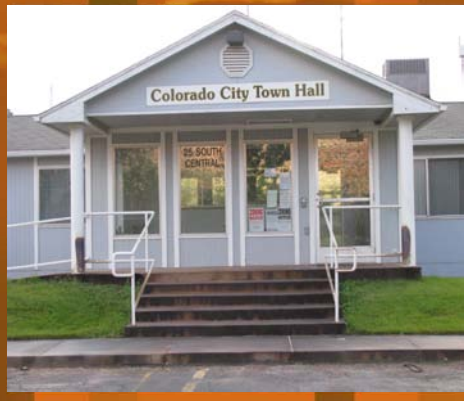
Town of COLORADO CITY Transportation Study

Task Assignment
MPD 36-10



ADOT

1985
COLORADO CITY, ARIZONA

Final Report

September 19, 2011

WilburSmith ASSOCIATES

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1. Introduction

1.1 Background Information

The *Town of Colorado City Transportation Study* was initiated by the Town of Colorado City in cooperation with the Arizona Department of Transportation (ADOT) Multimodal Planning Division. This study, and the resulting transportation plan, is funded through ADOT's Planning Assistance for Rural Areas (PARA) program. ADOT and the Town of Colorado City have retained the consultant team of Wilbur Smith Associates to conduct the study under the oversight and direction of a Technical Advisory Committee (TAC) that includes members from the Town of Colorado City; adjacent Hildale City, Utah; Mohave County; the Arizona Department of Transportation Multimodal Planning Division; the ADOT Flagstaff District Engineer's office; and other interested parties.

Colorado City is within an area of the state referred to as the Arizona Strip. The Arizona Strip is separated from the balance of the state by Marble Canyon, the Grand Canyon, and Lake Mead, all of which are along the Colorado River. There are no vehicular river crossings of the Colorado River between Page, Arizona and the Hoover Dam, a straight line distance of nearly 200 miles. As a result, much of the 5 million acre Arizona Strip is closer to regional urban services in St. George, Utah, 43 miles to the northwest and Las Vegas, Nevada, 161 miles to the west, than to Arizona's urban centers. Page is 113 miles to the east, Flagstaff is 252 miles to the southeast and Phoenix is 354 miles distant. The Mohave County seat of Kingman is 266 miles away. *Figure 1 Regional Context*, shows the location of Colorado City relative to regional destinations.

Figure 1 Regional Context

The town was founded in 1908 and was originally known as Short Creek for a nearby stream that sank into the ground before it had run very far. The community officially changed its name to Colorado City in 1963, but was not incorporated until 1985. Colorado City is located in an incredibly scenic area that has many nearby points of interest including the North Rim of the Grand Canyon, House Rock Valley, Navajo Trail, Cane Beds, Historic Pipe Springs National Monument, Vermillion and Shinorump Cliffs, Steamboat Rock, Kaibab National Forest, Zion National Park, Cedar Breaks National Monument, Coral Pink Sand Dunes State Park, and Lake Powell, Lake Mead, and Glen Canyon National Recreation Areas. The traditional economic focus on agriculture and ranching has shifted over time with growth and urbanization. Colorado City has thriving commercial and retail enterprises while neighboring Hildale has an active industrial park and service industries. Hildale plays an important part in Colorado City's economy. Arizona State Route 389 bisects the

community in a northwest-southeast direction while Short Creek traverses the Town in a northeast-southwest direction.

1.2 Study Area Overview

The study area includes not only the Town of Colorado City, but also the entire local community area encompassing the unincorporated communities of Cane Beds and Centennial Park in Mohave County, Arizona, and the immediately adjacent incorporated community of Hildale in Washington County, Utah. The study area can generally be described as:

- Bounded on the north by the northern boundary of the City of Hildale
- Bounded on the east by Yellowstone Road except for the inclusion of Cane Beds Road and Rosy Canyon Road to the state line
- Bounded on the south by the junction of Yellowstone Road and SR 389
- Bounded on the west by the westernmost corporate boundary of the Town of Colorado City.

The study area is shown in more detail in *Figure 2 Study Area* shown on the next page.

1.3 Study Purpose, Need, and Objectives

This study is intended to update the transportation study done for the Town in 1993. That study is extremely outdated, and the town needs a fresh look and new approach to developing their transportation plan to meet the current and future needs of the community.

Purpose: The purpose of this study is to create a useful, workable transportation system planning document that contains a realistic and achievable program for implementing transportation system improvements throughout the study area over short, medium, and long term time frames.

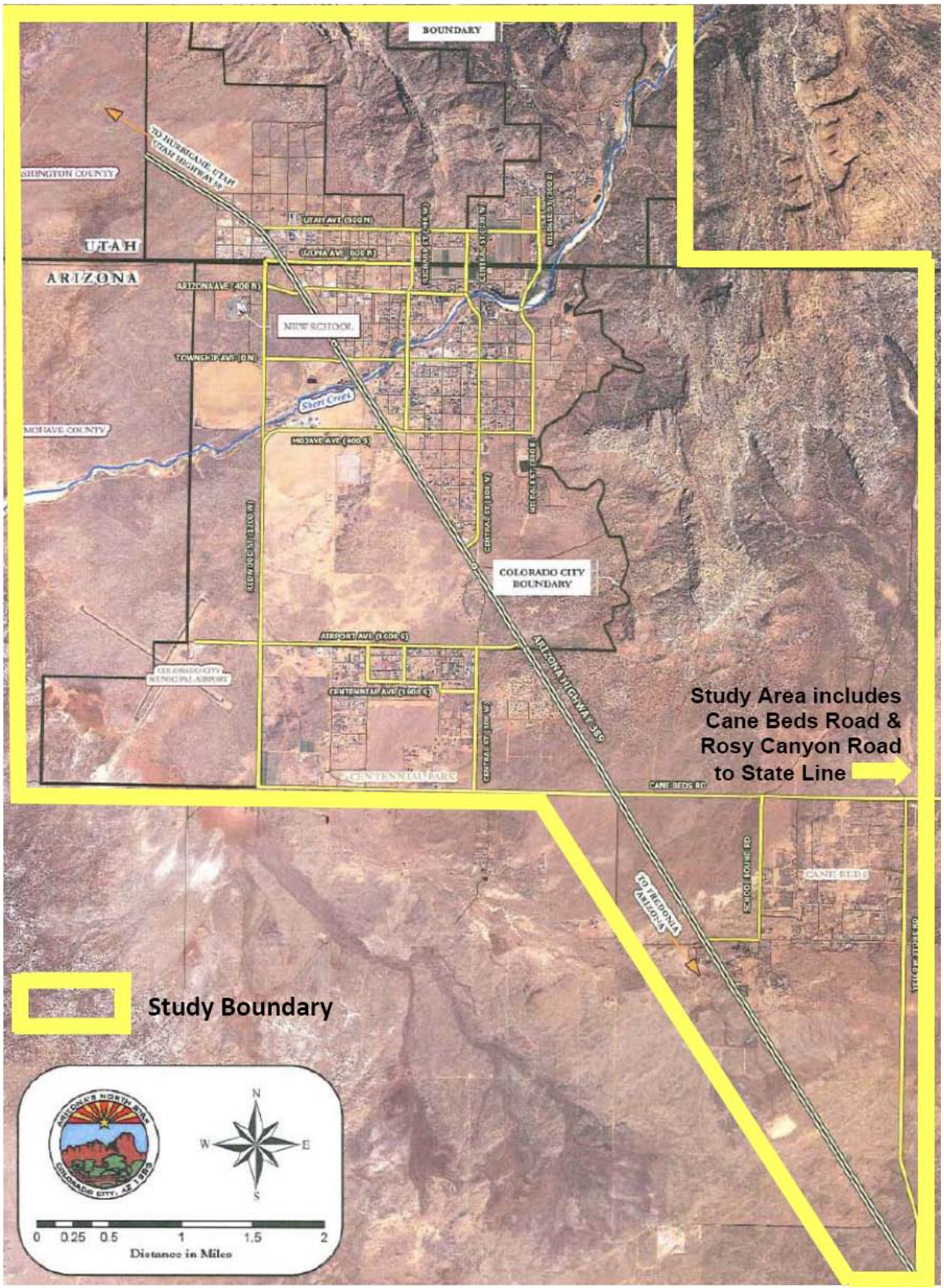
Need: There is a critical need for effective transportation planning to provide improved and safer traffic circulation throughout the study area, especially along the SR 389 corridor.

Objectives: The primary outcomes of this study are set forth in the following listing.

1. *To update the functional classification of roads to optimize the use of state and federal funds*
2. *To improve the transportation system infrastructure to meet current and future needs*
3. *To consider and address traffic circulation, capacity, and safety of the principal access routes*
4. *To improve multimodal accessibility and safety for all residents and visitors*
5. *To minimize and mitigate any adverse community and environmental impacts*
6. *To receive mapping, street details, cross-sections, and guidelines for ongoing use by the Town*

The transportation plan addresses current and future demands placed on the area's streets, highways, and multimodal facilities. The focus is on vehicular traffic and roadways, but this study also takes into account the current and needed multimodal facilities. This includes bus transit, bicycle, and pedestrian modes of transportation, in addition to the vehicular modes of transportation. The study is driven not only by the anticipated growth in both population and traffic volumes within the study area, but also by the need to address through traffic movements on SR 389 and pressing needs for safe access onto, off of, and across the highway by local traffic and pedestrians. The plan includes an implementation program with specific projects that address the identified needs and that can be accomplished in manageable phases. The program is categorized into five, ten, and twenty year horizons.

Figure 2 Study Area



1.4 Previous Plans and Studies

The first transportation study for the Town of Colorado City was completed in 1993. This study has served its purposed, and is now outdated. The Colorado City General Plan was done in 2002. In 2008, the *Colorado City Municipal Airport Master Plan* was completed. Other applicable planning documents that were reviewed to help develop this new plan include ADOT's *State Airport System Plan* and regional plans for Eastern Washington County, Utah, and the Dixie Metropolitan Planning Organization for the St. George, Utah metropolitan area. The Utah documents were reviewed for regional context north of the state line but greatly influencing the local community. In addition, the Mohave County General Plan was reviewed.

From 2007 through early 2010, ADOT developed a very long range visioning process called *Building a Quality Arizona* (a.k.a. bqAZ). This process included the development of four regional studies known as framework studies for the northern, western, eastern, and central Arizona areas. Additional smaller area framework studies were undertaken for metropolitan areas of the state simultaneously. These visioning efforts were not fiscally constrained; and focused on year 2050 and beyond to "build-out" conditions, where capacity of the state's developable lands was achieved. Three alternative scenarios were explored for each area, individually focusing on personal vehicular mobility, public transit, and focused growth (an effort to direct new development near existing development and infrastructure) alternatives. The Western Arizona Framework study and reported results were reviewed as part of this study effort to identify issues and needs relevant to the Colorado City community.

Several tactics were employed to gather all available background information and data pertinent to the study area. First, the local liaisons for the project were asked to submit all study reports and background information that they were aware of for Colorado City, Hilsdale, Mohave and Washington (Utah) counties, and ADOT. The TAC members were also asked for their input on identifying any additional reports or studies done in the area. In a final effort to ensure that all studies were accounted for, stakeholders were asked during their interviews if they had or were aware of any reports or studies. By including all local contacts in this process, the study team was able to compile a comprehensive reference library of project and study reports that have been previously completed in the study area. This effort creates continuity between this report and previous studies, and builds on the information already collected and planning efforts already completed to fully serve the residents of the Colorado City community. A complete list of these studies and reports can be found in *Appendix 2*.

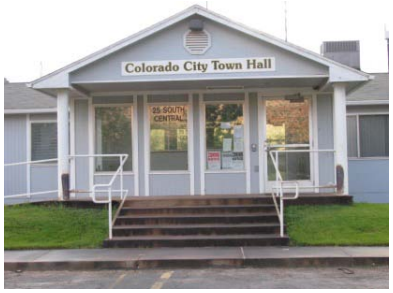
1.5 Community Involvement

The *Town of Colorado City Transportation Study* public involvement program is being conducted as a cooperative planning process involving project stakeholders that include public agency staff, elected officials, and interested members of the general public. Public participation is an integral part of this transportation planning study, and study related information is presented to, and feedback solicited from, stakeholders throughout each phase of the study. ADOT's Communications and Community Partnerships Division (CCP) leads the public involvement effort with the aid of their consultant consortia. The following sections summarize key components of the public involvement program.

1.5.1 Technical Advisory Committee

The Technical Advisory Committee was formed at the onset of the study with key members participating in refining and finalizing the study work program. TAC meetings are held upon the submittal of each working paper to review study results and to provide guidance and input into the planning process. The TAC members can then keep their respective agency or groups fully informed on the planning process and study progress, and can bring forth appropriate issues that may require consideration and/or technical analysis to the attention of the project team.

Agency and stakeholder members of the TAC include:



- Audra Merrick, ADOT Flagstaff District Engineer's office
- Steve Mackelprang, ADOT Flagstaff District Engineer's office
- Justin Feek, ADOT MPD Project Manager
- Scott Florence, BLM District Manager
- Lorraine Christian, BLM Field Manager
- Laurie Ford, BLM Realty Specialist
- Dean Cooke, Colorado City Director of Public Works
- Jonathan Roundy, Colorado City Town Marshall
- David Darger, Colorado City Town Manager
- Freeman Barlow, Colorado City/Hildale Building Official
- Jake Barlow, Colorado City/Hildale Fire Chief
- Jeremiah Barlow, Hildale City Manager
- Steve Latoski, Mohave County Public Works Director
- Sharon Mitchell, WACOG Transportation Planner
- Charles Hammon, engineering consultant for local projects
- Mike Bradshaw, engineering consultant for local projects


SR 389 in Colorado City

Consultant team members of the TAC include:

- Amy Rosar, Public Involvement Coordinator, KDA
- Dale Miller, Project Manager, Wilbur Smith Associates
- Randall Overmyer, Transportation Planner, Wilbur Smith Associates

1.5.2 Public Open Houses

Public open houses were scheduled after submittal of study working papers throughout the course of the study. These meetings were advertised in local newspapers, through postings in visible places, and through notification of the TAC members, stakeholders, and other interested parties. These meetings served as a means to communicate with the general public throughout the planning process to make sure that their concerns were heard and addressed as appropriate, and to apprise them of the progress and findings of the study. These meetings are important to the overall planning process, as they helped inform the study team on any issues, concerns, or background information that might have otherwise been missed by the project team and the Technical Advisory Committee.

1.5.3 Stakeholder Meetings

Stakeholder interviews were held during the development of this working paper. These meetings were used to solicit and receive input from individuals and/or groups that may not be members of the TAC, but who are major stakeholders and interested parties for the study. The study team conducted these interviews with the participants to learn about issues of concern to them, solicit their input, and to answer any questions that they may have regarding the study. Each stakeholder was given a list of questions to think about before their meeting so that they had time to gather their thoughts on transportation issues and information that they wanted to discuss. The invitation sent to the stakeholders, and the summarized meeting notes from interviews, can be found in *Appendix 1*.

2. Inventory of Current Conditions

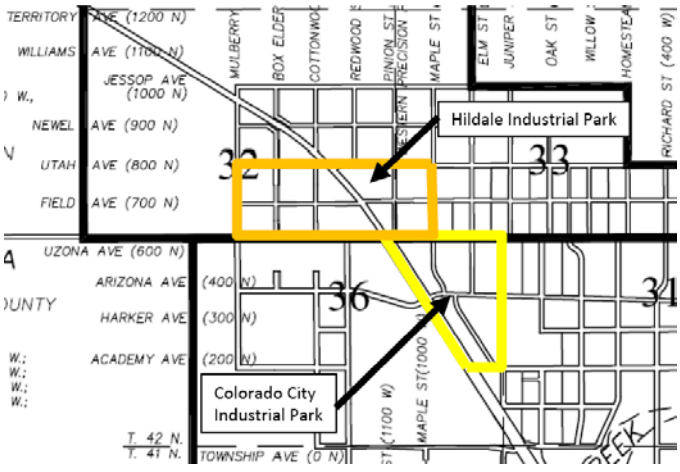
2.1 Land Use, Population, and Socioeconomics

2.1.1 Land Use

The development of the Town of Colorado City and the City of Hildale is characterized by ten-acre residential blocks on a grid street pattern northeast of SR 389/Utah Route 59. The average residential density is under two units per acre. Colorado City has no zoning ordinance, and works with residents to encourage development consistent with the Town's plans, including the 2002 General Plan.

Startup businesses exist throughout Colorado City and Hildale, typically adjacent to residences on the large residential parcels. As these businesses mature, they can relocate to available commercial areas located along the state highway in the vicinity of the state line or to areas near the airport. Additional commercial/retail and employment areas are found in the vicinity of the Town Hall at Township Avenue and Central Street and along SR 389. The Colorado City Airport is located southwest of SR 389 to the west of the Centennial Park community. The Town has identified future industrial uses in the area immediately surrounding the airport, which can be readily accessed by Airport Avenue from highway SR 389.

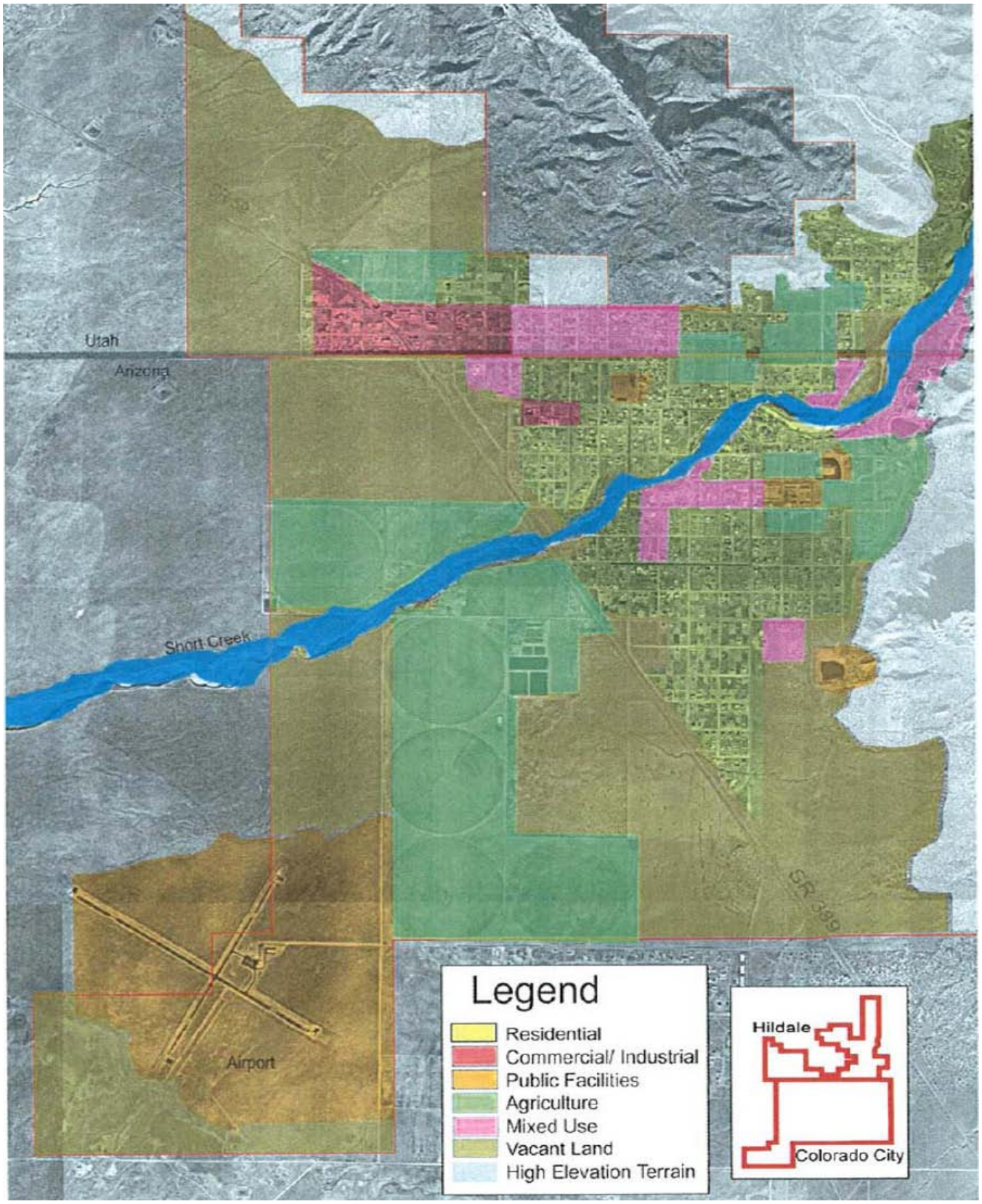
Figure 3 Industrial Park Locations



More commercial and industrial uses exist in Hildale, where there is an industrial park adjacent to, and on both sides of, Utah SR 59. The *Town of Colorado City General Plan* notes that the stricter access management policies that ADOT has for the Arizona State Highway System has encouraged employment and commercial uses to locate north of the Utah state line, where less restrictive access practices are in place for Utah SR 59.

Existing Land Uses in the community are shown in *Figure 4 Current Land Use* on the next page.

Figure 4 Current Land Use

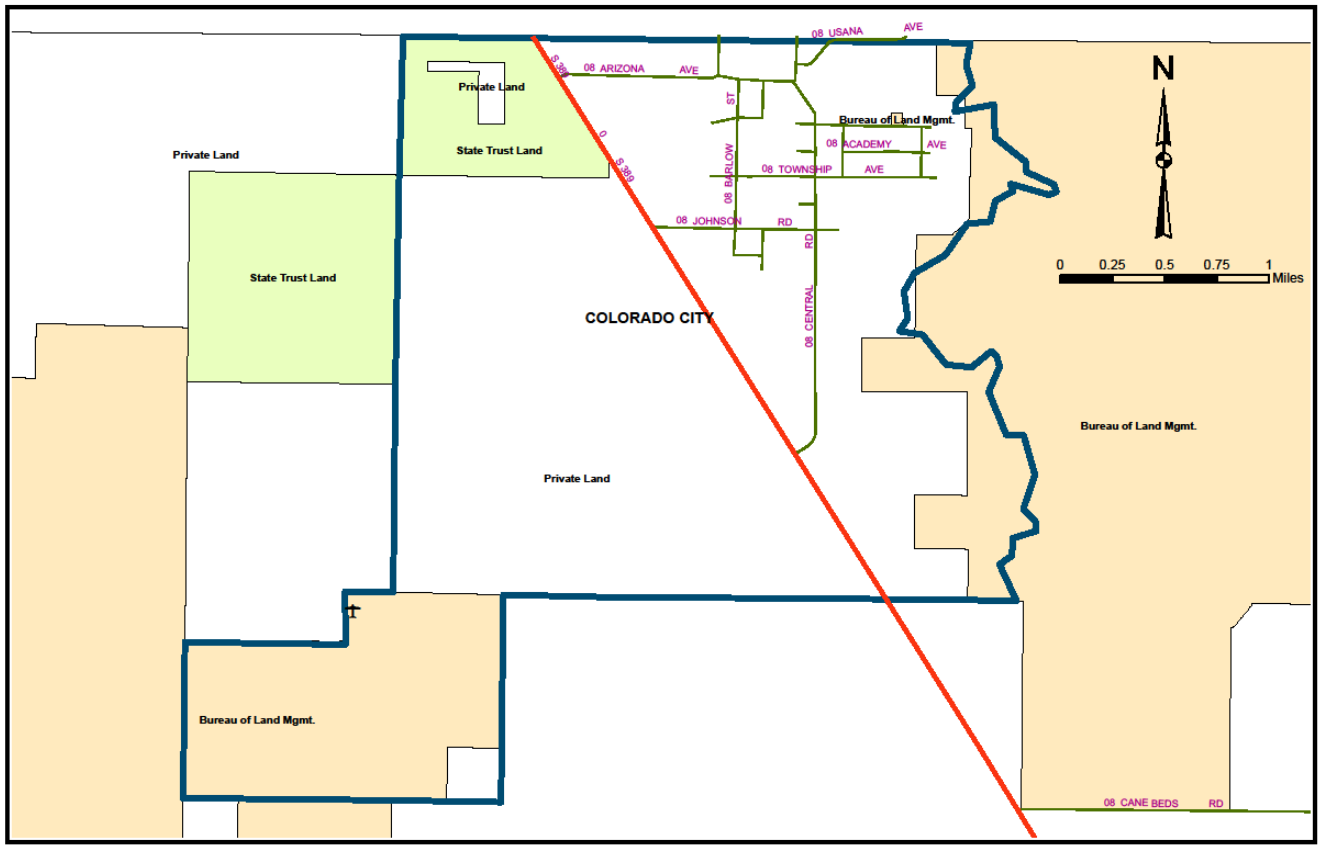


Source: 2002 Town of Colorado City General Plan

A portion of the lands in the study area are still used for agricultural purposes. About 15% of the study area is still used for agriculture, which is a use supported by the Town's General Plan. The General Plan reports that 29% of the land in the city is currently vacant and another 28% has slopes above 12% which makes development a little more difficult and expensive.

The Bureau of Land Management (BLM), the Arizona State Land Department, and the Utah Land Department have significant land holdings in the study area. Much of the private land in the study area is owned by the United Effort Plan Trust, a land holding trust of the Fundamentalist Church of Jesus Christ of Latter Day Saints. Land ownership is shown in *Figure 5 Public Lands Ownership*.

Figure 5 Public Lands Ownership



A new school campus exists west of SR 389 at the southwest corner of Arizona Avenue and Cottonwood Street. The issue of school related traffic and pedestrians crossing the highway will be further investigated during this study and specific mitigation measures will be recommended in subsequent working papers.

2.1.2 Social Characteristics

The current estimated population of Colorado City is 4,835 people, and the estimated population of Hildale is 2,430 people. According to the U.S. Census Bureau, the following information for the study area was collected from the 2000 census:

Table 1 Social Characteristics

Statistics for 2000	Arizona Portion of Study Area*	Colorado City, AZ	Hildale, UT	National Average
Less than 5 years old	21.5%	20.5%	22.6%	6.8%
18 years old and older	74.3%	39.6%	36.4%	74.3%
65 years and older	1.5%	1.7%	2.8%	12.4%
Median Age	14	14.3	13	35.3
Family size	7.25	7.88	8.10	3.14
High School Graduate	71.5%	70.6%	73.2%	80.4%
College Graduate	5.8%	5.2%	8.8%	24.4%
Disability Status	9.7%	10.4%	10.7%	19.3

**Includes Town of Colorado City and unincorporated Cane Beds and Centennial Park communities.*
Source: U.S. Census Bureau, 2000 Census Data

2.1.3 Economic Characteristics

The following workforce information for the study area was collected during the 2000 census:

Table 2 Economic Characteristics

Workforce Category Statistics	Colorado City, AZ	Hildale City, UT	National Average
Adult Pop. (16+) in Workforce	58%	55.9%	63.9%
Construction/Maintenance	32%	20%	N/A
Sales and Office	22%	24%	N/A
Production/Transportation	19%	22%	N/A
Mgmt. & Professional	18%	27%	N/A
Service	9%	7%	N/A

Source: U.S. Census Bureau, 2000 Census Data

Just over 13% of the workers were employed by the public sector. According to the 2000 Census data, workers in the study area drove an average of 26 minutes to work; almost exactly the same as the national average.

Currently unemployment rates are 11.1% for Mohave County, Arizona and 9.8% for Washington County, Utah, according to the U.S. Bureau of Labor Statistics. The current slowdown in the construction industry has dramatically influenced these rates, especially around the communities of St. George, Utah, and Kingman, Lake Havasu City, and Bullhead City, Arizona, which have historically experienced rapid residential growth.

The U.S. Census Bureau reports that the average household income is $50,389 in Washington County, Utah, and $38,641 in Mohave County, Arizona. The Washington County figure is influenced by the higher incomes levels in the St. George metropolitan area, and may not be accurate for Hildale.

2.2 Roadway System Inventory and Traffic Analysis

This section describes and defines the existing critical roadway network for the study area. These are the significant routes that carry the majority of traffic circulating through and within the area. This section also discusses the existing traffic and traffic control on these routes.

Because the roadway network carries the majority of the trips made in most communities in the United States, and this is certainly true in Colorado City as well, it is the backbone transportation infrastructure for the community. The roadway network in the Colorado City community consists of SR 389 and the local and county roadways in the study area. These routes move people and commodities throughout and beyond Colorado City, Hildale, Centennial Park, Cane Beds, and the balance of the study area. This roadway network comprises the primary surface transportation system, is shown in *Figure 6 Major Streets 1 of 2* and *Figure 7 Major Streets 2 of 2* on the following pages, and is discussed in more detail in the following sections.

2.2.1 Roadway Network and Functional Classifications

Per the Federal Highway Administration (FHWA), functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network. Functional classifications of roadways are used in transportation planning, roadway design, and to allocate federal roadway improvement funds.

Table 3 Functional Classification

Hierarchy of Functional Classification System	
Rural Areas	**Urbanized Areas**
Principal Arterials	Principal Arterials
Minor Arterial Roads	Minor Arterial Streets
Collector Roads	Collector Streets
Local Roads	Local Streets

These FHWA classifications are listed in descending (high to low) order of speed limit, vehicular capacity, and access restrictions. Urban and rural areas have fundamentally different characteristics as to density and types of land use, density of street and highway networks, nature of travel patterns, and the way in which all these elements are related in the definitions of highway function. Consequently, functional classifications provide for separate classification of urban and rural functional systems. Experience has shown that extensions of rural arterial and collector routes provide an adequate arterial street network in places with a population of less than 5,000. Hence, urban classifications are considered in the context of areas of population of 5,000 or more.

Figure 6 Major Streets 1 of 2

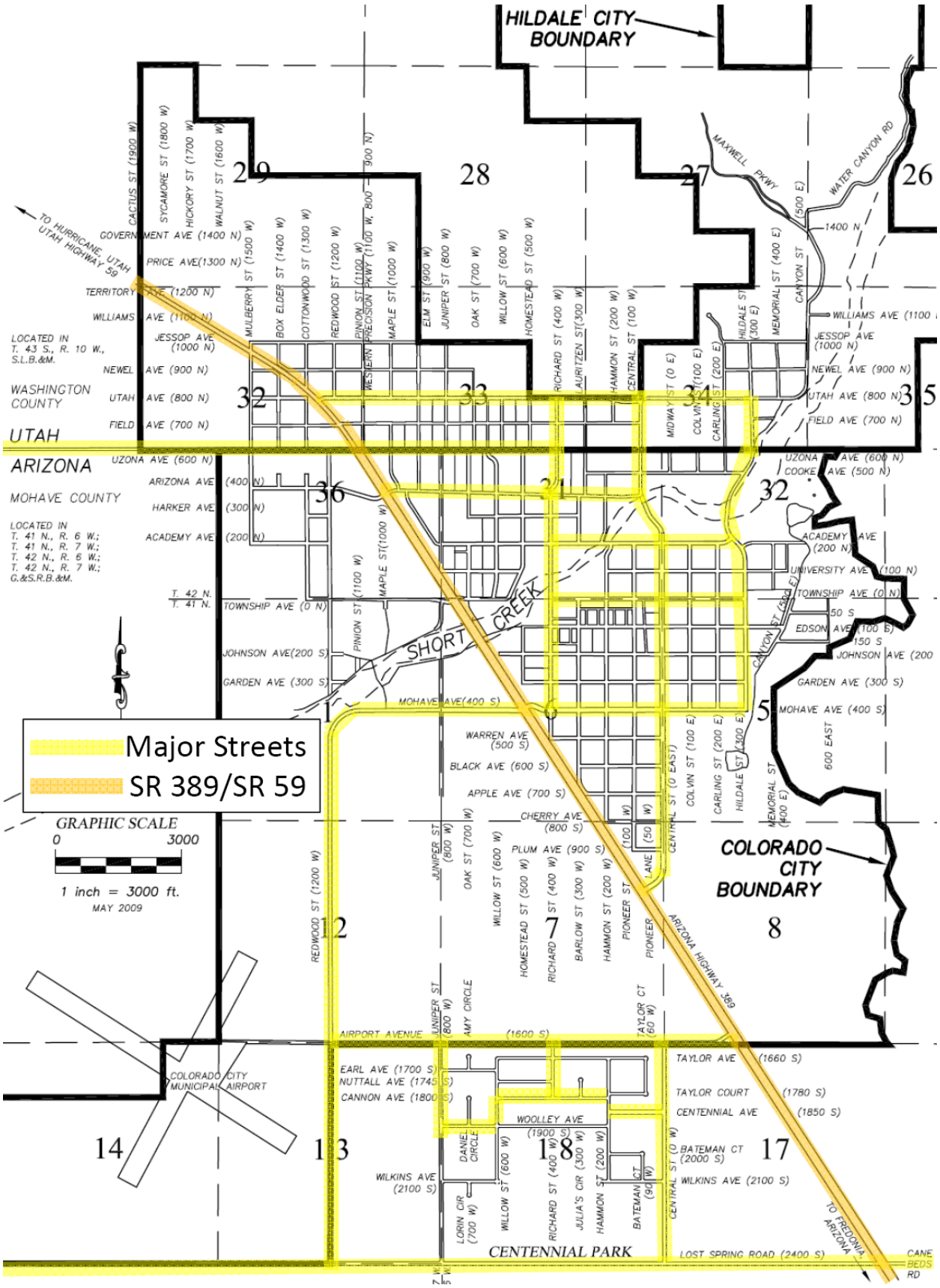
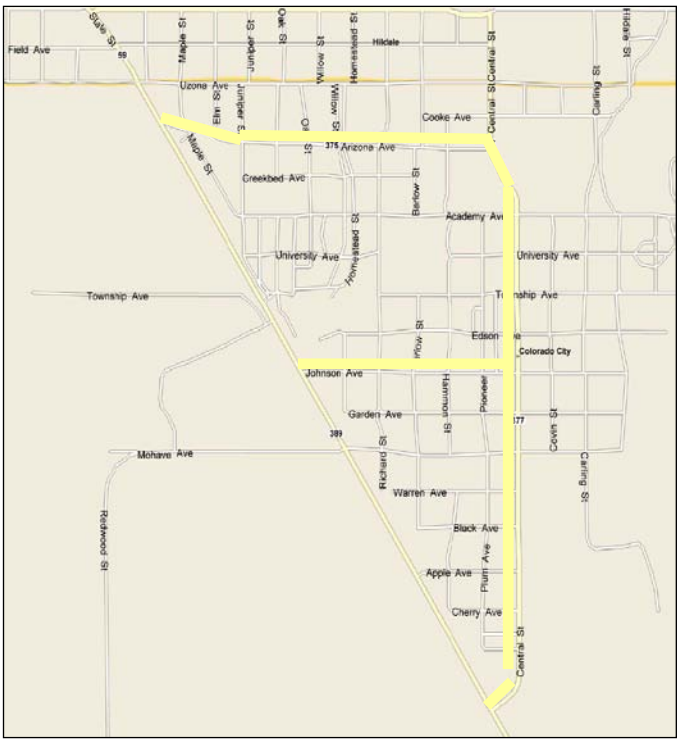


Figure 7 Major Streets 2 of 2

Figure 8 Functionally Classified Town Roads



The process of classifying roadways in Arizona is led by ADOT in cooperation with the regional councils of governments; in this case, the *Western Arizona Council of Governments* (WACOG). All roads that are part of the public roadway network are to be classified. For a project to be eligible for federal funding, and to be included in the State Transportation Improvement Plan (STIP), the roadway in question must be functionally classified as a major collector or above.

ADOT's HPMS data shows that the Town's streets listed below, and shown in the map to the right, are those that are currently classified as major collectors and thus are eligible for federal funding assistance:

- Central Street, from SR-389 to Arizona Ave
- Johnson Avenue, from SR-389 to Central St
- Arizona Avenue, from SR-389 to Central St

It should be noted that Johnson Avenue was formerly connected to SR 389 and served as a major collector street. However, this connection to SR 389 was eliminated due to its close proximity to the SR 389 bridge over Short Creek causing insufficient space for an improved intersection and sight distance problems due to the structure's side walls. Because of this, the street intersection with SR 389 was moved south to connect with Mohave Avenue. Mohave Avenue now accommodates much of the traffic flow to and from the highway that previously was served by Johnson Avenue. Mohave Avenue should therefore be reclassified as a major collector in recognition of this change, and Johnson Avenue should be reclassified as a local street.

There are other major streets in the study area *(see Figures 5 and 6)* that may also qualify for an upgrade in functional classification, thereby making the major street segments eligible for state and federal aid. If a street segment qualifies, the study effort will include assisting the Town of Colorado City with its application for the warranted change in functional classification. ADOT has a process for modifying routes on Arizona's approved functional classification system. Applications for reclassification are submitted to ADOT through WACOG. The application identifies the routes to be added or deleted, route termini, average daily traffic, and rationale for justifying the change in functional classification. ADOT's Multimodal Planning Division reviews the application and the impacts of reclassification on the roadway system balance for the surrounding system. They will take into account the opinions and views of local officials, WACOG, and the ADOT Flagstaff District Engineer. If approved by ADOT, the request is then forwarded to the FHWA for their concurrence and approval.

The primary candidates for upgraded functional classification based on current conditions are:

- Township Avenue from Richard Street to Hildale Street
- Mohave Avenue from Redwood Street to Hildale Street
- Airport Avenue from Redwood Street to SR 389
- Cane Beds Road from Central Street to SR 389 and east to Rosy Canyon Road
- Redwood Street from Airport Road to Mohave Avenue
- Richard Street from Mohave Avenue to Uzona Avenue
- Hildale Street from Mohave Avenue to Uzona Avenue
- Rosy Canyon Road from Cane Beds Road to the Utah State Line
- Academy Avenue from Richard Street to Hildale Street


Mohave Avenue to the west across Central Street

In Hildale, the major streets based on current conditions are:

- Utah Avenue from UT SR 59 to Hildale Street
- Richard Street from Uzona Avenue to Utah Avenue
- Central Street from Uzona Avenue to Utah Avenue
- Hildale Street from Uzona Avenue to Utah Avenue

2.2.2 Roadway Characteristics

All of the streets and roads in the Colorado City study area are 2-lane undivided facilities. Many of the streets in the developed areas of Colorado City and Hildale have been paved or chip sealed, as the Town and City each have a program in place to improve streets as monies become available. The following street segments are still unimproved or dirt.

- Cooke Avenue
- Township Avenue west of Short Creek
- Academy Avenue west of Central Street
- Arizona Ave from SR 389 to Elm Street
- Edson Avenue
- Garden Avenue
- Harker Avenue
- Warren Avenue
- Black Avenue
- Apple Avenue
- Cherry Avenue
- Plum Avenue
- Maple Street
- Redwood Street south of Airport Avenue
- Juniper Street
- Oak Street
- Willow Street
- Homestead Street
- Lauritzen Street
- Hammon Street
- Pioneer Street
- Pioneer Lane
- Colvin Street south of Academy Avenue
- Carling Street south of Academy Avenue
- Canyon Street south of Township Avenue

In Hildale, all local roadways are unpaved east of Maple Street except for Utah Avenue, Hildale Street, and parts of Canyon Street. The locations of unimproved streets are shown in *Figure 9 Unimproved Roads* shown on the following page.

2.2.3 Safety and Crash History

Crash data was obtained from the ADOT Traffic Records Section for the period including January 2005 through August of 2010. In addition, the Town of Colorado City provided supplemental crash data from their records for the calendar years 2005 through 2010.

Crash severities for both the ADOT records and the supplemental Town records are shown on Figures 10 through 13. Crash types for the ADOT records and the supplemental Town records are shown on Figures 14 through 17. These figures are found on the following pages. Note that the ADOT crash records are identified by a circle on the figures while the supplemental Town records are identified by a triangle on the figures.

During the six year analysis period, the ADOT data showed 29 crashes on SR 389 and 62 crashes on local streets and roads within the study area. Adding in the local crash data, there were 48 total crashes on the highway and 129 total crashes on local streets and roads. There were a number of animal or livestock related crashes, which are more typically found in rural than in urban areas.

There were three fatal crashes on study area roads during the analysis period (2005 – 2010). All of these fatal crashes occurred on SR 389.

There were ten pedestrian involved collisions, including six in the main Town area and 4 in the Centennial Park neighborhood. There were fourteen bicycle involved crashes reported, all in the main Town area.

