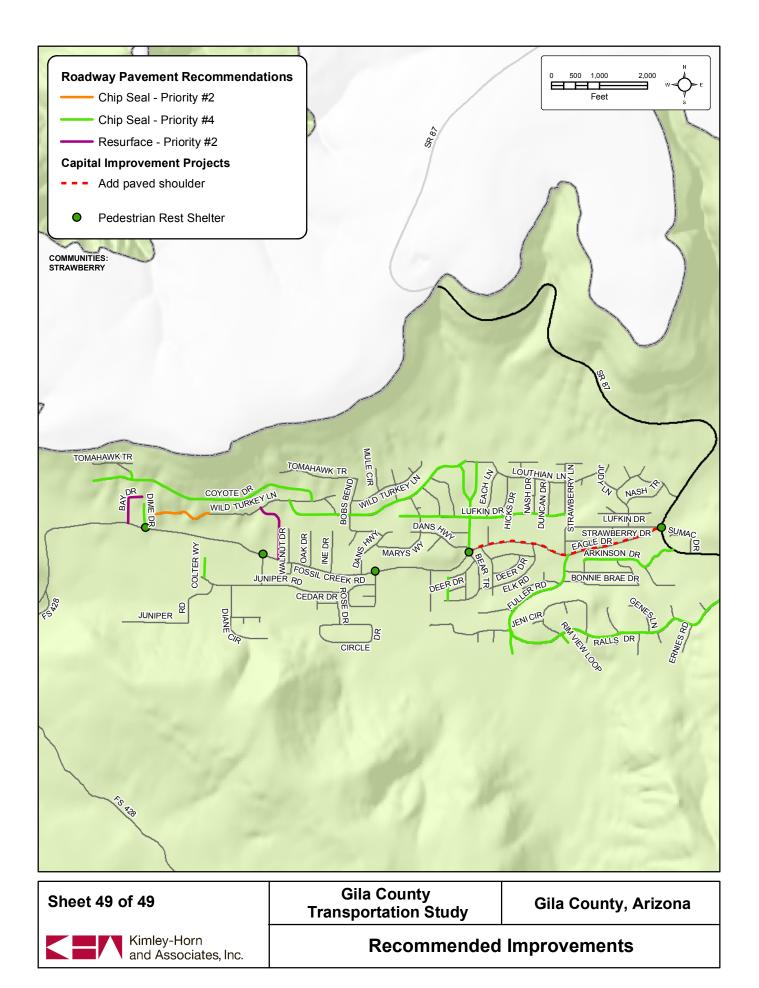
Gila County, Arizona

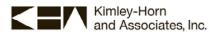


Kimley-Horn and Associates, Inc. **Recommended Improvements** 

BUNNHOLONORP BUNNHOLONORP	100 FS	GICONTROLS
COMMUNITIES: PINE		9 P - 9 8
<ul> <li>Roadway Pavement Recommendat</li> <li>Chip Seal - Priority #2</li> <li>Chip Seal - Priority #4</li> <li>Capital Improvement Projects</li> <li>Paving and reconstruction</li> <li>Pedestrian Rest Shelter</li> </ul>	ions	$0  500  1,000  2,000  w  \stackrel{N}{\longleftarrow} \epsilon$ Feet
Sheet 47 of 49	Gila County Transportation Study	Gila County, Arizona
Kimley-Horn and Associates, Inc.	Recommended	Improvements







# **APPENDIX G – PUBLIC INVOLVEMENT SUMMARY REPORTS**

# **Gila County Transportation Study**

# August 2013

Prepared by Arizona Department of Transportation



# Introduction

Gila County, in partnership with the Arizona Department of Transportation (ADOT) has initiated a study to update Gila County's 2006 Small Area Transportation Plan, identifying the most critical transportation infrastructure needs within the county and recommending a program of improvement projects to address those needs. Elements included in the study include pavement management, roadway, safety, transportation finance, and bicycle and pedestrian facilities.

# **Public Meetings**

To inform and involve Gila County residents in the study, ADOT hosted two public meetings, one in Payson on Tuesday, June 18 at the Payson Public Library from 6-8 p.m. and another in Globe on Wednesday, June 19 at the Gila County Courthouse from 6-8 p.m. Staff present at the meeting included Michael Grandy and Lina Bearat (Kimley-Horn and Associates) and Charla Glendening and Tony Staffaroni (ADOT). Also in attendance in Payson were LaRon Garrett and Curtis Ward (Town of Payson). Globe attendees also included Michael Pastor and John Marcanti (Gila County Supervisors). In addition to a presentation, there was an opportunity for attendees to ask questions and provide comments and recommendations on areas for improvement. In total, 22 Gila County residents were in attendance, nine in Payson and thirteen in Globe.

# **Newspaper Advertisement**

A newspaper advertisement providing the dates and locations of the public meetings was published in both Payson and Globe. A copy of the advertisement can be found in Appendix A.

# **Presentation and Meeting Materials**

A Power Point presentation was given at both meetings and a comment form was provided to each attendee.

The following comments/questions were received during the presentation:

- Would like to see a more detailed map of roads in southern Gila County
- Intersection of US 60/70 is a safety concern, may need a stop light
- Would like to see a scope of a road safety assessment
- Lack of sidewalks by the community center in Globe is a concern
- Number of intersections along US 60 have blind spots or a drop-off at the roadway edge;
- Jesse Hayes Road at Beer Tree Crossing where it turns into Ice House Canyon Road has visibility issues;
- What are the bridges that need to be reconstructed?
- People sometimes don't see the signal at 3rd Street while on US 60;
- Pedestrian hybrid beacon (also known as a HAWK crossing) confuses people;
- Suggest adding Forest Service Road 414 to roadways maintained by Gila County;
- Would like an alternate route west from Payson to go south to Rye for whenever SR 87 is closed due to crashes;
- Any plans to pave Young Road?
- When Pinal Creek floods, traffic has nowhere to go; and



• On Ice House Canyon Road before Albany Way, there are drainage issues when it rains.

# **Comment Form Summary**

The following comments were received and returned via the comment form that was provided at the public meeting. All comments received are included in this summary.

- The Tonto Creek Bridge project needs to be built as soon as possible; too many lives have been lost already. The US Forest Service, Gila County and ADOT have been talking about it for at least 25 years that I have lived in Payson, but little progress has happened.
- Need more pedestrian-friendly road shoulders.
- Need to make narrow roads one-way.
- Bridge Besich Blvd. at the low-water crossing at Russell Gulch that floods when it rains.
- Numerous near-misses due to vehicles pulling out in traffic-several accounts-one seriously injured.
- Can a traffic light be considered at the El Camino & US 60 intersection in Claypool @ Circle K?



# Appendix A

# **Gila County Transportation Study** PROVIDE YOUR INPUT AT THE JUNE 18 AND 19 PUBLIC MEETINGS

Gila County, in partnership with the Arizona Department of Transportation, has initiated a study to identify current and future transportation needs for areas of the county outside of local city limits. These elements will be included in the study:

- Roadway
- Safety
- Transportat
- Pavement management

# Share your thoughts on the transportation needs of Gila County!

Tuesday, June 18, 2013

6 p.m. to 8 p.m.

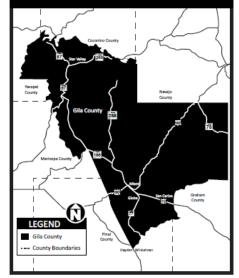
(presentation will begin at 6:15 p.m. with an open house to follow) Payson Public Library 328 N. Mclane Rd., Payson, AZ 85541

Wednesday, June 19, 2013 6 p.m. to 8 p.m. (presentation to begin at 6:15 p.m. with an open house to follow) Globe Courthouse

1400 E. Ash St., Globe, AZ 85501

Bicycle and pedestrian facilities
 Transportation finance

### STUDY AREA



If you require special assistance in order to participate in the public meeting, please contact projects@azdot.gov or 855.712.8530. Requests should be made as soon as possible to allow time to arrange the accommodation.



Rederal Highway Administration 13-307 FOR MORE INFORMATION: 855.712.8530 projects@azdot.gov azdot.gov/gilaPARA



# **Gila County Transportation Study**

# October 2013

Prepared by Arizona Department of Transportation



# Introduction

Gila County, in partnership with the Arizona Department of Transportation (ADOT) has initiated a study to update Gila County's 2006 Small Area Transportation Plan, identifying the most critical transportation infrastructure needs within the county and recommend a program of improvement projects to address those needs. Elements included in the study include pavement management, roadway, safety, transportation finance, and bicycle and pedestrian facilities.