Figure 9 Unimproved Roads

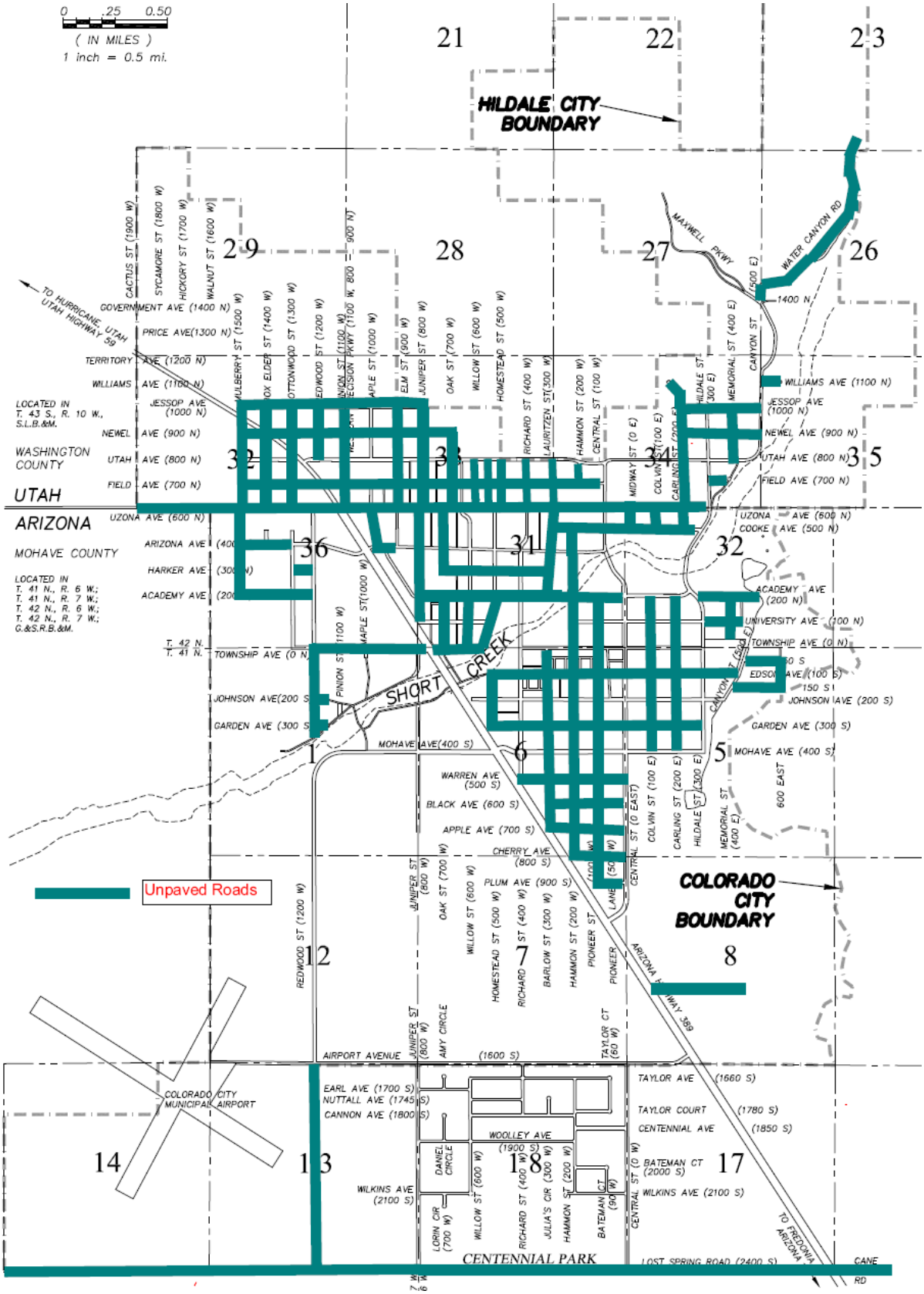


Figure 10 Crash Severity – Main Town Area 2005 – AUG 2010

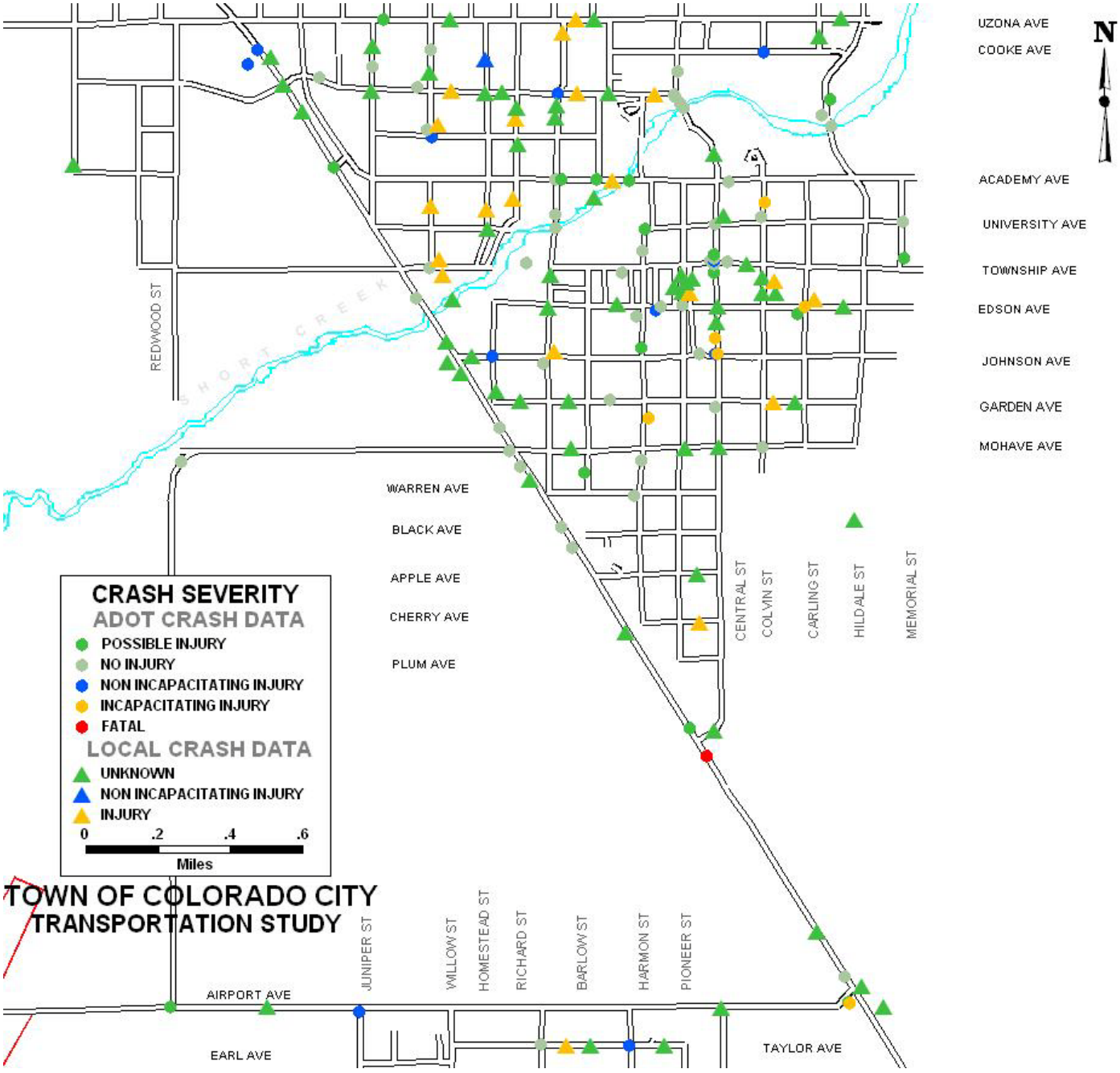


Figure 11 Crash Severity – Centennial Park Area 2005 – AUG 2010

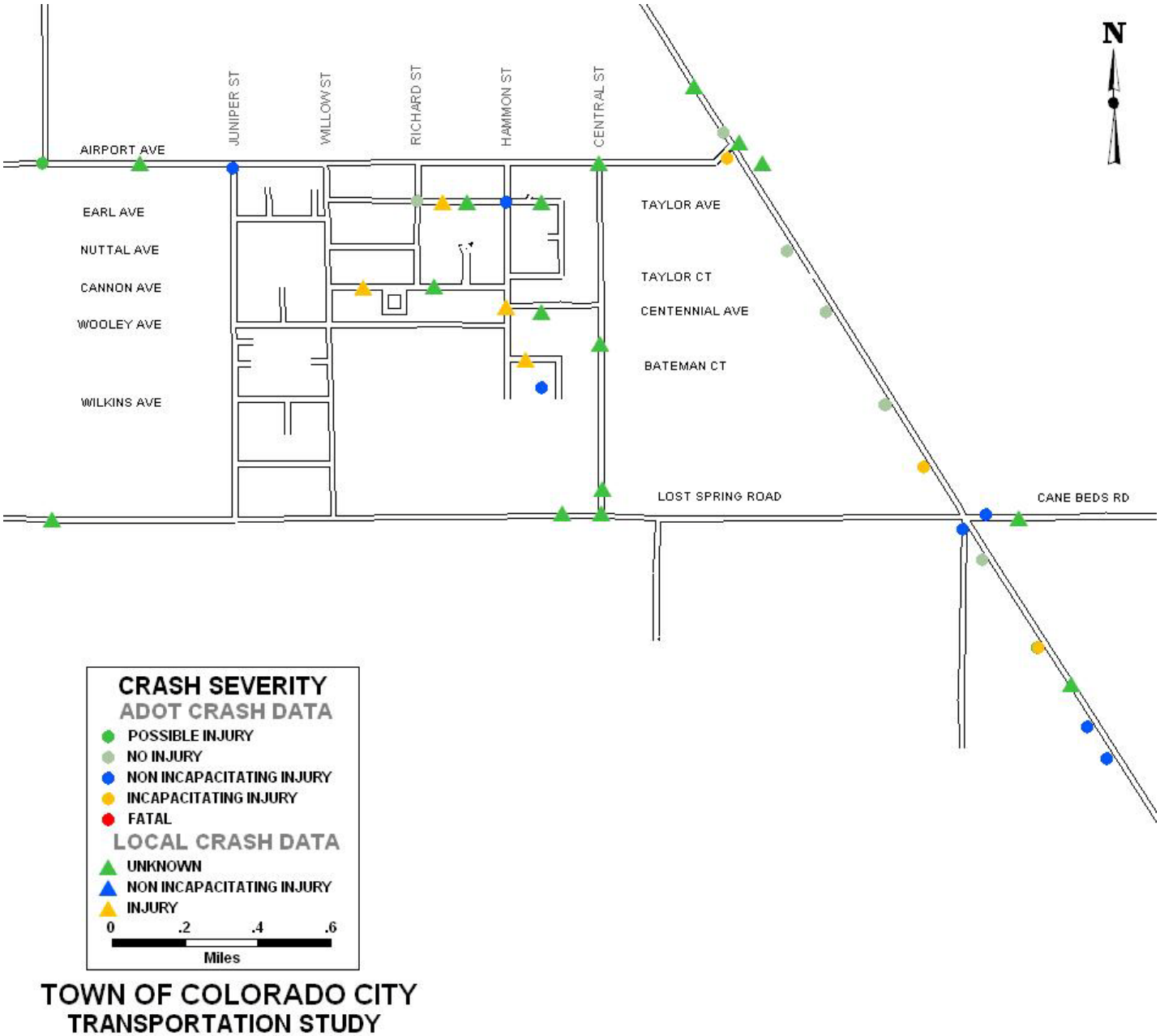


Figure 12 Crash Severity – Cane Beds Area 2005 – AUG 2010

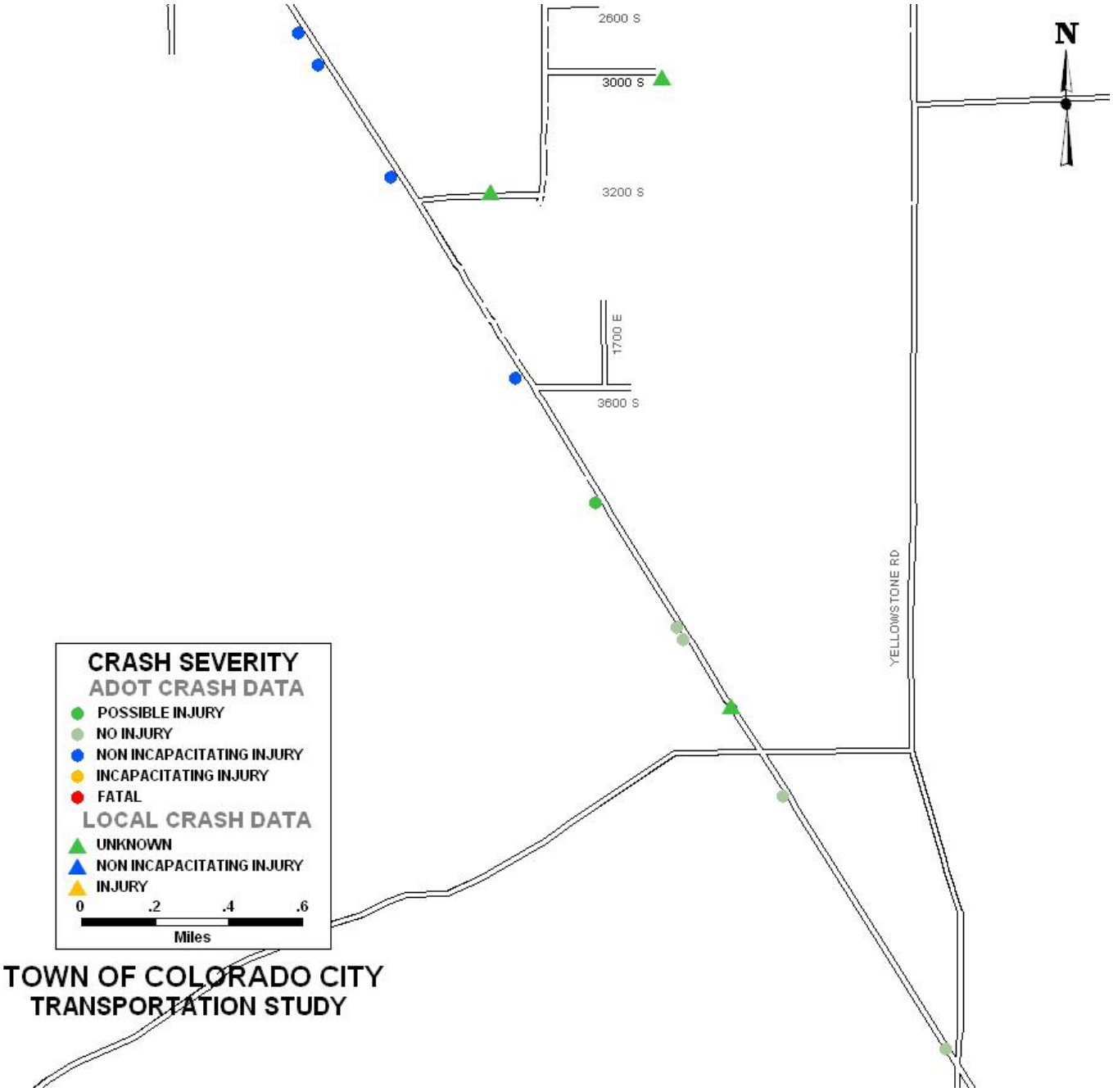


Figure 13 Crash Severity – SE HWY 389 Area 2005 – AUG 2010

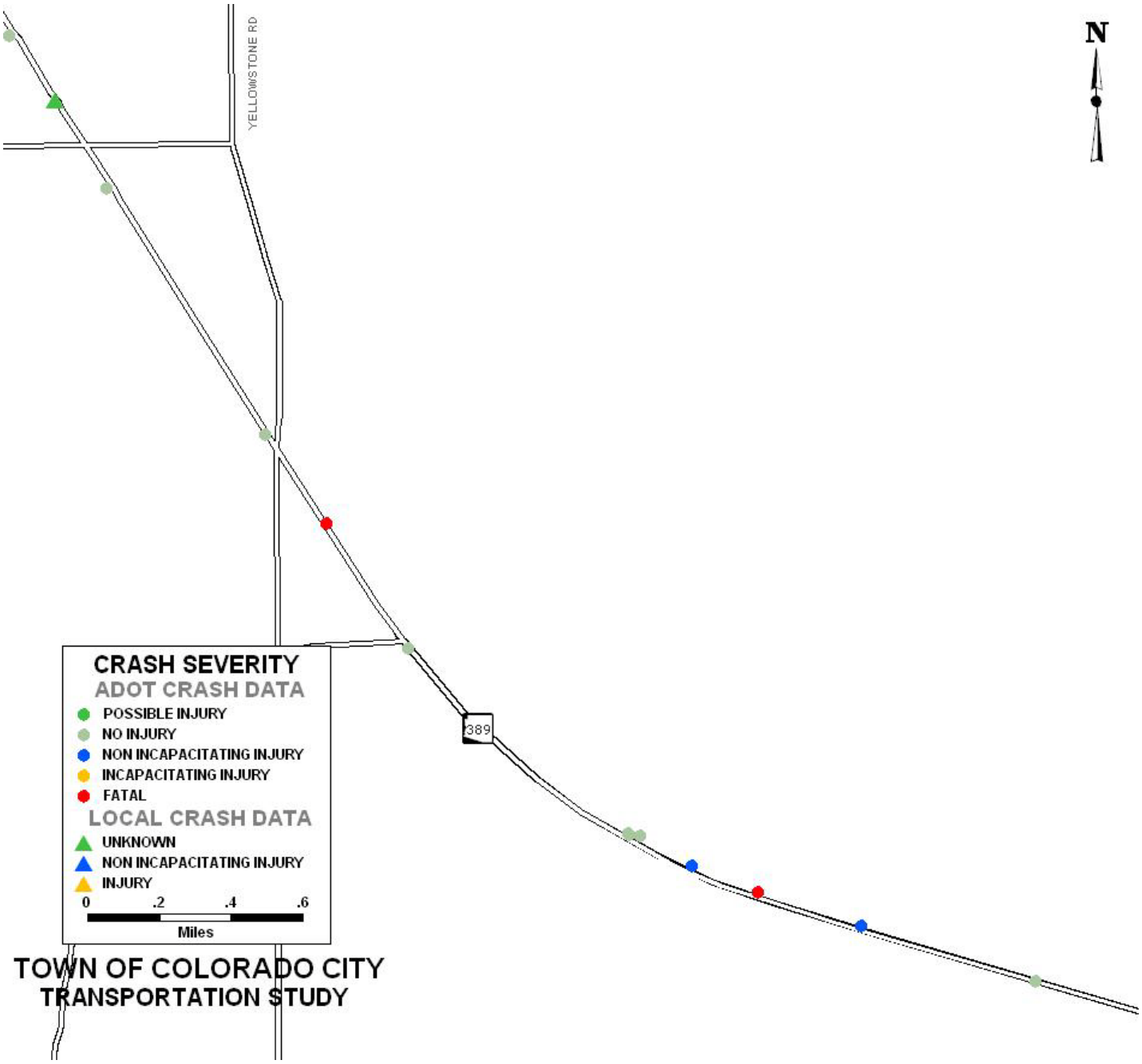


Figure 14 Crash Type – Main Town Area 2005 – AUG 2010

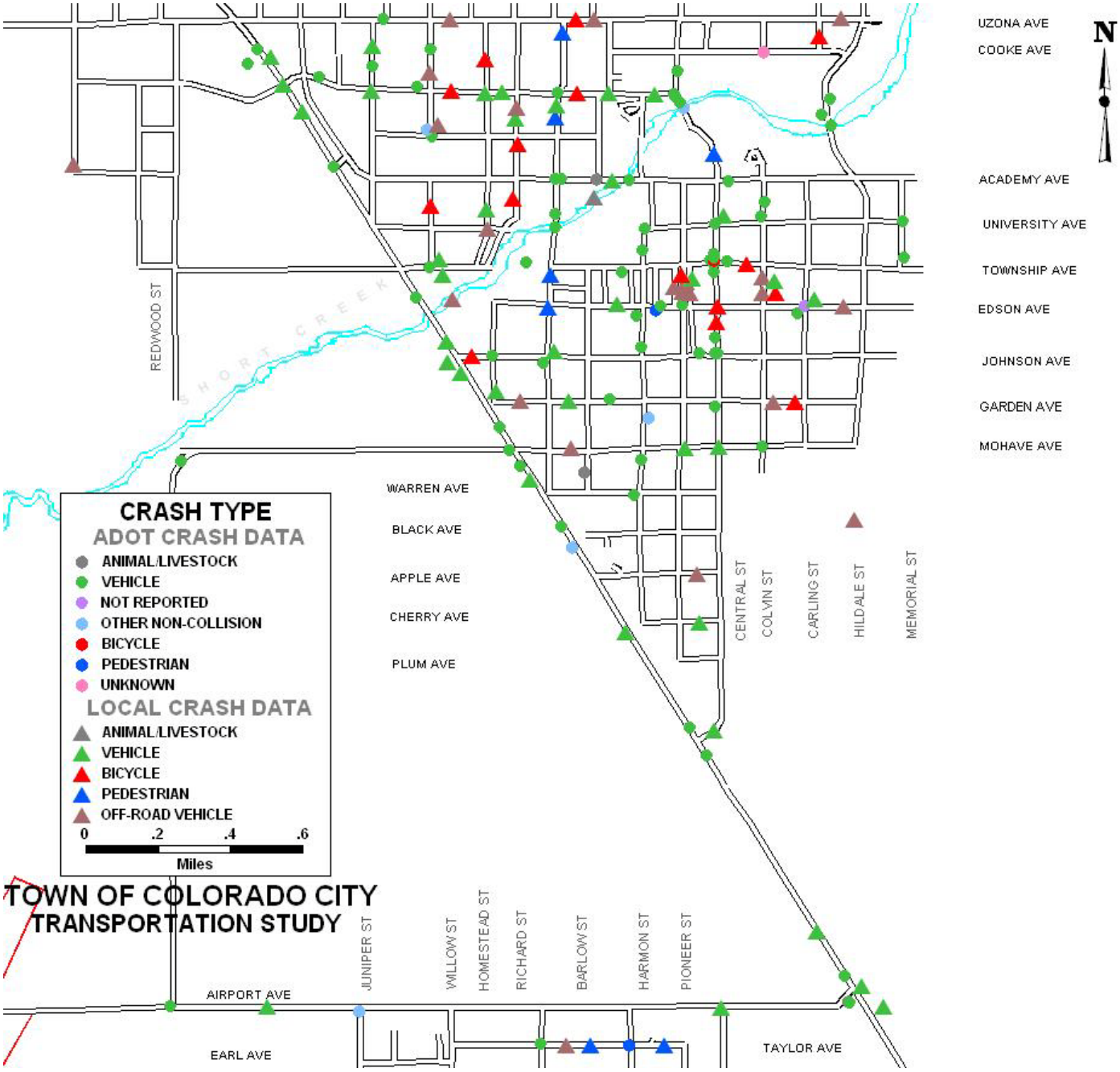


Figure 15 Crash Type – Centennial Park Area 2005 – AUG 2010

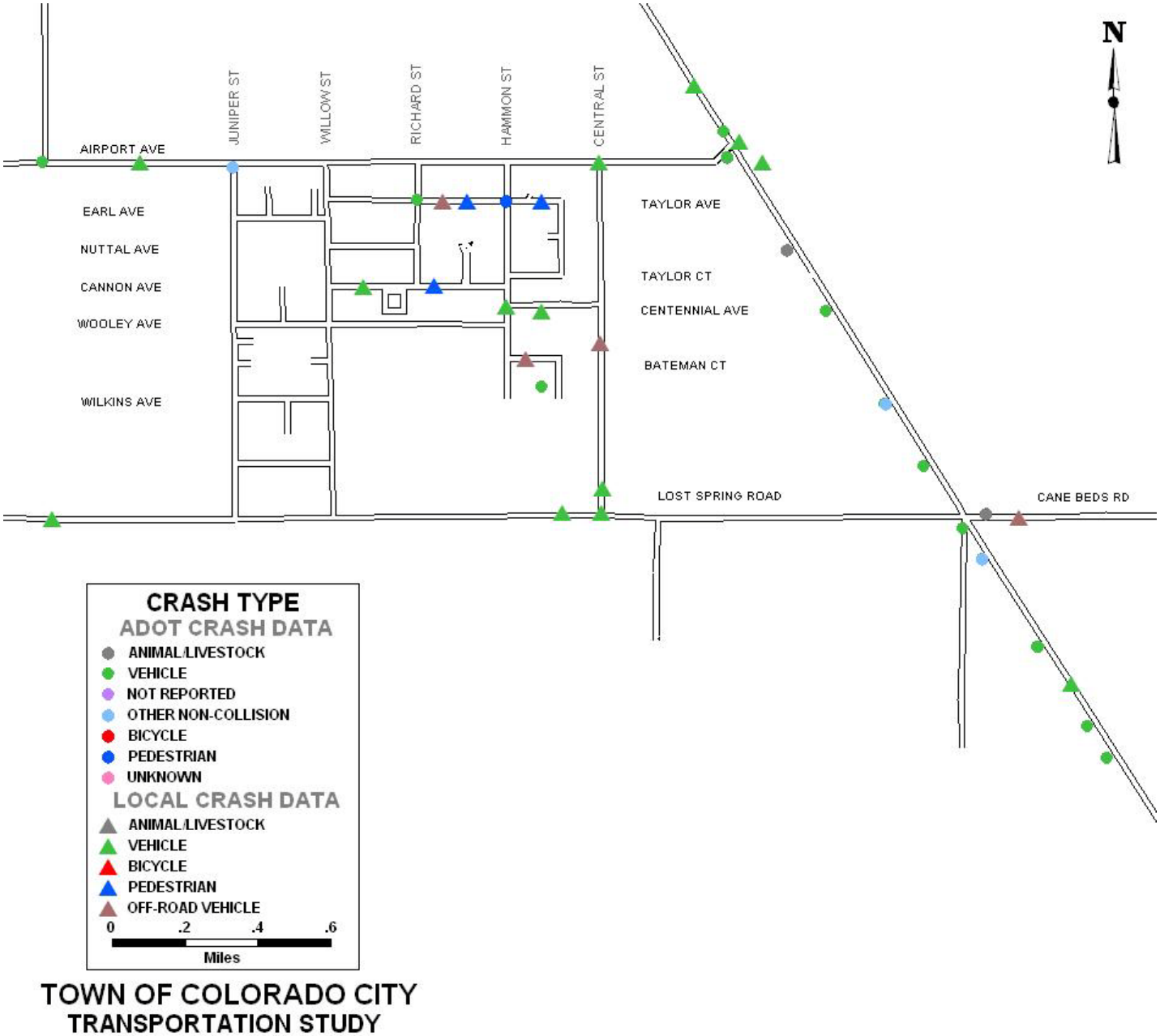


Figure 16 Crash Type – Cane Beds Area 2005 – AUG 2010

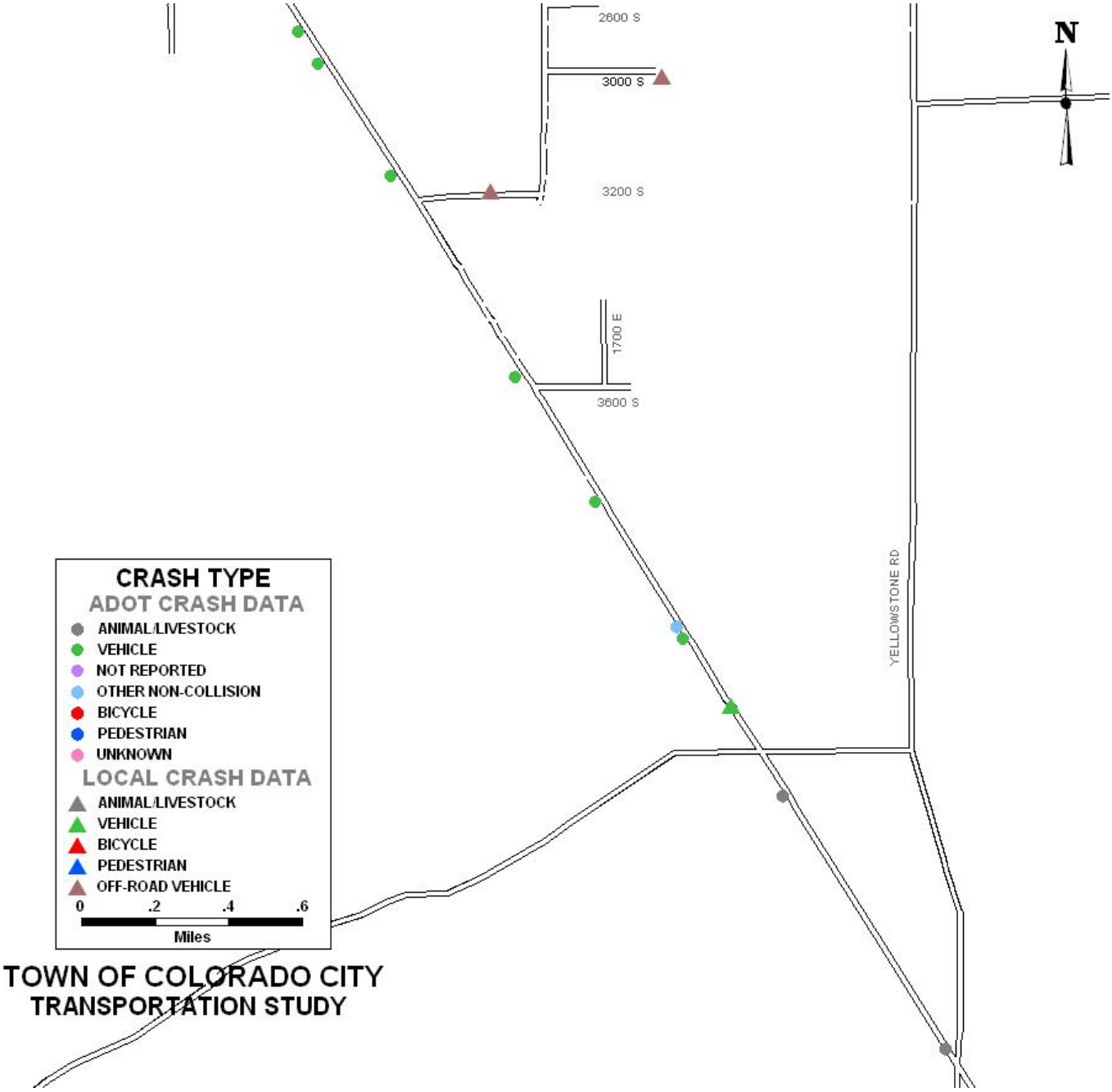
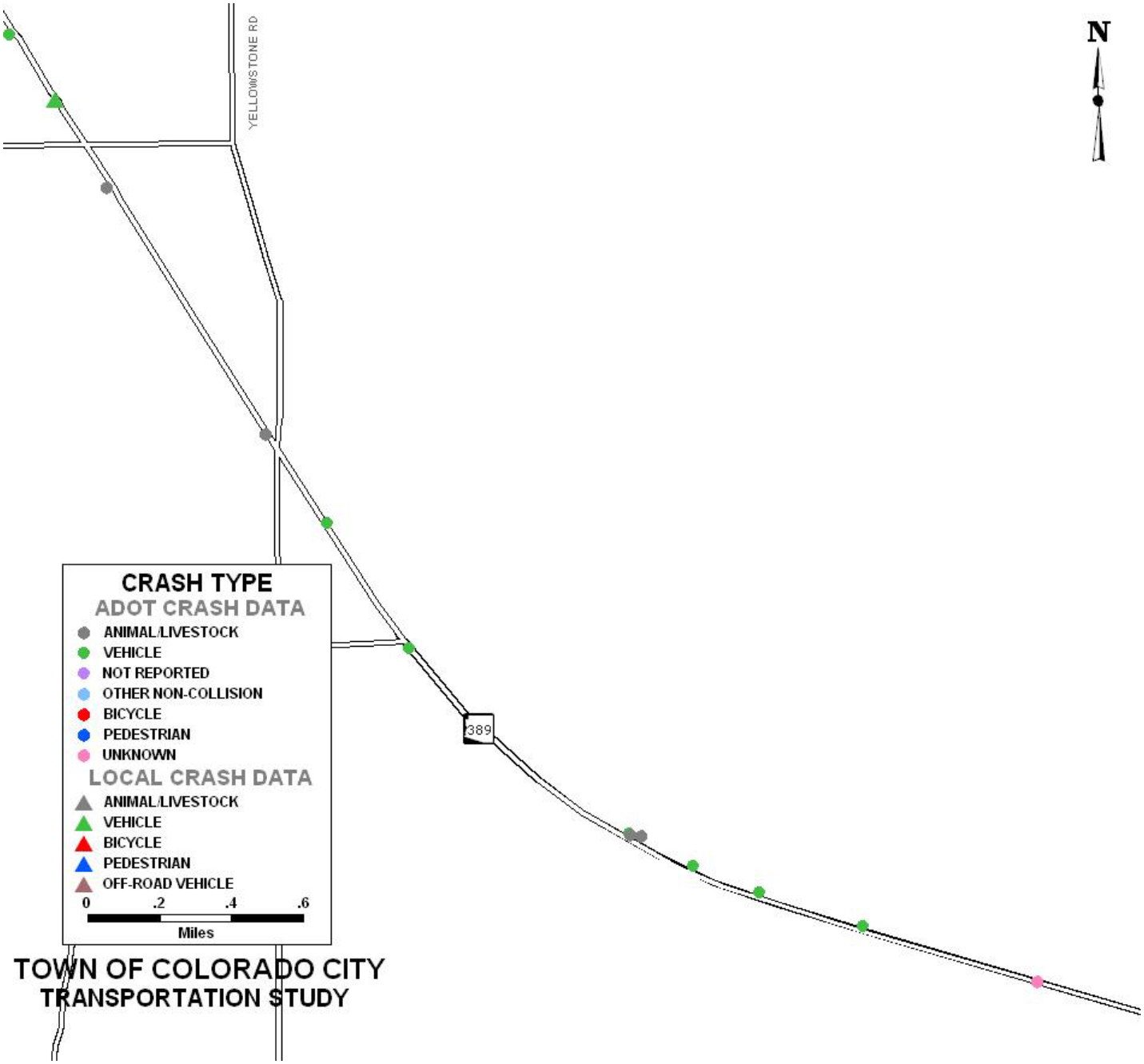


Figure 17 Crash Type – SE HWY 389 Area 2005 – AUG 2010

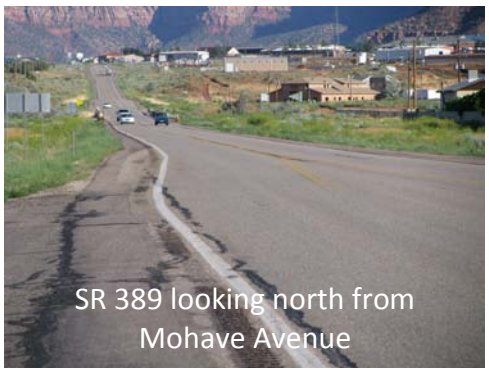


A review of the crash locations identifies several apparent issues. There have been a cluster of crashes around the intersection of Center Street and Township Avenue in downtown Colorado City. A second cluster of crashes is found along Pioneer Street between Edson and Township Avenues. Smaller clusters of crashes are found at the intersection of Center Street and Johnson Avenue, and along Homestead and Richard Streets between Academy Avenue and Arizona Avenue. Finally, a significant number of the crashes occurred approaching or crossing Short Creek at all three low water stream crossing locations: Richard Street, Central Street, and Hildale Street. SR 389 intersections in the study area are also of concern due to the higher speeds, but statistically the number of crashes is lower than

state averages for similar facilities. The segment of SR 389 from the Utah border to Airport Avenue has a crash rate of 6.45 crashes per 100 million vehicle miles (MVMs) with one fatality recorded during the six year sample period. Compare that to the average crash rate for Arizona 2-lane rural roads of 84 crashes per 100 MVMs with an average fatality rate of 1.4 fatal crashes per 100 MVMs. The segment of SR 389 from Airport Avenue to a point about a mile southeast of Yellowstone Road has a crash rate of 12.64 crashes per 100 MVMs with a fatality rate of 0.74 per 100 MVMs. This segment is also below the state average crash rate.

ADOT conducted a Road Safety Assessment of SR 389 between mileposts 30 and 31 southeast of the study area in July of this year. In ten years, that one mile segment experienced 50 crashes. Their report notes that accident rates in that area were well below the average for two lane rural highways. That conclusion is also valid for the portion of the highway within this study area.

2.2.4 Current Traffic Volumes


SR 389 looking north from Mohave Avenue

Recent traffic data was available from a number of sources, including the 2007 Highway Performance Monitoring System (HPMS), maintained by ADOT. This database includes recent traffic counts for all state highways. ADOT reports that SR 389 in the study area has average daily traffic of 3,600 vehicles. Of this, 14% is truck traffic. Similar data was obtained from the Utah Department of Transportation for Utah Route 59 in the study area. UDOT reports that Route 59 has daily traffic of 3,530 vehicles in the study area. Of this amount, 17% is truck traffic.

Central Street & Township Ave In downtown Colorado City

To supplement the data in these reports, additional traffic count data was collected specifically for this study. A set of thirty-eight traffic counts made in the area in November 2010, along with current and historic counts from the Arizona and Utah Departments of Transportation were used to help define the existing traffic conditions. *Figure 18 North Study Area Traffic Count Locations* and *Figure 19 South Study Area Traffic Count Locations* found on the following pages show the locations of the traffic counts collected.


SR 389 Bridge over Short Creek

These counts were conducted on November 17, 2010. Locations marked in red indicate locations where average daily traffic (ADT) was counted. Locations marked in green show locations where vehicle classification counts were taken as well as ADT. These counts show the breakout of traffic by vehicle type and are used to gauge commercial (truck) volumes as a percentage of total traffic. Note that all of the DOT counts were classification counts. For the purposes of this study, trucks are defined as combination trucks only.

Figure 18 North Study Area Traffic Count Locations

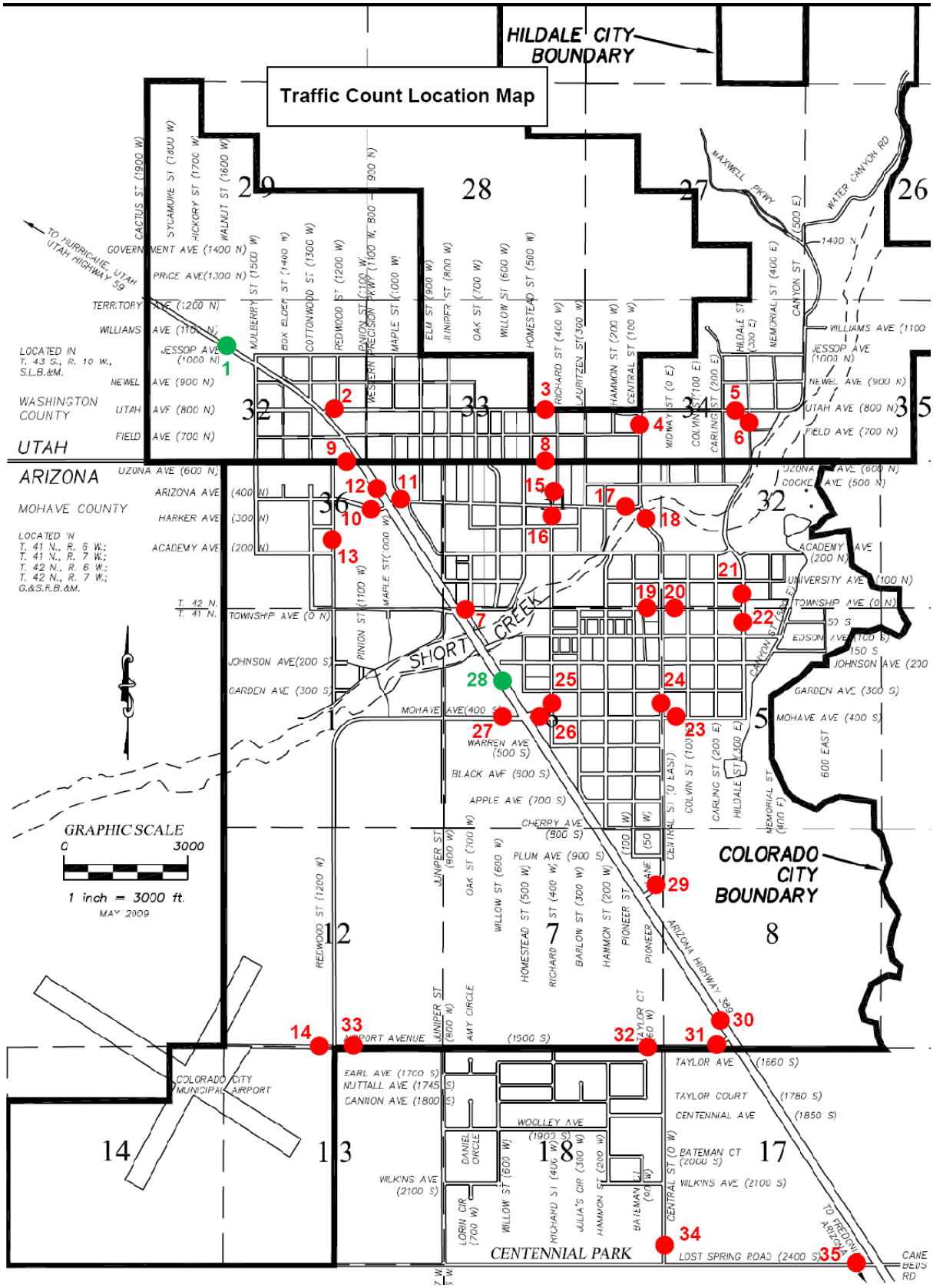
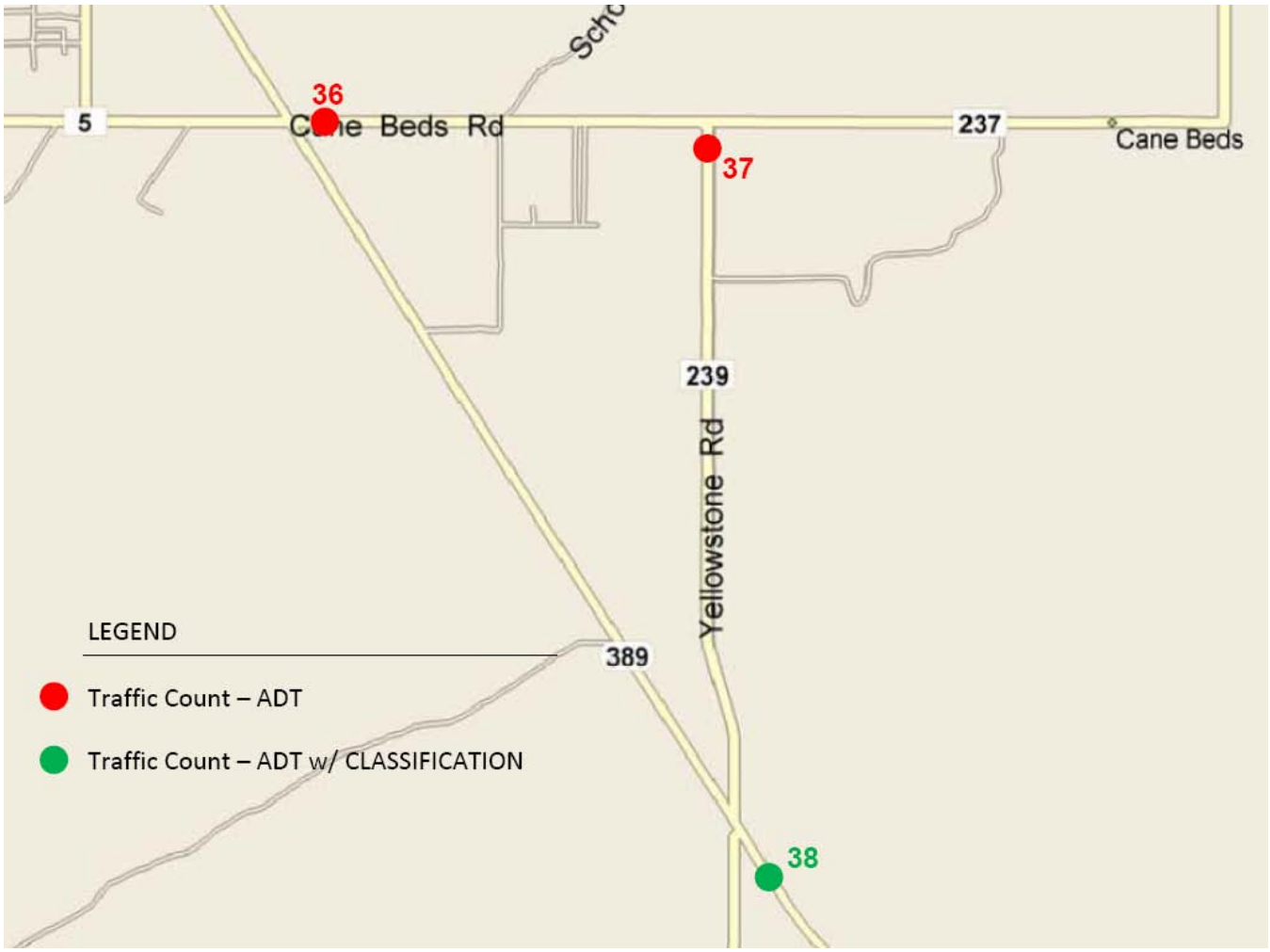


Figure 19 South Study Area Traffic Count Locations



The findings of these counts are shown in *Figure 20 Current Daily Traffic Counts* and *Table 4 Traffic Count Locations and Results*. Figure 20, showing the current ADT counts, is located on the following page. Count data for all locations is reported in Table 4 and it is located on the page after next. Someone tampered with the counter equipment at location #15, and so no data was recorded there; but all other locations recorded good data.


Central Street Low Water Crossing of Short Creek


Hildale Street Low Water Crossing of Short Creek

Figure 20 Current Daily Traffic Counts

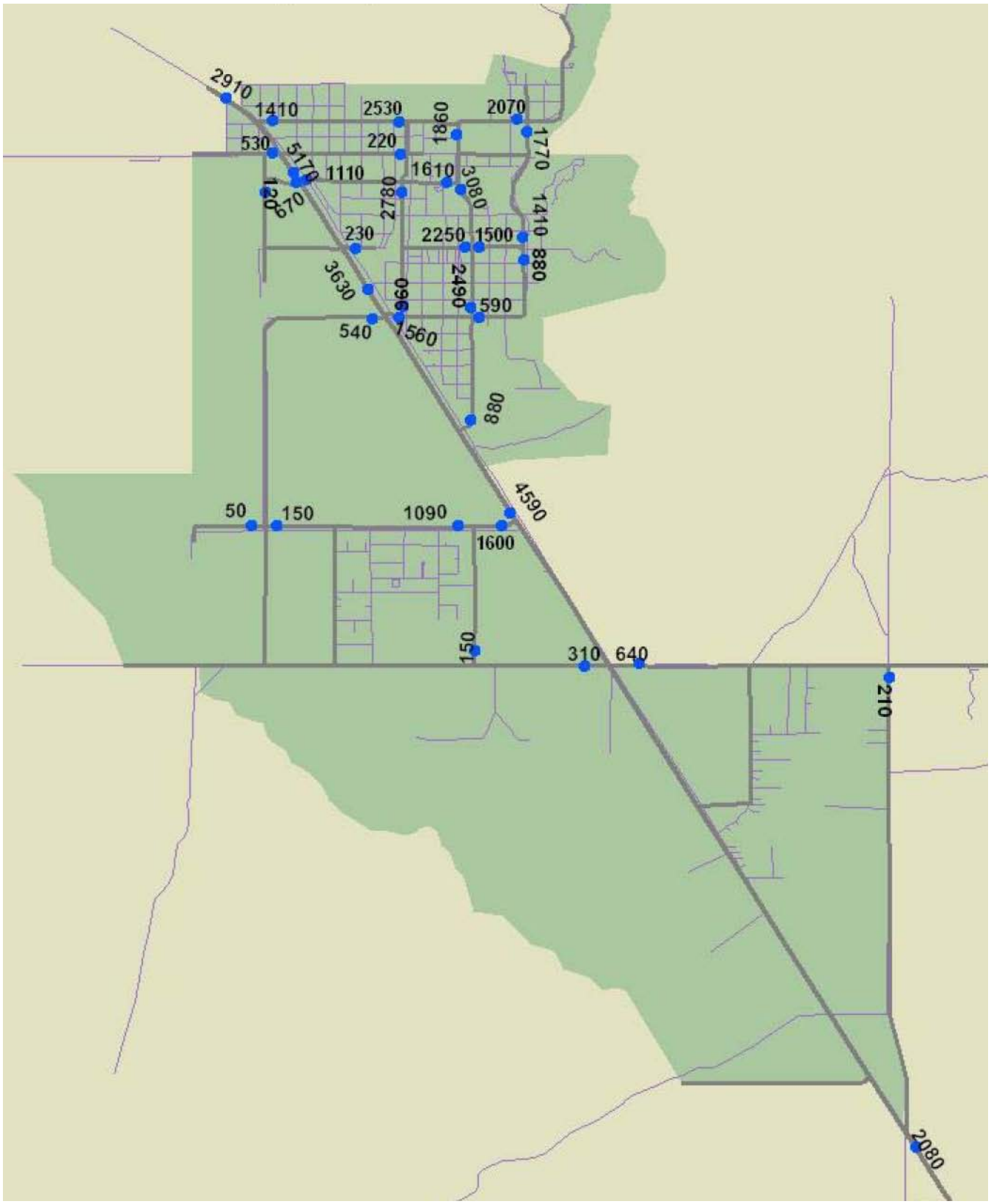


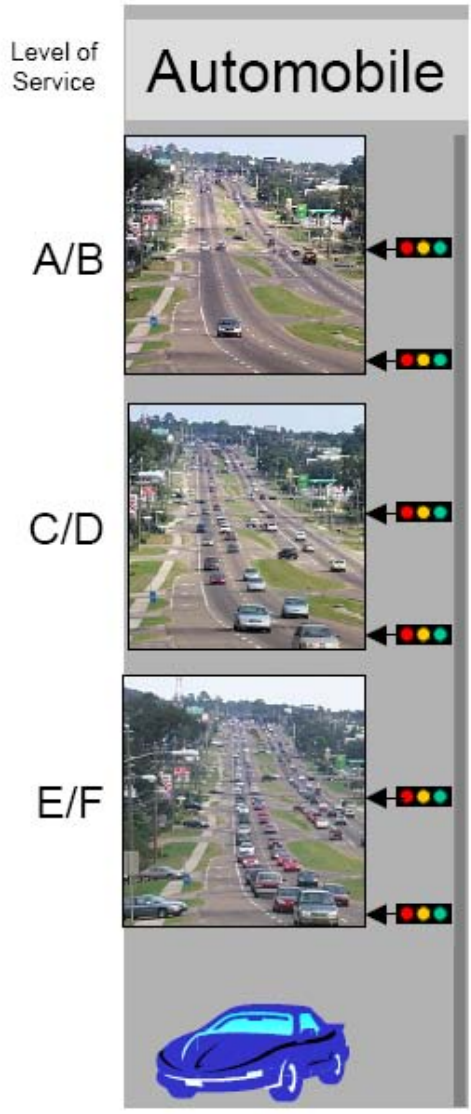
Table 4 Traffic Count Locations and Results

Site ID	Route	Location	Avg Volume	Avg % Trucks
1	Utah Hwy 59	NW of Mulberry St / 1500 W	2,910	11.6%
2	Utah Ave	E of Utah Hwy 59 / State St	1,410	
3	Utah Ave	Between Homestead St and Richard St	2,530	
4	Central St	Between Utah Ave and Field Ave	1,860	
5	Utah Ave	Between Carling St and Hildale St	2,070	
6	Hildale St	Between Utah Ave and Field Ave	1,770	
7	Township Ave	E of Arizona Hwy 389	230	
8	Uzona Ave	Between Homestead St and Richard St	220	
9	Uzona Ave	W of Utah Hwy 59	530	
10	Arizona Ave	W of Arizona Hwy 389	670	
11	Arizona Ave	E of Arizona Hwy 389	1,110	
12	Arizona Hwy 389	Between Uzona Ave and Arizona Ave	5,170	
13	Redwood St	N of Academy Ave	120	
14	Airport Ave	W of Redwood St	50	
15	Richard St	Between Arizona Ave and Uzona Ave		
16	Richard St	Between Arizona Ave and Creekbed Ave	2,780	
17	Arizona Ave	Between Hammond St and Central St	1,610	
18	Central St	S of Arizona Ave	3,080	
19	Township Ave	Between Central St and Pioneer St	2,250	
20	Township Ave	Between Central St and Colvin St	1,500	
21	Hildale St	Between Township Ave and University Av	1,410	
22	Hildale St	Between Township Ave and Edson Ave	880	
23	Mohave Ave	Between Colvin St and Central St	590	
24	Central St	Between Mohave Ave and Garden Ave	2,490	
25	Richard St	Between Mohave Ave and Garden Ave	960	
26	Mohave Ave	Between Richard St and Central St	1,560	
27	Mohave Ave	W of Central St	540	
28	Arizona Hwy 389	NW of Mohave St	3,630	8.6%
29	Central St	NE of Arizona Hwy 389	880	
30	Arizona Hwy 389	N of Ariport Rd	4,590	
31	Airport Ave	W of Arizona Hwy 389	1,600	
32	Airport Ave	W of Central St	1,090	
33	Airport Ave	E of Redwood St	150	
34	Central St	N of Lost Springs Rd / Cane Beds Rd	150	
35	Cane Beds Rd	W of Arizona Hwy 389	310	
36	Cane Beds Rd	E of Arizona Hwy 389	640	
37	Yellowstone Rd	S of Cane Beds Rd	210	
38	Arizona Hwy 389	SE of Yellowstone Rd	2,080	12.8%

2.2.5 Highway Capacity and Level of Service

Beginning in 1965, the Highway Capacity Manual (HCM) divided highway level of service (LOS) into six letter grades, "A" through "F," with "A" being the best and "F" being the worst. With the "A" through "F" LOS scheme, traffic engineers were much better able to explain to the general public and elected officials the operating and design concepts of highways. The LOS letter scheme caught on so well that it is now used throughout the United States in transportation.

Long range transportation planning studies typically use generalized roadway segment daily capacity and daily volume-to-capacity (V/C) based level of service (LOS) criteria as screening tools to help identify and quantify existing and future roadway deficiencies. The primary advantage of the planning level generalized criteria is that it requires relatively little data to generate reasonable results for a large number of roadway locations. Depending on the nature and scope of the study, more detailed capacity and LOS analyses may or may not be warranted. More detailed analyses require substantial additional data collection, analysis time, and cost.



This section of the report offers a reasonable set of generalized planning-level roadway segment capacity and V/C based LOS criteria for consistent use in ADOT small urban area transportation planning studies. These criteria were reviewed and approved by ADOT for use on transportation planning studies for small urban areas.

As much as possible, these criteria are based upon the *Highway Capacity Manual 2000* (HCM2000). However, the HCM2000 does not explicitly define roadway segment capacity or V/C based LOS criteria for all types of roadways. For example, HCM2000 uses average travel speed, not V/C, to measure LOS on urban streets. Consequently, the capacity and LOS criteria suggested below for urban streets are not directly attributable to the HCM2000, but are reasonable approximations of determinations that may be made using HCM2000 analyses for specific roadway segments. The HCM2000 does provide somewhat more explicit guidance for freeway V/C based LOS (HCM2000 Exhibit 23-2), as well as for free-flowing rural multilane roadways (HCM2000 Exhibit 21-2). But even for these, the information reflects "ideal design and conditions", which may not exist at all locations being analyzed.