# **Public Meetings**

To inform and involve Gila County residents in the study, ADOT hosted the final round of public meetings of the study, providing study overview and recommendations during two public meetings, the first held in Payson on Tuesday, October 1, 2013, at the Payson Public Library from 5:30 to 7:00 p.m., and the second held in Globe on Wednesday, October 2, 2013, at the Gila County Courthouse from 5:00 to 6:30 p.m. Staff present at the meeting included Michael Grandy and Lina Bearat (Kimley-Horn and Associates), and Charla Glendening and Coralie Cole (ADOT). Also in attendance in Payson was Steve Sanders (Gila County). Globe attendees included Michael Pastor, Steve Sanders, Jacque Griffin, and Don McDaniel (Gila County), Terry Wheeler and Brent Billingsley (City of Globe), and Jesse Gutierrez (ADOT, District Engineer). In addition to a presentation, there was an opportunity for Q&A, comments and recommendations on areas for improvement. In total, seven Gila County residents were in attendance, five in Payson and two in Globe.

# **Newspaper Advertisement**

A newspaper advertisement providing the dates and locations of the public meetings was published in both Payson and Globe. A copy of the advertisement can be found in Appendix A.

# **Presentation and Meeting Materials**

A Power Point presentation was given at both meetings and a comment form was provided to each attendee.

The following comments/questions were received during the presentation:

# Engineering

- Do safety issues drive changes to realignments?
- There are no proposed new roads on these lists, why? Because they are not cost effective?
- What matrix was used to prioritize crash data? Pot holes? Maintenance issues?
- Not many facilities in place for bicycles on county roads there is a higher need for them, especially on roads with faster speed limits.
- How would an improvement district work for roads?
- Difficult to look at maintenance as part of the transportation plan; maintaining the existing network seems to be a focus of this study.



- Houston Mesa Road:
  - Concerns construction vehicles will ruin pavement while working on water pipe project near Mesa Del Caballo
  - Recommend to elevate low-water crossings or replace them with bridges on Houston Mesa Road
  - Recommend while Houston Mesa Road is under construction, no passing should be allowed and the speed limit should be lowered
- Need more speed limit signage, enforcement, and crash analysis on Control Road because drivers are speeding on it now that it has been paved.
- Any discussion of an elevated travel way on Vista Mesa Road?
- What are the drainage issues on East Verde?
- SR 288 is in process of getting improved, so why is it not included on the boards?

### Funding

- Is there a need for additional revenue that is voter authorized?
- Best-case scenario shows \$34M is losing ground just maintaining the existing infrastructure; that is not good.
- The amount of recommended chip sealing for the first five years seems low.
- It is critical to have the towns, cities, and Gila County come together to push the sales tax extension before the election would be nice to have an agreed upon approach to include in this study.
- Does Gila County have a plan of what to do about getting the half-cent sales tax extended like how to promote it, do advertisements, get a citizen committee together, etc.?
- Does the county have plans to inform and promote what they want and need to the public so the public can know what to vote for? Is the county providing seminars or additional meetings?
- Do the HURF (Highway User Revenue Fund) projections assume that the HURF allocation to towns, cities, and counties will return to the same levels they used to be before the legislature reallocated some of the HURF to other uses?
- Reworking funding formulas with the Arizona State legislation would help funding shortfalls.
- Public needs to take a grass root effort to change current conditions; there is not a good exchange of federal funds –what about other states, how do they manage their transportation?
- How much gas tax comes to the county funds for roadways?
- Need to change the formula (tax) to fix this problem.
- Indicate that the excise tax is a voter-authorized sales tax.
- This study goes hand-in-hand with other studies identifying needs and funding sources federal funding, bonds, etc. are other sources of funding.
- HURF is being cut but is included in the percentage of growth, why is this?
- I recognize shortfalls in county budgets and it's good they are thinking of creative financing.



- We are getting closer to elections and need to work together to improve infrastructure; scenarios are needed sooner than later and more partners are needed to solve shortfall problems.
- Regarding city and county projects: recommend flexibility with priorities, sources and a breakout of funding options.
- A lot of funds seem to be going to projects in the northern part of the county.
- For chip-seal projects: \$230,000 is not a lot of funds allocated for this.