Table 5 Roadway Segment Capacities & LOS Criteria for Small Urban Areas presents a proposed set of HCM2000 based planning level roadway segment per-lane capacities and V/C based level of service criteria suitable for use in small urban, urbanizing and suburban areas. Based upon Table 5, *Table 6*

Roadway Segment Service Volumes for Small Urban Areas presents the maximum service volumes by level of service for the most common roadway types found in small urban, urbanizing and suburban areas.

Table 5 Roadway Segment Capacities & LOS Criteria for Small Urban Areas

Roadway Type	Daily Per Lane Capacity	Max LOS A V/C Ratio	Max LOS B V/C Ratio	Max LOS C V/C Ratio	Max LOS D V/C Ratio	Max LOS E V/C Ratio
Freeway	20,000	0.29	0.47	0.68	0.88	1.00
Multilane Arterial	8,000	n/a	n/a	0.70	0.95	1.00
2-Lane Arterial	7,000	n/a	n/a	0.50	0.90	1.00
2-Lane Collector	5,000	n/a	n/a	0.50	0.90	1.00

Table 6 Roadway Segment Service Volumes for Small Urban Areas

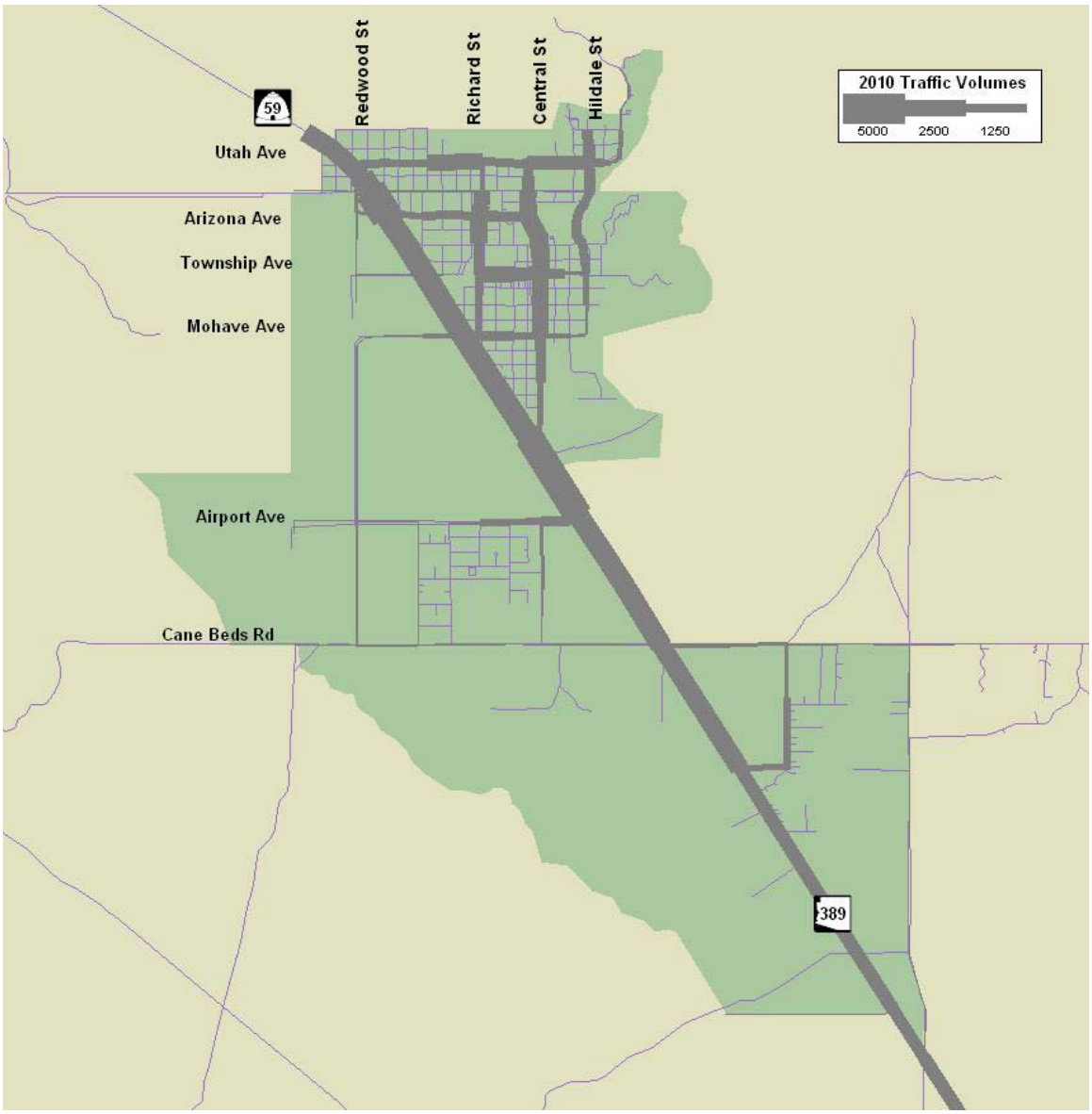
Roadway Type	Daily Per Lane Capacity	Max LOS A Service Volume	Max LOS B Service Volume	Max LOS C Service Volume	Max LOS D Service Volume	Max LOS E Service Volume
4-Lane Freeway	20,000	23,000	38,000	54,000	70,000	80,000
4-Lane Arterial	8,000	n/a	n/a	22,000	30,000	32,000
2-Lane Arterial	7,000	n/a	n/a	7,000	13,000	14,000
2-Lane Collector	5,000	n/a	n/a	5,000	9,000	10,000

Note: Service volumes have been rounded to the nearest 1,000.

2.2.6 Existing Traffic Conditions – 2010

The flow of the modeled traffic volumes for 2010 is shown in *Figure 21 2010 Traffic Flowband* which is located on the following page. As would be expected, Utah Hwy 59/Arizona Hwy 389, the highest level facility in the area, shows the highest volumes. Within the study area, the traffic flows are generally seen to increase as they near the urban core, and diminish with turning movements at intersections. Overall, the counted and modeled traffic flows for 2010 appear reasonable.

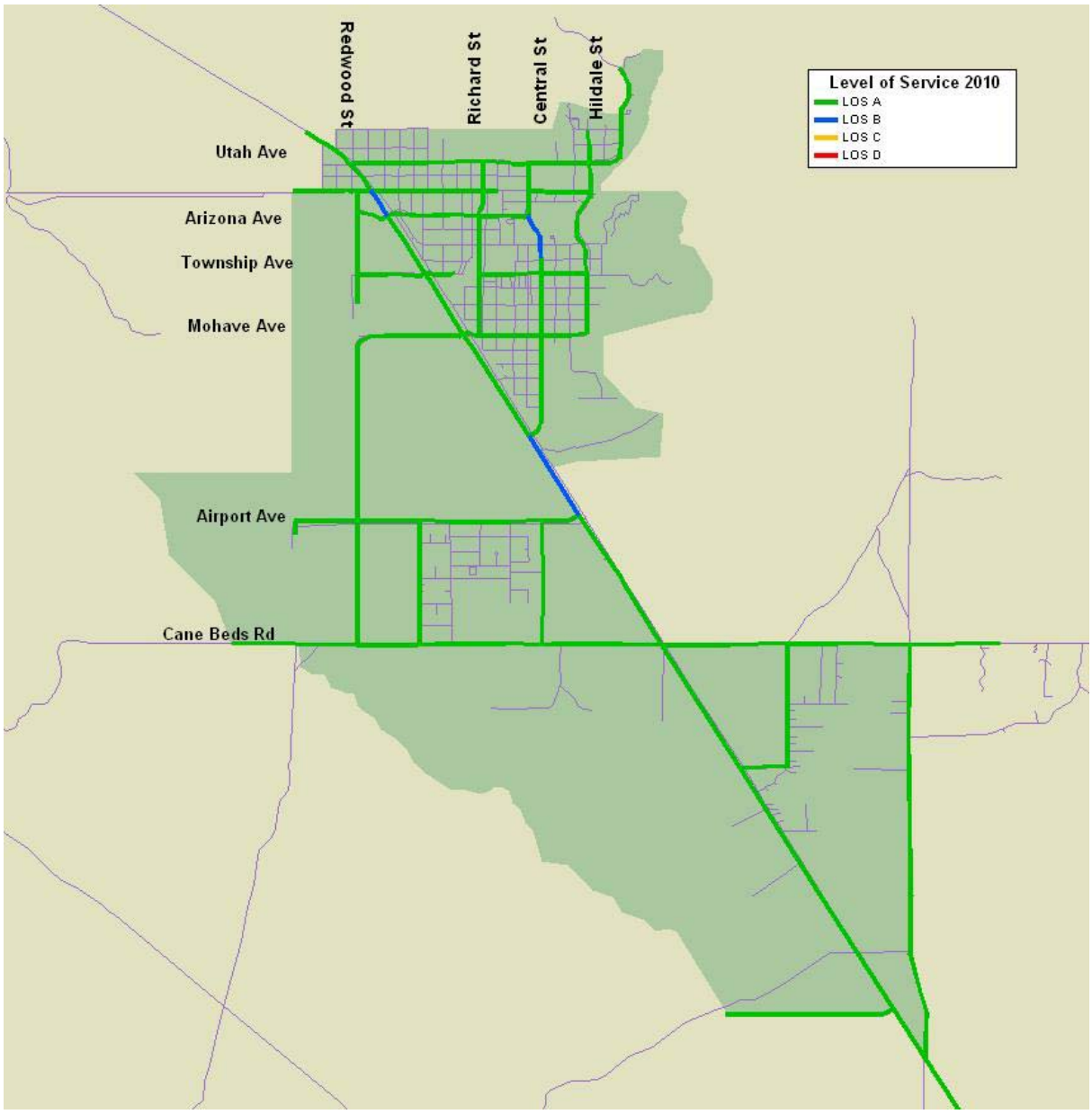
Figure 21 2010 Traffic Flowband



The 2010 levels of service for the study area are shown in *Figure 22 Study Area Level of Service* which is found on the following page.

Modeled volumes show about 97% of the study area's roadways by mileage currently operating at LOS A. Three distinct areas of congestion stand out at LOS B: (1) Hwy 389 between Uzona Ave and Arizona Avenue, (2) Hwy 389 between Central Street and Airport Avenue, and (3) Central Street between Arizona Avenue and Township Avenue. In each case, there is a local activity in the area which is more intense than surrounding land uses.

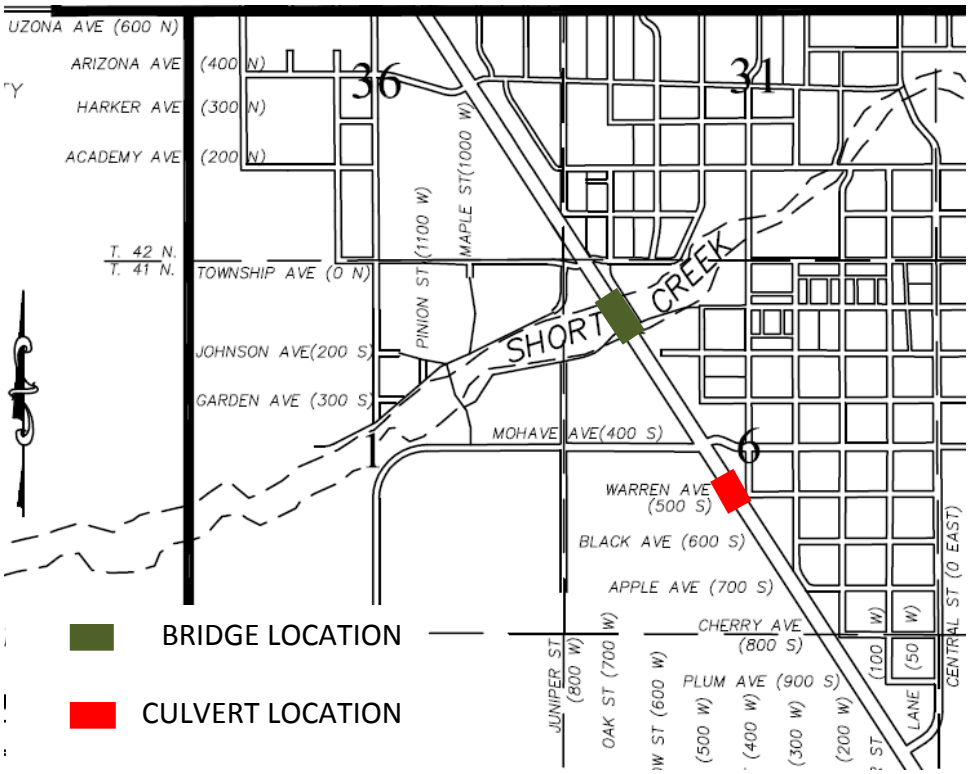
Figure 22 Study Area Level of Service



2.2.7 Bridges

ADOT has not inspected any bridges on the local roadway network. On SR 389, there are two bridge structures within or close to the study area. One of these is a concrete box culvert located north of the intersection with Central Street. The other is the bridge over Short Creek. Per ADOT's most recent bridge inspection reports, the condition of the box culvert is acceptable and the structure has a sufficiency rating of 84. The Short Creek Bridge also has an acceptable condition and has a sufficiency rating of 59. It is recommended that this bridge be periodically inspected and that replacement of this structure should be anticipated within a ten to twenty year planning horizon. The locations of the structures are shown in *Figure 23 Bridge Locations* on the next page.

Figure 23 Bridge Locations



2.3 Multi-Modal Transportation

2.3.1 Bicycle and Pedestrian Facility Plans and Policy Documents

The 1993 Transportation Study recommended bicycle lanes along collector streets in the community. This recommendation has not been implemented. The Town has been installing sidewalks on both sides of the street whenever a street paving project is undertaken.

2.3.2 Existing Bicycle and Pedestrian Facilities

Bicycle: There are no developed bicycle facilities within the study area. There is reportedly very limited bicycle use in the community. Bicycle riders share the public rights of way with vehicles as best they can or use sidewalks where they may exist. During the stakeholder interviews, it was reported that there is very little bicycle usage and providing bicycle facilities was a very low priority for the Town. A suggestion was made that a multiuse path be constructed along the highway through the community and another suggestion was made to provide a multiuse path to the BLM lands to the north and east of the community for access to recreational areas.

Looking West along Central Ave across Richard St – note the sidewalks on both sides

Pedestrian: Some local roadways have adjacent sidewalks while others do not. The following roadways have sidewalks as noted in the Town's General Plan:

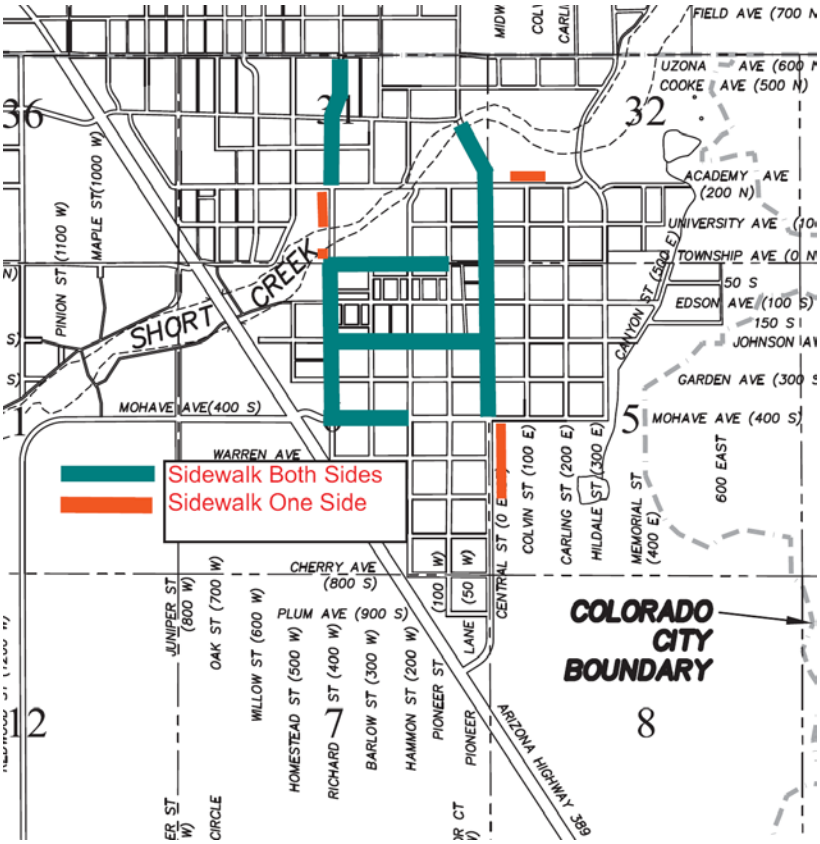
- Central Street from Arizona Avenue to Mohave Avenue on both sides.
- Central Street from Mohave Avenue to Black Avenue on the east side only.
- Richard Street from Uzona Avenue to Mohave Avenue, except for the east side from Academy Avenue to Township Avenue.
- Academy Avenue has a small segment both east and west of Colvin Street along the north side.


Looking west along Cannon Ave from Richard Street – note the sidewalks along both sides

- Township Avenue from Richard Street to Carling Street, on the north side only east of Central.
- Johnson Avenue from just west of Richard Street to Central Street.
- Mohave Avenue-from Richard Street to Hammon Street.

The above sidewalk facilities are shown on *Figure 24 Sidewalk Locations* below. Other small segments of sidewalk were noted from aerial reconnaissance, but these were likely installed piecemeal by individual residents. There are new sidewalks installed as part of the paving project recently completed on Central Street from Warren Avenue to Apple Avenue in the southern area of Town. This project was funded with Community Development Block Grant (CBDG) funds. There are sidewalks along many of the improved streets in Centennial Park; however, there are no sidewalks in Cane Beds.

Figure 24 Sidewalk Locations



2.3.3 Transit Plans and Policy Documents

Transit is an important service that can provide mobility for those that do not have a car, are not able to drive, or simply choose not to drive. It is especially important to the senior and disabled communities. While transit generally takes a 'back seat' to automobile travel, it is an invaluable resource for a community. In addition to expanding transportation options for residents and visitors alike, transit can reduce overall automobile usage, thereby decreasing vehicular traffic, lowering noise and air pollution, and reducing dependence on oil. The 2002 *Town of Colorado City General Plan* noted the option of public transit. The size of the community, as well as the low numbers of elderly and persons with disabilities, suggests that the need for internal circulation transit service is low, but that demand for commuter service, or at least van pools, to Hurricane and St. George, Utah, might be present and will likely increase in the future. The Town operated a transit service for the elderly and handicapped, but was forced to suspend the service three years ago due to inadequate funding.

2.3.4 Existing Transit Services

There is no fixed route public transit service within the study area at this time.

2.3.5 Freight

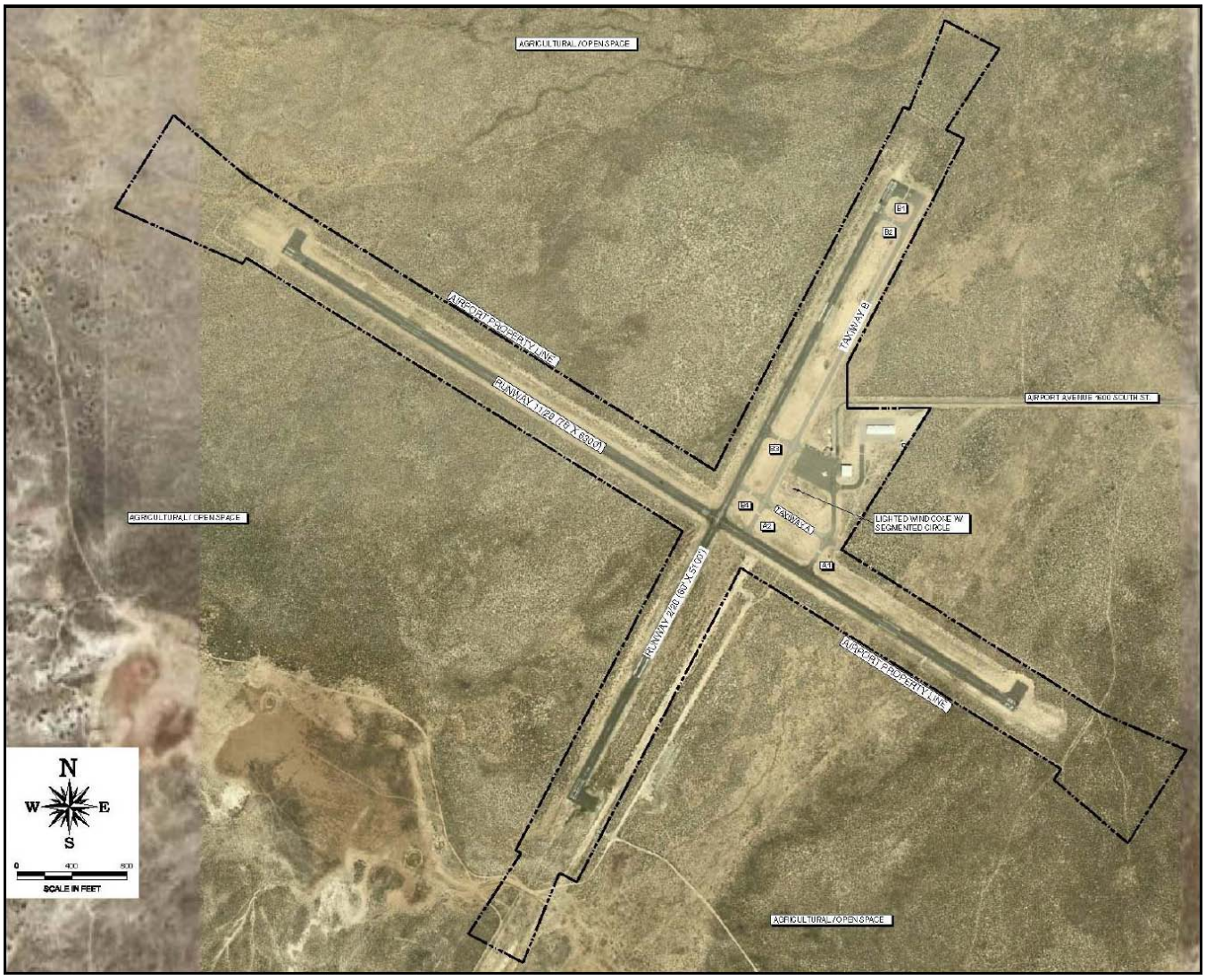
Freight traffic in the Arizona SR 389 and Utah Route 59 corridor is limited to locally generated volumes. Not surprisingly, there is more truck traffic northbound from the study areas than southeast bound along this highway. Utah Route 59 north of Hildale currently accommodates about 600 trucks per day; 388 of them semi-trucks. SR 389 in Arizona accommodates about 500 trucks per day; half of them semi-trucks.

2.3.6 Airport

The Colorado City Municipal Airport was initially constructed in 1961 on land leased from the Bureau of Land Management (BLM). The airport serves general aviation only; no commercial service is available. In 1991, the Town of Colorado City purchased the land from the BLM and constructed paved runways to replace earlier dirt runways. The two runways are 6,300 and 5,100 feet long. Lands immediately east of the airport are planned for employment uses. Lands north, south, and west of the airport are planned for agricultural uses. The most recent Airport Master Plan was completed in 2008. That plan calls for the future relocation of the terminal building and apron outside of the Runway Visibility Zone. *Figure 25 Airport Facilities* found on the next page shows the airside facilities at the municipal airport.

The Town of Colorado City has adopted an Airport Overlay Zoning ordinance that sets height restrictions in the aircraft approach areas and requires airport compatible uses for new development.

Figure 25 Airport Facilities



Source: Colorado City Municipal Airport, Airport Master Plan, December 2008

2.4 Natural Environment

Terrain: The Colorado City study area has major soils categories that have been defined based on their position in the landscape. These are floodplains, uplands, and mountains. The study area would generally fall within the first two categories. Soils in the area are generally *Mesic Semi-Arid* soils. Most of the study area is comprised of the *Palma-Clovis-Redbank association*; which are deep upland soils. The higher elevations may include some *Moenkopic-Shalet association*; which is shallower soil over sandstone or shale upland. There are no unusual risks or instability when road building on these soils.

Major Drainage Ways: The major drainage way in study area is Short Creek that flows generally from the northeast to the southwest through the study area. Floodplains for the study area have been identified by the Federal Emergency Management Agency (FEMA). FEMA maps for the study area are included in *Appendix 3 FEMA Flood Insurance Rate Maps*.

Surface Drainage: Rainfall runoff generally flows from north to south into Short Creek and from east to west, also draining into Short Creek. A diversion canal was constructed on the east side of the community to intercept much of the runoff from the public lands to the east. This drainage channel runs along Canyon Street and diverts the runoff into a reservoir located south of the Mohave Avenue and Hildale Street intersection. Any overflow from the reservoir runs southwesterly into a natural channel that crosses Center Street and SR 389 approximately at the Plum Avenue alignment.

During significant rainfall events, the streets serve as drainage conduits since there is no significant storm drainage infrastructure in the community beyond the creek and wash crossing structures. The streets that carry significant runoff have been (or should be) provided with curb and gutter sections to aid in the conveyance of storm runoff and to help protect adjacent properties. North of Short Creek, the streets that serve as major drainageways include Willow Street, Richard Street, Carling Street and Hildale Street. East of the creek, University Avenue, Township Avenue, Johnson Avenue, and Warren Avenue are the major drainageways. Runoff reportedly can flow six inches or more in depth during heavy rainfall events. The planning and design of street improvements therefore needs to closely look at drainage and be designed to convey the runoff waters within the right of way to a natural drainageway, such as Short Creek.


Richard Street Low Water Crossing of Short Creek

Wilderness Areas: The study area touches on the Cottonwood Point Wilderness. This 6,860 acre BLM wilderness is just east of Colorado City and is contiguous to the 47,170 acre Canaan Mountain Wilderness Study Area in Utah to the north of the Town. The wilderness contains 400-foot-high, multicolored Navajo sandstone cliffs, wooded canyons, and rock pinnacles. Pinyon and juniper woodlands cover much of the wilderness in association with sagebrush. Willow and cottonwood can be found in some of the canyons. Mule deer, coyote, bobcat, and mountain lion inhabit the area. Recreation opportunities in the wilderness include hiking, photography, wildlife observation, and sightseeing.

Primary access to the wilderness areas are from unimproved roads and trails connecting to SR 389, which passes close to the area's western boundary. Mohave County Road 237 (Cane Beds Road) and Ruby Canyon Road provide access to the wilderness areas. Water Canyon Road and the Maxwell Parkway forking off of Canyon Street in northeast Hildale also provides access to the wilderness area for recreation purposes.

Vegetation and Wildlife: Many visitors, local and from afar, come to the Arizona Strip and southern Utah area to see and enjoy the natural beauty of the numerous national parks, monuments, and other public lands. Endangered/threatened species that may be of concern for projects in the area are listed in *Table 6 Endangered Species in Mohave County* found on the next page. These species are currently listed for Mohave County, but do not necessarily occur in Colorado City proper or the study area. Federally funded projects would need to have an environmental document completed including a cultural and biological assessment to clear the project for construction and identify mitigation measures needed, if any.

California condors are the largest flying land bird in North America. Condors are members of New World vultures. They are opportunistic scavengers that feed primarily on large dead mammals such as deer, elk, bighorn sheep, range cattle, and horses, and travel 100 miles or more per day in search of food. In prehistoric times, condors ranged from Canada to Mexico, across the southern United States to Florida, and on the east coast in New York. During this period, condors were a common resident of the Grand Canyon area. By the time Europeans arrived in western North America, condors had retreated to a stronghold along the Pacific coast from British Columbia to Baja California. Over the years, the population dropped until 1982, when only 22 birds were left, all in California. Reintroduction of captive bred condors began in 1992 in California, and 1996 in Arizona. The reintroduction site is located near the Vermilion Cliffs north of US 89A east of Jacobs Lake.

California condors are one of the most endangered birds in the world. They were placed on the federal endangered species list in 1967. In Arizona, reintroduction was conducted under a special provision of the Endangered Species Act that allows for the designation of a nonessential experimental population. Under this designation (referred to as the 10(j) rule), the protections for an endangered species are relaxed, providing greater flexibility for management of a reintroduction program.

Table 7 Endangered Species in Mohave County

Endangered	Threatened	Candidates for Inclusion
Arizona cliff-rose, *Purshia subintegra*	Bald eagle, *Haliaeetus leucocephalus*	Fickeisen plains cactus, *Pediocactus peeblesianus fickeiseniae*
Bonytail chub, *Gila elegans*	Desert tortoise, *Gopherus agassiziii*	Relict leopard frog, *Rana onca*
Brown pelican, *Pelecanus occidentalis*	Jones cycladenia, *Cycladenia jonesii*	Yellow-billed cuckoo, *Coccyzus americanus*
California condor, *Gymnogyps californianus*	Mexican spotted owl, *Strix occidentalis lucida*	
Holmgren milk vetch, *Astragalus holmgreniorum*	Siler pincushion cactus, *Echinocactus Utahia sileri*	
Hualapai mexican vole, *Microtus mexicanus hualpaiensis*		
Humpback chub, *Gila cypha*		
Razorback sucker, *Xrauchen texanus*		
Southwestern willow flycatcher, *Empidonax traillii*		
Virgin River chub, *Gila seminude*		
Yuma clapper rail, *Rallus longirostris yumanensis*		

According to the Arizona Game and Fish Department personnel who manage the condor habitat and reintroduction program, condors have been seen in the Colorado City area. However, Town officials report that they are unaware of any sightings of condors in or around the study area.

Condors are very inquisitive animals and often watch human activities where a feeding opportunity may occur. Game and Fish staff has advised against intentional human feeding of the birds. They are not usually bothered by surface construction activities, and roadway maintenance and improvement work should not pose a conflict.

Before any project developments are considered near potential condor habitat, an environmental assessment should be undertaken and all NEPA environmental regulatory agencies should be contacted to confirm that none of these species or habitats will be impacted by the proposed project.

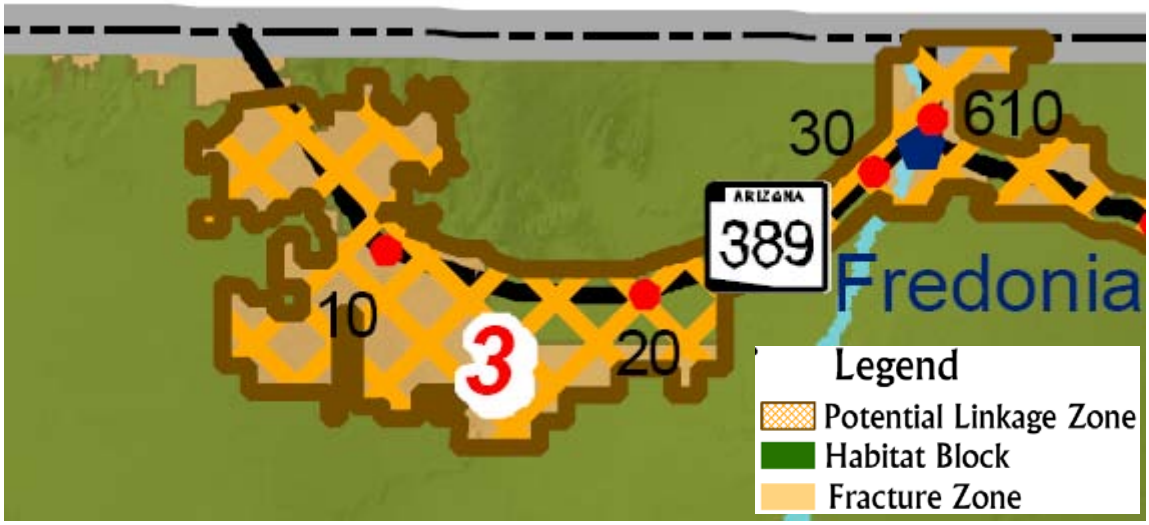
Developers and builders should make an effort to avoid disturbing or encroaching on Short Creek and other drainageway areas and floodplain open space wherever possible during the planning, design and implementation of their projects. This can help preserve flood protection which safeguards residents, and can help provide wildlife habitat and improve water quality. In addition, developers can create dedicated open or natural areas along washes and creeks passing through or adjacent to new developments and subdivisions. If it does become necessary to disturb these natural areas, the next best option is to mitigate the disturbance by replanting in adjacent areas or doing restoration projects to restore native vegetation to previously affected areas.

The Arizona Game and Fish Department would like to see greater emphasis on determining and avoiding or mitigating impacts on wildlife for transportation and development projects. They have wildlife friendly guidelines that can be followed. These guidelines include facilitating crossings for wildlife; mitigating development by providing for well designed wildlife corridors; providing wildlife connections to agricultural areas (for feeding); and avoiding concurrent connectivity for humans in the same corridor (such as roads, trails, etc.).


Rosy Canyon Road

Regarding this study, the most important issue that the Arizona Game and Fish Department would like to see addressed is that the major wildlife linkage corridors be considered when transportation improvement projects are planned, designed, and constructed. Within this study area, there is a major wildlife linkage corridor across SR 389 south and east of the study area. This linkage corridor, entitled the “Cedar Rim/Fredonia Pronghorn Crossing” connects major wildlife habitats on each side of the highway around the Cottonwood Point wilderness and points east. *Figure 26 Wildlife Linkages* shows the general location of the wildlife linkage zone.

Figure 26 Wildlife Linkages



An additional priority for the Arizona Game and Fish Department is that they would like to see the local agencies help to preserve existing access to state and federal lands by requiring that existing accesses be maintained, or alternately, mitigated with new legal access roads, should an existing access need to be removed. They report that they are losing access to public lands through development, making it more difficult for the public to access these lands. Access to public lands is important to hikers, hunters, residents, visitors, and for public safety purposes. The Department would like to see opportunities taken advantage of that would improve access corridors. Cottonwood Point Wilderness is the primary location in the study area where public land access is important.

Noise: Adherence to the *ADOT Noise Abatement Policy* dated December 05, 2005, and as amended on August 24, 2007, is advised for any new or improved roadway corridors. This policy is based on the currently accepted noise abatement policies and procedures outlined by both the United States and Arizona governing bodies. FHWA has specific noise abatement criteria that serve as an upper limit for federally funded projects in the State of Arizona.

Air Quality: A review of ADEQ and EPA maps reveal no ongoing air quality issues in the study area.

Hazardous Materials: A review of ADEQ and EPA maps reveal no hazardous materials exposure locations in the study area.

2.5 Cultural Environment

According to the National Register of Historic places, and the State Historic Preservation Office (SHPO), there are no protected historic places and/or buildings in the study area. In conversations with SHPO staff, they indicated anecdotal information had suggested that an old schoolhouse structure existed that may qualify. This is currently used as a library.

Bureau of Land Management (BLM) staff has reported that archeological resources are found on properties near Short Creek.

Old Spanish Trail: In 1829, Antonio Armijo began using this route as a trading corridor between the Spanish colonies of Santa Fe, New Mexico, and Los Angeles, California. Parts of his route followed a pathway used by early trapper, Jedediah Smith, and before that, by Spanish padres, Domingues and Escalante, in the 18th century. As the trail evolved, it included northern legs that connected to the area that is now Grand Junction, Colorado. The southern route went through Pipe Springs National Monument and from there to the Virgin River, passing close to Colorado City. In the report of his 1844 exploratory trip to California, John Fremont referred to the route as the "Spanish Trail". In 2002, Congress designated the "Old Spanish Trail" as a National Historic Trail jointly administered by the National Park Service and the Bureau of Land Management. Detailed directions to trail heads and trail conditions can be found at http://www.nps.gov/olsp. *Figure 27 Old Spanish Trail* is a map showing the regional location and route of the trail.

Figure 27 Old Spanish Trail

Source: National Park Service

3. Programmed Improvements

3.1 Short Term Programmed Improvements

WACOG: The draft 2011-2014 WACOG Transportation Improvement Program (TIP) includes the following projects within the study area:

1.	Street Sign Replacement 2010	$ 25,000 encumbered
2.	Safety Improvements 2011	$ 50,000
3.	Box Culvert 2013	$422,800
4.	Surface Transportation Funds 2015	$264,250
5.	Potential future Transportation Enhancement funds for a Central Street shared use walkway	$277,451

All but the first line item are not yet assured as the current TIP is not yet fiscally constrained. The new WACOG Transportation Planner, Sharon Mitchell, is currently working on revisions to the TIP.

Mohave County: Mohave County funds are limited to maintenance of current county facilities. County roadways within the study area include:

- Mt. Trumball Loop
- Yellowstone Road
- Rosy Canyon Road
- Cane Beds Road to the east and west of SR 389
- Some dedicated local roadways within the Centennial Park subdivision

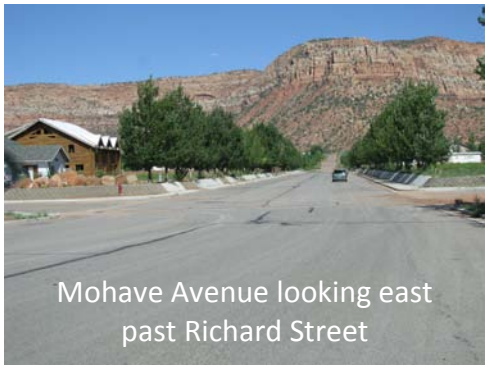

Yellowstone Road south of Cane Beds Road

Town of Colorado City: The Town does not have a current 5-year transportation improvement plan. Similar to the county, the city has been expending their available transportation funds on maintaining the existing street system, and improving local streets to all-weather status by chip sealing, when funds are available. The Town has been successful in securing CDBG funds to incrementally pave and improve streets with asphalt pavement, curb and gutter sections, and sidewalks.

4. Stakeholder Identified Transportation Needs

4.1 Overview

During the course of the research phase of this study, interviews were conducted with various stakeholders to determine known deficiencies, problem areas, needed improvements, and desired projects for the local communities and the study area. The summary of the discussions with various stakeholders can be found in *Appendix 1* of this report.


Mohave Avenue looking east past Richard Street

4.2 Specific Needs Identification and Locations

The stakeholders interviewed identified a number of improvements to the transportation system for the study area. Many of the identified needs were common to many or all of the stakeholders, meaning universal support for most of the identified needs for the transportation system. The stakeholders identified needs for the region and did not limit their remarks to strictly the local community only. Many of these identified projects were also cited by local public agencies as needed transportation system improvements. The indication is that the public will support most, if not all, of these improvements when funding becomes available from any and all sources.

Key specific needs identified by the stakeholders are summarized below:

- Arizona Avenue at SR 389: Installation of a pedestrian/bicycle underpass of SR 389 at Arizona Avenue to protect children as they make their way to and from the school located on the west side of the highway at the southwest corner of Arizona Avenue and Cottonwood Street. The community had applied for a transportation enhancement grant for such a facility a few years back, but the project was not funded.
- Redwood Street at Short Creek: Construct a bridge or low water crossing of Short Creek at Redwood Street for traffic to circulate in the area west of SR 389 without having to use SR 389.
- Township Avenue at Short Creek: Construct a bridge or low water crossing of Short Creek and extend the street to connect the downtown area to SR 389. This would enable commercial traffic from SR 389 direct access into downtown Colorado City which would reduce commercial traffic in residential areas.


Looking east at Arizona Avenue for SR 389

- SR 389 Intersections with Town Streets and County Roads: Provide left turn lanes and right turn deceleration and acceleration lanes, where not already present, to improve safety for cars turning off and onto the highway. Specific locations mentioned include:
  - Mohave Avenue: Need right turn deceleration lanes on SR 389 in both directions.
  - Arizona Avenue: Need left turn lanes and right turn deceleration lanes on SR 389 in both directions. Also needs intersection lighting and pedestrian markings and signage.
  - 3200 South: Need left turn lanes on SR 389 for southbound to eastbound traffic.
  - 3600 South: Need left turn lanes on SR 389 for southbound to eastbound traffic.
  - Airport Avenue: Need a right turn deceleration lane on SR 389 for southbound to westbound traffic.
  - Cane Beds Road: Need left turn lanes and right turn lanes on SR 389 in both directions.
  - Central Street: Provide an acceleration lane for right turns onto the highway.
  - Township Avenue: Provide left turn lanes and right turn lanes – will be needed if Short Creek crossing is constructed connecting downtown to SR 389.
  - Uzona Avenue: This is a skewed crossing with a southbound left turn lane for UT 59 traffic to turn onto eastbound Uzona, but there is no opposing left turn lane on the Arizona side.

This intersection presents a safety concern to the community due to its irregular geometrics and it needs to be improved to enhance safe travel through the intersection.

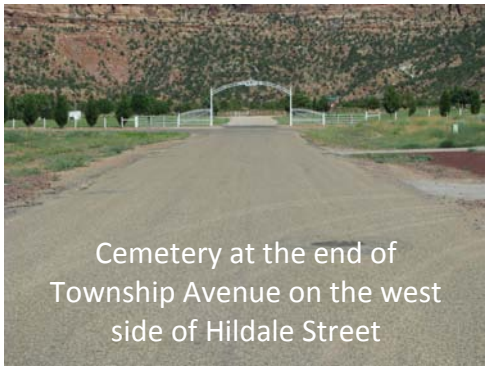
- Central Street: Improve with base stabilization and chip seal surfacing Central Street from Centennial Avenue to Cane Beds Road in the Centennial Park area.
- Redwood Street: Improve with base stabilization and chip seal surfacing Redwood Street from Airport Avenue to Cane Beds Road in the Centennial Park area.
- Yellowstone Road: Improve with base stabilization and chip seal surfacing Yellowstone Road from Cane Beds Road to 3200 South in the Cane Beds area.
- School Boundary Road: Improve with base stabilization and chip seal surfacing School Boundary Road from Cane Beds Road to 3200 South in the Cane Beds area.
- Cane Beds Road Extension & Rosy Canyon Road: Finish the improvement (base stabilization and chip seal surfacing) of Cane Beds Road from the current termination of the improved surfacing east and northerly to the Utah State line where the road has chip seal surfacing. This road connects the Colorado City area to US 89 in Utah and provides a travel time saving over alternate routes.
- Cane Bed Road Connection: To improve public safety response time and reduce school bus route time, connect 3200 South between School Bound road and 1960 East so 3200 South is continuous from SR 389 east to Yellowstone Road; improve the entire road to all weather standards (Note: This may require right of way acquisition/dedication and improvement to County Road standards).
- Water Canyon Road (in northeastern Hildale area): The road is narrow in places and has lots of recreational use. Parking at the terminus trailhead area is deficient. The road should be widened to enable two-way travel the entire length and additional trailhead parking should be provided.
- Airport Improvements:
  - More T-hangars are needed at the airport.
  - New parallel taxiway.
  - Runway reconstruction and a new runway extension.
- BLM would like improved access to two trailhead locations for the Cottonwood Point Wilderness Area. These points are at the east end of roadways of use on the Airport Road alignment east of SR 389, and a roadway of use to the east located one half mile to the north of the Airport road alignment.
- As funds are available, the dirt road paving program of the town should be continued.
- As funds become available, improve chip seal surfaced major streets with asphalt paving and curb and gutter sections.
  - Hildale Street was mentioned as needing curb and gutter sections.


Hildale Street looking north from University Avenue

- Traffic control and lane striping is very limited. As funds become available, a more aggressive program should be implemented to add striping and markings where needed and to maintain all striping and markings in place.
- Central Street: Complete the improvement of Central Street from Apple Avenue to SR 389 including a new drainage structure for the wash crossing at Plum Avenue.
  - This street has a wide expanse of pavement for pedestrians to cross; it was suggested that pedestrian refuge islands be provided at crosswalks.
- Utah Avenue/Central Street Intersection: This is a "T" intersection on a curve in Utah Street with adequate sight distance issues. Intersection needs improvement to enhance safety. The Utah Avenue/Central Street Intersection has some unique design issues associated with it including angled right-of-ways which create sight problems, a very steep rocky outcropping, and Federal BLM land encroaching.

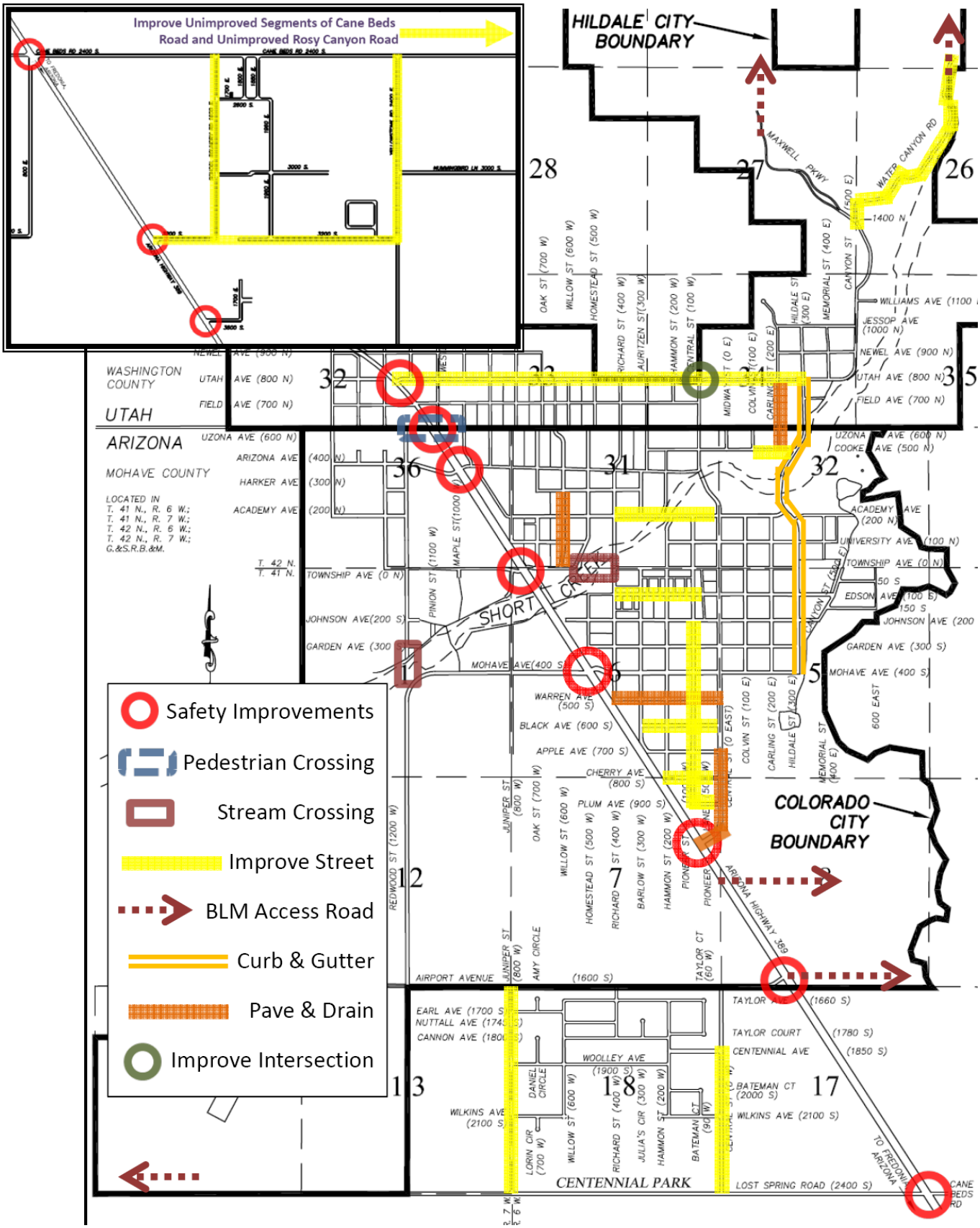

Utah Avenue and Central Street Intersection

- Sidewalks: Construct and provide sidewalks where needed to provide for effective pedestrian circulation. Specific locations mentioned include:
  - Arizona Avenue: Sidewalks are needed along Arizona Avenue from Cottonwood Street east to Juniper Street.
  - Uzona Avenue: Sidewalks are needed along Uzona Avenue to provide additional pedestrian access to the school.
  - Hildale Street: Sidewalks are needed along Hildale Street from Academy Avenue to the cemetery entrance at Township Avenue.
  - School area: Sidewalks are needed where not already present on Township Avenue, University Avenue, Colvin Street, and Carling Street in the vicinity of the school contained within these bounds.
  - Church area: Sidewalks are needed where not already present on Academy Avenue, Hildale Street, and other streets to provide good pedestrian connectivity to and from the Church.
  - Other areas of focus for sidewalks include Edson Avenue south of the Post Office from Central Street to Richard Street and Cooke Avenue from Central Street east to the Zoo.


Cemetery at the end of Township Avenue on the west side of Hildale Street

The transportation system needs identified by the stakeholders are also shown on *Figure 28 Stakeholder Identified Transportation System Needs* that can be found on the next page. The listing and map do not show all improvement needs mentioned, but rather show those that were mentioned by multiple stakeholders and those that fell into general categories.

Figure 28 Stakeholder Identified Transportation System Needs



5. Forecast of Future Conditions

5.1 Population Growth

Population projections for Arizona are developed by the Department of Commerce. These projections were evaluated along with projections for Hildale prepared by the State of Utah and the regional planning agency in Washington County, Utah. *Table 8 Population Projections* shows projections for both communities:

Table 8 Population Projections

Year	Colorado City	Hildale
2010	4835	2795
2020	6196	4585
2030	7302	6008

This does not tell the whole picture of future transportation in the study area though, nor does it explain the future "through" traffic volumes that can be anticipated. Much of the future through traffic will be generated by the dynamic growth in Washington County, Utah; specifically around the St. George metropolitan area.

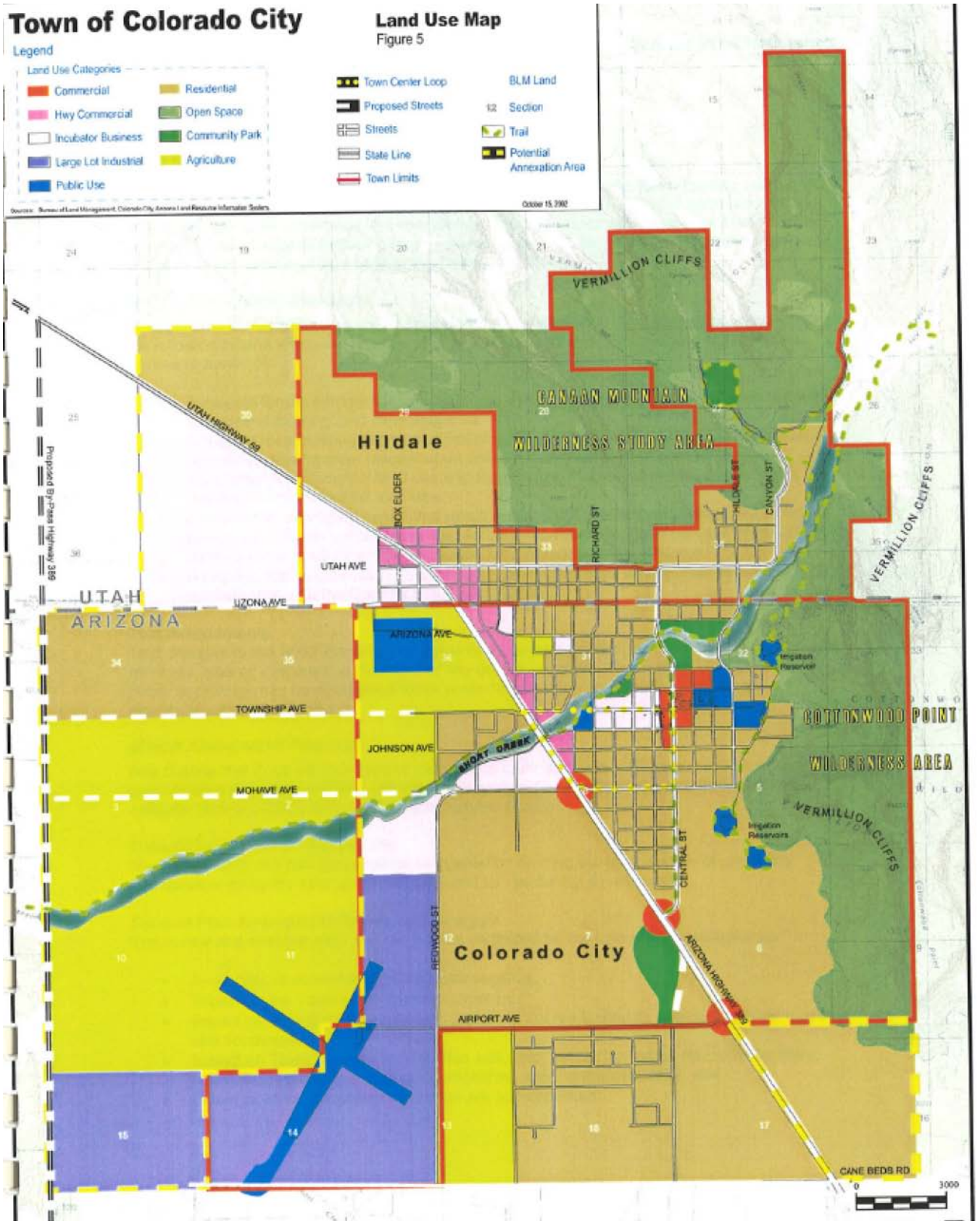
The Five County Association of Governments (FCAG) projects Washington County to grow from a population of 162,544 in 2010 to 251,896 in 2020 and 352,922 in 2030. Even more rapid growth is projected from then to 2050, when the county population is projected to be 607,334. By 2050, the St. George share of that population is expected to be 318,000, and the Hurricane share is expected to be 53,445. Both through traffic on SR 389/Utah 59, and commuter traffic from the study area to new employment centers in Hurricane and the St. George metropolitan area, will impact in and through traffic at Colorado City.

5.2 Future Land Use

The *Town of Colorado City General Plan* contains a land use element suggesting future land uses. The General Plan encourages the location of future service and retail uses along SR 389 and around the town center. The General Plan encourages industrial and employment land use development surrounding the municipal airport. The plan also encourages development of new public lands access roadways to adjacent BLM holdings. Preservation of the community's large lot size and rural character is emphasized as important.

The General Plan does include a couple features unique to Colorado City. The preservation and continuation of agricultural uses within the community is endorsed, and there is a land use designation for it. Development of home based businesses as a business incubator is also promoted. Most community land use plans seek to separate employment and residential uses, but the Colorado City General Plan supports this linkage, at least until such time as businesses outgrow the residential site constraints. Future land uses from the General Plan are shown in *Figure 29 Future Land Use*.

Figure 29 Future Land Use

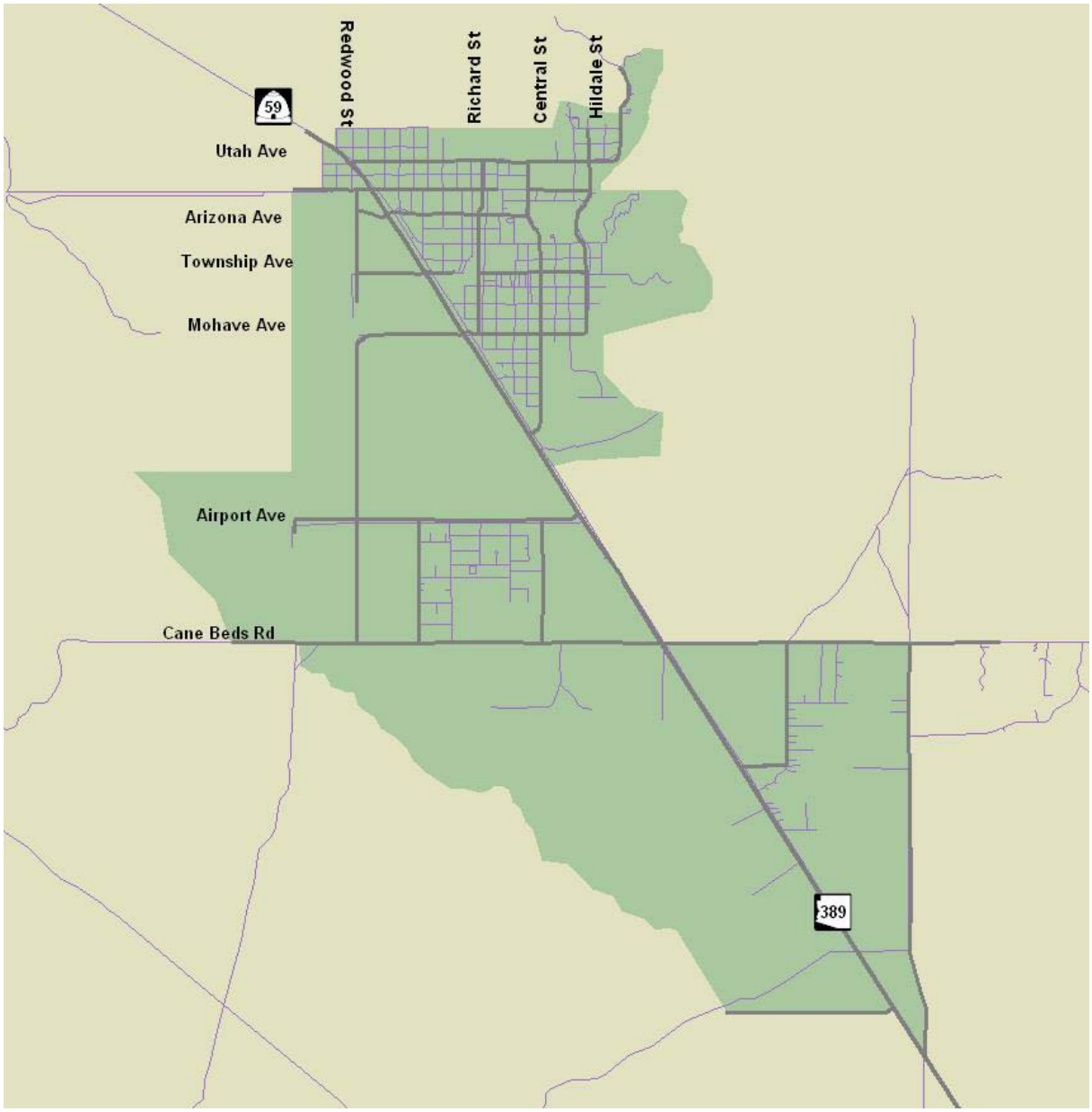


Source: 2002 Town of Colorado City General Plan

5.3 Future Traffic & Level of Service

A travel forecasting sketch-level travel demand model has been developed to provide future roadway level traffic forecasts for highways, arterials, and collectors throughout the study area. Traffic volumes, percent trucks, and level of service (LOS) are based on the sketch-level travel demand model and traffic count data collected for this study. The network for the model was developed to include its functionally-classified streets and additional streets of local significance. Following standard practice, not all local streets were included in the network. *Figure 30 Colorado City Sketch Level Model Network* shows the network and defined area of the sketch-level model. Network streets are shown with a heaver line weight. Local streets which are not in the model network are shown as lighter lines. Six external stations were developed to account for traffic coming into the study are from outside.

Figure 30 Colorado City Sketch Level Model Network



This tool provides insights into the overall magnitude and distribution of future traffic within the study area. The model was developed with a traffic analysis zone (TAZ) system of thirty-nine zones. Demographic data estimated for each zone included population and basic, retail, and service employment.

Census data for Colorado City and Hildale, state and county level Census data and data relationships, and estimates based on aerial photos, were used to develop demographic data control totals for the years 2010, 2015, 2020, and 2030. These were then disaggregated to the traffic analysis zone (TAZ) level. Control total data are shown in *Table 9 Demographic Control Totals for Each Analysis Year*.

Table 9 Demographic Control Totals for Each Analysis Year

Projected Demographic Data for the Sketch-Level Model									
		DU	HHsize	Pop	Emp	Pop/Emp	Basic	Retail	Service
2010	Hildale	342	8.17	2,795	687	4.07	289	164	234
	Colorado City	644	7.51	4,835	1,330	3.64	677	294	359
	Total	986	7.74	7,630	2,017	3.78	966	458	593
2015	Hildale	438	8.17	3,580	880	4.07	370	211	299
	Colorado City	738	7.51	5,542	1,524	3.64	778	335	411
	Total	1,176	7.72	9,122	2,404	3.79	1,148	546	710
2020	Hildale	561	8.17	4,585	1,127	4.07	474	270	383
	Colorado City	825	7.51	6,196	1,704	3.64	869	375	460
	Total	1,386	7.72	10,781	2,831	3.81	1,343	645	843
2030	Hildale	735	8.17	6,008	1,477	4.07	621	354	502
	Colorado City	972	7.51	7,302	2,008	3.64	1,024	442	542
	Total	1,708	7.72	13,310	3,485	3.82	1,645	796	1,044

Disaggregation of data to the TAZ level was made subjectively, based on available vacant land, preservation of farm land, topology, and existing activity in the zone. The general categories of zones defined for population growth are shown in *Figure 31 Estimated Population Growth Categories*; this figure is located on the following page.

Figure 32 Estimated Employment Growth Categories shows the categories for population growth in zones. This figure is found on the page after the next page.

While the TAZ-level demographics and external station volumes were grown for each year, no changes were made to the 2010 network; it was used as a no-build network for each of the analysis years.

Figure 31 Estimated Population Growth Categories

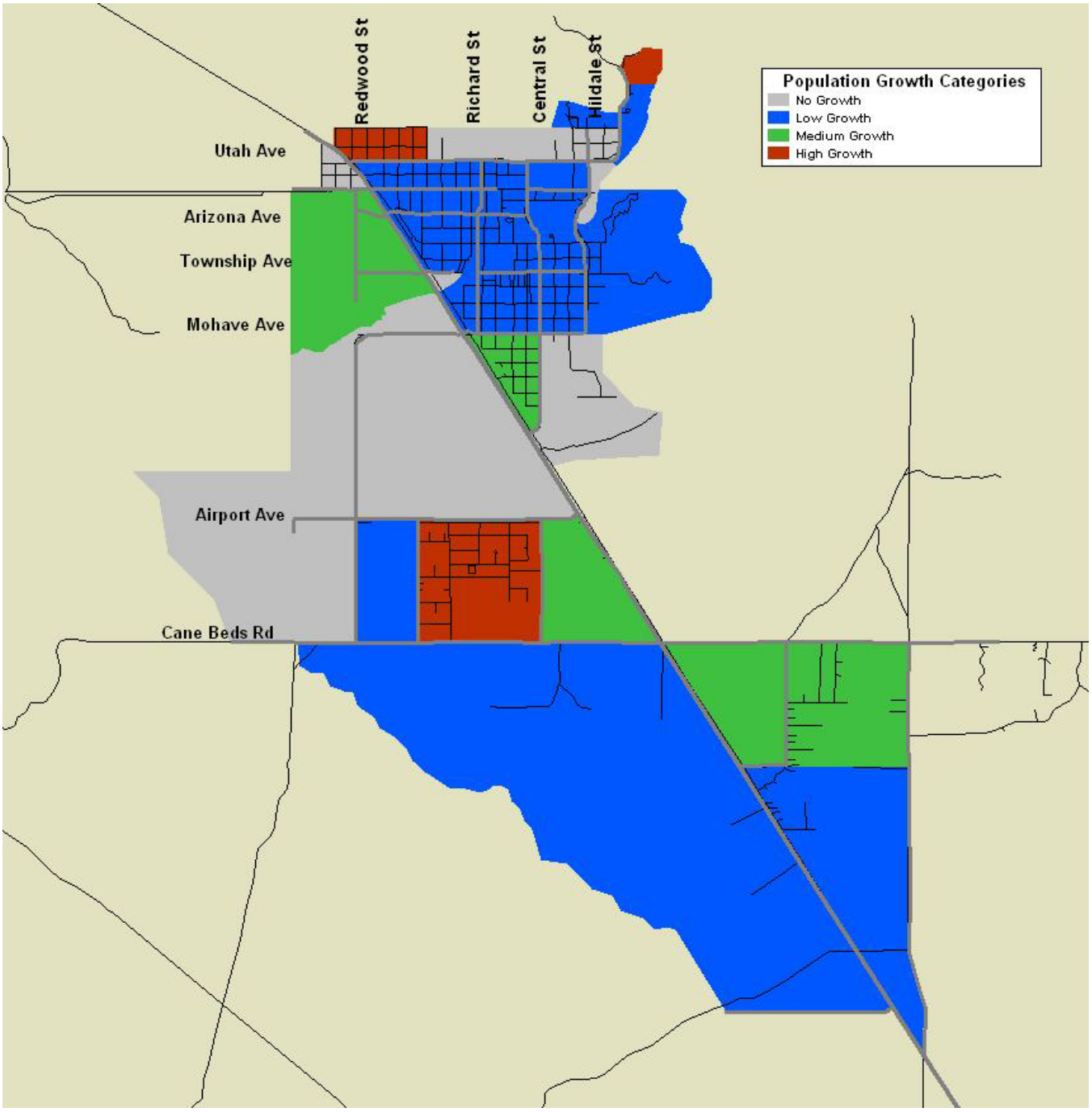
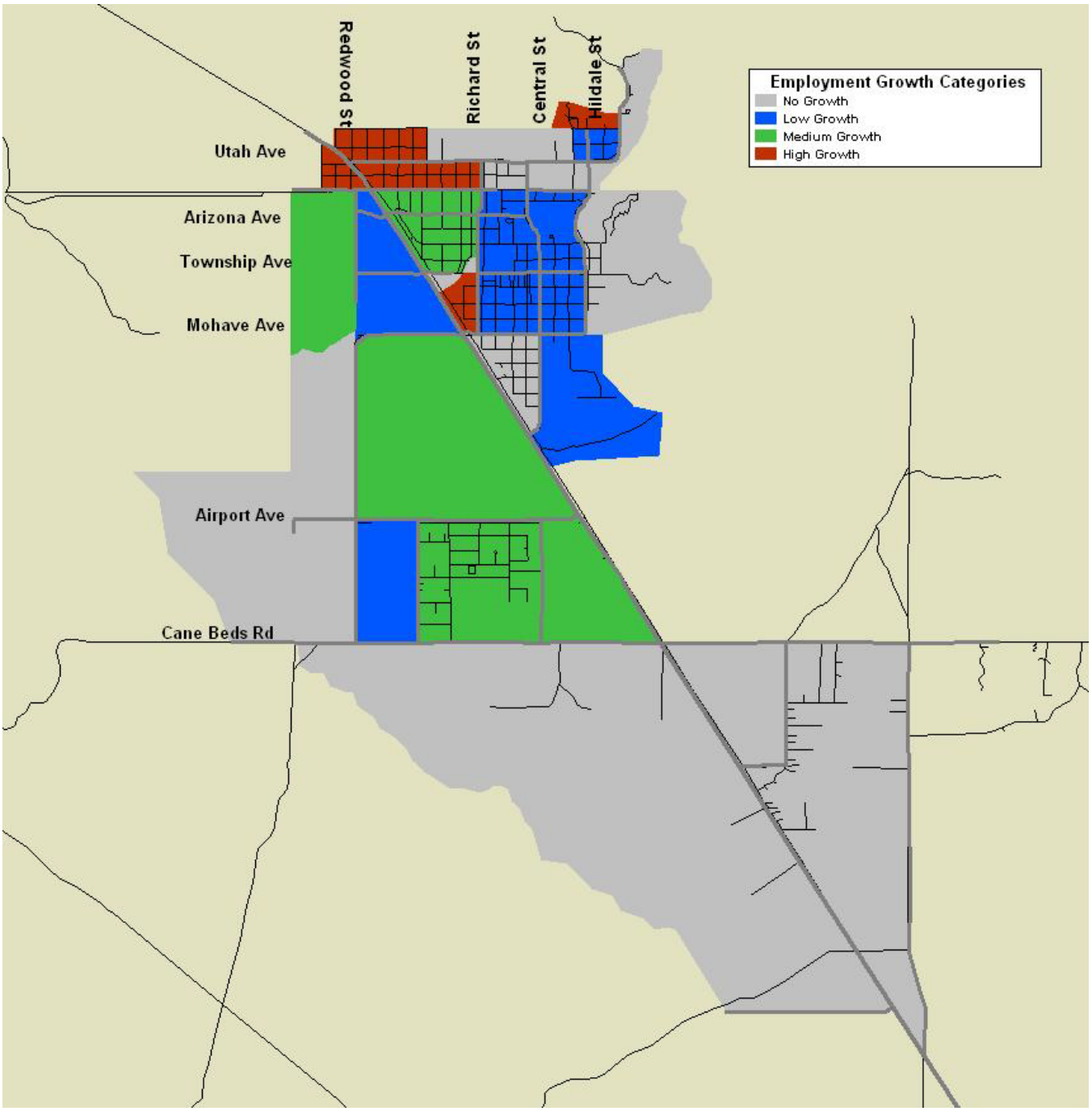


Figure 32 Estimated Employment Growth Categories

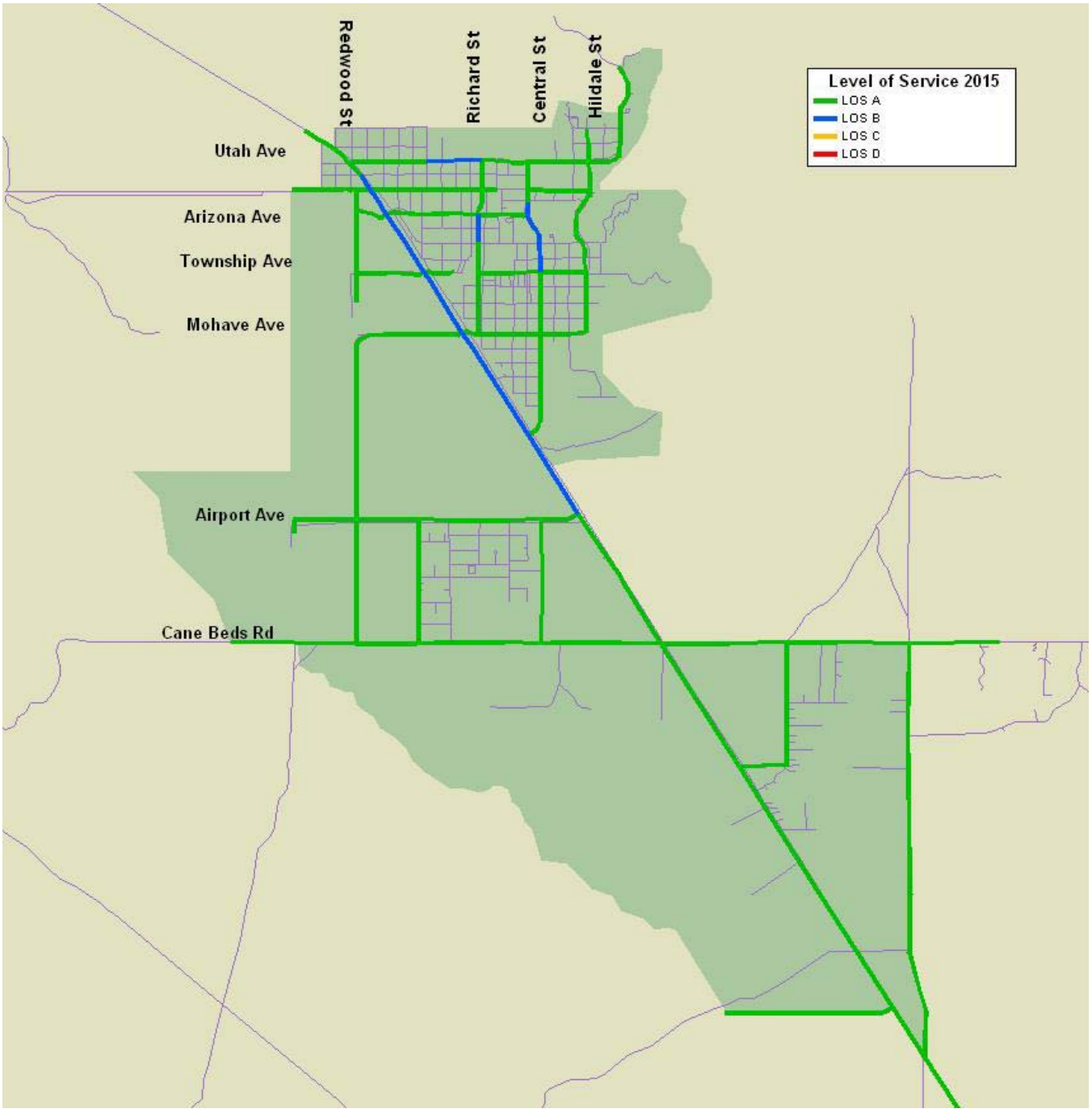


Level of Service: Level of service (LOS) is a measure of the average service level of a roadway based on its 24-hour volume and saturation flow capacity. Functional Classes and daily capacities for the network were redefined based on the ADOT Small Urban Area Planning Studies (PARA) guidelines. A simple ratio of the assigned model volume to the link capacity was used to define the LOS. Daily capacities and the ranges of the volume to capacity ratio which were used to define LOS for each functional class are shown in Table 5 in Section 2.2.5.

5.3.1 Forecast Conditions – 2015

Assigned volumes from the 2015 Colorado City sketch-level travel demand model were used to calculate LOS, using the 2010 no-build network. LOS for 2015 is shown in *Figure 33 2015 Level of Service*. Compared with 2010, the relatively congested areas are spreading and merging towards each other. Roadway mileage at LOS B increases from 3% in 2010 to 10% in 2015.

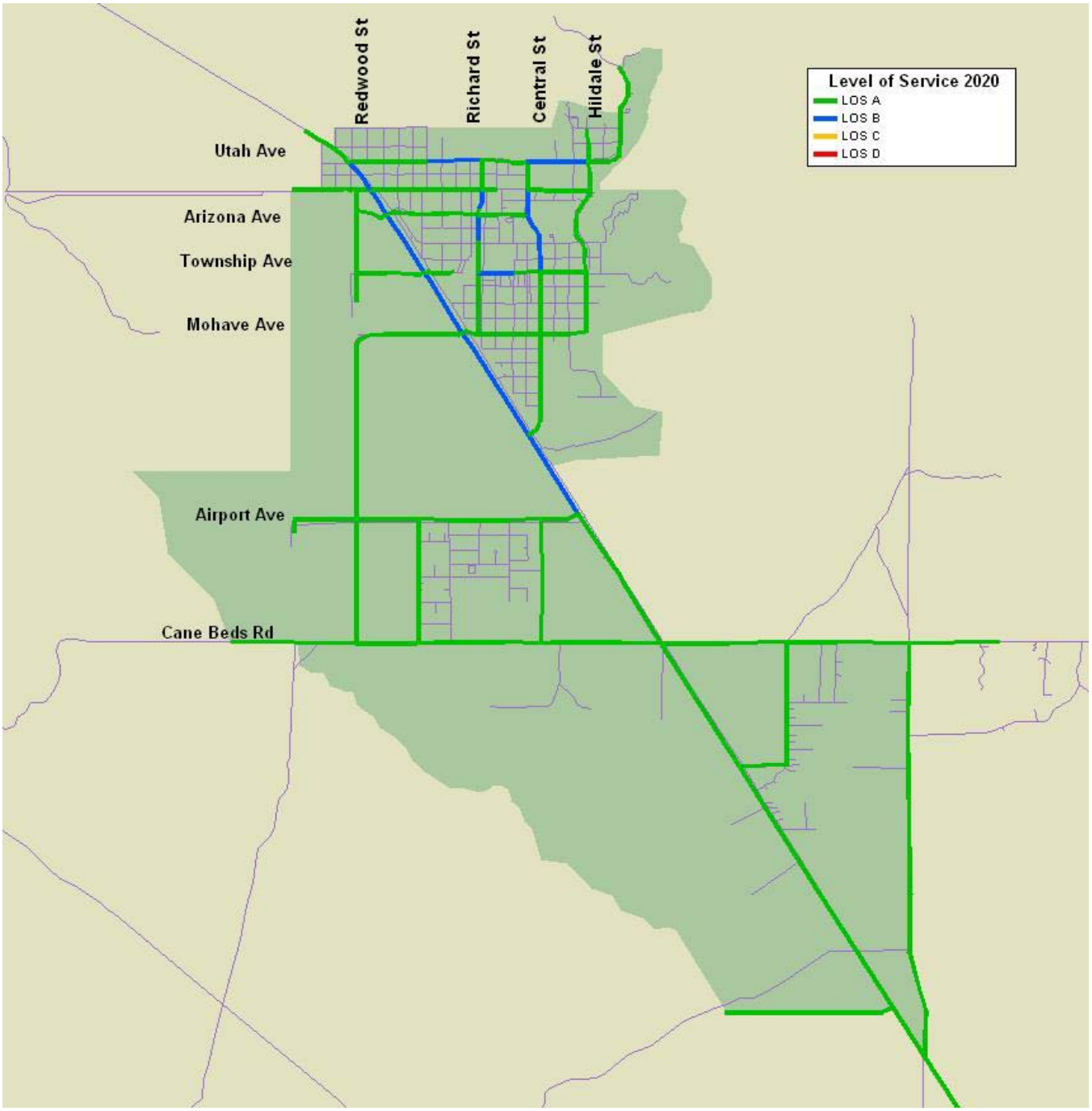
Figure 33 2015 Level of Service



5.3.2 Forecast Conditions – 2020

Forecasting demographic conditions five years further to the year 2020, while still using the no-build network, some additional LOS degradation can be seen. LOS for 2020 for the study area is shown in *Figure 34 2020 Level of Service*.

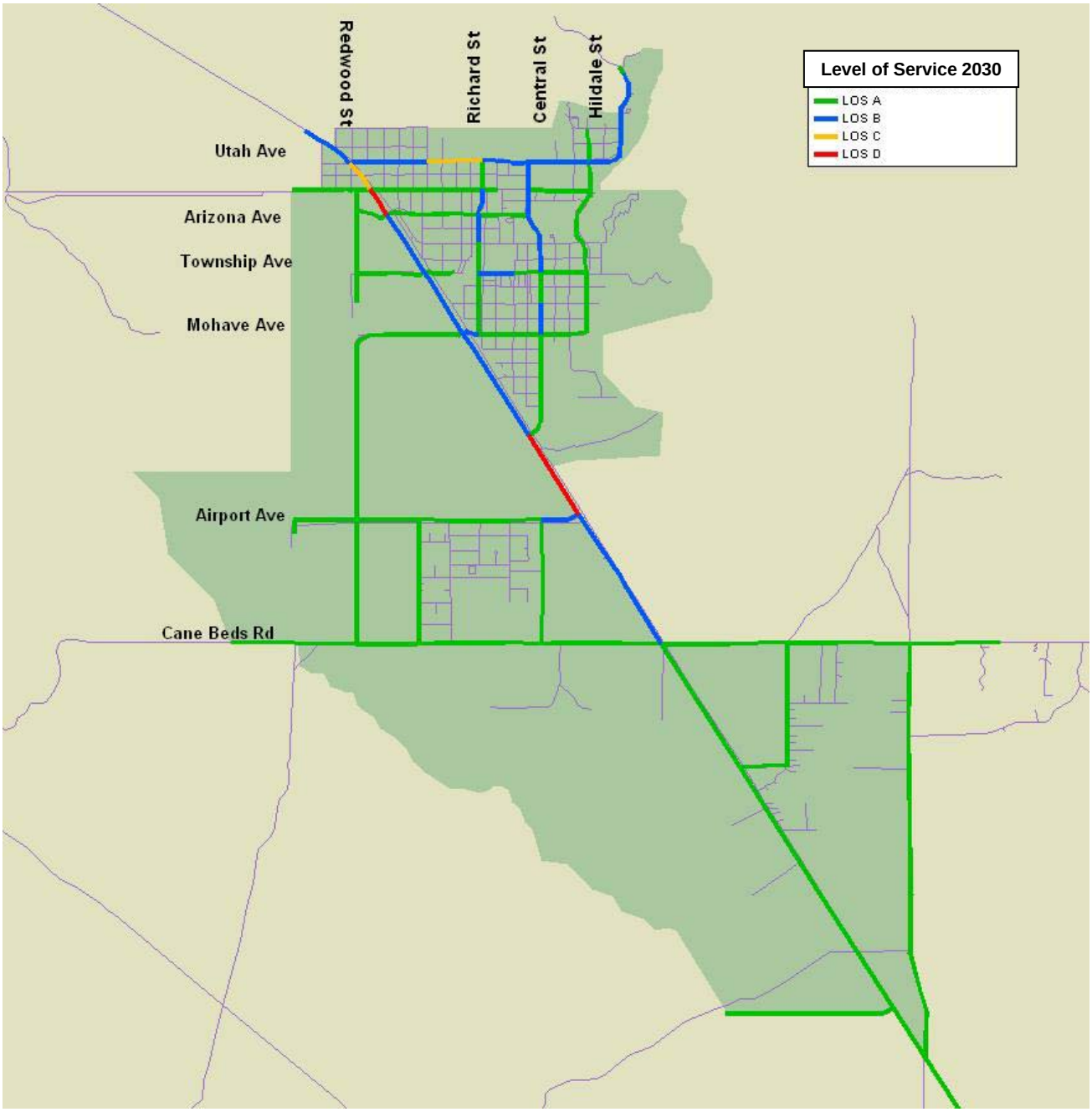
Figure 34 2020 Level of Service



5.3.3 Forecast Conditions – 2030

For the 2030 forecast of twenty years' worth of demographic growth on the no-build network, decreased levels of service can be seen more extensively throughout the study area. The study area LOS for 2030 is shown in *Figure 35 2030 Level of Service*. The effects of the forecast demographic growth traffic can be clearly seen. Highway 389 at sections between Utah Avenue and Arizona Avenue has dropped to LOS C and LOS D. Another section of LOS C appears on Utah Avenue just west of Richard Street. All the rest of Utah Avenue, and most of Central Street above Mohave Avenue, are at LOS B.

Figure 35 2030 Level of Service



5.3.4 Traffic Forecast Summary

In general, the local roads serving the urban areas of Colorado City and Hildale that are at LOS A under existing conditions in 2010 are forecasted to have sufficient capacity to maintain their performance through the year 2030. In contrast, the higher-level facilities such as Utah Highway 59/Arizona Highway 389, Utah Avenue, and Central Street are forecasted to show degraded levels of service through the year 2030. *Table 10 Percent of Study Area Mileage in Each LOS Category* shows the percentage of the total mileage within the study area that is at each defined LOS category for the existing conditions and the three forecast years.

Table 10 Percent of Study Area Mileage in Each LOS Category

	Percent of Mileage Per LOS Category					
	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
2010	97.0	3.0	0.0	0.0	0.0	0.0
2015	90.0	10.0	0.0	0.0	0.0	0.0
2020	87.4	12.6	0.0	0.0	0.0	0.0
2030	77.2	19.0	1.6	2.2	0.0	0.0

It can be seen that the roadways at LOS A show a steady decline throughout the twenty-year forecast period. Much of the LOS A decrease is taken to LOS B. By the year 2030, more significant degradation of levels of service takes some area roadways to LOS C and LOS D. It should be noted that LOS is defined by ranges, so a road's volume can increase by a fairly significant amount without tripping it into the next category. Additionally, average volumes over a stretch of roadway vary with the traffic loading points and with turning movements at intersections. As *Table 11 Average Volumes for Selected Road Segments* located on the next page shows, the average volumes over the larger stretches of road segments only increase slightly for the twenty-year forecast period, with an average increase of only 4.4%. This table also shows the higher growth assigned to Utah Avenue northeast of Hildale, which was viewed as containing vacant land and therefore a likely recipient of Hildale's forecast demographic growth.

5.4 Multimodal Conditions

5.4.1 Pedestrian and Bicycle Circulation

Regardless of the size of a community, it can benefit by increasing the share of non-motorized transportation among its residents. Walking and bicycling expand mobility for non-drivers, reduce motor vehicle demands on the street system, do not impact the environment with noise, air pollution or consumption of valuable oil resources, and provides a venue for healthy exercise.

Currently, the infrastructure to support walking and bicycling in the study area is limited. The few sidewalks that do exist are *mostly* found within the developed area of Colorado City and Centennial Park, while there are no designated bikeways in the study area at all.

Table 11 Average Volumes of Selected Road Segments

Average Volumes of Selected Road Segments	2010	2015	2020	2030	Pct Increase 2010 - 2030
Utah Hwy 59 N of Utah Ave	2,910	3,390	3,900	5,189	3.9%
Arizona Hwy 389 between Utah Ave and Arizona Ave	4,124	4,812	5,675	7,248	3.8%
Arizona Hwy 389 between Arizona Ave and Mohave Ave	3,665	4,337	5,037	6,336	3.6%
Arizona Hwy 389 between Mohave Ave and Central St	3,711	4,306	4,862	6,202	3.4%
Arizona Hwy 389 between Central St and Airport Ave	4,590	5,284	5,882	7,420	3.1%
Arizona Hwy 389 between Airport Ave and Cane Beds Rd	3,401	3,771	4,037	4,793	2.0%
Arizona Hwy 389 between Cane Beds Rd and Yellowstone Rd	2,323	2,496	2,593	2,783	1.0%
Arizona Hwy 389 SE of Yellowstone Rd	2,080	2,240	2,331	2,520	1.1%
Utah Ave W of Central	1,498	1,892	2,672	3,666	7.2%
Utah Ave E of Central	2,085	2,465	3,543	4,677	6.2%
Utah Ave NE of Hildale	601	1,127	1,844	3,050	20.4%
Arizona Ave W of Central	1,374	1,549	1,836	2,299	3.4%
Mohave Ave W of Central	1,354	1,573	1,773	2,140	2.9%
Mohave Ave E of Central	395	395	395	395	0.0%
Airport Ave W of Central	385	466	551	742	4.6%
Airport Ave E of Central	1,601	1,928	2,248	2,979	4.3%

With an eye on future growth, this is a good time to begin the process of building the pedestrian and possibly bicycle infrastructure to ensure that, as the region grows, the pedestrian and bicycle systems are planned and developed to be a safe, attractive, and functional part of the transportation system of the two communities. The following recommendations are suggested to build on existing efforts towards pedestrian and bicycle friendly communities:

- Make minor and major improvements as funding and resources become available. Even small, inexpensive improvements (painted crosswalks or roadway sweeping) can improve conditions for pedestrians and bicyclists.
- Develop guidelines and standards to provide for pedestrian and bicycle facilities in all new development and redevelopment projects, particularly those involving construction of new roadways or upgrades to existing roadways. This includes school bus route stops.
- Provide for convenient pedestrian and bicycle access through and to developments. 'Shortcut' pathways to surrounding major roads and destinations are especially important to encourage walking and bicycling. Piggyback on other development or redevelopment projects, such as street repaving projects, can be used to improve walking and bicycling networks.

Other elements important to pedestrians and bicyclists include bicycle parking, education (directed at pedestrians, bicyclists, drivers, adults, and children), enforcement, facility maintenance, wayfinding/signage, and ADA accessibility.

5.4.2 Transit Circulation

Transit is a beneficial element for any community providing access for those who cannot or choose not to drive. In addition, transit can replace trips currently made by the automobile, thereby reducing our contribution to roadway congestion, consumption of oil resources, and noise and air pollution. Transit, in conjunction with walking and bicycling, extend the range of trips made by the individual modes. As the population in the study area grows older, transit will become even more necessary to support mobility for seniors who can no longer drive.

While the need for internal transit service appears minimal in Colorado City, future interest in regional commuting service between the study area, Hurricane, and St. George will likely increase. Considerations for future transit service in the study area include:

- Work trips provide a good basis for transit service with repeat trips to/from fixed locations.
- A park-and-ride lot near the highway for carpool users and vanpools can offer a low cost startup for future transit focused on commuter trips.
- While no public transit exists in the study area, a number of school bus routes do exist. To make this service more effective, the town could work with the school district to identify locations for pullouts to move school buses out of the 'through' travel lane during boarding of students. This increases the safety of both riders and motorists. At busier pick up points, the installation of seating, shelters and bicycle racks will make the system more user-friendly.


Utah Avenue – looking west towards Richard Street

6. Current and Future Conditions Findings

This working paper identifies and describes the current and future conditions of the transportation system for the Town of Colorado, including the communities of Hildale, Cane Beds, and Centennial Park. Future traffic was forecast to the Year 2030 and the performance of the existing street, road and highway network was analyzed under the increased traffic loadings. There are many needs and desired improvements identified herein, but some of the more important findings are set forth as follows:

1. The existing local street and road network in the study area will adequately meet the forecasted traffic demand throughout the 20-year planning period.
2. Consequently, for the next working paper, *Evaluation Criteria and Improvement Plan*, the study will focus on developing solutions to address safety concerns at identified locations such as at each intersection with the highway, SR 389/UT 59; to support economic development efforts, and to improve the overall quality of life for community residents.
3. Initial review of the travel demand model data would support the improvement of Redwood Street from Uzona Avenue on the north to Cane Beds Road West on the South, including a

crossing structure of Short Creek, to enable traffic circulation to occur on the west side of the highway without vehicles having to use the highway.

4. A means for pedestrians to safely cross the highway at Arizona Avenue is needed since the school is located on the west side of the highway while most of the students are located on the east side of the highway.
5. Application needs to be made to get the major traffic carrying streets, such as Utah Avenue, Hildale Street, Richard Street, Township Avenue, Mohave Avenue and Airport Avenue, functionally classified to urban major collector status so needed improvements are eligible for federal funding.
6. Plan for a new street connection and a crossing structure at Short Creek for Township Avenue to provide a direct connection from the downtown area to SR 389 to remove some of the traffic from streets that pass through residential neighborhoods.
7. Non-motorized travel in the community is reportedly primarily by foot; therefore, a plan that would provide for sidewalk continuity and connectivity between major destinations such as the Church, schools, dairy store, commercial/retail area near Town Hall, etc., would be beneficial.
8. Provide additional east-west capacity in Hildale to reduce the dependency on Utah Street; this could include improvement of Uzona Avenue as another parallel collector street.
9. Develop a program to create an all-weather road for 3200 South from SR 389 to Yellowstone Road that would include acquisition of right of way for the entire corridor, opening a road where it does not currently exist from School Boundary Road east to 1960 East, and grading, stabilizing and chip sealing the road for its entire length to enhance public safety for Cane Beds.
10. Crash rates within the study area are within acceptable limits; however, crashes along SR 389 southeast of town, between Airport Avenue and just east of Yellowstone road are higher than those within the town. On the local streets and roadways, several crash clusters are noted that will be evaluated further for safety enhancements.
11. Special consideration needs to be given to the SR 389 highway corridor given the dramatic growth projected for the St. George area and its potential impact on traffic through the Colorado City community.
12. The community needs to continue to secure grant monies from all available sources to leverage local funds to maximize the transportation system improvements that can be implemented.

The information, data, discussion, input, and findings from this section of the plan guided the development of evaluation criteria and, based on the needs that have been identified, a set of alternative solutions to address the needs, and an implementation plan that contains sets of specific projects that are grouped into short-term (5-year), mid-term (10-year), and long-term (20-year) transportation system improvement programs.

7.0 Functional Classification

Per the Federal Highway Administration (FHWA), functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets rarely serve travel independently. Rather, most travel involves movement through a network of roads. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network. Functional classifications of roadways are used in transportation planning, roadway design, and to allocate federal roadway improvement funds.

Table 12: Functional Classification

Hierarchy of Functional Classification System	
Rural Areas	**Urbanized Areas**
Principal Arterials	Principal Arterials
Minor Arterial Roads	Minor Arterial Streets
Collector Roads	Collector Streets
Local Roads	Local Streets

In Table 12, these FHWA classifications are listed in descending (high to low) order of speed limit, vehicular capacity, and access restrictions. Urban and rural areas have fundamentally different characteristics as to density and types of land use, density of street and highway networks, nature of travel patterns, and the way in which all these elements are related in the definitions of highway function. Consequently, functional classifications provide for separate classification of urban and rural functional systems. Experience has shown that extensions of rural arterial and collector routes provide an adequate arterial street network in places with a population of less than 5,000. Hence, urban classifications are considered in the context of areas of population of 5,000 or more.

The process of classifying roadways in Arizona is led by ADOT in cooperation with the regional councils of governments; in this case, the Western Arizona Council of Governments (WACOG). All roads that are part of the public roadway network are to be classified. For a project to be eligible for federal funding, and to be included in the State Transportation Improvement Plan (STIP), the roadway in question must be functionally classified as a major collector or above.

Applications for reclassification are submitted to ADOT through WACOG. The application identifies the routes to be added or deleted, route termini, average daily traffic, and rationale for justifying the change in functional classification. ADOT's Multimodal Planning Division reviews the application and the impacts of reclassification on the roadway system balance for the surrounding system. They will take into account the opinions and views of local officials, WACOG, and the ADOT Flagstaff District Engineer. If approved by ADOT, the request is then forwarded to the FHWA for their concurrence and approval.