# Environmental

- Did the study account for pedestrian and bicyclist needs?
- Not much air quality issue in Gila County, so why was air quality an evaluation criteria?
- On Tonto projects (roads and trails) and regarding Tribal management has there been any communication between these groups? Is the Forest Service part of the technical team?
- As part of ongoing Tonto National Forest travel management plan, some roadways are being closed Gila County needs to identify which roadways need to stay open.
- Debatable whether Tonto National Forest does a good job managing and maintaining roadways

   maybe they should be taken over by ADOT.
- Has the forest service provided any alternative access along Control Road for locals?
- How is progress made with so much complexity and control by the forest service? We have to live by their rules and this makes for a difficult scenario.

# Study/Other

- Make Payson area prominently displayed on maps so not overshadowed by Globe area.
- Need to explain how pavement management needs are prioritized.
- How do you prioritize needs and establish criteria with such a broad range for each project?
- Why is the focus on maintenance instead of new projects?
- There is a need for a county management plan on transportation issues and needs.
- The study needs to firm-up priorities for clarity.
- Explain what an improvement district is and how it works.
- Make sure this study accounts for projects already under construction.
- What is an RSA? Are those assessments (RSA) done by Gila road department? Explain who conducts the RSA.
- Is the county capable of managing projects when they go to bid? Does the county get funds to save for more projects?
- Why is Gila County helping ADOT pay for HWY 260/Lion Springs?
- Sidewalk projects would outlast road rehabilitation projects.
- Can we get citizens of Globe behind these findings because our streets are falling apart?
- Is there a liaison to communicate these issues with the Roundup? Need more exposure on the needs discovered on this study.



- Does the state legislature know of the results of this study? If so, they should see even ten times more detail than what is shown here.
- Want an agreed-upon approach in the study to help "sell the study" overall.
- The next steps should be to show this to local communities; Fall is a good time to present issues to council meetings and get agendas started.
- If the legislators see how it affects them and it "brings it home" kind of like when improvements happened on SR 260 when one of their members had a second home up there then they would be more motivated to help regarding shortfalls.
- When will report be available online? I would like to share the findings of the study.
- Liked the presentation everything was simple and easy to understand.
- It is inspirational for Gila County to partner studies like this.

# **Comment Form Summary**

The following comments were received and returned via the comment form that was provided at the public meeting. All comments received are included in this summary, and a copy of the scanned comment form can be found in Appendix C.

- I fully support a cooperative effort for transportation planning between the cities and the county.
- We need to work toward identifying "Routes of Regional Significance"' that benefit the whole county not just individual residents.
- We need to develop joint standards for arterial facilities that the county and cities approve. This should include right-of-way, access control, lane widths, and multimodal interface.
- The County excise tax needs to be "fairly" shared with the cities.
- We need to develop excise tax "share philosophies" and agree to one prior to the end of the study.
- Let's talk at a Globe Council meeting. Specifically let's discuss the renewal of the 0.5-cent excise tax.



# Appendix A

# Gila County Transportation Study JOIN US AT THE OCTOBER 1 AND 2 PUBLIC MEETINGS

Gila County, in partnership with the Arizona Department of Transportation, has developed draft recommendations to address identified current and future transportation needs on roads owned or maintained by Gila County. Recommendations focus on the following elements:

- Roadway
- Safety
- Pavement management

Tuesday, Oct. 1, 2013 5:30 p.m. (presentation to begin at 6 p.m. with an open house to follow) Payson Public Library 328 N. Mclane Rd. Payson, AZ 85541

Wednesday, Oct. 2, 2013 5 p.m. (presentation to begin at 5:30 p.m. with an open house to follow) Gila County Courthouse Supervisor Room 1400 E. Ash St. Globe, AZ 85501

If you require special assistance in order to participate in the public meeting, please contact projects@azdot.gov or 855.712.8530. Requests should be made as soon as possible to arrange the accommodation.

- Bicycle and pedestrian facilities
- Transportation finance

# STUDY AREA

Learn more about the recommendations to meet the transportation needs of Gila County!



FOR MORE INFORMATION: 855.712.8530 Projects@azdot.gov; azdot.gov/gilaPARA

13-445