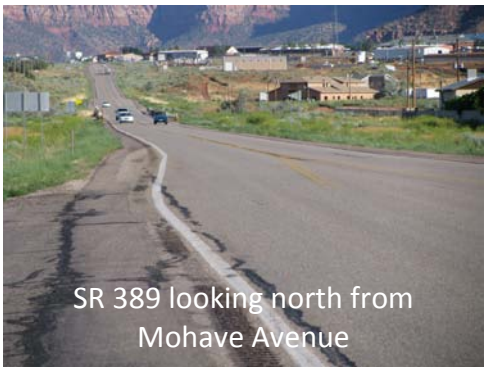
Based on the analysis done in the existing and future conditions of the plan, input from Stakeholder Surveys, discussions with Town staff and field surveys of the community roadway network, applications

for functional classifications were prepared and submitted to the Town Manager for the following roadways:

- Uzona Avenue from SR 389 to Richard Street – to Major Collector
- Arizona Avenue from Redwood Street to SR 389 – to Major Collector
- Academy Avenue from Richard Street to Hildale Street – to Major Collector
- Township Avenue from SR 389 to Hildale Street – to Major Collector
- Mohave Avenue from Redwood Street to Hildale Street – to Major Collector
- Airport Avenue from Redwood Street to SR 389 – to Major Collector
- Cane Beds Road from Redwood Street to SR 389 and to Rosy Canyon Road – to Major Collector
- Redwood Street from Uzona Street to Cane Beds Road – to Major Collector
- Richard Street from Uzona Avenue to Mohave Avenue – to Minor Arterial
- Hildale Street from Uzona Avenue to Mohave Avenue – to Major Collector
- Rosy Canyon Road from the Utah State Line to Cane Beds Road – to Major Collector

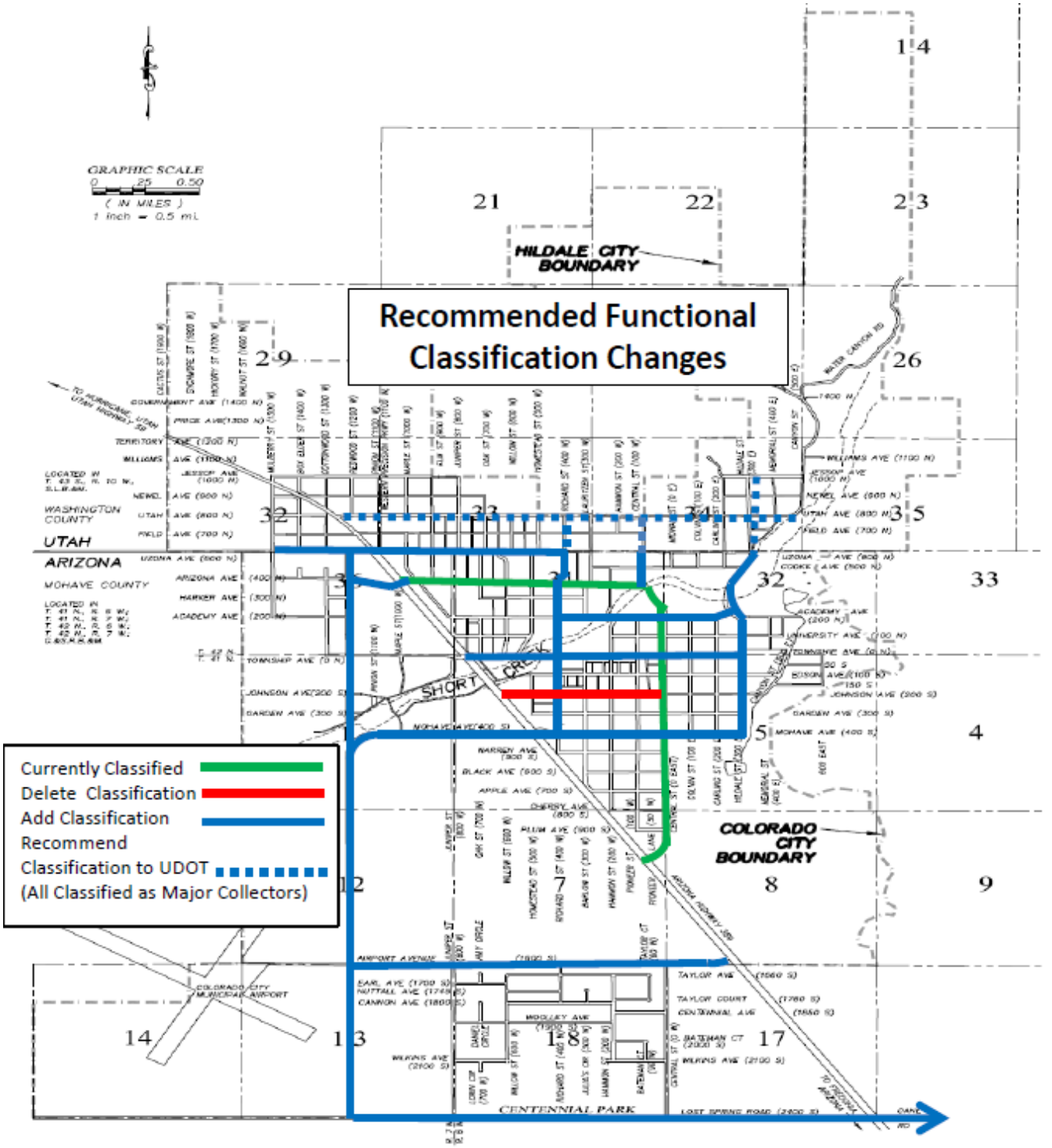
Recommendations to Utah DOT for Hildale will include major collector classification of:

- Utah Avenue from UT SR 59 to Canyon Street
- Richard Street from Uzona Avenue to Utah Avenue
- Central Street from Uzona Avenue to Utah Avenue
- Hildale Street from Uzona Avenue to Jessop Avenue
- Uzona Avenue from Mulberry Street to SR 59


SR 389 looking north from Mohave Avenue

Additionally, an application was prepared to remove the collector designation from Johnson Avenue. This roadway no longer connects to SR 389, and this deletion should enhance the request for Mohave Avenue. *Figure 36* shows the roadways for which functional classification requests were submitted.

Figure 36 Recommended Function Classification Changes



8.0 Project Needs

The projects identified in this working paper were selected based on issues identified in *Working Paper #1, Current and Future Conditions*. Since the inception of this project, discussions with Colorado City staff, comments by members of the Technical Advisory Committee, and interviews with area stakeholders have all illustrated a framework of transportation needs for the area. Field investigations have validated that perception.

These draft candidate projects are, in total, much less that the total universe of transportation needs within the study area. The ability to meet these just these candidate needs will stress the financial resources of all area stakeholder agencies. The ability to address the entire universe of needs is extremely problematic. These draft candidate projects should be reviewed by all stakeholders, and their feedback through consultation and the public involvement process of this study may result in the addition or deletion of individual projects.

Most of these projects are needed now. When projects identified are not needed currently (such as widening of a segment of the state highway), is was noted in the text. Stakeholder feedback is needed on the ranking and prioritization of a finalized list of projects into short (five year), medium (ten year), and long range (twenty year) time frames. This setting of priorities will also be influenced the ability of external public agency partners to address a reasonable share of the needs.

8.1 Structures

Five structural need projects have been identified. These are new bridges over Short Creek at the Redwood Street alignment, the Township Avenue alignment, and the Academy Avenue alignment as well as upgraded Short Creek crossing box culvert structures at Hildale Street, and Central Street. These five structural projects are summarized in the Table 13 below:

Table 13: Structural Project Summary with Costs

Site No.	***Project Location*** / **Project Description**	Jurisdiction	Planning Level Cost
1	*Redwood Street at Short Creek* / Bridge	Colorado City	$2,990,000
2	*Township Avenue at Short Creek* / Bridge	Colorado City	$2,990,000
3	*Academy Avenue at Short Creek* / Bridge	Colorado City	$2,925,000
4	*Central Street at Short Creek* / Bridge	Colorado City	$2,437,500
5	*Hildale Street at Short Creek* / Box Culvert / Roadway and Intersection Improvements	Colorado City	$975,000
	TOTAL		**$12,317,500**

Individual project description and cost sheets for these structural projects, including maps, are shown on the following pages.

Project No. 1

Project Type: Bridge over Short Creek
Location: Redwood Street at Short Creek
Solution Description: Travel demand modeling done for the Colorado City Transportation Study predicted some future congestion along SR 389, especially the segments between Airport Avenue and Central Street and between Arizona Avenue and the Utah border. A partial solution to this issue is to provide parallel roadways for local trips to occur off the state highway. Redwood Street is also a primary access route to the Centennial Park neighborhood and the airport. This route is currently interrupted at Short Creek due to the lack of a crossing structure. During storms, SR 389 is the only all weather crossing in the area. In the event of an incident on the highway, a Redwood Street connection across the creek would also provide an alternative emergency access route. The bridge will allow vehicles, including emergency services, medical response, and law enforcement to reach both sides of the river on a continuous basis. The bridge is estimated to be 250 feet long and 46 feet wide.

Planning Level Cost Estimate
Short Creek Bridge at Redwood Street

DCR/EA, Design and Construction Engineering	$690,000
Construction	$2,300,000
TOTAL =	**$2,990,000**

Project No. 2

Project Type: Bridge over Short Creek
Location: Township Avenue alignment at Short Creek
Solution Description: **T**ownship Avenue is interrupted at Short Creek. A bridge at the Township alignment would permit this roadway to be extended to SR 389, providing an additional connection from the highway to the central business district and town center. The two lane bridge would be about 250 feet long. Travel demand modeling done for the Colorado City Transportation Study predicted some future congestion along SR 389, especially the segments between Airport Avenue and Central Street and between Arizona Avenue and the Utah border. A partial solution to this issue is to provide connections to parallel roadways allowing local trips to occur off the state highway.

Planning Level Cost Estimate
Short Creek Bridge at Township Avenue alignment

DCR/EA, Design and Construction Engineering	$690,000
Construction	$2,300,000
TOTAL =	**$2,990,000**

Project No. 3

Project Type: Bridge over Short Creek
Location: Academy Avenue at Short Creek
Solution Description: Flooding during the winter of 2010 demonstrated the vulnerability of low flow box culverts in Short Creek on several roadways including Academy Avenue. This new bridge will be about 250 feet in length with a width of 60 feet, permitting two through lanes and sidewalks.

Planning Level Cost Estimate
Short Creek Bridge at Academy Avenue

DCR/EA, Design and Construction Engineering	$675,000
Construction	$2,250,000
TOTAL =	**$2,925,000**

Project No. 4

Project Type: Bridge over Short Creek
Location: Central Street at Short Creek
Solution Description: Flooding during the winter of 2010 demonstrated the vulnerability of box culverts in Short Creek on several roadways including Central Street. This new bridge structure will be about 80 feet in width with a length of 50 feet, permitting two through lanes and sidewalks.

Planning Level Cost Estimate
Short Creek Culvert at Central Street

DCR/EA, Design and Construction Engineering	$562,500
Construction	$1,875,000
TOTAL =	**$2,473,500**

Project No. 5

Project Type: Improved Box Culvert over Short Creek
Location: Hildale Street at Short Creek
Solution Description: Flooding during the winter of 2010 demonstrated the vulnerability of low flow box culverts in Short Creek on several roadways including Central Street. This new box culvert will be about 100 feet in width with a length of 50 feet, permitting two through lanes and sidewalks.

Planning Level Cost Estimate
Short Creek Culvert at Hildale Street

DCR/EA, Design and Construction Engineering	$225,000
Construction	$750,000
TOTAL =	**$975,000**

8.2 Roadway Improvement Projects

Twenty two roadway improvement projects have been identified, exclusive of projects on the state highway. The list includes projects in Colorado City, in Hildale, and in unincorporated Mohave County areas within the study area. These roadway construction projects are summarized in Table 14 below. Individual project description and cost sheets for these roadway projects, including maps for major projects, are shown on the following pages.

Table 14: Roadway Improvement Project Summary with Costs

Site No.	*Project Location* Project Description	Jurisdiction	Planning Level Cost
6	*Redwood Street from Mohave Avenue to Township Avenue* Paving	Colorado City	$2,015,000
7	*Redwood Street from Airport Avenue to Cane Beds Road* Paving	Colorado City	$3,432,000
8	*Township Avenue from SR 389 to Richard Street* New Roadway	Colorado City	$1,442,500
9	*Uzona Avenue from SR 389 to Richard Street* Paving	Colorado City	$3,120,000
10	*Central Street from Cherry Avenue to SR 389* Paving and Drainage Improvements	Colorado City	$2,601,000
11	*Arizona Avenue from SR 389 to Elm Street* *Paving and Widening*	Colorado City	$581,400
12	*Edson Avenue from Richard Street to Central Street* *Paving*	Colorado City	$1,612,500
13	*Cooke Avenue from Central Street to Hildale Street* *Paving*	Colorado City	$1,530,000
14	*Uzona Avenue at SR 389* *Realignment to Highway*	Colorado City	$1,599,000
15	*Canyon Street and Water Canyon Road* *Widening and Chip Seal*	Hildale	$182,000
16	*Cane Beds Road from Redwood Street to Rosy Canyon Road* *Paving*	Mohave County	$45,500,000
17	*3200 South from SR 389 to Yellowstone Road* *Paving*	Mohave County	$4,934,000
18	*School Boundary Road from Cane Beds Road to 3200 South* *Paving*	Mohave County	$3,432,000
19	*Yellowstone Road from Cane Beds Road to 3200 South* *Paving and Extension*	Mohave County	$3,432,000
20	*Rosy Canyon Road from Cane Beds Road to Utah Line* *Paving*	Mohave County	$26,000,000

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
21	*Central Street from Centennial Avenue to Cane Beds Road* *Chip Seal Paving*	Mohave County	$127,650
22	*Pioneer Lane from Johnson Avenue to Township Avenue* *Chip Seal Paving*	Mohave County	$45,000
23	*Homestead Street from Township Avenue to Arizona Avenue* *Chip Seal Paving*	Colorado City	$87,300
24	*Willow Street from Arizona Avenue to Academy Avenue* *Chip Seal Paving and drainage improvements*	Colorado City	$79,700
25	*Warren Avenue from Central Street to Barlow Street* *Chip Seal Paving and drainage improvements*	Colorado City	$162,800
26	*Barlow Street from Arizona Avenue to Academy Avenue* *Chip Seal Paving and drainage improvements*	Colorado City	$71,050
27	*Maple Street from Uzona Avenue to Academy Avenue* *Chip Seal Paving and drainage improvements*	Colorado City	$153,900
	TOTAL		**$102,158,800**

A number of the individual project sheets also show lowered cost figures for chip sealing some roadways where major construction costs were estimated, rather than build fully engineered roads with asphalt paving. Due to the number of projects and the magnitude of the needs, it may be preferable to chip seal some of these lower use roads. New construction around bridges and roadways serving the school as well as those serving retail areas near the highway warrant longer term improvements.

Project No. 6

Project Type: Roadway Construction and Paving

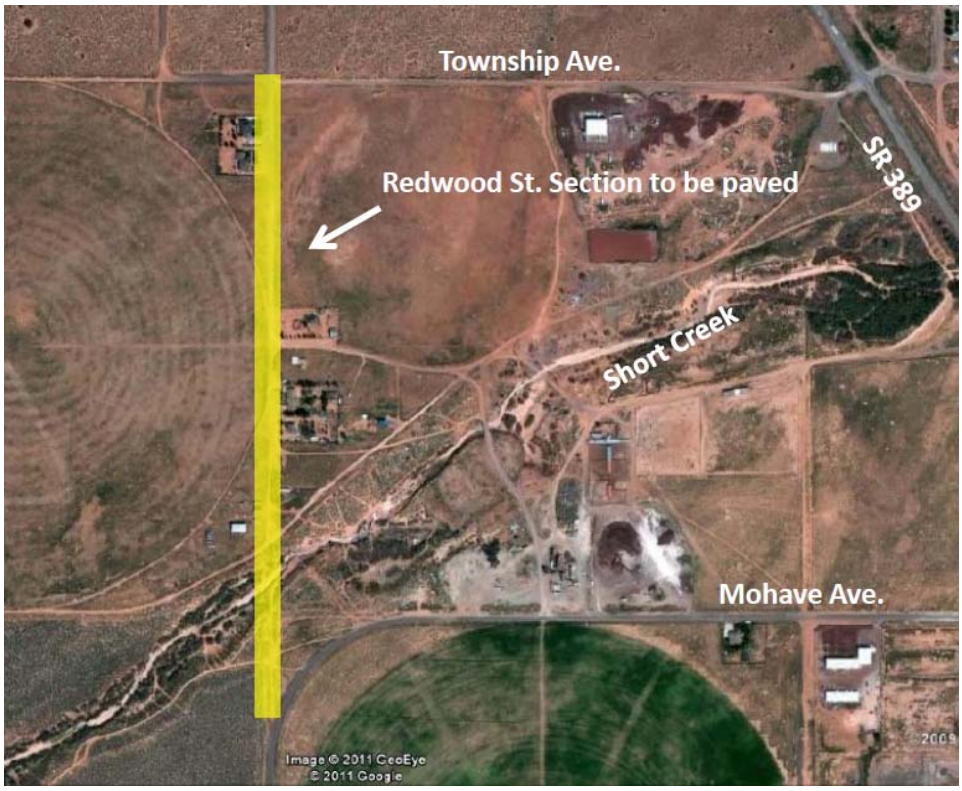
Location: Redwood Street from Mohave Avenue Curve to Township Avenue.

Solution Description: Redwood Street is interrupted at Short Creek. A bridge here would permit this roadway to be continuous from Cane Beds Road to Uzona Avenue. This segment of about 3,100 feet needs grading, base stabilization and paving. Travel demand modeling done for the Colorado City Transportation Study predicted some future congestion along SR 389, especially the segments between Airport Avenue and Central Street and between Arizona Avenue and the Utah border. A partial solution to this issue is to provide parallel roadways allowing local trips to occur off the state highway.

Planning Level Cost Estimate
Redwood Street Construction

Design and Construction Engineering	$465,000
Construction **Option One: Fully engineered road with asphalt paving**	$1,550,000
TOTAL =	**$2,015,000**

Design and Construction Engineering	$14,000
Construction **Option Two: Chip Sealing**	$93,000
TOTAL =	**$107,000**



Project No. 7

Project Type: Roadway Construction and Paving

Location: Redwood Street from Airport Avenue to Cane Beds Road.

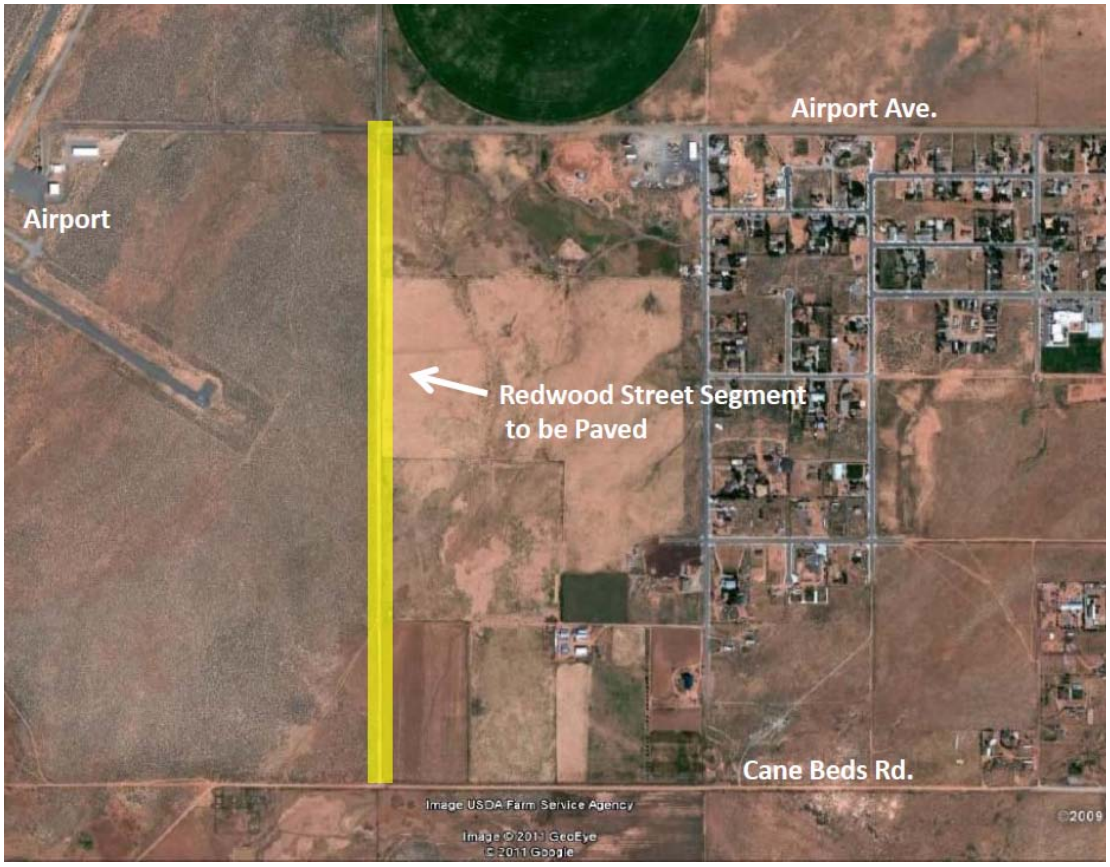
Solution Description: This segment of about one mile, needs grading, base stabilization and paving. Travel Demand modeling done for the Colorado City Transportation Study predicted some future congestion along SR 389, especially the segments between Airport Avenue and Central Street and between Arizona Avenue and the Utah border. A partial solution to this issue is to provide parallel local roadways allowing local trips to occur off the state highway.

Planning Level Cost Estimate

Redwood Street Construction

Design and Construction Engineering	792,000
Construction **Option One: Fully engineered road with asphalt paving**	$2,640,000
TOTAL =	**$3,432,000**

Design and Construction Engineering	24,000
Construction **Option Two: Chip Sealing**	$158,400
TOTAL =	**$182,400**



Project No. 8

Project Type: Roadway Construction

Location: Township Avenue alignment from SR 389 to Richard Street

Solution Description: **T**ownship Avenue is interrupted at Short Creek. A bridge at the Township Avenue alignment would permit this roadway to be extended from Richard Street to SR 389, a distance of about 1,950 feet. This will provide an additional connection from the highway to the central business district and town center. Travel demand modeling done for the Colorado City Transportation Study predicted some future congestion along SR 389, especially the segments between Airport Avenue and Central Street and between Arizona Avenue and the Utah border. A partial solution to this issue is to provide connections to parallel roadways allowing local trips to occur off the state highway.

Planning Level Cost Estimate

Township Avenue Construction

Right of Way Acquisition and Relocation	$175,000
Design and Construction Engineering	$292,500
Construction	$975,000
TOTAL =	**$1,442,500**

Project No. 9

Project Type: Roadway Construction and Paving

Location: Uzona Avenue from SR 389 to Richard Street.

Solution Description: This segment of about 4,800 feet needs grading, base stabilization and paving. Improvements to Uzona Avenue are important to the relief of Utah Avenue, which is the only significant east/west corridor in Hildale. This is a two lane roadway with shoulders.

Planning Level Cost Estimate

Uzona Avenue Construction

Design and Construction Documents	$720,000
Construction (@$700 LF)	$2,400,000
TOTAL =	**$3,120,000**

Project No. 10

Project Type: Roadway Drainage and Paving Improvements

Location: Central Street from Cherry Avenue to SR 389

Solution Description: This segment of about 1,700 feet has storm water from a small drainageway crossing the roadway. This impedes traffic and contributes to pavement deterioration. In addition to two new box culverts at the drainageway crossing and pavement maintenance, curbing and gutters will help stabilize the situation on this roadway segment. Repaving to match the new section to the north is also included.

Planning Level Cost Estimate

Central Street Drainage Improvements

Design and Construction Engineering	$81,000
Curb and Gutter both sides	$45,000
Drainage Improvements	$225,000
Repaving	$2,250,000
TOTAL =	**$2,601,000**

Project No. 11

Project Type: Roadway Construction and Paving

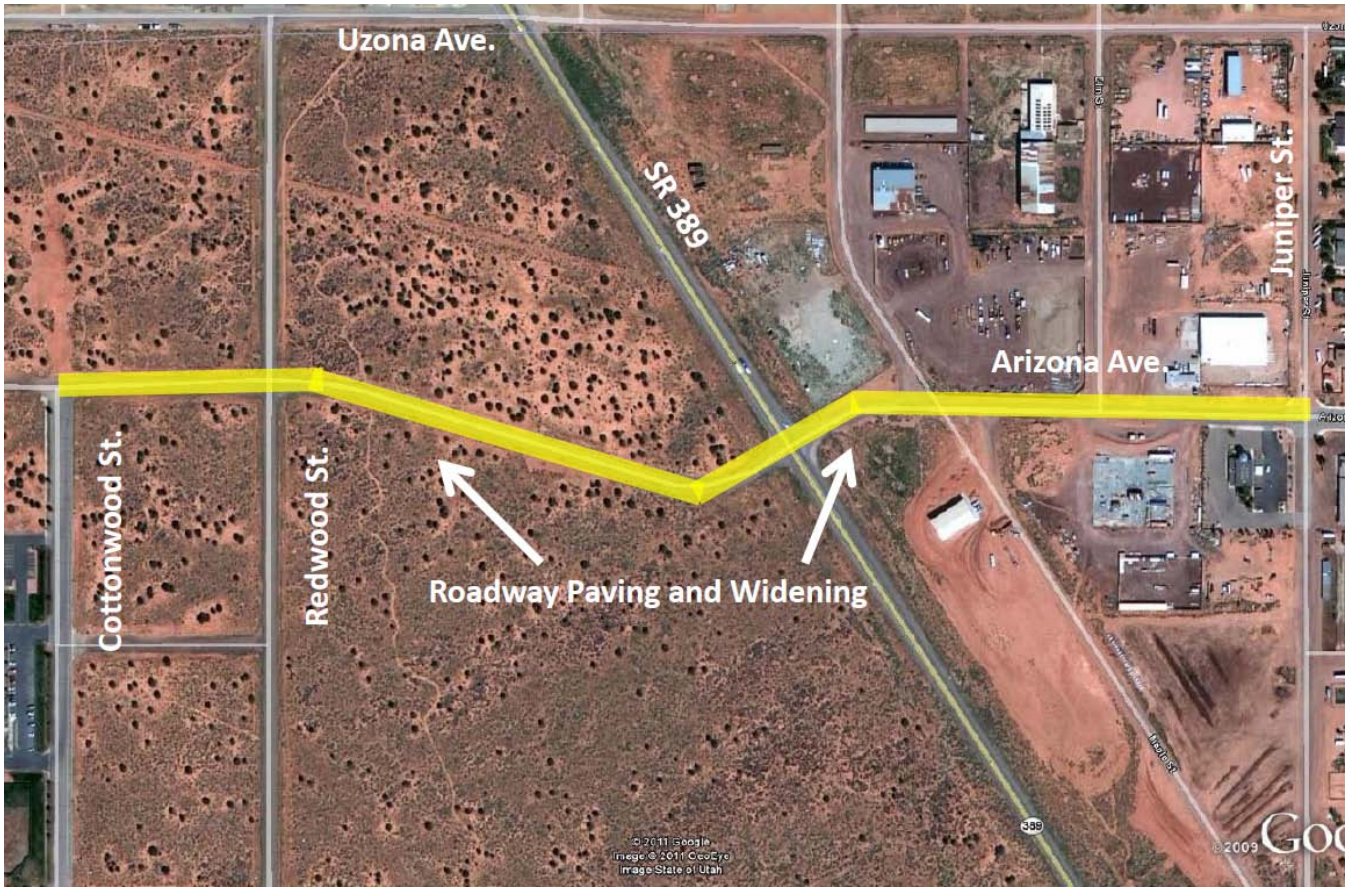
Location: Arizona Avenue from Cottonwood Street to Juniper Street.

Solution Description: This segment needs grading, base stabilization and paving. Possible commercial development of adjacent properties, and resultant increases of traffic suggest that this segment be widened to include multiple through and turn lanes. A potential schematic is shown below. This improvement project includes curb and gutter and sidewalks, which are also included in the cost estimate. A short extension of this wider cross section should continue west of SR 389. The segment between SR 389 and Juniper Street is scheduled for construction in August of 2011.

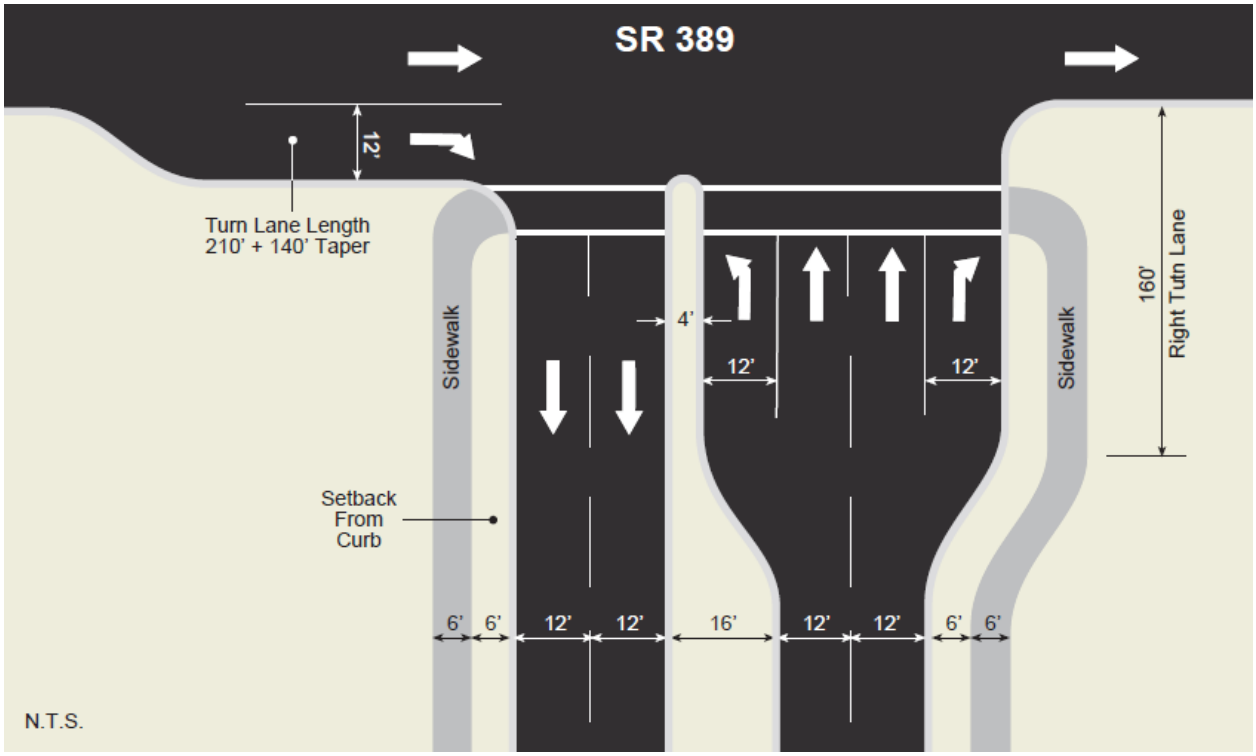
Planning Level Cost Estimate

Arizona Avenue Construction

Design and Construction Engineering	$474,750
Curb and Gutter	$82,500
Sidewalk	$125,000
Roadway Construction	$1,375,000
TOTAL =	**$2,057,250**



Proposed Schematic for Arizona Avenue at SR 389 if Retail Development Occurs



Project No. 12

Project Type: Roadway Construction and Paving

Location: Edson Avenue from Richard Street to Central Street.

Solution Description: This segment of about 2,625 feet needs grading, base stabilization and paving. This will contribute to the paving of roadways serving the downtown core. This is a two lane roadway.

Planning Level Cost Estimate

Edson Avenue Construction

Design and Construction Engineering	$300,000
Construction **Option One: Fully engineered road with asphalt paving**	$1,312,500
TOTAL =	**$1,612,500**

Design and Construction Engineering	$12,000
Construction **Option Two: Chip Seal**	$78,750
TOTAL =	**$90,750**

Project No. 13

Project Type: Roadway Construction and Paving

Location: Cooke Avenue from Lauritzen Street to Hildale Street.

Solution Description: This segment of about 2,460 feet needs grading, base stabilization and paving. This will contribute to the paving of roadways serving the downtown core. This is a two lane roadway.

Planning Level Cost Estimate
Cooke Avenue Construction

Design and Construction Engineering	$300,000
Construction **Option One: Fully engineered road with asphalt paving**	$1,230,000
TOTAL =	**$1,530,000**

Design and Construction Engineering	$11,070
Construction **Option Two: Chip Seal**	$73,800
TOTAL =	**$84,870**

Project No. 14

Project Type: Roadway Construction and Paving

Location: Uzona Avenue Realignment at SR 389

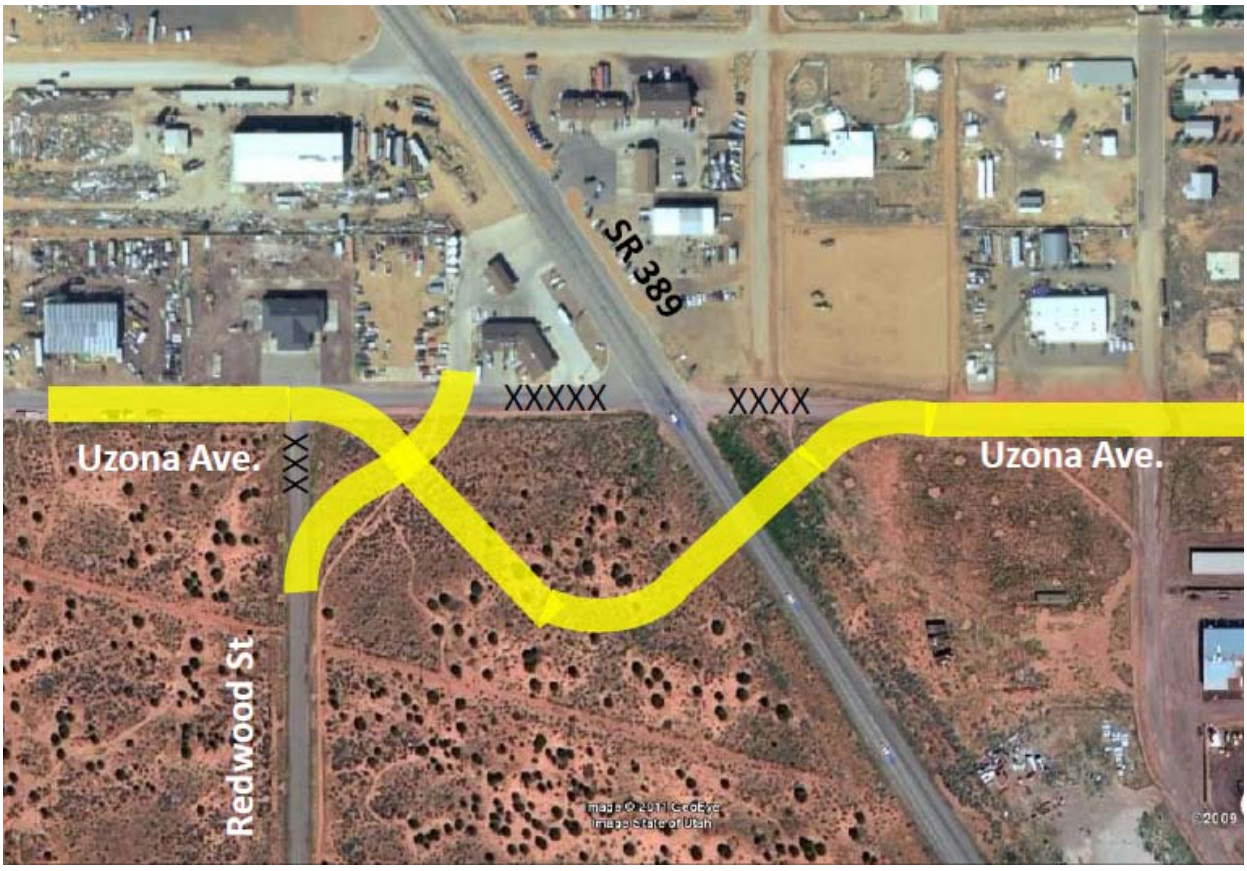
Solution Description: Uzona Avenue intersects with SR 389/Utah 59 at a skewed angle. This creates potential sight distance problems and longer travel length for some turning movements. An inexpensive solution might be to install a traffic light at this location, although it is doubtful that entering volumes meet standard signal warrants. Potential commercial development at the southeast corner of this intersection will significantly increase traffic volumes at this intersection, necessitating a more comprehensive look at solutions. Two alignment options are illustrated, with comparable costs. These provide enhanced connectivity to Redwood Street while still preserving commercial access.

Planning Level Cost Estimate

Uzona Avenue Realignment and Reconstruction

DCR, EA, and Design and Construction Engineering	$307,500
Curb and Gutter	$61,500
Sidewalk	$164,000
Roadway Construction	$1,066,000
TOTAL =	**$1,599,000**

Option One



Option Two

Project No. 15

Project Type: Roadway Widening and Improvement

Location: Water Canyon Rd. and Canyon St. from Williams Way to Maxwell Park

Solution Description: Water Canyon Road and Canyon Street are unpaved roads in Hildale, leading to BLM recreational areas. The roadway is currently narrow and it is difficult for two vehicles to pass. The roadway needs to be widened, stabilized and have a chip seal surface from Canyon Street to its terminus 0.9 mile to the north as well as drainage improvements. Additionally, additional trailhead parking is needed at the northern end of the road, with adequate space for vehicle and trailer turnarounds.

Planning Level Cost Estimate

Water Canyon Road and Canyon Street Improvements

Design and Construction Engineering	$78,500
Construction	$524,400
TOTAL =	**$602,900**

Project No. 16

Project Type: Roadway Construction and Paving

Location: Cane Beds Road from Redwood Street to Rosy Canyon Road.

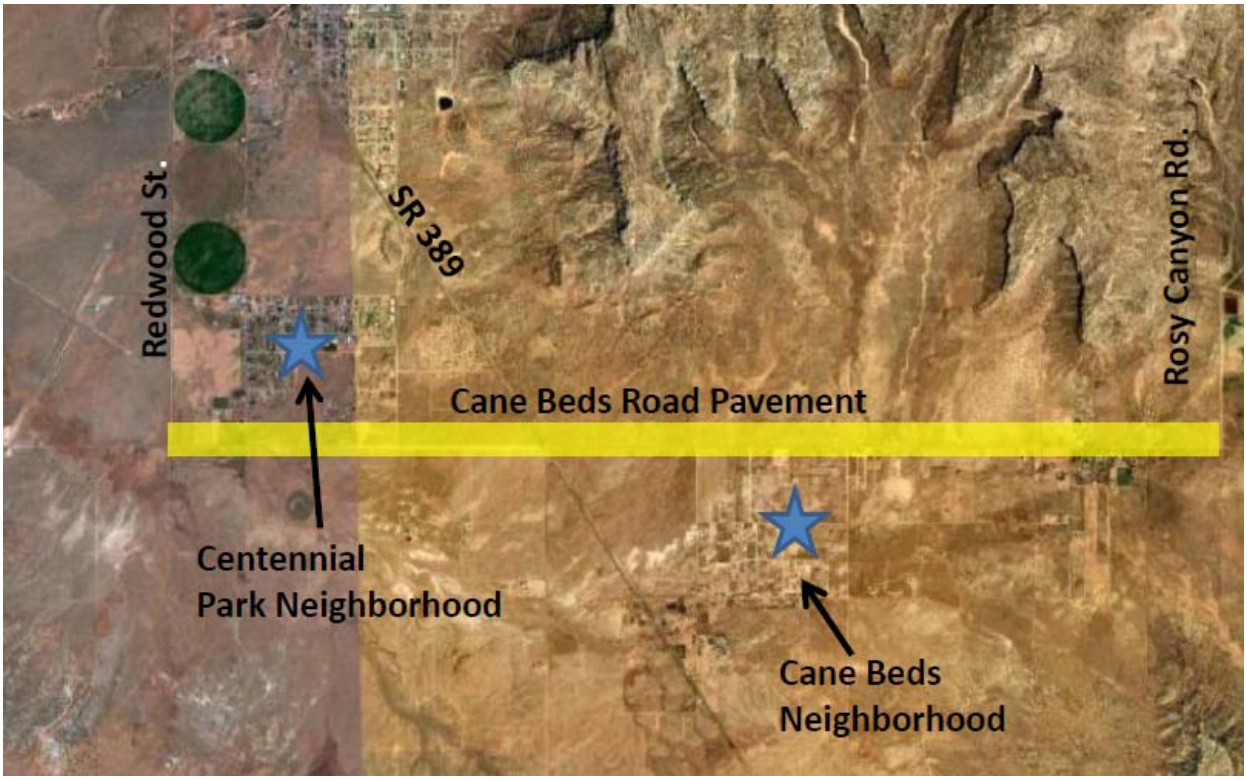
Solution Description: Cane Beds Road is a county route that connects the area to much of the Arizona Strip. It also serves as a major access route for the Centennial Park and Cane Beds neighborhoods as well as connecting to Rosy Canyon Road at its eastern terminus, a route used as a regional connector to Kanab, Utah. East of SR 389, this is a bus route for local schools as well. This 7 mile segment needs base stabilization and paving for two lanes and shoulders.

Planning Level Cost Estimate

Redwood Street Construction

DCR/EA, Design and Construction Engineering	$10,500,000
Construction **Option One: Fully engineered road with asphalt paving**	$35,000,000
TOTAL =	**$45,500,000**

DCR/EA, Design and Construction Engineering	$166,320
Construction **Option Two: Chip Seal**	$1,108,800
TOTAL =	**$1,275,120**



Project No. 17

Project Type: Roadway Construction and Paving

Location: 3200 South from SR 389 to Yellowstone Road.

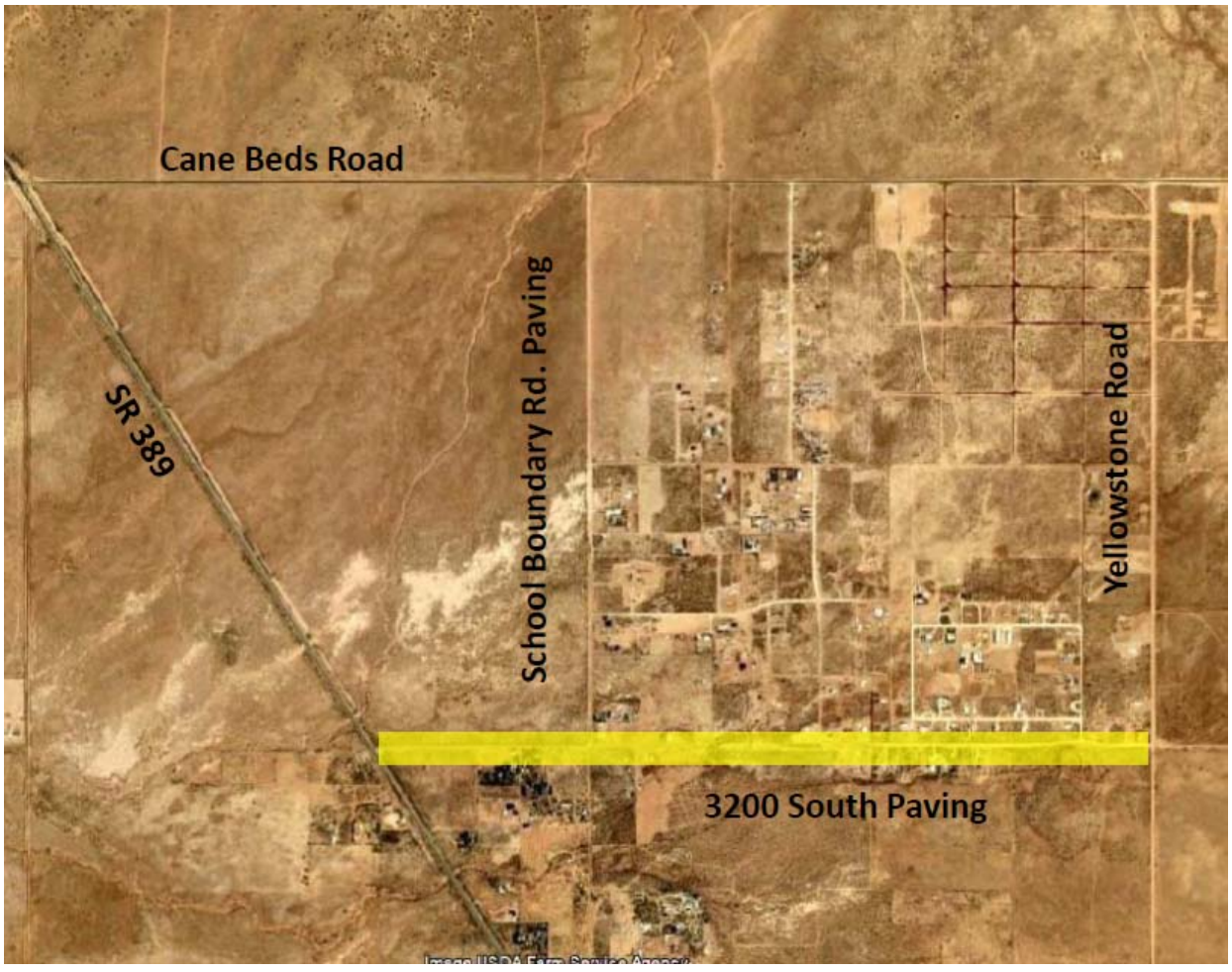
Solution Description: 3200 South is a major access route to the Cane Beds area. This is a bus route for area schools as well. This 1.4 mile road needs base stabilization and paving for two lanes and shoulders.

Planning Level Cost Estimate

3200 South Construction

Right of Way Acquisition	$130,000
Design and Construction Engineering	$1,108,000
Construction **Option One: Fully engineered road with asphalt paving**	$3,696,000
TOTAL =	**$4,934,000**

Right of Way Acquisition	$130,000
Design and Construction Engineering	33,264$
Construction **Option Two: Chip Seal**	$221,760
TOTAL =	**$385,024**



Project No. 18

Project Type: Roadway Construction and Paving

Location: School Boundary Road from Cane Beds Road to 3200 South

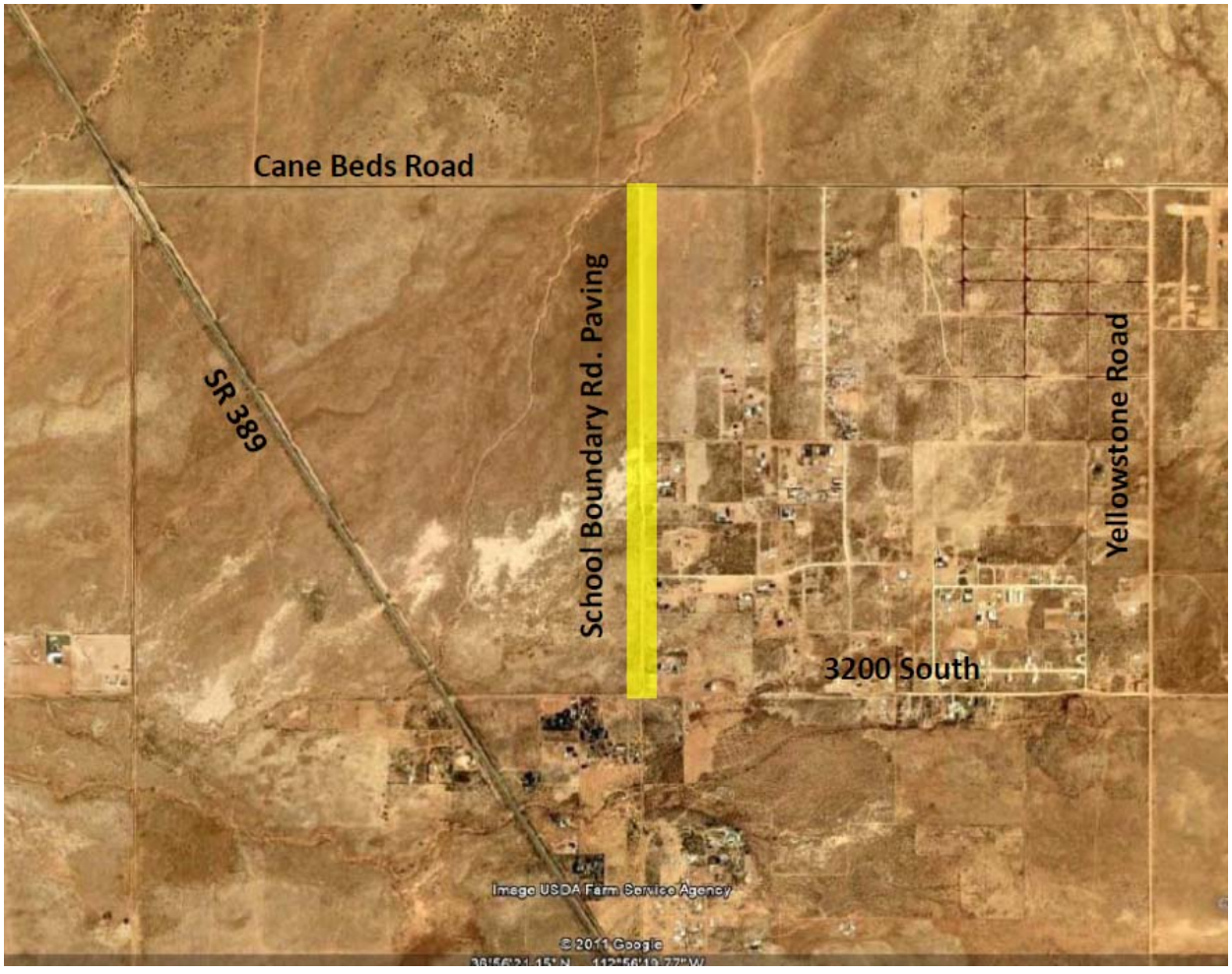
Solution Description: School Boundary Road is a major access route to the Cane Beds area. This is a bus route for area schools as well. This one mile road needs base stabilization and paving for two lanes and shoulders.

Planning Level Cost Estimate

School Boundary Road Construction

Design and Construction Engineering	$792,000
Construction **Option One: Fully engineered road with asphalt paving**	$2,640,000
TOTAL =	**$3,432,000**

Design and Construction Engineering	$23,760
Construction **Option Two: Chip Seal**	$158,400
TOTAL =	**$182,160**



Project No. 19

Project Type: Roadway Construction and Paving

Location: Yellowstone Road from Cane Beds Road to 3200 South

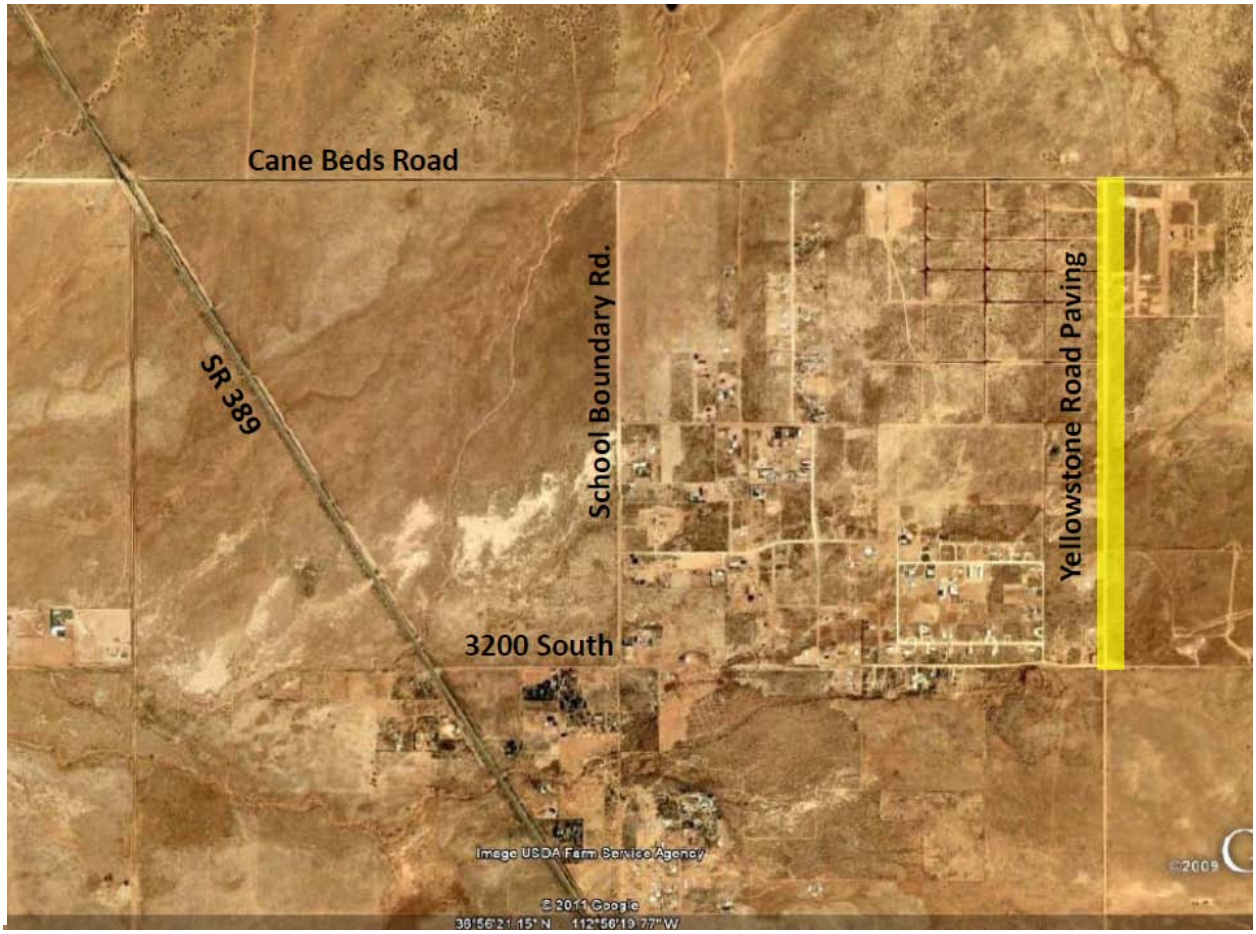
Solution Description: Yellowstone Road is a major access route to the Cane Beds area. This is a bus route for area schools as well. Yellowstone Road continues south to SR 389, but currently, this one mile segment is the priority need for base stabilization and paving for two lanes and shoulders.

Planning Level Cost Estimate

Yellowstone Road Construction

Design and Construction Engineering	$792,000
Construction **Option One: Fully engineered road with asphalt paving**	$2,640,000
TOTAL =	**$3,432,000**

Design and Construction Engineering	$23,760
Construction **Option Two: Chip Seal**	$158,400
TOTAL =	**$182,160**



Project No. 20

Project Type: Roadway Construction and Paving

Location: Rosy Canyon Road from Cane Beds Road to Utah border

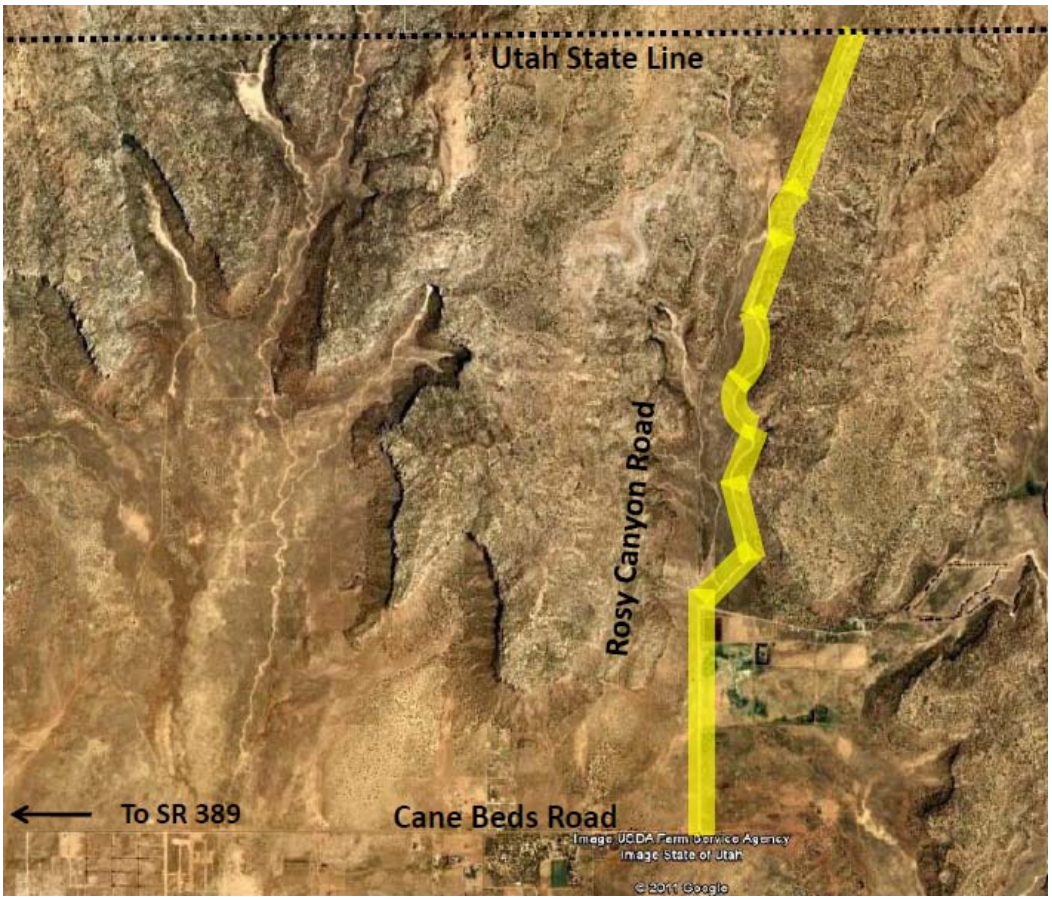
Solution Description: Rosy Canyon Road is an extension from Cane Beds Road that is used as a regional route to the Kanab Utah area; a much shorter distance than using SR 389. This route contributes to regional economic development efforts. The four mile Arizona segment is the priority need for base stabilization and paving for two lanes and shoulders. In Utah, this is a county maintained route.

Planning Level Cost Estimate

Rosy Canyon Road Construction

Design and Construction Engineering	$6,000,000
Construction **Option One: Fully engineered road with asphalt paving**	$20,000,000
TOTAL =	**$26,000,000**

Design and Construction Engineering	$95,040
Construction **Option Two: Chip Seal**	$633,600
TOTAL =	**$728,640**



A number of other unpaved roadways in the study areas should be considered for chip seal coating as an initial stabilization and preservation step. These additional interim improvement projects and their cost estimates are listed below. Illustration of these interim projects are not included.

Project No. 21
Project Type: Roadway Chip Seal
Location: Central Street from Centennial Avenue to Cane Beds Road
Solution Description: This 3,700 foot segment of Central Street in the Centennial Park area is not currently paved. An initial step would be to chip seal this roadway.

Engineering	$16,650
Construction	$111,000
TOTAL =	**$127,650**

Project No. 22
Project Type: Roadway Chip Seal
Location: Pioneer Lane
Solution Description: This 1,300 foot segment of Pioneer Lane is not currently paved. An initial step would be to chip seal this roadway.

Engineering	$6,000
Construction	$39,000
TOTAL =	**$45,000**

Project No. 23
Project Type: Roadway Chip Seal
Location: Homestead Street from Township Avenue to Arizona Avenue
Solution Description: This 2,530 foot segment of Homestead Street is not currently paved. An initial step would be to chip seal this roadway.

Engineering	$11,400
Construction	$75,900
TOTAL =	**$87,300**

Project No. 24
Project Type: Roadway Chip Seal
Location: Willow Street from Academy Avenue to Township Avenue
Solution Description: This 1,310 foot segment of Homestead Street is not currently paved. An initial step would be to chip seal this roadway and provide some drainage improvements.

Engineering	$5,400
Drainage Improvements	$35,000
Roadway Chip Seal	$39,300
TOTAL =	**$79,700**

Project No. 25
Project Type: Roadway Chip Seal
Location: Warren Avenue from Central Street to Barlow Street
Solution Description: This 1,310 foot segment of Warren Avenue is not currently paved. An initial step would be to chip seal this roadway and provide drainage improvements.

Engineering	$55,900
Drainage Improvements	$46,900
Roadway Chip Seal	$60,000
TOTAL =	**$162,800**

Project No. 26
Project Type: Roadway Chip Seal
Location: Barlow Street from Arizona Avenue to Academy Avenue
Solution Description: This 1 segment of Barlow Street is not currently paved. An initial step would be to chip seal this roadway and provide drainage improvements.

Engineering	$9,300
Drainage Improvements	$28,000
Roadway Chip Seal	$33,750
TOTAL =	**$71,050**

Project No. 27
Project Type: Roadway Chip Seal
Location: Maple Street from Uzona Avenue to Academy Avenue
Solution Description: This 2,630 foot segment of Maple Street is not currently paved. An initial step would be to chip seal this roadway and provide drainage improvements.

Engineering	$20,000
Drainage Improvements	$55,000
Roadway Chip Seal	$78,900
TOTAL =	**$153,900**

8.3 Curb, Gutter and Sidewalk Projects

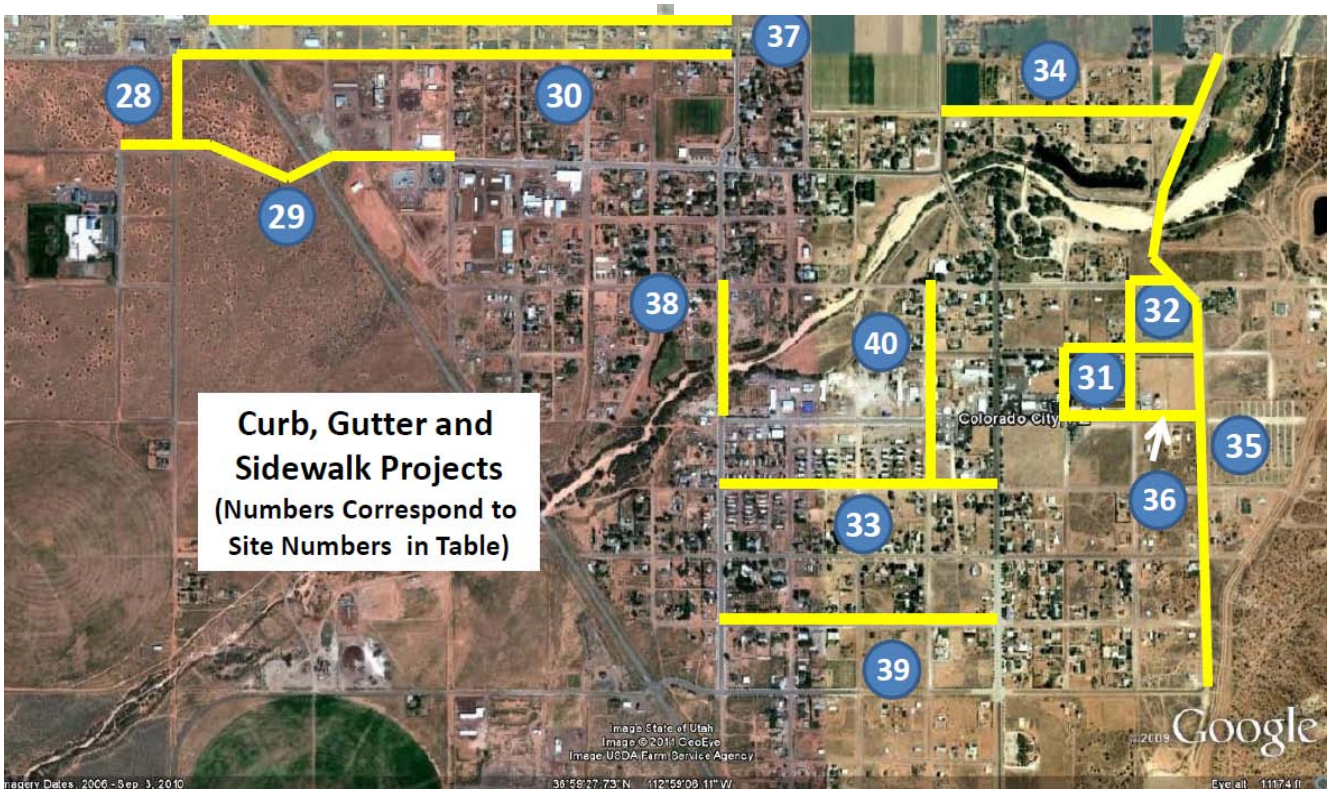
Thirteen curb, gutter and sidewalk projects have been identified. Each is a "stand alone" project that can be done with or without roadway paving improvements that may have been identified in the previous section (Some roadway improvement projects, such as Arizona Avenue and Uzona Avenue improvements nearing or across the state highway, included curb, gutter, and sidewalk costs). Overlapping projects were adjusted to avoid double counting segments. These projects are summarized in Table 15 below.

Table 15: Curb, Gutter and Sidewalk Project Summary with Costs

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
28	*Hildale Street from Mohave Avenue to Uzona Avenue* Curb, Gutter, and Sidewalk	Colorado City	$696,960
29	*Arizona Avenue from Cottonwood Street to Juniper Street* Curb, Gutter, and Sidewalk	Colorado City	$357,500
30	*Uzona Avenue from Redwood Street to Richard Street* Curb, Gutter, and Sidewalk	Colorado City	$513,000
31	*School Area (University, Academy, Colvin and Carling)* Curb, Gutter, and Sidewalk	Colorado City	$281,600
32	*Church Area (University, Academy, Carling and Hildale)* Curb, Gutter, and Sidewalk	Colorado City	$123,420
33	*Edson Avenue from Richard Street to Central Street* Curb, Gutter, and Sidewalk	Colorado City	$288,750
34	*Cooke Avenue from Central Street to Hildale Street* Curb, Gutter, and Sidewalk	Colorado City	$270,160
35	*Redwood Street from Uzona Avenue to Arizona Avenue* Curb, Gutter, and Sidewalk	Colorado City	$97,900
36	*Township Avenue from Colvin Street to Hildale Street* Curb, Gutter and Sidewalk	Colorado City	$104,800
37	*Field Avenue from SR 59 to Richard Street* Curb, Gutter and Sidewalk	Hildale	$414,400
38	*Richard Street from Academy Avenue to Township Avenue* Curb, Gutter and Sidewalk	Colorado City	$106,000
39	*Garden Avenue from Richard Street to Central Street* Curb, Gutter, and Sidewalk	Colorado City	$211,440
40	*Pioneer Street from Academy Avenue to Johnson Avenue* Curb, Gutter and Sidewalk	Colorado City	$156,800
	TOTAL		**$3,622,730**

Figure 37 on the next page shows the locations of the above curb, gutter, and sidewalk improvement projects.

Figure 37 Curb, Gutter and Sidewalk Projects



8.4 State Highway Improvements

Four projects were identified for the state highway (SR 389 in Arizona, State Route 59 in Utah). These are widening of the Arizona segment north of Airport Avenue, widening of the Utah segment in Hildale, spot intersection improvements in the Arizona portion of the study area, and provision of a grade separated pedestrian crossing of the highway near Arizona Avenue. These project costs are summarized in Table 16 below.

Table 16: State Highway Project Summary with Costs

Site No.	*Project Location* Project Description	Jurisdiction	Planning Level Cost
41	*Widening of State Route 59 from Utah Avenue to Uzona Avenue* *Roadway Widening*	Hildale/UDOT	$1,196,150
42	*Widening of SR 389 from Arizona Avenue to Airport Avenue* Roadway Widening	ADOT	$10,879,050
43	*SR 389 Intersections from Utah Avenue to Yellowstone Road* *Intersection Improvements (left and right turn lanes)*	Colorado City/ADOT	$6,650,000
44	*SR 389 near Arizona Avenue* Grade separated pedestrian crossing	Colorado City/ADOT	$1,365,000
	TOTAL		**$20,090,200**

The location of state highway widening, and intersection improvement needs are shown in Figure 3 below. Specific turning movement needs at these intersections are shown in Figure 4 below.

Figure 38: Highway Widening and Improvement Locations

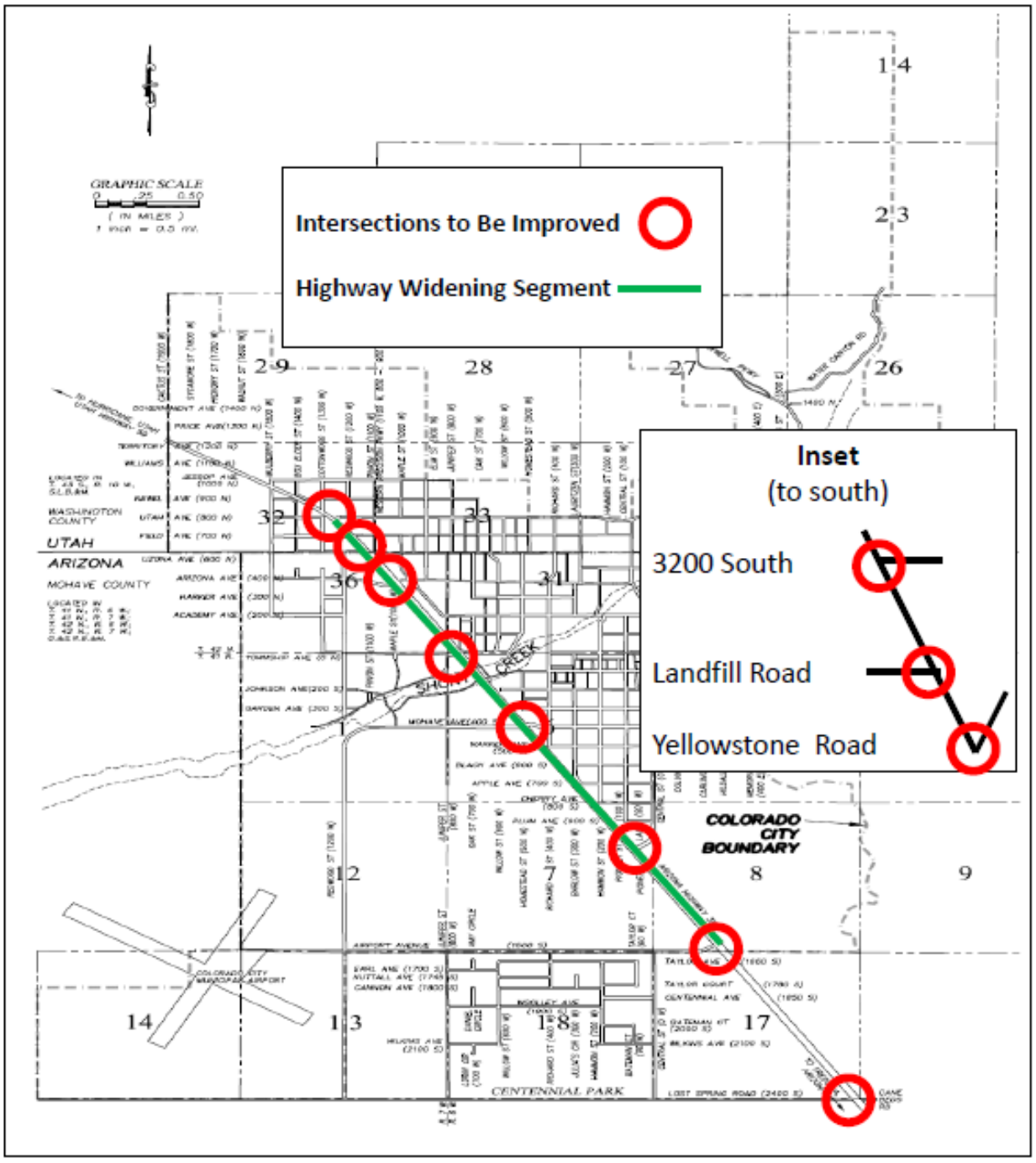


Figure 39: Intersection Turning Lane Needs

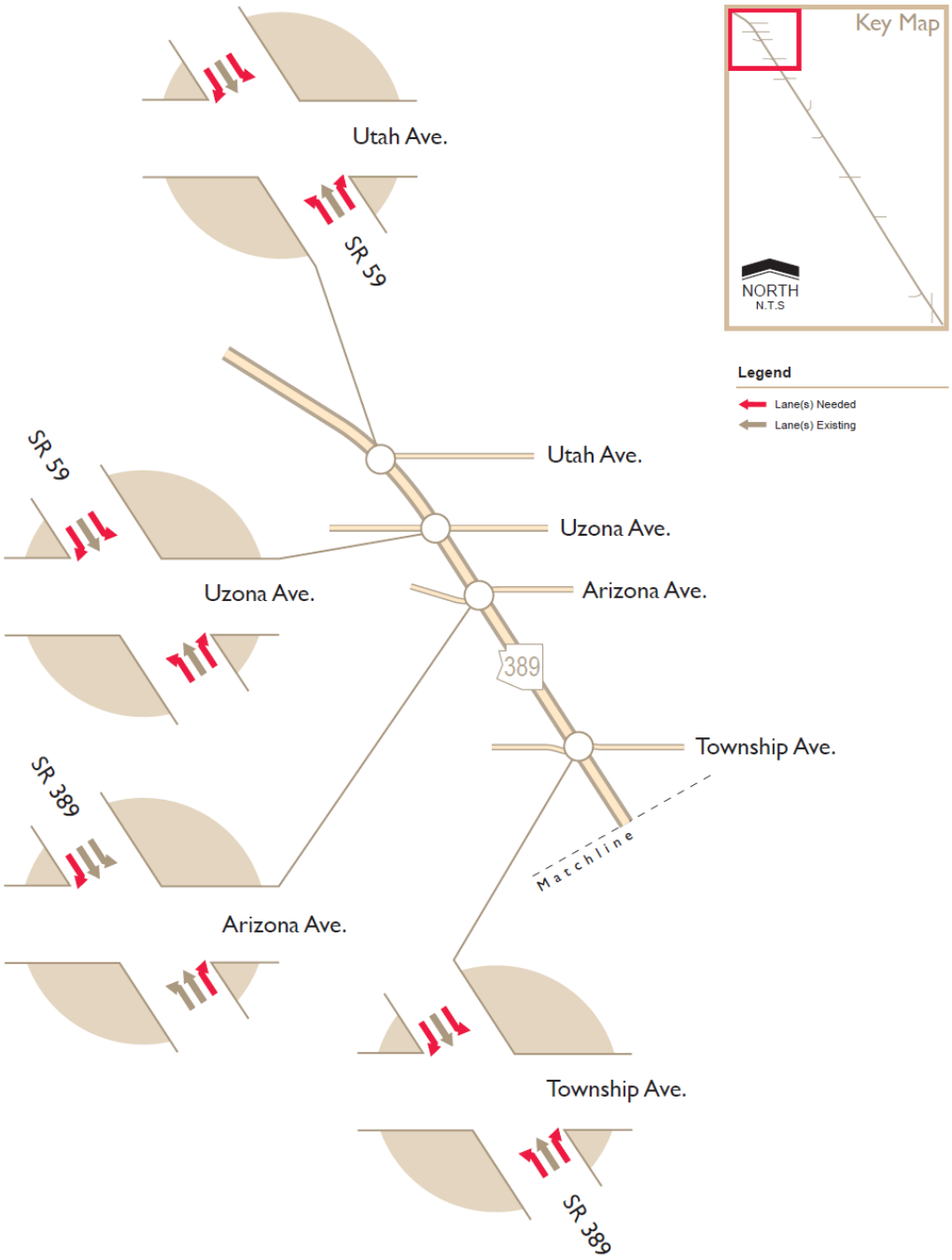


Figure 39 continued

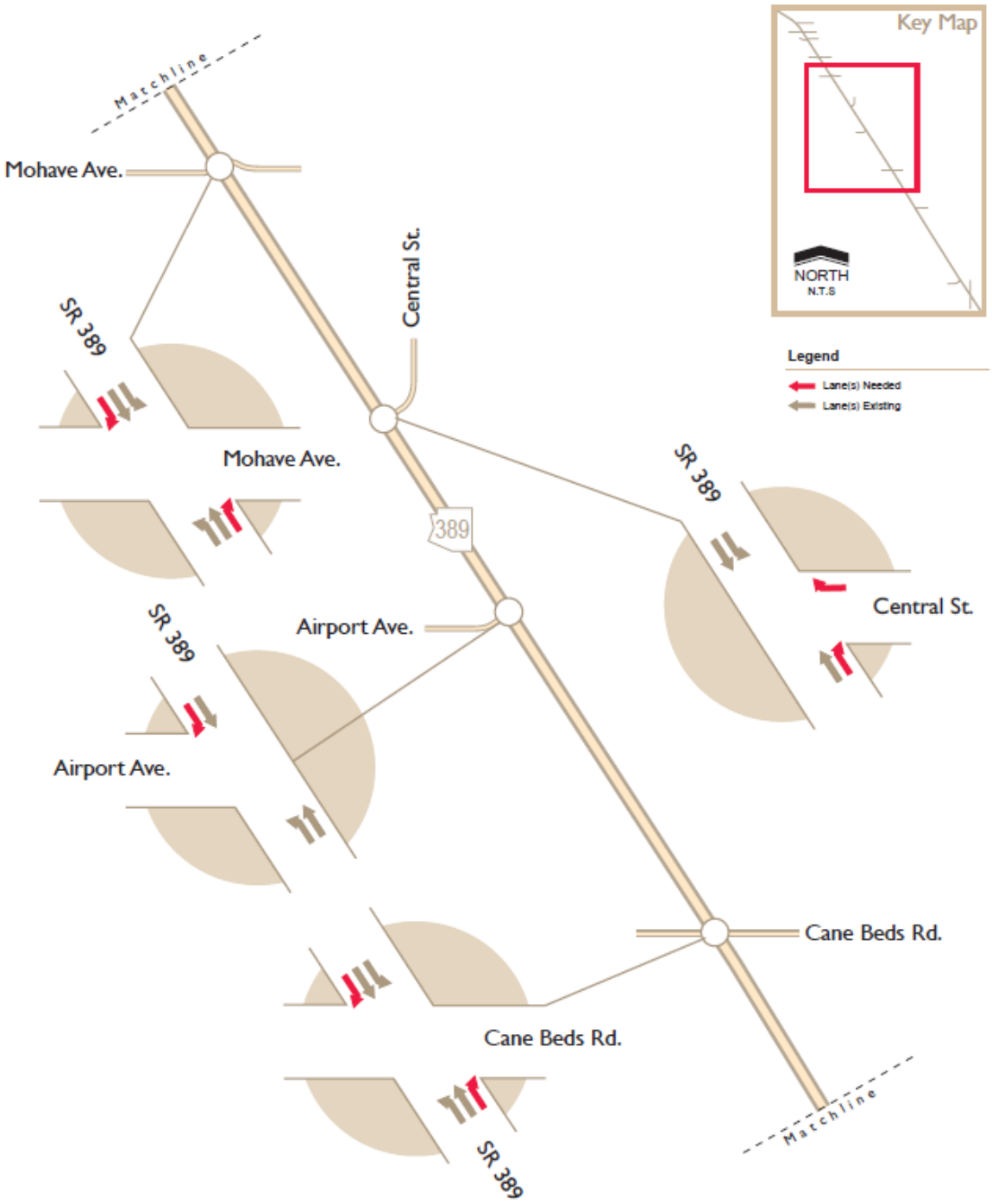
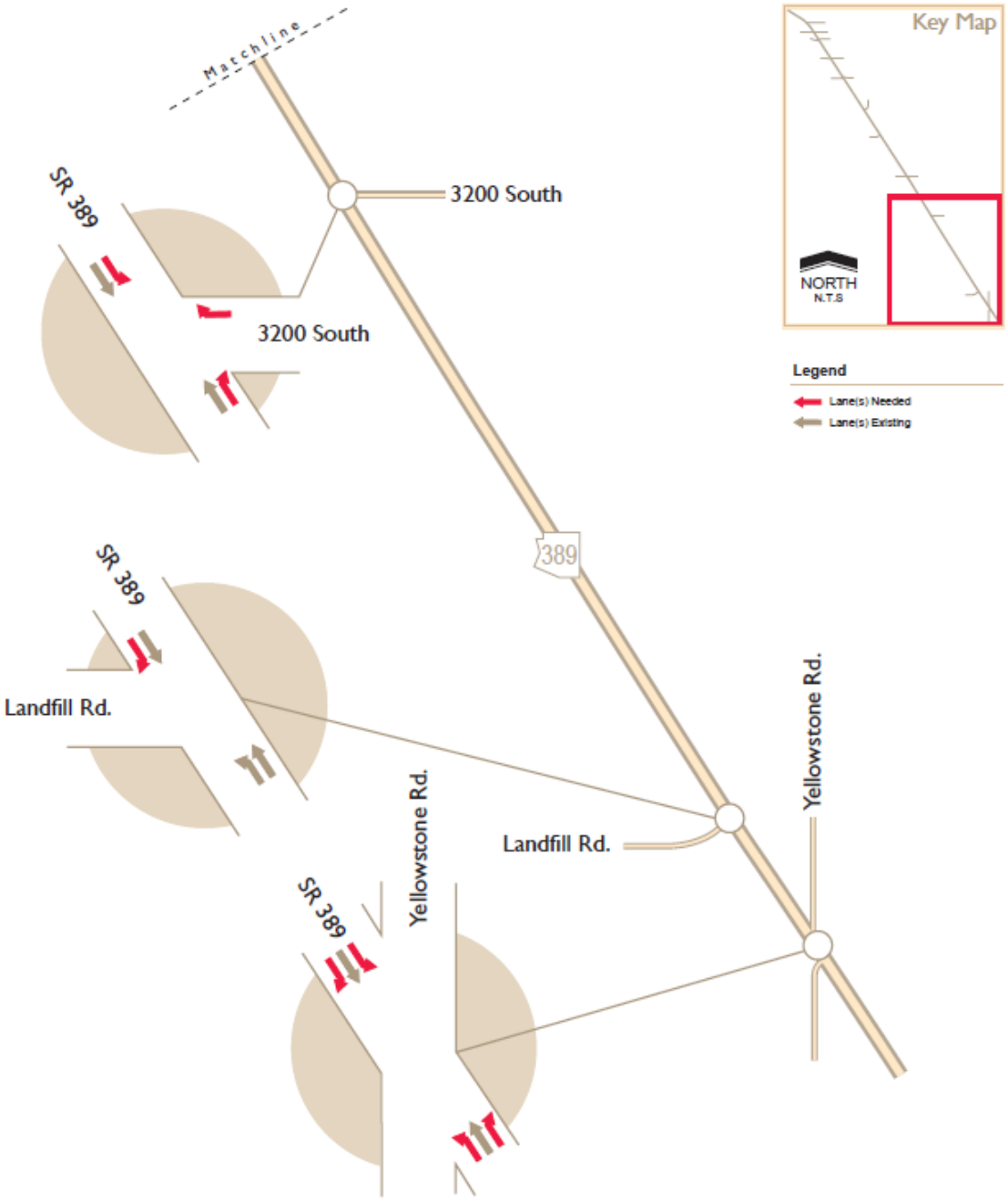


Figure 39 continued



Individual project description and cost sheets for these state highway projects follow.

Project No. 41

Project Type: Highway Widening
Location: Utah Route 59 from Utah Avenue to Uzona Avenue
Solution Description: This segment of the state highway, 1,850 feet length, needs to be widened to a four lane cross section. The taper will end about 500 feet northwest of Utah Avenue. The additional lanes will allow for more regional through traffic on the roadway while still accommodating local traffic growth. Travel demand modeling predicts that this additional capacity will not be needed until **after** 2020.

Planning Level Cost Estimate
State Highway Widening

DCR/EA, Design and Construction Engineering	$276,150
Roadway Construction	$920,500
TOTAL =	**$1,196,150**

Project No. 42

Project Type: Highway Widening
Location: SR 389 from Arizona Avenue to Airport Avenue
Solution Description: This segment of the state highway, 3.17 miles in length, needs to be widened to a four lane cross section. The additional lanes will allow for more regional through traffic on the roadway while still accommodating local traffic growth. Travel demand modeling predicts that this additional capacity will not be needed until **after** 2020.

Planning Level Cost Estimate
State Highway Widening

DCR/EA, Design and Construction Engineering	$2,510,550
Roadway Construction	$8,368,500
TOTAL =	**$10,879,050**

Project No. 43

Project Type: Highway Intersection Improvements
Location: Utah Route 59 and Arizona SR 389 from Utah Avenue to Yellowstone Road
Solution Description: This segment of the state highway has eleven intersections requiring additional turn lanes for left turn and right turn movements. These additional lanes will allow for safer operations for local traffic at these locations.

Planning Level Cost Estimate
Intersection Improvements

DCR/EA, Design and Construction Engineering	$1,500,000
Intersection turn lane construction, striping and signage	$5,150,000
TOTAL =	**$6,650,000**

Project No. 44

Project Type: Pedestrian Crossing of SR 389
Location: SR 389 near Arizona Avenue
Solution Description: With the construction of the school complex west of SR 389, there is a potential safety problem with bicyclists and pedestrians crossing the highway en route to school. Over 400 students, plus staff, attend this school. The Town of Colorado City has expressed an interest in a pedestrian grade separation of the highway at this location.

The crossing structure will need to satisfy ADA requirements for slopes and landing areas. Evaluation processes will look at minimizing engineering conflicts, addressing utility conflicts, coordinating regulatory approvals, obtaining environmental clearances, and utilizing available right-of-way wherever possible. During a future Design Concept Report and Alternatives Analysis study, an evaluation of the specific location and alignment of the pedestrian crossing in the vicinity Arizona Avenue should take place. Details to consider will be length of the approach ramps, necessary right-of-way, and other engineering parameters. Options exist for both an overhead or a below grade structure. Placing the facility below the roadway creates more traffic operations concerns during construction. It may also require a pumping station to drain the tunnel during storms, and security lighting will need to be provided. As a plus, a below grade structure is less imposing. The ADOT District Engineer's office prefers a below grade facility. Costs provided below are for such a structure.

Planning Level Cost Estimate
SR 389 Pedestrian Grande Separation near Arizona Avenue

DCR/EA, Design and Construction Engineering	$928,800
Below Grade Improvements, including Embankment/Grade Improvements, lighting, and drainage features	$3,096,000
TOTAL =	**$4,024,800**

Figure 40 Pedestrian Underpass Location

Examples of Pedestrian Underpasses

8.5 Airport Project Needs

The Town of Colorado City completed an Airport Master Plan in 2008. That plan identified a number of short, medium and long term capital needs and projected revenue sources for state and federal assistance. Table 17 below shows these projects, which will be carried forward into the final report for this project.

Table 17: Airport Project Needs

Phase I, Short-Term Development Items	TOTAL	FAA	STATE	LOCAL
A1 Land Acquisition for Approach Protection ±143 acres	$360,000	$342,000	$9,000	$9,000
A2 Upgrade AWOS	$240,000	$228,000	$6,000	$6,000
A3 Conduct 405 Survey	$100,000	$95,000	$2,500	$2,500
A4 Wildlife Fencing	$600,000	$570,000	$15,000	$15,000
A5 Reconstruct RW 11/29	$2,300,000	$2,185,000	$57,500	$57,500
A6 Construct Apron	$1,000,000	$950,000	$25,000	$25,000
A7 Install Utilities to Apron Area	$360,000	$342,000	$9,000	$9,000
A8 Remove Terminal Building	$40,000	$38,000	$1,000	$1,000
A9 Construct Replacement Terminal Building	$450,000	$427,500	$11,250	$11,250
A10 Construct Full Length Parallel Taxiway RW 11/29	$1,200,000	$1,140,000	$30,000	$30,000
A11 Construct Taxilanes	$350,000	$332,500	$8,750	$8,750
A12 Pavement Maintenance	$100,000	$95,000	$2,500	$2,500
A13 Upgrade Septic System	$40,000	$38,000	$1,000	$1,000
A14 Update Airport Layout Plan	$100,000	$95,000	$2,500	$2,500
Total Short Term Cost	**$7,240,000**	**$6,878,000**	**$181,000**	**$181,000**
Phase II, Medium-Term Development Items	TOTAL	FAA	STATE	LOCAL
B1 Snow Removal Equipment and Storage Building	$600,000	$570,000	$15,000	$15,000
B2 Runway Strengthening	$1,200,000	$1,140,000	$30,000	$30,000
B3 Install Taxiway Lighting	$450,000	$427,500	$11,250	$11,250
B4 Apron Expansion	$1,000,000	$950,000	$25,000	$25,000
Total Medium-Term Cost	**$3,250,000**	**$3,087,500**	**$81,250**	**$81,250**
Phase III, Long-Term Development Items	TOTAL	FAA	STATE	LOCAL
C1 Replace RW Lighting	$300,000	$285,000	$7,500	$7,500
C2 Environmental Assessment for RW Extension	$125,000	$118,750	$3,125	$3,125
C3 Extend RW 11/29	$500,000	$475,000	$12,500	$12,500
C4 Construct Taxilanes	$300,000	$285,000	$7,500	$7,500
C5 PAPIs and REILs RW 2/20	$150,000	$142,500	$3,750	$3,750
C6 Connect to Town Sewer System	$300,000	-	-	$300,000
C7 Construct Full Length Parallel Taxiway RW 2	$400,000	$380,000	$10,000	$10,000
Total Long-Term Cost	**$2,075,000**	**$1,686,250**	**$44,375**	**$344,375**
TOTAL	**$12,565,000**	**$11,651,750**	**$306,625**	**$606,625**

Cost estimates in 2007 dollars

Source: Colorado City Municipal Airport, Airport Master Plan, 2008.

9.0 Revenue and Financing Alternatives

9.1 Federal Funding

There are a number of federal funding programs that can be used to address transportation needs within the study area. These funds are typically distributed through and by the Arizona Department of Transportation (ADOT). In some cases, such as Transportation Enhancement Funds, regional Councils of Governments (COGs) rank the local applications. The Colorado City area is represented by the Western Arizona Council of Governments (WACOG).

Federal surface transportation programs are included in an omnibus funding program that is intended to be reauthorized every five years or so. The current program, The Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), expired in 2009. A new bill has not yet been enacted by Congress. In such cases of a funding lag (which has happened in the past), a series of short term "continuing resolutions" serve to bridge the gap until Congress agrees on the wording and policies of a new authorization bill.

The structure of the new authorization bill is not yet known. It will be influenced by Congress, the Obama Administration, and various transportation professional associations (such as the American Association of State Highway and Transportation Officials (AASHTO), and the American Public Transportation Association (APTA), as well as a variety of other transportation advocacy groups. The trend for the program appears to focus on modal balance, flexibility of funds between programs, and performance based funding decision making.

Since the recent economic downturn, the American Recovery and Reinvestment Act (ARRA) has also provided "stimulus funding" for projects including transportation. While these funds are most welcome, the requirements for rapid obligation and expenditure of these funds, while mandating adherence to all federal project requirements, makes it difficult to use these resources for projects that would require federal environmental clearance. Environmental reviews to comply with the National Environmental Policy Act (NEPA) can be quite lengthy, and since such reviews are not required for state and local projects in Arizona, it can be difficult to use these funds for many desired projects, especially those that include right of way acquisition, utility relocation, and capacity expansion.

At the present time, federal funding programs include:

American Recovery and Reinvestment Act (ARRA) Funds: "Stimulus Program" funds described above. Additional ARRA funds beyond those already obligated are uncertain.

Border Infrastructure Program: Very limited discretionary (competitive) program in SAFTEA-LU. Projects must be related to cross-border (international border) trade and traffic movements. It is unlikely this study area would qualify for these funds.

Congestion Mitigation and Air Quality Program (CMAQ): These funds are limited to designated areas that exceed air quality standards. The study area is not eligible for these funds.

Federal Transit Adminstration (FTA) Section 5311 Funds: These monies are used to support public transit service in non-metropolitan (rural) areas such as the study area. These funds can be used for both capital and operating costs.

Federal Transit Adminstration (FTA) Section 5310 Funds: This program provides capital funds for vehicles for agencies providing transit service to the elderly and persons with disabilities. The primary target recipients are non-profit agencies and Native American Indian tribes. Local public agencies can apply for these funds if no "willing and able" non-profit agencies are available in a service area. These funds are available to both urban and rural recipients. Funds can be used to cover 80% of vehicle costs, but recipients must fund the costs of operating service.

Highway Bridge Program: These funds are used for maintenance and repairs to bridges on the State Highway System.

Highway Safety Improvement Program (HSIP): These funds are designated for highway safety projects, including high risk rural roads and railroad crossings of roadways. The funds are distributed through ADOT to the various regional councils of governments (COGs), and then to the local agencies for use on specific safety projects.

Interstate Maintenance Funds: These funds are restricted to maintenance costs for the existing Interstate Highway System.

Job Access Reverse Commute Funds: The Job Access and Reverse Commute (JARC) program was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. Many new entry-level jobs are located in suburban areas, and low-income individuals have difficulty accessing these jobs from inner city, urban, or rural neighborhoods. States and public agencies are eligible designated recipients. Eligible sub-recipients are private non-profit organizations, state or local governments, and operators of public transportation services including private operators of public transportation services. The program funds capital planning and operating expenses for projects that transport low income individuals to and from jobs and activities related to employment, and for reverse commute projects, typically through the FTA Section 5311 program.

National Highway System Funds: The funds are used for maintenance of the designated National Highway System (NHS). There are no NHS routes in the study area.

Safe Routes to Schools Program: This federal program was created in 2005 to encourage students to walk or bicycle to school, and to provide funding for programs to encourage students in elementary and middle schools to walk or bike to school and address safety improvements needed for the route to the school. The program has averaged $2.2 million per year in funding in Arizona and is administered by ADOT. Eligible projects include:

- Sidewalk improvements
- Traffic calming and speed reduction improvements
- Pedestrian and bicycle crossing improvements
- On-street bicycle facilities
- Off-street bicycle and pedestrian facilities
- Secure bicycle parking facilities
- Traffic diversion improvements in the vicinity of schools
- Creation and reproduction of promotional and educational materials
- Bicycle and pedestrian safety curricula, materials and trainers
- Training including workshops that target school- and community-level audiences
- Incentives for SRTS contests and incentives that encourage more walking and bicycling
- Safety and educational tokens that also advertise the program
- Photocopying, duplicating, mailing and printing costs related to the program
- Costs for data gathering, analysis, and evaluation reporting at the local project level
- Pay for substitute teacher to cover for faculty attending SRTS functions
- Costs for additional law enforcement or equipment needed for enforcement activities
- Equipment and training needed for establishing crossing guard programs
- Stipends for parent or staff coordinators

Statewide Planning and Research (SPR) funds: These federal funds are used for planning studies such as ADOT's PARA program that funded this planning study.

Surface Transportation Program funds (STP): These are federal highway funds distributed by ADOT. They can be used for a broad number of transportation projects, including transit.

The New Freedom Program: This FTA program aims to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the work force and full participation in society. Lack of adequate transportation is a primary barrier to work for individuals with disabilities. The 2000 Census showed that only 60 percent of people between the ages of 16 and 64 with disabilities are employed. The New Freedom formula grant program seeks to reduce barriers to transportation services and expand the transportation mobility options available to people with disabilities beyond the requirements of the Americans with Disabilities Act (ADA) of 1990. States and public bodies are eligible designated recipients. Eligible sub-recipients are private non-profit

organizations, state or local governments, and operators of public transportation services including private operators of public transportation services. Eligible activities are capital and operating expenses for new public transportation services and new public transportation alternatives beyond those required by the American with Disabilities Act of 1990 (ADA) that are designed to assist individuals with disabilities.

Tolling Program: Very limited discretionary money was provided in the SAFETEA-LU program for pilot or demonstration projects to finance Interstate construction or reconstruction projects. The study area would not qualify for these funds.

Transportation Enhancement Funds: These federal funds are distributed by ADOT and may be used for bicycle, pedestrian, and aesthetic enhancements to transportation projects. Competition for these limited funds is keen. Individual project funding limits are $943,000 for state system projects and $750,000 for local projects, supplemented by local matching funds in the minimum amount of 5.7% of the total project value.

9.2 State Funding

State funding for transportation is somewhat limited. Gasoline tax, vehicle fees, and lottery proceeds are the only revenue sources. As vehicles become more fuel efficient, and roadway costs increase, the buying power of the fuel tax is diminishing. The state gasoline tax has not been raised for many years. Forty of the fifty states have higher gasoline taxes than Arizona. In addition to these constraints, a portion of the fuel tax revenues is being used to support the operation of the Department of Public Safety, which patrols the State Highway System. Current state funding sources are as follows:

Highway User Revenue Funds (HURF): These are state gasoline tax and vehicle license funds, shared with local jurisdictions and distributed by percentage of state population. These may be "swept" into the general fund during a state fiscal crisis. These are typically expended for maintenance rather than capital improvements.

Local Transportation Assistance Funds (LTAF): These are state shared revenues from proceeds of the state lottery, which may be spent on roadways or public transit. These funds are distributed based on population. These funds are distributed to cities and towns, but not to counties. These have been "swept" into the general fund during the recent a state fiscal crisis, and it may be years before they are restored.

Local Transportation Assistance Funds II (LTAF II): These are state shared revenues from proceeds of the state lottery that must be spent on transit. These funds are distributed based on population. These may be "swept" into general fund during a state fiscal crisis.

Safety Enforcement Transportation Infrastructure Fund (SETIF): These funds are generated from fees charged to foreign vehicles entering Arizona through the international ports of entry. The funds are used for vehicle safety enforcement, to improve and maintain facilities within twenty-five miles of the international border, and to reduce congestion at the ports of entry. These funds have also been used for Department of Public Safety activities and for joint projects with the Department of Homeland Security, the Arizona-Mexico Commission, and the International Development Authority. There are no eligible projects in the study area.

Vehicle License Tax Funds (VLT): These are state shared revenues from vehicle license taxes. These funds may also be "swept" into general fund during a state fiscal crisis.

9.3 Local Funding Sources

There is a wide range of options available for local funding sources. State enabling legislation varies as well as some, but not all, jurisdictions have been empowered by state statutes to levy things such as dedicated sales taxes. Local funding sources overlap to some degree with private funding options since they rely on resident funding and sometimes developers. Local funding sources include:

Bonding: Funding for capital projects from the sale of bonds by a public agency. Bond programs must be approved by a vote of the public. Bonding is actually a financing tool rather than a funding source. A revenue stream, typically from a secondary property tax, is needed to retire general obligation bond debt service. A second type of bonding, revenue bonds, can be issued for projects with a dedicated revenue source, such as toll roads.

Development Exactions: In many areas, builders of residential and commercial developments construct all internal public infrastructure (roads, curb, gutter, and sidewalks, traffic and street lights, and utility infrastructure), and then dedicate these improvements to the local public agency as public infrastructure and public street right-of-way. Sometimes these exactions extend to parks and property for public schools as well, depending on the size and scope of the developments.

Development Impact Fees: A number of local public agencies, both counties and cities, have imposed development impact fees. These fees cover the costs of extending public services to new developments, and, in some cases, provide funds to offset capacity demands on public service systems some distance removed from the developments. These fees can cover utility services such as water, wastewater, and refuse collection, fire and police facilities, libraries, and transportation. These fees are for capital outlays only, and do not cover ongoing operations and maintenance costs. Recent legislation has limited the amounts and use of such funds.

Transportation impact fees are typically computed based on the trip generation of new developments and are calculated on residential units and "equivalent dwelling units" for employment and commercial land uses. This analysis is usually based on planned roadway facilities in a General Plan

Transportation Element. Developers usually receive credits against these fees for planned regional roadways within or adjacent to their respective developments that they have constructed. Transportation (or Development) Impact Fees, therefore, usually require the developer to front load the construction costs, as fees are imposed on building permits.

The trip analysis done for impact fee studies typically discounts "pass-through" or external traffic on targeted roadways, as such traffic is not created by the developments bearing the fees. Roadway capacity to accommodate total traffic, however, is required, and limited area impact fees only address a portion of the needed capacity. Therefore, it is preferable that impact fees be adopted over a larger regional area to address a larger portion of the regional travel needs and to prevent development from "leapfrogging" beyond the boundaries of smaller fee imposition areas.

The acceptance of such fees by the developers varies. Residential impact fees are passed on to home buyers through higher home purchase prices. Market accommodation of commercial development impact fees can only be achieved by higher commodity prices, however. This results in higher prices at stores within the impact fee area than at similar nearby retailers in areas with lower or no impact fees. As a result, resistance to these fees can be high. Local officials are sometimes leery of losing retail sales taxes when commercial developments seek to locate near, but outside of their impact fee areas. Impact fee rates vary, but a number of suburban communities in Arizona impose transportation impact fees higher than $5,000 per home or dwelling unit. The volatility of this revenue source is high, as income rises and falls with the market demand for new housing units.

Improvement Districts: Improvement Districts are created to provide specific facilities for specific geographical areas, and use the sale of obligation bonds to fund the improvements. Historically, improvement districts were used to upgrade older areas to modern standards for such actions as installing street lights, undergrounding utilities, or converting an area from septic tanks to sanitary sewers. These districts can also be used for newer areas to provide needed capital facilities. Usually a district uses a secondary property tax to retire the bonds. Sometimes a neighborhood area approaches a local government to create such a district to provide needed improvements. A vote of the property owners of the impacted area is required to authorize a district.

Improvement districts can be used for roadway improvements within cities or in county areas. The creation of an improvement district requires the concurrence of 51% of the property owners, and costs are imposed on properties based on calculated benefits which may include parcel size, roadway frontage, or some other value. Special assessments are then levied against the benefited property for the apportioned cost of the improvements. A "cash demand period" is established wherein owners may pay the assessment up front, interest free, within a short specified period of time. Bonds are sold for the balance of the costs of the improvements, and the owners make periodic payments including interest over the life of the bond which is based on the complete cost of the improvements. If roadways are improved to public agency standards, then the city or county typically assumes ownership, maintenance responsibility, and liability for the roadway. If roadways are improved, but not up to city or county standards, the public agency will not assume maintenance or liability for the roadway, and maintenance and liability remain the responsibility of the district. It is more expensive

up front to build the roadways to public agency standards, but less expensive in the long run as the public agency is thereafter responsible for operations and maintenance as well as liability exposure.

Improvement Districts are typically established to address deficiencies in the infrastructure in established areas. Infrastructure deficiencies may include roadway width, drainage, pavement, or enhancements such as sidewalks, streetlights, utility undergrounding, or installing sanitary sewers in areas with current septic systems.

General Funds: Monies generated by local governments from local revenue sources.

Local or Countywide Sales Taxes: A number of cities and urban counties have dedicated general sales taxes for transportation. Some locations have restricted such tax revenues to public transit, while others have used the funds for all modes of transportation. Additionally, some local jurisdictions have dedicated sales taxes for transportation just on construction materials. Such taxes also include a computation of the materials used in new building construction as well as purchases made at home improvement stores. The logic behind this is that new construction increases vehicular impacts on the roadways and consequently should share in the cost of needed transportation infrastructure to service the increased traffic. A number of suburban high growth cities have received rather high returns on such taxes until the recent housing slump. The limited retail base in Colorado City promises very limited benefits from a sales tax increase.

P3 funding: On July 13, 2009, Governor Jan Brewer signed HB 2396, Arizona's landmark P3 legislation. P3s are public-private partnerships, which include toll facilities and a variety of other innovative financing techniques involving private partnerships. The bill allows ADOT to issue concessions of up to 50 years, with extensions, for P3 projects. ADOT can also grant other units of government authority to develop P3 projects.

9.4 Private Funding Sources

Community Facilities Districts (CFDs): In 1988, the Arizona Community Facilities District Act was approved. The purpose was to provide new mechanisms for funding of infrastructure improvements for both municipalities and developers. The law authorized tax exempt bonds to be issued and repaid by assessing only the lands directly benefiting by the new infrastructure. Originally, Community Facilities Districts were required to be within a city or town. In 2006, these districts were also allowed in unincorporated areas. CFD bonds can fund a number of public infrastructure needs including transportation. Developers prefer this funding approach, since their cost exposure is less than with conventional financing, and no security needs to be pledged against the bond other than the projected assessment revenue stream. Some local jurisdictions do not support CFDs due to the inherent risk that, in the event of developer default, the debt could fall on the public agency. CFD bonds are not backed by a contingent general obligation of the entire city, town or county, as are general obligation bonds.

To establish a CFD, at least 25% of the impacted property owners must petition for such a district and then the establishment moves forward through hearing, notification, and election processes. The notice, hearing, and election process can be waived if 100% of the impacted property owners petition for the CFD's establishment, which could be the case for a new planned development under a single ownership entity.

P3 funding: As discussed above, P3s involve a mix of public and private funding through a public-private partnership agreement.

9.5 Current Revenue Streams

Table 18 shows the five year history of existing revenue sources and amounts that the Town of Colorado City has used to address their transportation needs (VLT HURF, LTAF, LTAF II,). It is important to realize that the majority of the transportation revenues are used for administration of the local transportation agencies and for the operations and maintenance of the transportation systems.

In addition, the table contains town sales tax revenues and state-shared state sales tax revenues for the same years. Note that all revenue sources have declined to some extent due the recent economic downturn and recession. The revenues are expected to rebound with a slower growth trend starting in the next year or two as economic conditions hopefully start to improve. These sales tax funding sources are not specifically earmarked for transportation purposes. To the best of our knowledge, these funds are not being used for transportation system improvements by either the county or the city, although they can be used for such purposes. These are potential additional funding sources, if the local agencies choose to use them for this purpose.

Table 18: Five Year Revenue History

Year	VLT	HURF	LTAF	LTAF II	City Sales Tax	State Sales Tax
2006	$243,426	$406,162	$21,046	$12,045	$320,285	$373,827
2007	$245,879	$412,258	$18,581	$ 6,487	$285,207	$386,562
2008	$226,762	$371,609	$11,538	0	$281,434	$360,703
2009	$209,967	$342,132	$17,386	0	$246,459	$305,378
2010	$201,325	$336,528	$ 1,813	0	$235,085	$299,284

9.6 Suggested New Revenue Approaches

New revenue sources that may be considered by the Town of Colorado City include:

An additional sales tax dedicated to transportation system improvements: A one-half cent dedicated sales tax could be imposed exclusively within the Town of Colorado City through an increase in the sales tax rate. This would generate around $58,774 (2011 dollars) annually. The town currently has a two cent sales tax. This is about the average for similar communities, although some non-metro communities have higher rates. The City of Bisbee has a two and a half cent rate, Page is at three, and Fredonia, notably, is at four cents. Such actions, however, may incent the development and/or relocation of commercial enterprises outside, but near, the city limits. This can also encourage leap-frog development which is undesirable since it increases dramatically the infrastructure costs to serve the development. The result is a level of unfairness since facilities within the city are used jointly by both city and unincorporated area residents. A larger issue is that Colorado City has very limited retail activity. A new retail center, like the one under consideration at SR 389 and Arizona Avenue, would generate far more revenue that a half- cent rate increase. Hildale Utah currently has a one-cent sales tax rate.

Development impact fees imposed on new development within the study area to fund regional roadway system improvements. Such development fees should only be considered if new larger scale subdivision plans are proposed. It would be difficult to impose fees on individual home builders who often do work in a piecemeal fashion. Large scale developers could also elect to use CFDs as a funding approach to provide internal infrastructure.

Improvement Districts could be used to fund improvements in portions of the study area where the trust does not own the real property. This might be of interest in unincorporated portions of the study area where several longer roadway projects are needed. This might be feasible in the Centennial Park area, but there might not be enough participants to finance a district in the Cane Beds area.

10.0 Evaluation Criteria for Project Selection

Since the inception of this project, discussions with Colorado City staff, comments by members of the Technical Advisory Committee, and interviews with area stakeholders have all illustrated a framework of transportation needs for the area. Field investigations have validated that perception. Projects identified in this draft were recommended based on the following criteria:

- Provide additional all weather crossings of Short Creek, so the creek can no longer act as a barrier bisecting the community. Executive Order 2010-01, declaring a flood emergency, and Mohave County's declaration of a flood emergency as a result of the December storms, are both attached as Appendix 2.
- Provide additional through streets in the area, so local traffic has alternative to the state highway
- Address pedestrian access to school locations in the area including steps to increase pedestrian safety
- Improve roads that serve as school bus routes

- Provide enhanced access to the downtown area and to major activity centers in the area including schools, the church, the zoo, and outdoor recreation areas
- Improve conflict points on the state highway
- Improve east/west travel capacity in and near Hildale
- Provide capacity and access opportunities to enhance marketability of industrial and commercial properties in the area
- Provide for future regional through traffic levels
- Enhance regional connections in the Arizona Strip

The next step in the process will involve a collaborative review of these suggested projects, with additions or deletions as directed by staff and stakeholders. The final candidates will then need to be subject to a ranking procedure to establish priorities for short, medium and longer term implementation.

11.0 Recommended Sort, Medium and Long Range Project Priorities

Identified projects were presented to the TAC and the public at meetings held in April of 20100. Based on feedback received from those meetings and review of the above evaluation criteria, the projects were prioritized into short (five year), medium (ten year), and long (twenty year) term implementation categories. Tables 19, 20, and 21 below list these projects.

Table 19 Short Term Projects

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
10	*Central Street from Cherry Avenue to SR 389* Paving and Drainage Improvements	Colorado City	$2,601,000
12	*Edson Avenue from Richard Street to Central Street* Chip Seal	Colorado City	$90,750
13	*Cooke Avenue from Laurentzen to Hildale Street* Chip Seal	Colorado City	$84,870
21	*Central Street from Centennial Avenue to Cane Beds Road* Chip Seal	Mohave County	$127,650
23	*Homestead Street from Township Avenue to Arizona Avenue* Chip Seal	Colorado City	$87,300
24	*Willow Street from Academy Avenue to Township Avenue* Chip Seal and drainage improvements	Colorado City	$79,700
25	*Warren Avenue from Central Street to Barlow Street* Chip Seal and drainage improvements	Colorado City	$162,800
26	*Barlow Street from Arizona Avenue to Academy Avenue* Chip Seal and drainage improvements	Colorado City	$71,050
27	*Maple Street from Uzona Avenue to Academy Avenue*	Colorado	$153,900

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
	Chip Seal and Drainage Improvements	City	
32	*Church Area (University, Academy, Carling and Hildale)* Curb, Gutter, and Sidewalk	Colorado City	$123,420
36	*Township Avenue from Colvin Street to Hildale Street* Curb, Gutter and Sidewalk	Colorado City	$104,800
38	*Richard Street from Academy Avenue to Township Avenue* Curb, Gutter and Sidewalk	Colorado City	$106,000
	TOTAL SHORT TERM PROJECTS		**$3,793,240**

Table 20 Medium Range Projects

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
1	*Redwood Street at Short Creek* Bridge	Colorado City	$2,990,000
2	*Township Avenue at Short Creek* Bridge	Colorado City	$2,990,000
8	*Township Avenue from SR 389 to Richard Street* New Roadway	Colorado City	$1,442,500
9	*Uzona Avenue from SR 389 to Richard Street* Paving	Colorado City	$3,120,000
14	*Uzona Avenue at SR 389* Realignment to Highway	Colorado City	$1,599,000
16	*Cane Beds Road from Redwood Street to Rosy Canyon Road* Chip Seal	Mohave County	$1,275,120
17	*3200 South from SR 389 to Yellowstone Road* Chip Seal	Mohave County	$385,024
19	*Yellowstone Road from Cane Beds Road to 3200 South* Chip Seal and Extension	Mohave County	$182,160
20	*Rosy Canyon Road from Cane Beds Road to Utah Line* Chip Seal	Mohave County	$728,640
22	*Pioneer Lane from Township Avenue to Johnson Avenue* Chip Seal	Colorado City	$45,000
28	*Hildale Street from Mohave Avenue to Uzona Avenue* Curb, Gutter and Sidewalk	Colorado City	$696,960
29	*Arizona Avenue from Cottonwood Street to Juniper Street* Curb, Gutter and Sidewalk	Colorado City	$357,500
33	*Edson Avenue from Richard Street to Central Street* Curb, Gutter, and Sidewalk	Colorado City	$288,750
34	*Cooke Avenue from Central Street to Hildale Street*	Colorado City	$270,160

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
	Curb, Gutter, and Sidewalk		
35	*Redwood Street from Uzona Avenue to Arizona Avenue* Curb, Gutter, and Sidewalk	Colorado City	$97,900
37	*Field Avenue from SR 59 to Richard Street* Curb, Gutter and Sidewalk	Hildale	$104,800
39	*Garden Avenue from Richard Street to Central Street* Curb, Gutter, and Sidewalk	Colorado City	$211,440
40	*Pioneer Street from Academy Avenue to Johnson Avenue* Curb, Gutter and Sidewalk	Colorado City	$156,800
43	*SR 389 Intersections from Utah Avenue to Yellowstone Road* Intersection Improvements (left and right turn lanes)	Colorado City/Hildale/DOTs	$6,650,000
44	*SR 389 near Arizona Avenue* Grade separated pedestrian crossing	Colorado City/ADOT	$1,365,000
	TOTAL MEDIUM TERM PROJECTS		**$24,956,754**

Table 21 Long Range Projects

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
3	*Academy Avenue at Short Creek* Bridge	Colorado City	$2,995,000
4	*Central Street at Short Creek* Bridge	Colorado City	$2,437,500
5	*Hildale Street at Short Creek* Box Culvert	Colorado City	$975,000
6	*Redwood Street from Mohave Avenue to Township Avenue* Chip Seal	Colorado City	$107,000
7	*Redwood Street from Airport Avenue to Cane Beds Road* Chip Seal	Colorado City	$182,400
11	*Arizona Avenue from Cottonwood St. to SR 389 to Elm Street* Paving and additional widening for commercial development	Colorado City	$2,057,250
15	*Canyon St. and Water Canyon Rd. - Williams Way to Maxwell Park* Widening and Chip Seal	Hildale	$182,000
18	*School Boundary Road from Cane Beds Road to 3200 South* *Chip Seal*	Mohave County	$182,160
30	*Uzona Avenue from Redwood Street to Richard Street* Curb, Gutter, and Sidewalk	Colorado City	$513,000
31	*School Area (University, Academy, Colvin and Carling)* Curb, Gutter and Sidewalk	Colorado City	$281,600

Site No.	*Project Location* **Project Description**	Jurisdiction	Planning Level Cost
41	*Widening of State Route 59 from Utah Avenue to Uzona Avenue* Roadway Widening	Hildale/UDOT	$1,196,150
42	*Widening of SR 389 from Arizona Avenue to Airport Avenue* Roadway Widening	Colorado CityADOT	$10,879,050
	TOTAL LONG TERM PROJECTS		**$21,988,110**

Appendix 1 – Stakeholder Interview Notes

Interviews were conducted with stakeholders on **Monday, October 4, 2010,** on **Tuesday, October 5, 2010,** and on **Wednesday, October 6, 2010**. This appendix is a compilation of the individual stakeholder interview meeting notes and summarizes the comments made and the information provided by the stakeholders during their interview sessions.
The following introductory information and interview questions were used to facilitate discussions with each stakeholder, but in most cases the interviews were open format and the responses did not follow the questions.

Stakeholder Interview Questions

The Town of Colorado City, together with the Arizona Department of Transportation, is undertaking a study of the transportation system for cars, trucks, pedestrians, bicycles, public transportation and aviation for your community. The result of this study will be a new transportation plan that will serve as a guide for the planning, budgeting and implementation of improvements to the transportation system to provide better and safer traffic circulation throughout the community. Wilbur Smith Associates is the consultant employed to prepare this new transportation plan on your behalf.

A key component of the data collection efforts will be conducting these stakeholder interviews. The information you provide during the interviews will give us invaluable input on the location and nature of known areas of transportation infrastructure deficiencies, safety concerns and issues, and other insights into streets, roads, intersections, sidewalks, shared use paths, transit needs, and roadside areas.

1. ***Are there any specific areas of the street system that you feel should be improved? If so, what type of improvements do you feel are needed.***
2. ***Are you aware of any locations where accidents or lots of near misses have occurred?***
3. ***Are there any new streets, pedestrian ways, bike ways, or transit services you feel are needed?***
4. ***What do you believe should be the top priority transportation projects for the community?***
5. ***Do you have any suggestions for new funding sources for transportation improvements?***
6. ***Where do you make most of your trips during the course of a typical week?***
7. ***How often do you travel outside the Colorado City / Hildale Area?***

   >_1/week ____ 1/week ____ Every 2 weeks ____ Every month ____ Rarely ____
8. ***What are the primary reasons for this travel?***

   Work Commute _____ Shopping _____ Medical _____ Recreational _____

   Commercial Aviation _____ & Destination _____ Other _____
9. ***Where are the principal destinations?***

   St. George _____ Hurricane _____ Kanab _____ Page _____

   Flagstaff _____ Phoenix _____ Las Vegas _____ Other _____
10. ***Is there anything else you think we should know or be aware of?***

Thank you for your time!

Day: Monday	*Date:* October 4, 2010	*Time:* 8:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Carol Timpson, Principal, Colorado City Unified School District** **Raymond Black, Transportation Director, Colorado City Unified School District**		

The following street/road improvements were identified as priority needs for the community and the District.

1. Arizona Avenue: Installation of a pedestrian/bicycle underpass of SR 389 at Arizona Avenue. The community had applied for a transportation enhancement grant for such a facility a few years back, but the project was not funded. A grade separated crossing of the highway at Arizona Avenue is one of the top priorities of the School District because of the large amount of students using this route to access the school located at the southwest corner of Arizona Avenue and Cottonwood Street.
2. Redwood Street: Construct a bridge or low water dip crossing of Short Creek at Redwood Street to enable school buses to serve the Centennial Park area without having to use SR 389; felt to be a significant safety enhancement.
3. 3200 South: Need left turn lanes on SR 389 for southbound to eastbound traffic.
4. 3600 South: Need left turn lanes on SR 389 for southbound to eastbound traffic.
5. Airport Avenue: Need a right turn deceleration lane on SR 389 for southbound to westbound traffic.
6. Cane Beds Road / AZ SR 389: Need left turn lanes and right turn lanes on SR 389 in both directions.
7. Central Street: Improve (base stabilization and chip seal surfacing) Central Street from Centennial Avenue to Lost Spring Road (a.k.a. County Road 5, Mount Trumbell Road). This segment may need drainage improvements along with surfacing improvements.
8. Redwood Street: Improve (base stabilization and chip seal surfacing) Redwood Street from Airport Avenue to Lost Spring Road.
9. Juniper Street: Extend and connect Juniper Street from its current terminus in Centennial Park south to Lost Springs Road; improve the street (base stabilization and chip seal surfacing) from Woolley Ave (1900 South) to Lost Springs Road (2400 South).
10. Yellowstone Road: Improve (base stabilization and chip seal surfacing) from 3200 South to Cane Beds Road to create an all-weather road.
11. School Boundary Road: Improve (base stabilization and chip seal surfacing) from 3200 South to Cane Beds Road to create an all-weather road.
12. 3200 South: Improve (base stabilization and chip seal surfacing) from SR 389 to School Boundary Road to create an all-weather road. Also, extend and connect 3200 South through the Cane Beds area where it does not exist between School Boundary Road and 1900 East. Improve (base stabilization and chip seal surfacing) 3200 South the entire length from SR 389 to Yellowstone Road.
13. Cane Beds Road Extension & Rosy Canyon Road: Finish the improvement (base stabilization and chip seal surfacing)of Cane Beds Road from the current termination of the improved surfacing east and northerly to the Utah State line where the road has chip seal surfacing. This road connects the Colorado City area to US 89 in Utah and is a significant time savings over alternate routes. The school district frequently needs to travel to the US 89 area for school functions.

14. Local Roads in Cane Beds: The local roads serving the residential areas of Cane Beds are narrow (one lane) and have a dirt surface. School buses have difficulties when meeting vehicles particularly during inclement weather. Widen the roads to allow for two vehicles to pass each other. Improve the road surface for all weather travel. Will require drainage improvements. Some or all of these roads may be privately owned and may require right of way acquisition to improve.
15. Sight Distance at Intersections: There are areas all over town where bus driver views are obstructed at corners creating a condition where the driver needs to encroach into cross lanes to see on-coming traffic. The obstructions include tree branches, privacy fences, etc. Of particular concern are the intersections of Arizona Avenue, Airport Avenue, and Cane Bed Roads with AZ SR 389.
    a. Suggest the Town consider (and enforce) an ordinance requiring a clear zone at intersection corners and a minimum vertical clearance for tree pruning considering the height and line of sight of a bus driver.
16. Centennial Park: Some of the streets are narrow and are essentially one-lane as vehicles are parked on both sides of the street. This has caused some issues for bus drivers in this area.
    a. Suggest the County consider new regulations to allow on-street parking only on one side to maintain two-way travel and/or require sufficient off-street parking to reduce the number of cars parked on the streets.
17. Mohave Avenue / SR 389 Intersection: Need right turn deceleration lanes on SR 389 in both directions.
18. Arizona Avenue / SR 389 Intersection: Need left turn lanes and right turn deceleration lanes on SR 389 in both directions.
19. SR 389 Intersections: Need right turn deceleration lanes at all street intersections with SR 389 in each direction where the lane does not already exist.
20. Arizona Avenue: There are sidewalks along the front of the school on Cottonwood Street, however, the sidewalks end at the edge of school property. The School District would like to see the sidewalks extended along Arizona Avenue from Cottonwood street East to the Dairy at Juniper Street where the current sidewalk ends.
21. Uzona Avenue: Need sidewalks along Uzona Avenue to provide pedestrian access to the public school.
22. Central Street: Encourage the City to continue the incremental improvements being made to Central Street in the Town proper that include sidewalks.
23. Water Canyon Road (in northeastern Hildale area): The road is narrow in places and has lots of recreational use. Parking at the terminus trailhead area is deficient. The District makes field trips to this site on occasion. Would like to see the road widened to enable two-way travel the entire length and additional trailhead parking provided.

Additional comments made during the interview discussion include the following:

1. Frequent trips within the study area include the following:
    a. School bus routes (Charles Hammon provided the school bus routes to WSA prior to the interview).
    b. To/from Centennial Park area.
    c. To/from the Cane Beds area.
    d. To/from the public school campus from all over the area.

e. To/from home to various points in the community.

f. To the Post Office and Shopping Area around the Central Street and Township Avenue intersection.

2. School buses or a school employee travels out of town for field trips or school business 3 or 4 times a week. A bus run goes daily Monday through Thursday to 6 mile village and Moccasin.
3. Personally, interviewees travel out of town several times a month for shopping and medical purposes most frequently to St. George, Hurricane and Kanab.
4. School business travel is mostly to points in Arizona (Kingman, Phoenix, etc.) while personal travel is mostly to Utah.

*** End of Carol Timpson and Raymond Black Interview Notes ***

Day: Monday	*Date:* October 4, 2010	*Time:* 9:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Freeman Barlow, Building Official, Town of Colorado City** **Daniel Barlow, Sr., City Council Member, Town of Colorado City**		

The following paragraphs summarize the points of discussion during our interview and conversation related to the new transportation plan for the Town of Colorado City. Of note is that Daniel Barlow, Sr., was the Town's first Mayor and served in that capacity for 20 years. He was a leading participant in the Town's previous transportation plan completed in 1993.

1. Drainage: Drainage is an important issue for the street system. The plan and each improvement need a drainage element. Some of the Town's streets also serve as flood control conduits and outlets. After a heavy rainfall event, runoff washes down many streets in Town and leaves mud on the streets. For example, Township Avenue has 6" of water in the street during and after heavy rains.
2. The flood control dike east of town has helped alleviate flooding in the Town.
3. The objective of the Town has been to try to get water off the streets and into the creek. A lot of the stormwater flows from the north are routed into the creek off of Richard Street. Stormwater flows on Township Avenue run off into Short Creek at its western terminus.
4. Short Creek serves as the major drain for the community. Drainage is primarily from north to south.
5. There is a CDBG in place to improve Arizona Avenue from the Town's dairy at Juniper Street west to AZ Highway SR 389.
6. The Central Street project to be constructed in October 2010 is also a CBDG funded project and extends improvements to Black Avenue.
    a. Drainage water on Central Street flows to the Plum Avenue area. This is a major drainageway at the south end of the Town. There is a culvert under the highway for this wash that is located a short distance from Central Street. The large drainage structure required under Central Street is in the Town's 5-year plan for the Plum Avenue drainageway.
7. The intersection of Central Street and Highway 389 is a critical intersection. There needs to be an acceleration lane at this intersection to provide safer turn movements onto the highway.
8. The intersection of Airport Avenue and SR 389 is a safety concern. This intersection needs to have auxiliary left turn and right turn lanes and other safety improvements as required.
9. Mohave County has a Sheriff's Office and is building a Court's facility on a site located on the east side of SR 389 between Airport Avenue and Cane Beds Road. These facilities will add additional traffic and turning movements on the highway. The driveway intersection with SR 389 should be reviewed for proper safety provisions for traffic at this location.
10. Johnson Street used to connect to SR 389 and served as a collector street. There was concern with the location of this intersection as it was in close proximity to the Short Creek SR 389 bridge. It was agreed that the Johnson Avenue intersection would be eliminated and that a new intersection be located at Mohave Avenue. Mohave Avenue now serves as the collector street although the official functional classification designation has not yet been changed.
11. The construction and improvement of Hildale Street on the east side of the Town and the construction and extension of Mohave Avenue from Central Street to Hildale Street form a bypass of sorts to relieve traffic

from Central Street and Arizona Avenue in the core area of Town. Hildale Street and Mohave Avenue are in need of further improvement by providing curb, gutter and related drainage improvements.

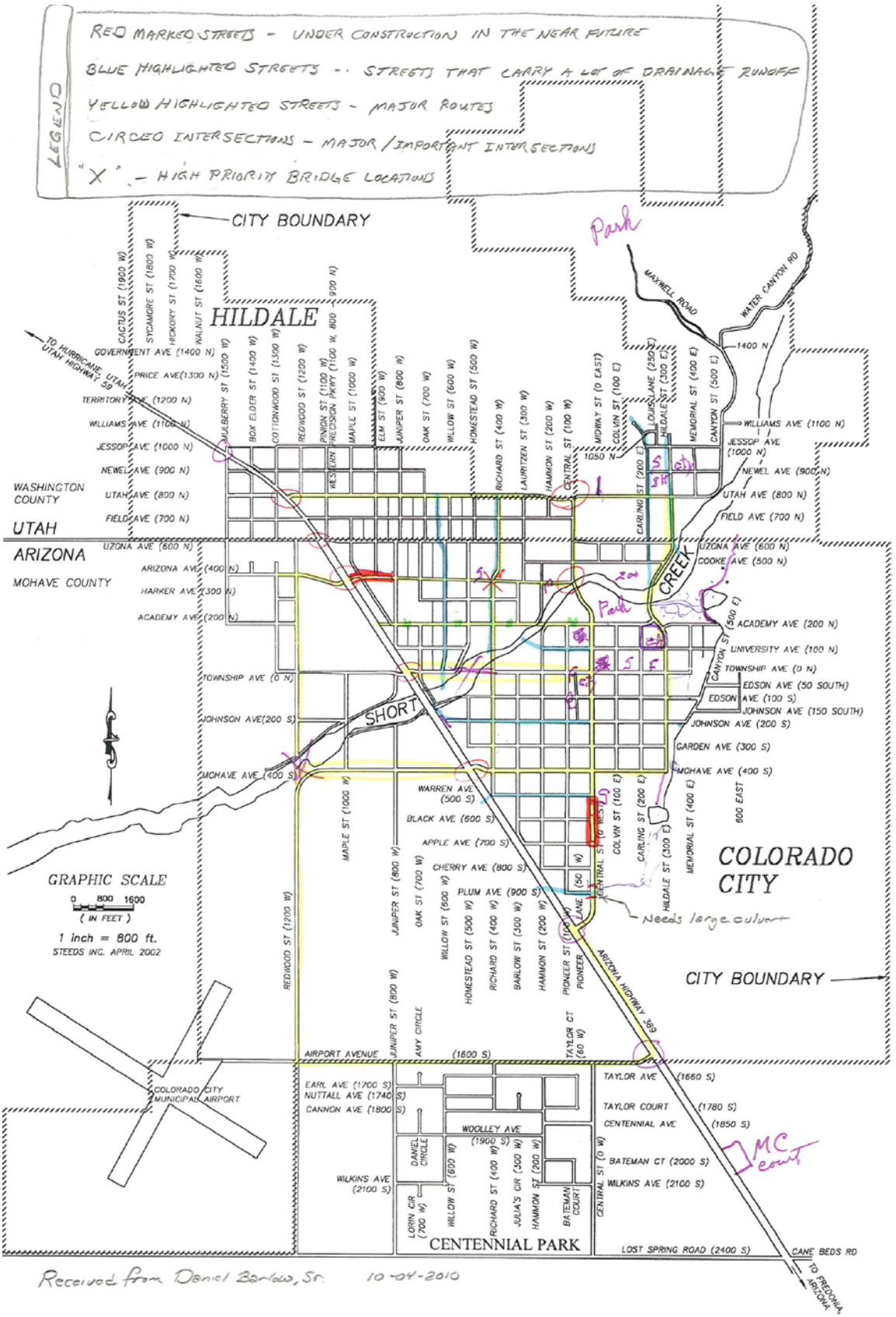
12. There is a need for a bridge or low flow crossing structure across Short Creek on Redwood Street.
13. Township Avenue needs to be extended across Short Creek to connect Homestead Street to Richard Street.
14. The two most important new facilities are (1) the Township Avenue crossing of Short Creek and (2) the Redwood Street crossing of Short Creek.
15. The roads in front of the school need curb, gutter and sidewalk (Cottonwood Street).
16. There is a private school along Garden Avenue between Lauritzen and Hammon Streets. Garden Avenue needs improvement with curb, gutter and sidewalk.
17. The intersection of Arizona Avenue and SR 389 is a major safety concern. Connecting Township Avenue across Short Creek would relieve the heavy traffic on Arizona Avenue.
18. Heavily traveled routes include Hildale Street, Mohave Avenue, Township Avenue, Richard Street, Arizona Avenue, Uzona Avenue (state line road), Central Street and SR 389.
19. A major concern is providing facilities for safe entrance on and exit off the highway and provision of lighting at the major highway intersections.
20. Future development in the community will likely include areas on the north side of the City of Hildale.
21. A goal of the Town is to have all homes within one block of an all weather street. All weather streets in Colorado City are typically chip seal surfacing on a prepared and stabilized base with curb and gutter and sidewalks. Ultimately, the goal is to chip seal all local streets in the community.
22. The Central Street/Arizona Avenue intersection is an important intersection in town; the intersection needs to be analyzed for improvement.
23. The Central Street/Utah Avenue intersection is an important intersection in Hildale; the intersection needs to be analyzed for improvement with widening, turn lanes, curb and gutter, etc.
24. These important intersections need paving as chip seal surface is insufficient under the heavy traffic.
25. Utah Avenue in Hildale needs to be widened, improved with asphalt, and provided with curb and gutter.
26. Along Uzona Avenue, all intersections are offset; some use Uzona Avenue to access the public school in lieu of Arizona Avenue.
27. The Richard Street crossing of Short Creek can flood out and typically is the first street to do so. Central Street and Hildale Street can also flood out but do so less frequently. If all three Short Creek crossings are inundated, everyone must use the highway to safely cross the creek.
28. There is a major church facility within the block of University Avenue, Hildale Street, Academy Avenue and Carling Street. On the north side of the church building is a large parking lot. At least twice a week, this lot is full and when services let out, the traffic causes localized traffic jams in the community.
29. At funerals, the procession from the church, south along Hildale Street and into the cemetery entrance aligned with Township Avenue also creates significant traffic jams. In addition, there is a need for sidewalks from the church at the northwest corner of University Avenue and Hildale Street south to the cemetery on the east side of Hildale Street at Township Avenue.
30. There is a need for curb and gutter on Carling Street between Township Avenue and University Avenue.

31. There needs to be sidewalks where not already present around the school located between Township Avenue and University Avenue and between Colvin Street and Carling Street.
32. Bicycle paths, routes or lanes are not an essential feature for the Town of Colorado City. Most people in the community walk significantly more so than biking. Therefore, providing sidewalks is more critical than bike facilities.
33. There is a nature park east of Hildale Street north of Academy Avenue. Provide curb and gutter and sidewalk on Hildale Street to this facility at Short Creek.
34. Any street plan needs to consider drainage and runoff flow.
35. Canyon Street Canal is a major drainage facility on the east side of the community. Drainage from the public lands and mountainous area to the east drains westerly to this flood control canal. A number of years back, the canal failed and water ran down Mohave Avenue and Richard Street to the creek. Drainage runoff in the canal runs south to reservoir located off the south end of Hildale Street. The outlet for the reservoir drains southerly to the Plum Avenue/Central Street area and then flows westerly to the drainage structure under SR 389. Major culverts are needed at Central Street, Plum Avenue and SR 389.
36. Curb and gutter and sidewalks are needed along the entire route of Hildale Street.
37. Schools are located at the northwest corner of Arizona Avenue and Richard Street; at the northwest corner of Township Avenue and Carling Street; and at the northwest corner of Garden Avenue and Hammon Street.
38. Mohave Community College has a large nursing program.
39. The Town is in the midst of a lawsuit regarding land and real property ownership by the trust. The State of Arizona is attempting to disband the community trust. An unfavorable ruling would create many issues in the community that would be complex and difficult to resolve.
40. Hildale City Hall is located at the northeast corner of Hildale Street and Newel Avenue.
41. Mr. Freeman Barlow and Mr. Daniel Barlow, Sr., reported that most trips within the community during the course of a typical week include tips to the:
    a. Post office nearly every day – located on Central south of Town Hall
    b. Public and Private Schools 3 times a day, 5 days a week
    c. Church at least twice a week but typically may be 3 to 5 times a week
    d. Grocery store located at the northeast corner of Central Street and Township Avenue
42. Trips out of town are typically made twice a week for medical and educational purposes primarily to St. George and Hurricane.
43. The community has lots of construction workers who work outside the community and there are some commuters who live in town but work elsewhere.
44. Major employers in the community include:
    a. Most wanted jeans
    b. Mohave Community College
    c. Colorado City School District
    d. Grocery Store
    e. Hardware Store

45. Daniel Barlow, Sr., provided a map of the town identifying various pertinent features.
    a. Streets that serve as major drainage conduits include Willow Street, Richard Street, Carling Street, Hildale Street, University Avenue, Johnson Avenue, Warren Avenue, and Plum Avenue.
    b. Major streets include: Utah Avenue, Arizona Avenue, Township Avenue, Mohave Avenue, Airport Avenue, Redwood Street, Richard Street, Central Street, and Hildale Street.
    c. Important intersections that include all intersections of community streets with SR 389 plus Central Street and Utah Street and Central Street and Arizona Avenue.
    d. High priority bridges across Short Creek at Redwood Street and at Township Avenue.
    e. Two segments that are programmed for improvement including Central Street from Warren Avenue to Apple Avenue and Arizona Avenue from Juniper Street to SR 389.

A copy of this map is included on the next page.

*** End of Freeman Barlow and Daniel Barlow, Sr., Interview Notes ***


LEGEND
RED MARKED STREETS - UNDER CONSTRUCTION IN THE NEAR FUTURE
BLUE HIGHLIGHTED STREETS -- STREETS THAT CARRY A LOT OF DRAINAGE RUNOFF
YELLOW HIGHLIGHTED STREETS - MAJOR ROUTES
CIRCLED INTERSECTIONS - MAJOR / IMPORTANT INTERSECTIONS
"X" - HIGH PRIORITY BRIDGE LOCATIONS
CITY BOUNDARY
HILDALE
Park
MAXWELL ROAD
WATER CANYON RD
1400 N
TO HURRICANE, UTAH UTAH HIGHWAY 59
GOVERNMENT AVE (1400 N)
PRICE AVE(1300 N)
TERRITORY AVE (1200 N)
WILLIAMS AVE (1100 N)
JESSOP AVE (1000 N)
NEWEL AVE (900 N)
UTAH AVE (800 N)
FIELD AVE (700 N)
WASHINGTON COUNTY
UTAH
ARIZONA
MOHAVE COUNTY
UZONA AVE (600 N)
ARIZONA AVE (400 N)
HARKER AVE (300 N)
ACADEMY AVE (200 N)
COOKE AVE (500 N)
CREEK
UNIVERSITY AVE (100 N)
TOWNSHIP AVE (0 N)
EDSON AVE (50 SOUTH)
EDSON AVE (100 S)
JOHNSON AVE (150 SOUTH)
JOHNSON AVE (200 S)
GARDEN AVE (300 S)
MOHAVE AVE (400 S)
SHORT
WARREN AVE (500 S)
BLACK AVE (600 S)
APPLE AVE (700 S)
CHERRY AVE (800 S)
PLUM AVE (900 S)
Needs large culvert
COLORADO CITY
CITY BOUNDARY
GRAPHIC SCALE
0 800 1600
(IN FEET)
1 inch = 800 ft.
STEEDS ING. APRIL 2002
AIRPORT AVENUE (1600 S)
COLORADO CITY MUNICIPAL AIRPORT
EARL AVE (1700 S)
NUTTALL AVE (1740 S)
CANNON AVE (1800 S)
WOOLLEY AVE (1900 S)
TAYLOR AVE (1660 S)
TAYLOR COURT (1780 S)
CENTENNIAL AVE (1850 S)
BATEMAN CT (2000 S)
WILKINS AVE (2100 S)
CENTENNIAL PARK
LOST SPRING ROAD (2400 S)
CANE BEDS RD
TO FREDONIA ARIZONA
ARIZONA HIGHWAY 389
MC court
Received from Daniel Barlow, St. 10-04-2010

Day: Monday	*Date:* October 4, 2010	*Time:* 11:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**John Barlow, Secretary, Arizona Strip Landfill Commission**		

The following notes summarize the comments made by Mr. John Barlow during the interview discussing the new Town of Colorado City Transportation Plan. Mr. Barlow has worked for the Town for many years in many different positions.

1. As Secretary of the Landfill Commission, John Barlow has oversight over the solid waste collection program as well as the disposal of solid waste in the landfill.
    a. It takes two days to collect the Town's solid waste. The waste collection is done weekly. Areas in town north of Short Creek are collected on Thursdays and areas in town south of Short Creek are collected on Fridays. Commercial waste and residential waste are collected concurrently on the same two days. One truck picks up small container (cans) users and a second truck picks up large container (dumpster) users. So each collection day, there are two trucks circulating through that area of Town. Note, residential users can have the larger dumpsters that are collected along with the commercial users.
    b. The volume of solid waste collected in dumpsters is twice the volume of waste collected in cans.
    c. The Commission also collects commercial waste (dumpsters) in Centennial Park, but they do not provide the residential solid waste collection in this neighborhood.
    d. The Commission collects dumpster waste disposal only in Cane Beds, and does not provide can collection.
    e. On Tuesdays, the "can" truck collects waste in Fredonia, and on Wednesdays, the "dumpster" truck collects waste in Fredonia.
    f. The Landfill Commission was created in 1997. John Barlow assumed management of the Commission in April of 2003 or 2004.
2. The intersection of Arizona Avenue and SR 389 is dangerous and lots of school children cross the highway at this location going to and from school. The new public school located west of SR 389 was built and opened roughly 8 or 9 years ago.
3. The dirt roads are problematic for the garbage trucks in wet weather. In spite of this, it is somewhat infrequent that the trucks have been unable to do the waste pickup.
4. Another issue is on streets that don't have a defined edge such as a curb and gutter section. Residents don't know where to place the solid waste cans, so the locations vary considerably. There have been instances where the cans have been hit by cars traveling the street. A program to install curb and gutter on streets would be beneficial.
5. The Town's goal is to provide an improved hard surfaced road within two blocks of each residence. Apple Avenue and Barlow Street were recently improved with chip seal surfacing to get residential properties in the area within two blocks of a hard surfaced street. The other streets in the area are still gravel and unimproved.
6. The Town has been successful and effective in getting streets improved using Community Development Block Grant program funds.
7. The busiest intersections in Town are: Central Street/Township Avenue and Richard Street/Arizona Avenue.

8. Major routes in Town include: Richard Street, Central Street, Hildale Street, Mohave Avenue, and Township Avenue.
9. The top priority project for the Town should be to connect Township Avenue at Richard Street to SR 389 by installing a bridge or low water crossing of Short Creek. Desirably this would be a bridge to provide an all weather crossing of the creek in addition to the highway bridge.
10. The second priority project for the Town should be to construct a bridge or low water crossing of Short Creek at Redwood Street.
11. The City shop is located at 520 North Maple Street (northeast corner of Maple Street and Arizona Avenue). The Landfill Commission office is at this location as well.
12. The next CDBG project is slated for improving Arizona Avenue from the Dairy Store at Juniper Street to the highway and includes the installation of curb and gutter.
13. Another priority project for the community is to finish the improvement of Central Street from the current CDBG project southerly to SR 389. This project will include a major drainage structure (box culvert) at Plum Avenue.
14. The Town has utilized Mohave County Flood Control District funds to help improve the streets. For example, the curb and gutter section on Township Avenue was paid for with Flood Control District monies when that street was improved. This funding source has also included drainage culverts and surface drainage crossings.
15. Local funds are used to chip seal surface roads. The Town is now using a cinder pit source for road construction. The cinders are mixed with limestone fines. Water is added. This material is compacted and used to stabilize the road base. The prepared surface is then chip sealed. The cinders and limestone fines are locally available materials and consequently are economical to obtain. The Town has found this construction method to be effective and relatively inexpensive enabling them to stretch their public works budget and get a quality product.
16. The local destinations John Barlow typically travels to during the course of normal week include the: post office, CMC grocery store and adjacent retail area, to and from the schools, and the dairy store and coffee shop on Arizona Avenue.
17. Lots of families in Colorado City home school their children. Some attend the private schools.
18. John and his family typically travel outside the local area more than once a week primarily for shopping and medical purposes to St. George and Hurricane. Occasionally some business is done out of town as well such as some banking services.
19. The Commissions solid waste collection trucks travel out of town to Fredonia for collection as noted above.

*** End of John Barlow Interview Notes ***

Day: Monday	*Date:* October 4, 2010	*Time:* 1:00 pm MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**LaDell Bistline, Airport Manager, Town of Colorado City Municipal Airport**		

These notes summarize the comments made by LaDell Bistline, the Airport Manager, during his stakeholder interview to discuss the new Town of Colorado City Transportation Study.

1. The Central Street improvement project is well done and a good example of the nature of the newer street improvements being completed in the Town.
2. The access to the airport is good. Redwood Street is paved and Airport Avenue is paved. This provides a loop access to the airport from Highway SR 389.
3. The road into the airport from the intersection of Redwood Street and Airport Avenue could be improved.
4. The Town has ordinances in place regarding zoning and development to protect the clear zones for the airport and its facilities. They are not working with Mohave County to get the same zoning overlays.
5. The airport has plans in the future to construct T-hangars in the area near the west end of the entrance road (Airport Avenue). The plans include using the street right of way at the west end of Airport Avenue for vehicle parking for the future T-hangars. The project would entail rerouting the airport entrance drive and shortening Airport Avenue to create the area needed vehicle parking for the proposed T-hangars.
6. The visibility safety area goes through the middle of the terminal at this time. There are no plans to relocate the terminal at this time; but there is a terminal area redevelopment plan in place.
7. The Town has a plan in place to construct a parallel taxiway and extend the runway. The environmental assessment was commenced seven years ago but has been held up by environmental groups in opposition to the runway extension. BLM is also involved in the environmental reviews.
8. The immediate need at the airport is for new T-hangars. The Town has a "wait list" for T-hangar space.
9. The current priorities for the airport are as follows: (1) Runway reconstruction (top priority) and (2) perimeter fencing (second priority).
10. Mr. Bistline stated that he would provide and email the airport's 5-year capital improvement program.
11. There are currently ten (10) fixed base aircraft at the airport.
12. There is an air ambulance service that uses the airport. The air ambulance usually flies to Salt Lake City.
13. Airport Strip BLM and the Department of Public Safety (DPS) also use the airport on occasion.
14. Some local businesses and industries use the airport for business travel. Most of the fixed base aircraft at the Town's airport are owned by businesses.
15. AP Tech is used for the airport's pavement management program.
16. For the community, Mr. Bistline would like to see the unimproved section of Rosy Canyon Road improved to provide a continuous hard surfaced route connecting SR 389 at Cane Beds and US 89 in Utah. This is a need for the Town and its residents.
17. When Short Creek floods, all the local roads are closed and the only dry crossing is the US 389 bridge crossing.

18. LaDell Bistline reported the following principal destinations within the community when he travels during the course of a normal week:
    a. Daily to the airport of course
    b. Family trips twice a day to the school
    c. To the post office
    d. To the shopping area in the vicinity of Township Avenue and Central Street
    e. Trips to the business located along SR 389 near the state line
    f. To the Dairy Store located on Arizona Avenue at Juniper Street
19. Travel out of town is typically once a week, usually for shopping or less frequently for medical reasons, and generally to St. George or Las Vegas.

*** End of LaDell Bistline Interview Notes ***

Day: Monday	*Date:* October 4, 2010	*Time:* 2:00 pm MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Carolyn Hamblin, Dean, Mohave Community College**		

These notes summarize the comments made by Carolyn Hamblin, Dean of the Colorado City campus of Mohave Community College.

1. The community college campus has five buildings on the property located on Central Street near Mohave Avenue. There is also one college building in Centennial Park. Other campuses of the community college are located in Kingman, Bullhead City and Lake Havasu City.
2. The community college used to occupy the old high school building but moved to the current location 20 to 25 years ago.
3. There are 21 staff members who make daily trips from home to the campus for work and back. In addition, many make a trip out and back at lunch time as well.
4. There are 350 students who physically travel to the campus for classes. In addition, there are a number of on-line students who make perhaps two trips per year to the campus. Approximately 1/3 of the 350 students travel to campus four times a week. The other 2/3 of the students travel to campus two times per week. The classes start at 4 pm and continue into the evening.
5. The college saw 20% growth in the student population from 2009 to 2010. The student population has leveled off this year at the 350 student level.
6. A concern expressed was regarding excessive traffic speeds on Utah Avenue between Central Street and Highway SR 389.
7. Another entrance to the college campus off of Central Street is planned in the future when warranted.
8. There is congestion in Centennial Park in the area of the schools. There are a number of schools in Centennial Park to the west of Centennial Avenue and Hammon Street including the Masada Elementary Charter School and a private charter high school known as the Colorado City Academy.
9. Pedestrian access to the MCC campus is good and the sidewalks in the area are in good condition.
10. Ms. Hamblin occasionally uses Rosy Canyon Road to travel to her home in Kanab; and cited the improvement of the unimproved section of this road as a need.
11. Trips made around the community during the course of a typical week include the following areas:
    a. Arizona Avenue corridor
    b. The downtown corner (Central Street and Township Avenue)
    c. From MCC to the High School and to the Academy in Centennial Park
    d. Occasionally to the dam/reservoir site just east of the campus for lunch and exercise
    e. The Merry Wives Café located at the northwest corner of Uzona and UT 59
12. Trips out of town are typically made daily for commuting purposes to and from Kanab, Utah. In addition, out of town travel is made on a monthly basis to the Beaver Dam Center and to the Kingman and Bullhead City campuses for business purposes.
13. There is a need for a right-turn lane from Eastbound (south) 389 onto Airport Avenue.

*** End of Carolyn Hamblin Interview Notes ***

Day: Monday	*Date:* October 4, 2010	*Time:* 3:00 pm MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Warren Barlow, Supervisor, 911 Dispatch - Town of Colorado City & City of Hildale**		

These notes summarize the comments made by Warren Barlow regarding his input to the Colorado City Transportation Plan.

1. Public safety vehicles have gotten stuck on School Boundary Road; this dirt road needs to be improved to all weather status.
2. Township Avenue needs to connect to SR389 with a new bridge or low water crossing of Short Creek; there are some ground water wells in the path of the road that would need to be dealt with and there is a metal building that would need to be relocated as well.
3. Yellowstone Road is an existing dirt surface road that needs to be improved to an all weather road between 3200 South and Cane Beds Road.
4. The street names east of Canyon Street are jogged from the streets with the same names west of Canyon Street; 911 Dispatch would prefer the streets have a different name since they do not align and are offset by ½ block; public safety response would know that those street names are east of Canyon Street.
5. Extend and connect 3200 South in Cane Beds between School Boundary Road and 1960 East so that 3200 South is a continuous street from SR 389 to Yellowstone Road.
6. The entire community needs traffic control and informational signage where warranted including stop signs, yield signs, street name signs, etc. In addition, there may need to be traffic signals on SR 389.
7. The street surfaces on Richard Street, Central Street and Arizona Avenues need preventative maintenance to preserve the streets and extend their lives with the objective of preventing further deterioration.

Note: Warren Barlow's time was limited due to demands of his position. He recommended that Frank Barlow be interviewed. In addition, he stated that Frank Barlow has good GIS mapping for the community.

*** End of Warren Barlow Interview Notes ***

Day: Monday	*Date:* October 4, 2010	*Time:* 3:30 pm MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Frank Barlow, 911 Dispatch - Town of Colorado City & City of Hildale**		

These notes summarize the information provided by and the comments made by Frank Barlow, an employee in the 911 Dispatch Center. Frank Barlow maintains the GIS mapping and database for the 911 Dispatch Center. In addition, he is a paramedic and a fireman.

1. There have been accidents at the intersection of Central Street and SR 389.
2. There have been accidents at the intersection of Airport Avenue and SR 389.
3. There have been accidents at Uzona Avenue and AZ SR 389 / UT SR 59.
4. There is a hill crest on SR 389 between the Airport Avenue and Central Street intersections that limits sight distance somewhat and may be a contributing factor to some accidents.
5. Mohave Avenue to Hildale Street to Utah Avenue create a loop beltway for the community off of SR 389.
6. Major/principle routes in the Town include Mohave Avenue, Central Street, Arizona Avenue, Mohave Avenue, Redwood Street, and Highway SR 389.
7. Arizona Avenue provides direct access to the schools located on the west side of the highway. The crossing of SR 389 at Arizona Avenue is a school route crossing.
8. Township Avenue intersection with SR 389 is low volume as it primarily serves a residential area to the east of the highway and terminates at Short Creek.
9. There have been accidents at the intersection of Richard Street and Arizona Avenue.
10. Arizona Avenue from Richard Street to Central Street has seen accidents as there are entrances (drives) onto Arizona Avenue in those blocks. The street narrows in this segment creating a safety concern.
11. Southbound Central Street approach to Arizona Avenue is on a downhill slope to the intersection. This approach is dangerous in icy winter conditions.
12. Richard Street south of Arizona Avenue – there has been a history of drivers hitting vehicles and objects along the edge of the road for some reason.
13. Sight distance is poor at the intersection of Richard Street and Township Avenue due to fencing at the northeast corner of the intersection.
14. The highway narrows for the bridge over Short Creek on SR 389. The bridge crosses the Short Creek floodway. This route is also Edson Avenue which crosses under the highway bridge in the Short Creek bed.
15. Sidewalks are needed around the Church located along Hildale between University Avenue and Academy Avenue. Tie the Church area to the existing Town sidewalks. Need sidewalks along Academy Avenue. Look at the entire area for sidewalk needs to provide sidewalk connectively.
16. Look at sidewalk situation along Central Street in the vicinity of the Community College at Mohave Avenue. Address any lack of sidewalks in this area so the college has good sidewalk connectivity.

17. There is an unofficial/undocumented access route connecting Homestead Street southward onto Mohave Avenue at the highway creating an unsafe intersection.
18. Need unique street names for streets east of the canal (Canyon Street) so public safety knows specifically where these streets are. These streets extend to the wilderness boundary, so further development is not likely in this area.
19. The drainage control facility (valley drain pan) at Central Street and Airport Road is a dip in the road creating a safety concern for vehicles.
20. Sight lines and visibility at Richard Street and Airport Road is limited due to walls in this area.
21. Township Avenue and Central Street is the central point for street numbering and addressing.
22. Utahmap@utah.gov was used by the Town as the base map for their 911 Dispatch Center GIS system. The Town uses ArcMap 9.1.
23. The access drive onto SR 389 for the liquor store is a safety concern. This drive is located south of Cane Beds Road.
24. The mailboxes located along the highway, as well as the local access drives onto the highway, presents a safety concern at each location.
25. There was a fatal ATV/car accident where an ATV attempted to cross the highway.
26. There is a proposed Mohave County Courts building along the east side of SR 389 between Cane Beds Road and Airport Avenue. This access point also presents a safety concern.
27. The low water street crossings of Short Creek at Hildale Street, Central Street, and Richard Street present a public safety rescue concern as they serve as low head dams with an eddy effect upstream that can trap people. These dams create a churn where drowning can occur.
28. A bridge crossing of Short Creek at Redwood Street is needed.
29. Connect park areas to the community with sidewalks where walks may be missing.
30. There is a high density residential area located west of Central Street south of Township Avenue.
31. Richard Street surface is a flood overflow area where drainage runoff flows on the street downhill from the north into Short Creek.
32. Water runs across Arizona Avenue at the Willow Street and Homestead Street area near the Dairy store.
33. There is drainage across Central Street at Plum Avenue just north of the highway intersection.
34. There is a drainageway across SR 389 near the new Court facility.
35. There is a large drainageway crossing Cane Beds Road east of SR 389 located just west of School Boundary Road.
36. Need jurisdictional (traffic control) signage all over study area including the Town, County and BLM.

37. Frank Barlow makes most of his trips during the course of a typical week to the following locations: the Produce Store located at Richard Street and Township Avenue; the Dairy Store at Arizona Avenue and Juniper Street; the shopping area and fuel station at Central Street and Township Avenue; the Church house along Hildale Street (usually walks to Church); and to work at Town Hall.
38. Frank Barlow commutes for work two to three days a week to St. George. In addition to work, some trips are made to St. George for medical purposes.
39. Frank Barlow identified on a map some land uses in town:
    a. BLM recreational area to the north of Town on Water Canyon Road for hiking, etc.
    b. Park located northeast of Maxwell Parkway north of Hildale.
    c. Medical clinic located at the north end of Hildale Street in Hildale.
    d. Fire station located at the northeast corner of Hildale Street and Newell Avenue by the Hildale City Hall.
    e. Fuel station at the northwest corner of UT 59 and Uzona Avenue.
    f. A zoo and park located along Short Creek east of Central Street extending to the east of Hildale Street.
    g. Park located along Arizona Avenue between Hammon Street and Central Street.
    h. Fuel station located at the northwest corner of Central Street and Township Avenue.
    i. Fire station located south of Township Avenue between Pioneer Street and Pioneer Lane.
    j. School located on the north side of Township Avenue between Colvin Street and Carling Street.
    k. Fire station located northeast of the intersection of Township Avenue and Carling Street.
    l. Medical clinic located at the southeast corner of Township Avenue and Colvin Street.
    m. Medical clinic located along Central Street between Airport Avenue and Cane Beds Road.
    n. Three schools located along the south side of Cannon Avenue west of Hammon Street.

*** End of Frank Barlow Interview Notes ***

Day: Tuesday	*Date:* October 5, 2010	*Time:* 9:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Vance Barlow, Town Clerk, Town of Colorado City**		

These notes summarize the comments made and input to the Town of Colorado City Transportation Study by Mr. Vance Barlow, Town Clerk.

1. Improve operational and safety of ingress and egress on and off of SR 389. Add right turn decal and accel lanes where needed. Add left turn lanes where needed. Central Street has a right turn deceleration lane, but Arizona Avenue and Mohave Avenue do not. Right turn lanes are critical to safety on SR 389 to get slowing turning vehicles out of the higher speed through lane. Needed at all intersections with SR 389.
2. The most dangerous intersection is Uzona Avenue at the state line with AZ SR 389 / UT SR 59. There are a number of businesses at this intersection and the Uzona Avenue crossing is skewed to the highway. There is a left turn lane for southbound UT SR 59 traffic onto eastbound Uzona that does not have an opposing left turn lane for northbound to westbound traffic movements. The northbound approach to the intersection is directly at the left turn lane for southbound traffic on the highway which is unsettling. The highway needs to have a center dual left turn lane southerly through Arizona Avenue like there is north of the state line. There are numerous drives onto the highway north of Uzona Avenue and limited drives onto the highway to the south.
3. There is a need for a bridge or a low water crossing over Short Creek for Redwood Street west of the highway. This will become increasingly important as more development occurs west of the highway. The priority of this crossing to the school district is recognized.
4. The improvement of Arizona Avenue between SR 389 and Juniper Street using CDBG funds will complete this critical street improvement.
5. A big drainage culvert is needed at Central Street in the vicinity of Plum Avenue to enable the final segment of Central Street to be completed to the intersection with SR 389. This improvement project is in the WACOG 5-year plan to get the drainage improvement project completed.
6. The curve in Hildale Street between Academy Avenue and Uzona Avenue is to avoid a large archaeological site – an Anasazi Corn Grower's site along the banks of Short Creek. The City owns a lease on the site. Future development is to make this a public park that is open to the public.
7. The dip street crossings at Hildale Street, Central Street, and Richard Street will likely stay as they are due to the high cost of bridged crossings.
8. The extension of Township Avenue across Short Creek would be nice, but there is a question as to its feasibility due to (1) its high cost, (2) the SR 389 intersection's proximity to the Highway's Short Creek Bridge, and (3) the well that would need to be relocated or addressed.
9. CMC, the cooperative grocery store, wants to build a new store. The new store would be located between Maple Street and Highway 389 and between Arizona Avenue and Uzona Avenue. If and when this happens, it would change traffic flows and patterns significantly and will have a major impact on Arizona Avenue and Uzona Avenue.
10. Colorado City's industrial park area is bounded on the Arizona side by Uzona Avenue on the north, Academy Avenue on the south, Juniper Street on the east and SR 389 on the west. Hildale's Industrial park area is bounded by Uzona Avenue on the south, Utah Avenue on the north, Maple Street on the East and Mulberry Street on the west. There is potential area for an industrial park on the land around the airport.

11. The corridor around Central Street in Centennial Park is also a business park and its location is along the west side of Central Street between Airport Avenue and Centennial Avenue.
12. Vance Barlow does not see residential development filling in the area on the west side of the highway between Airport Avenue and Short Creek within the 20 year planning period. He sees infill of vacant residential areas in the existing community will occur first followed by infill of vacant residential areas to the north of Utah Avenue in Hildale to occur next; both before vacant tracts are developed outside the existing developed areas of the community.
13. Along South Central Street, the area to the south and east of Mohave Community College may develop residentially.
14. The ownership of most of the real property in the community is held by a land holding trust. The trust overlaps into Hildale. There is another trust (Black Trust) that holds property in the southern area of the community. There are generally eight houses constructed in a typical block. The properties in Centennial Park and Cane Beds are not known to be in a trust and it is believed that most are privately owned parcels and lots.
15. The Black Trust also owns land on the west side of SR 389 that could develop into a business/industrial park. This land is generally located between Airport Avenue on the south, Mohave Avenue on the north and east of Redwood Street.
16. The census bureau reported average household size of approximately 9 per dwelling unit. Vance Barlow felt that this household size might be a little low and could be an underestimate. He indicated the household sizes are large in the community and are more like small extended family/multifamily units.
17. A major flood event occurred in 1982 when 3 inches of rain fell in a 24 hour period.
18. Most accidents are on the highway versus on local Town streets. The Central Street intersection used to be a problem area for crashes to occur, but ADOT improved the intersection with auxiliary turn lanes and that alleviated the accident problem for the most part. The hill crest on the highway to the south of the Central Street intersection still is a bit of an safety issues as it limits sight distance.
19. Priority needs for the community are:
    a. Improvement of the Uzona Avenue intersection with AZ 389 / UT 59.
    b. Improvement of the Arizona Avenue intersection with AZ 389 by adding turn lanes.
    c. Improvement of the Mohave Avenue intersection with AZ 389 to provide for safer on and off turns.
20. Improvement of Township Avenue with a bridge or low water crossing of Short Creek is likely a long ways off and thus its intersection with AZ SR 389 is a lower priority than the three top priorities mentioned above.
21. Arizona Avenue seems like the busiest street in Town to Vance Barlow.
22. Central Street is closed for improvements and is slated to reopen mid-October.
23. Hildale Street could be upgraded by adding curb and gutter.
24. Decisions need to be made to decide the priorities of unimproved surface streets that should be chip sealed. Methods need to be refined to make the hard surfacing improvements as affordable as possible to maximize the streets that can be improved. Chip seal surfaces provide dust abatement and afford less vehicle maintenance due to smoother street surfaces.

25. Uzona Avenue both east and west of AZ 389 / UT 59 is very busy and at times congested. There is a new parts store being built at this intersection that will result in even more traffic on Uzona Avenue and through its intersection with the highway.
26. Vance Barlow makes most of his trips within the community during the course of a normal week to the following locations:
    a. Commute from home at Uzona Avenue and Willow Street to Colorado City Town Hall.
    b. Automotive shop in Hildale west of the highway along Uzona Avenue.
    c. Post office and shopping area in the vicinity of Central Street and Township Avenue.
    d. Church meeting house at Hildale Street and Academy Avenue.
27. Vance Barlow travels outside the community perhaps 3 to 4 times a week; typically to St George and Hurricane for shopping and medical purposes. They travel to Flagstaff or Phoenix 3 times per month for specialty medical care (insurance requirements cause travel to Arizona locations versus Utah locations).

*** End of Vance Barlow Interview Notes ***

Day: Tuesday	*Date:* October 5, 2010	*Time:* 10:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Brian Zitting, Canaan Peaks Engineering, Hurricane, UT**		

These notes summarize the discussion with and input of Brian Zitting with respect to the Town of Colorado City Transportation Study. Brian owns an engineering firm located in Hurricane, UT and lives in Hildale. He and his firm have completed a number of projects for the Colorado City/Hildale community.

1. There are lots of dirt streets in the community that need to be improved. Economic conditions in Hildale and Colorado City limit the number and timing of streets that can be improved.
2. The community's dirt road improvement program is based on an inventory of streets. The improvement of unimproved streets in the community generally follows the process outlined:
   a. The design is completed for the street setting the horizontal and vertical alignments and the geometrics of the street when improved.
   b. The street surface is then prepared, the base constructed and a double layer of chip seal applied to create a hard surfaced, all-weather street.
   c. At some point, curb and gutter is then constructed on each side of the chip seal surfacing to control drainage.
   d. Chip seal surfaced streets typically have a new chip seal application approximately every five years after the original construction.
   e. The final step includes placing a 2 to 3 inch thick layer of hot mix asphalt between the curb and gutter sections to create a "finished" street.
3. The community does not have typical developers and developments; therefore, street construction and improvement is undertaken by the Town of Colorado City and the City of Hildale on a pay as you go basis.
4. The recent poor economic conditions have stymied growth the past few years. This has given both municipalities a reprieve in terms of the need for new street improvements to keep up with developing areas.
5. Central Street terminates at Utah Avenue with a "Tee" intersection on a curve in Utah Avenue. The intersection has sight distance issues and left turns at this location can be hazardous. A roundabout was proposed at this intersection, but it was determined that this was not the favored solution. Canaan Peaks Engineering has a concept design for reconstruction of the intersection that includes raised islands. *Brian Zitting indicated he would provide this conceptual design to the study team for reference in the plan.*
6. There is very little traffic control striping in the Town. This Town has limited funds to maintain extensive traffic control markings and striping. However, striping would be a positive safety improvement.
7. There is also minimal street lighting and where it exists, it is low wattage fixtures to keep the operation and maintenance costs low. There is a need for street lights to provide better illumination of key street areas to enhance safety.
8. It would be good to have an overall pedestrian and bicycle route and trail plan to show connectivity to recreational destination points.

9. Central Street has a wide expanse of street surface for pedestrians to walk across. This presents a safety concern due to the width of the street surface as it can take a long time for pedestrians to cross. Curb bulb-outs and/or a refuge island in the middle of the street would help.
10. Suggest that center dual left turn lanes be eliminated to improve safety of travel.
11. Mohave Avenue has a wide right of way as does Johnson Avenue.
12. The canal area along the east side of Town would be a good setting for a multiuse trail.
13. Short Creek corridor may also be another good candidate for a multiuse trail.
14. The Town has used transportation enhancement funds in the past to construct sidewalks along the west side of Central Street with benches.
15. The Town applied for a pedestrian underpass of SR 389 at Arizona Avenue but was not awarded a grant to construct it through the Transportation Enhancement Program. Arizona Avenue is the primary route for school children living east of the highway to access the school located on the west side of the highway. School children crossing the highway presents a major safety issue for the community.
16. Bike use in Town has historically used the sidewalks versus the streets.
17. A bike path in the highway right of way would be beneficial, but the community has been told that ADOT does not allow bike paths in state highway right of way. SR 389 has 200 feet of right of way, so there would be room for a multiuse path adjacent to the right of way line.
18. Priority projects for the community include:
    a. Chip sealing of dirt streets.
    b. Adding curb and gutter where needed to help control drainage.
    c. Adding hot mix asphalt to upgrade chip seal surfaces to asphalt surfaces (following curb and gutter installation).
    d. Adding signage and striping traffic control improvement to enhance safety of travel.
19. Brian Zitting mentioned a concept promoted a number of years ago known as the “Southern Corridor” that would connect St. George / I-15 to US 89 and points east. The segment connecting to Hurricane is the most viable piece of the original concept. There was also a concept proposal for a Lake Powell pipeline that would provide water to the St. George, Hurricane and Cedar City areas.
20. Uzona Avenue goes west to the Town’s sewage lagoons.
21. A bridge is needed over Short Creek on the Redwood Street alignment.
22. Brian Zitting lives in Hildale. Trips made during the course of a typical week include the following destinations: Post Office, grocery store, Hildale City Hall and Colorado City Town Hall, and the Maxwell Parkway and Canyon Street areas for recreational purposes.
23. Since Brian Zitting lives in Hildale, he makes daily trips to his business located in Hurricane. Other travel outside the local community includes monthly trips to St. George and Cedar City for shopping and medical reasons.

*** End of Brian Zitting Interview Notes ***

Day: Tuesday	*Date:* October 5, 2010	*Time:* 11:00 am MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Jonathan Roundy, Town Marshall, Town of Colorado City, AZ**		

These notes summarize the comments made and information provided by Mr. Jonathan Roundy, Town Marshall, as input on the development of the Town of Colorado City Transportation Study.

1. The intersection of Uzona Avenue and SR 389/UT 59 is a location that has had major accidents. Utah improved SR 59 by adding a left turn lane for southbound to eastbound traffic, but Arizona did not improve the south side of the intersection to match. The highway is on a diagonal creating a skewed intersection. The number one top priority of the Town Marshall's office is to improve the intersection to eliminate accidents at this location.
2. Most serious accidents in the community are located on the highway (versus on local streets).
3. The intersection of Town streets with the highway are safety concern areas. There have been fatalities at some of these intersections. At some intersections, there are no right turn lanes on the highway so that vehicles can slow for a right turn outside the high speed travel lane. These intersections need to have right turn lanes installed.
4. Visibility is poor at night at many intersections. There is a need for street lights at major intersections. Note that this would improve safety but is not considered to be a cause of accidents.
5. There is very little traffic control striping and marking on the streets in the community. This would help improve the safety of the streets, but is also not considered to be a cause of accidents.
6. In the winter under slick road conditions, the intersection of Central Street and Arizona Avenue is problematic due to the grades of the intersection approaches.
7. During flooding events, the only all weather crossing of Short Creek is the bridge on highway SR 389. The Richard Street crossing has more capacity than the crossings at Central Street and Hildale Street, so it remains free of flooding longer than the other two locations.
8. There needs to be a bridge crossing of Short Creek at Central Street to provide an all weather crossing to supplement the bridged crossing on SR 389. This would solve the public safety concern of having an alternate crossing during flooding and would minimize the slopes mitigating the vehicle sliding problems.
9. Priorities: (1) Improve the intersection of Central Street and Arizona Avenue including a bridge over Short Creek; (2) Improve the intersection of Uzona Avenue and SR 389/UT 59 by providing all needed turn lanes; and (3) Improve the safety of intersections along SR 389 by adding right turn lanes where needed.
10. There needs to be a pedestrian crossing of the highway at Arizona Avenue due to the school located west of the highway and many of the students living on the east side of the highway.
11. There is a need for a bridge over Short Creek at Redwood Street.
12. Hildale Street on the east side of Town was constructed and opened 5 to 6 years ago.
13. The streets in Hildale, UT are generally in worse condition than the streets in Colorado City, AZ.
14. The accident records of the Town Marshall show the following:
    a. 2007 46 accidents
    b. 2008 58 accidents

c. 2009 37 accidents

d. 2010 43 accidents

15. The Town is in need of a traffic control device inventory that shows the location and nature all signs, pavement markings, speed limits, etc.

16. Improvements needed include turn lanes, street lights at intersections, lane markings, striping, cross walk markings, painting, etc.

17. Mr. Jonathan Roundy provided his notes on the questionnaire form that are summarized below:

    a. High accident locations are at UT 59 & Uzona Avenue and at SR 389 & Central Street.

    b. School crossing of the highway needed at Arizona Avenue.

    c. Priority transportation projects include providing adequate east-west and north-south major streets and mitigating street flooding.

18. Trips made within the community during the course of a typical week include commuting from home on the south side of the community to Town Hall for work; trips to the northwest side of Town to the school; to the Dairy Store on Arizona Avenue at Juniper Street; trips to the grocery store at the northeast corner of Central Street and Township Avenue; and to the north side of town into Hildale usually via Richard Street.

19. Travel outside of the local community occurs around once a week, usually to St. George and Hurricane primarily for shopping and medical purposes.

*** End of Jonathan Roundy Interview Notes ***

Day: Tuesday	*Date:* October 5, 2010	*Time:* 12:00 pm MST	*Location:* Town Hall, Colorado City, AZ
Person Interviewed:	**Jake Barlow, Fire Chief, Town of Colorado City Fire Department, AZ**		

These notes summarize the comments made and information provided by Mr. Jake Barlow, Fire Chief, regarding the Town of Colorado City Transportation Study.

1. The layout of the street system (grid), traffic patterns, and the street widths are generally good.
2. The Town has a program in place to make all the streets all-weather.
3. Provide sidewalks where missing and include planter strips between the sidewalks and edge of street. The objective is to get pedestrians (and bicycles) separated from traffic and to provide appropriate safety measures where pedestrians and cars interface.
4. Some of the roads need delineation of road edges. The fire department has large trucks with low undercarriages and these vehicles need good roadway surfaces to drive on.
5. The design of waterways across streets and handling of drainage runoff on streets is very important.
6. Good design of access drive connections to properties is also important.
7. In the transportation master plan, if a street carries lots of water or if it has grade differentials, how wide does the street need to be to carry the water and what is needed for good transition to access properties?
8. Fire station locations:
    a. At Pioneer Street and Township Avenue.
    b. At Hildale Street and Newel Avenue just East of the Hildale City Hall.
    c. Training station on Township Avenue at Carling Street.
9. The Colorado City Fire District is approximately 15 miles by 15 miles and extends 7 miles to the west to BLM lands.
10. The fire department needs a fire station on the west side of SR 389 between Airport Avenue and Cane Beds Road in the vicinity of Wilkins Avenue.
11. The fire department is all volunteer firefighters with no full time staff at this time.
12. In Centennial Park, would like to see Wilkins Avenue extended east to the highway to provide direct access from Centennial Park to the highway.
13. There is a need for a future fire station in the Hildale Industrial Park area located in the vicinity of UT 59 north of the state line.
14. Bike/pedestrian facilities are needed at Arizona Avenue and SR 389 since this is a route to the school on the west side of the highway. There needs to be a walkway crossing over or under the highway.
15. There have been pedestrian and vehicle accidents at Uzona Avenue and the highway. Since this is the Arizona-Utah state line, people stop to take pictures. There needs to be a place (turnouts) for people/tourists to pull off the road to take pictures.
16. The intersection of Mohave Avenue and SR 389 is a busy intersection.

17. There is a need for a bridge or low water crossing of Short Creek for Township Avenue. This would make improved access into Town.
18. Improve the roads to a safer condition where needed.
19. There was a fatality recently where a person was thrown from the bed of a pickup when the driver swerved to avoid an obstruction in the roadway. The obstruction was a manhole top that was higher than the adjacent street surface presenting a bump. Valley drains and raised manholes are safety hazards present in the streets in certain areas. Would like to see a program (road safety audit) to identify obstructions and obstacles and a plan to eliminate or mitigate these road hazards.
20. Priority projects are needed to alleviate traffic at all intersections with SR 389 and to provide a crossing of Short Creek at Redwood Street; the latter would improve access to the airport and to the Arizona Strip.
21. Would like to see Mohave County improve and chip seal Rosy Canyon Road – this is important to the Fire Department since it is in their response area.
22. Would like to see Mohave County improve Lost Springs Road between SR 389 and Redwood Street.
23. 3200 South needs to be connected between School Boundary Road and 1900 East so it is continuous between SR 389 and Yellowstone Road.
24. Factors that affect the number and severity (serious and fatal) crashes include the traffic volume. There is considerably more traffic on UT 59 north of the state line versus SR 389 in Arizona. UT 59 also has more crown and when it gets icy, vehicles can slide off the road. ADOT uses rumble strips on the road edges and in the center of the road and that saves lives. The roads construction, design and the volume of traffic all seem to correlate to the number and severity of accidents.
25. Most of the trips made by Jake Barlow during the course of a typical week is the commute from home to work and on the major routes in the community including Richard Street, Arizona Avenue, and Hildale Street. His job as Fire Chief requires him to travel all over the community on a regular basis.
26. Travel outside the local community occurs typically more than once a week usually for business related activities to Phoenix, St. George and to Kingman via St. George.

*** End of Jake Barlow Interview Notes ***

Day: Tuesday	*Date:* October 5, 2010	*Time:* 2:00 pm MST	*Location:* via email
Person Interviewed:	**Charles Hammon, Excel Engineering**		

Charles Hammon is the principal and owner of a local engineering firm based in Centennial Park. He has provided professional services to the Town and the School District and is familiar with the community and its transportation system. Mr. Hammon was unable to attend the interview meeting, but did provide comments and information in response to the interview questions posed. His responses are as follows:

1. ***Are there any specific areas of the street system that you feel should be improved? If so, what type of improvements do you feel are needed.***

   It will greatly benefit the residents of Centennial Park and especially the school if Redwood Road crossed the Creek.

   Airport Avenue connects to SR 389. The highway desperately needs turn lanes at this location.

2. ***Are you aware of any locations where accidents or lots of near misses have occurred?***

   Airport Avenue connects to SR 389 and is the main entrance to Centennial Park. I have seen many near misses as cars attempt to turn right into Centennial and a line of cars blast past them in the other lane. There is no right turn lane to safely get out of traffic and have time to slow down in time to make the turn.

   Redwood Road runs north and eventually makes a sweeping bend to the east. That sweeping bend is a location of many near misses. People travel at high speeds around that turn and have limited visibility to the oncoming traffic. If Redwood crossed the creek this area would become a 3-way intersection.

3. ***Are there any new streets, pedestrian ways, bike ways or transit services you feel are needed?***

   Bike and pedestrian ways haven't been explored much in our community. I feel ATV traffic is more prevalent than bike and pedestrian ways. ATV routes would be a great way to get people safely to the Creek and other popular ATV destinations.

4. ***What do you believe should be the top priority transportation projects for the community?***

   1- Highway 389 needs turn lanes at the entrance to Centennial Park. Highway traffic has increased and Centennial Park is continually growing.

   2- Redwood Road needs a Creek Crossing.

   3- Utah Avenue needs rehabilitated and possible shoulder improvements.

5. ***Do you have any suggestions for new funding sources for transportation improvements?***

   I don't know, but perhaps Rural Development has funding for community development.

6. ***Where do you make most of your trips during the course of a typical week?***

   My trips are primarily from Centennial Park, via Airport Avenue, to SR 389 and then to Hildale where I work. Another frequent trip is from Centennial Park, SR 389, and then Central Street to the grocery and hardware store.

7. ***How often do you travel outside the Colorado City / Hildale Area?***

   >_1/week ____ 1/week _X___ Every 2 weeks ____ Every month ____ Rarely ____

8. *What are the primary reasons for this travel?*

   Work Commute _____ Shopping __X____ Medical _____ Recreational __X____

   Commercial Aviation _____ & Destination _____ Other _____

9. *Where are the principal destinations?*

   St. George ___X_____ Hurricane ____X_____ Kanab _____ Page _____

   Flagstaff _____ Phoenix _____ Las Vegas _____ Other _____

10. *Is there anything else you think we should know or be aware of?*

    Cane Beds Road follows the south section line of section 17 and 18, just south of Centennial Park. It amazes me how much traffic uses that road.

*** End of Charles Hammon Interview Notes ***

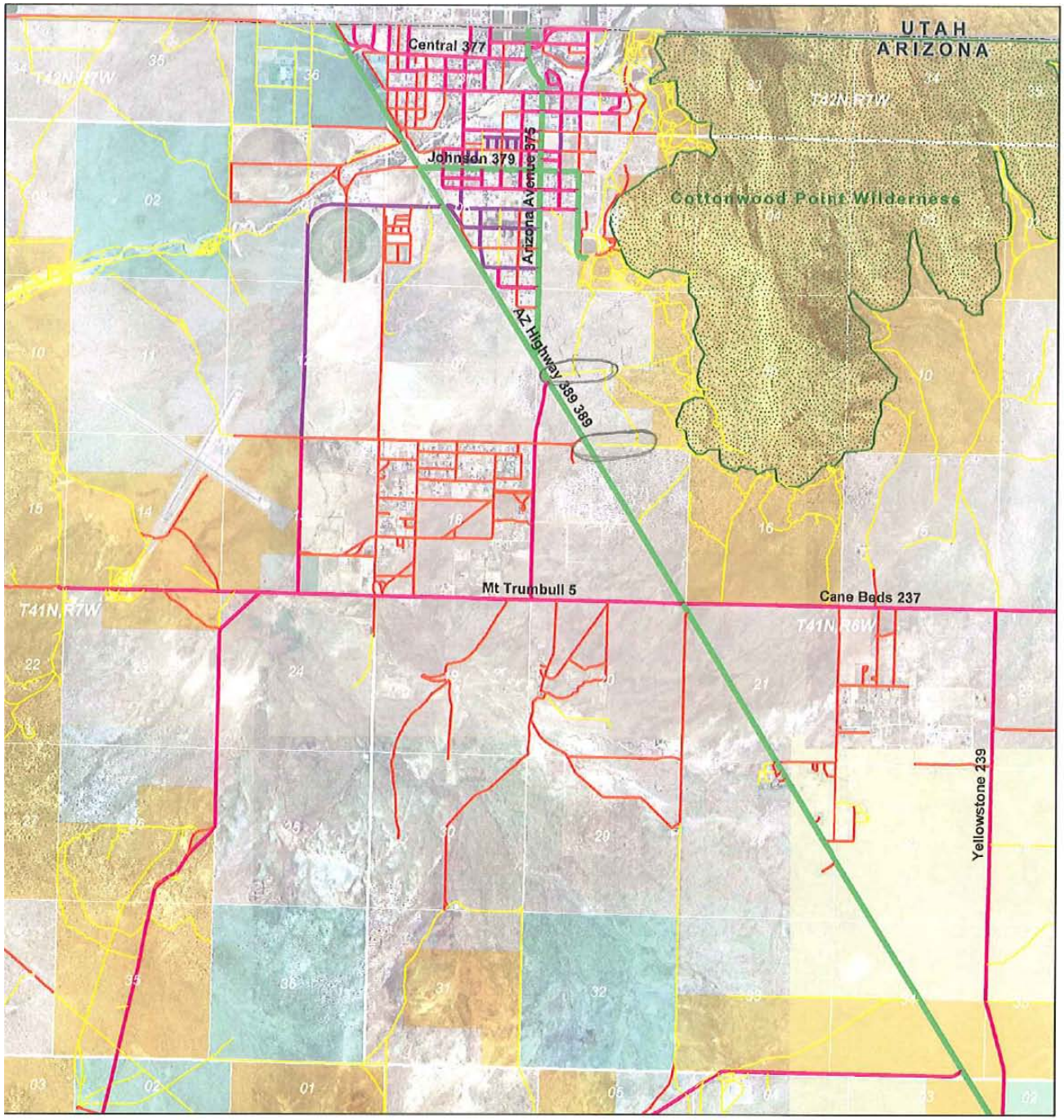
Day: Wednesday	*Date:* October 6, 2010	*Time:* 10:00 am MDT	*Location:* BLM Offices, St. George, UT
Person Interviewed:	**Laurie Ford & Lorraine Christian, BLM**		

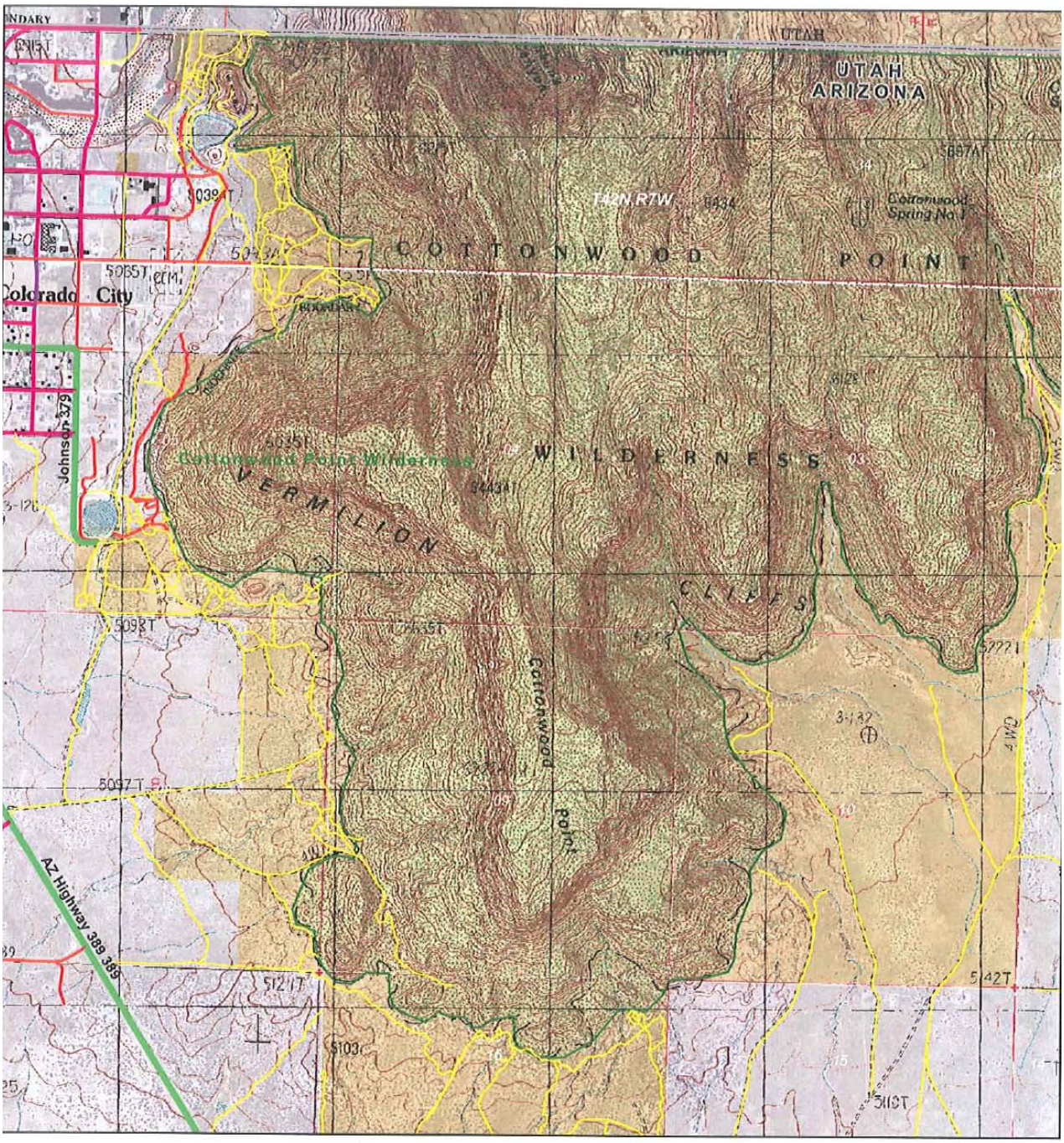
These notes summarize the comments made and information provided as input to the Town of Colorado City Transportation Study during our meeting at the Arizona Strip Field Office of BLM in St. George, UT.

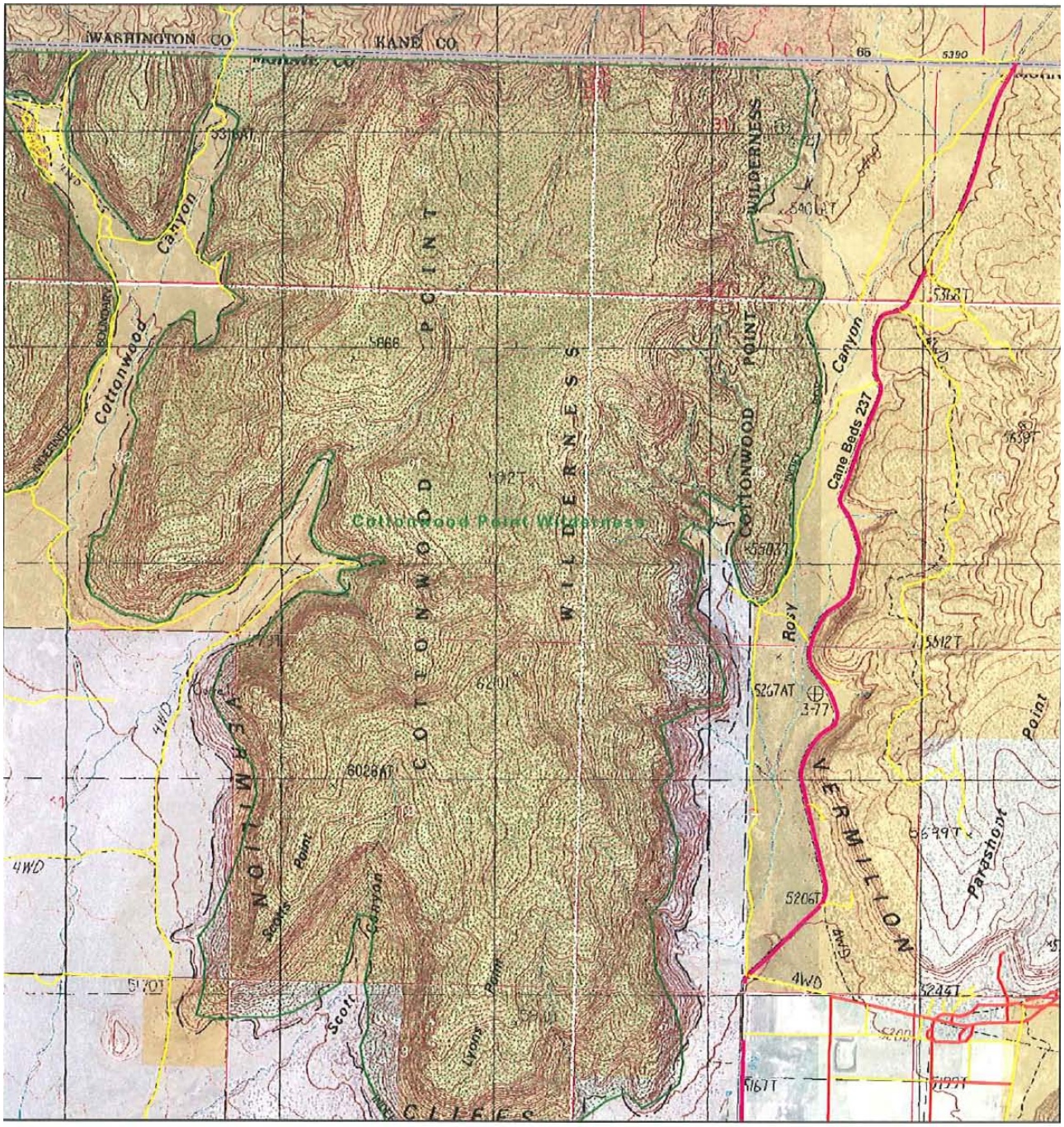
1. It was requested that we add Shered Mullins, Realty Specialist, BLM, St. George Field Office, to our stakeholder list. His email address is: shered_mullins@blm.gov. This individual is in addition to Laurie Ford (who is also on the study's TAC) and Lorraine Christian.
2. Laurie Ford provided three maps denoting BLM property in the vicinity of the study area for the Town of Colorado City Transportation Study. The yellow highlighted tracts represent BLM land.
3. One half of Rosy Canyon Road is on BLM land is situated on BLM land. Mohave County has right of way for Rosy Canyon Road and is responsible for maintenance of the public road on the BLM land. Mohave County right of way for Rosy Canyon Road is reported to be 84 feet in width.
4. On BLM land, if there is any proposed widening, straightening or improvements proposed to the roadway outside of the existing traveled surface area, BLM requires an environmental survey (both cultural and biological) to be done and provided to BLM as a first step towards possible BLM permitting of the proposed improvements.
5. No cultural inventory of the Rosy Canyon Road right of way has been done by Mohave County, although there are lots of cultural resources known to be in the area. Any proposed project to improve Rosy Canyon Road on BLM land (or any other road on BLM land) must include the cost to conduct an environmental survey for cultural and biological resources as it will be a mandatory requirement of BLM.
6. BLM is in the process of doing a road survey and inventory for their property in the Arizona Strip. Many of the locally used roads and trails will be closed to vehicular use. None of the roads that may be closed are legal roads for public access. They are locally used trails and roads that exist by usage only.
7. If the Town would like to see some of the locally used roads remain available to the public for access to resources on BLM property for recreational use, the Town can identify such roads and make a request to BLM. If approved, BLM can grant a right of way for a multiuse trail or a road.
8. As noted for Rosy Canyon Road, any road that is requested to become a legal access road by BLM granted right of way must have an associated cultural and biological survey completed and provided as part of the process to acquire the desired road (or trail) right of way. The contracting of the environmental assessment (EA) to a consultant and the cost of the EA is borne be the applicant.
9. The Town's water tank is located on BLM property.
10. A current issue is an area that is being used as a shooting range by local area residents. This is not a permitted use. BLM requires authorization of recreational and related uses of BLM land.
11. Lost Spring Road is shown as Mt. Trumbull (Mohave County Road) 5 on the BLM map and is the extension of Cane Beds Road to the west of SR 389. Some of this road is located either half or entirely on BLM land in the area south of the airport. The west half of Redwood Street to the east of the airport is also located on BLM land. The County and/or Town would need to verify if they hold legal right of way for the roads or if legal right of way is needed prior to undertaking any plans to improve these roads. The requirement for an environmental assessment applies to these roads as well.

12. There are some popular camping and recreational areas used by the local community in the Cottonwood Canyon and Rosy Canyon areas. If these locations are important to the local community, the Town and/or the County should apply for legal access rights to preserve the areas for recreational use with the BLM. BLM could then grant an easement or right of way for such access and use.
13. The BLM, as part of this study, may want to see a few roads providing access to BLM land opened as a public road legal right of way if no such right of way already exists. Several locations that may be candidates are circled on the first map providing a connection from SR 347 to BLM land to the east.

*** End of BLM Interview Notes ***


UTAH
ARIZONA
Central 377
Johnson 379
Arizona Avenue 375
AZ Highway 389 389
Cottonwood Point Wilderness
T42N,R7W
T41N,R7W
T41N,R6W
Mt Trumbull 5
Cane Beds 237
Yellowstone 239
0 0.375 0.75 1.5 Miles
N
United States Department of the Interior
Bureau of Land Management
Arizona Strip Field Office
NATIONAL SYSTEM OF PUBLIC LANDS
Colorado City Roads
Map created on August 9, 2010
CAUTION: Land ownership data is derived from less accurate data than the 1:24000 scale base map. Therefore, land ownership may not be shown for parcels smaller than 40 acres, and land ownership lines may have plotting errors due to source data. No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by the BLM.
O denotes road where BLM potentially may want legal access for public to wilderness areas
Legend
Primary Paved Roads
Secondary Paved Roads
Primary Unpaved Roads
Secondary Unpaved Roads
Tertiary Unpaved Roads
Designated Wilderness
Bureau of Land Management
Private
State


UTAH
ARIZONA
T42N R7W
COTTONWOOD POINT
Colorado City
Johnson 379
Cottonwood Point Wilderness
WILDERNESS
VERMILION CLIFFS
Cottonwood Point
AZ Highway 389
0 0.2 0.4 0.8 Miles
United States Department of the Interior
Bureau of Land Management
Arizona Strip Field Office
NATIONAL SYSTEM OF PUBLIC LANDS
Colorado City Roads
Map created on August 9, 2010
CAUTION: Land ownership data is derived from less accurate data than the 1:24000 scale base map. Therefore, land ownership may not be shown for parcels smaller than 40 acres, and land ownership lines may have plotting errors due to source data. No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by the BLM.
Legend
Primary Paved Roads
Secondary Paved Roads
Primary Unpaved Roads
Secondary Unpaved Roads
Tertiary Unpaved Roads
Designated Wilderness
Bureau of Land Management
Private
State



CAUTION: Land ownership data is derived from less accurate data than the 1:24000 scale base map. Therefore, land ownership may not be shown for parcels smaller than 40 acres, and land ownership lines may have plotting errors due to source data. No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by the BLM.

0 0.2 0.4 0.8 Miles

United States Department of the Interior
Bureau of Land Management
Arizona Strip Field Office

NATIONAL SYSTEM OF PUBLIC LANDS

Colorado City Roads

Map created on August 9, 2010

Legend

- Primary Paved Roads
- Secondary Paved Roads
- Primary Unpaved Roads
- Secondary Unpaved Roads
- Tertiary Unpaved Roads
- Designated Wilderness
- Bureau of Land Management
- Private
- State

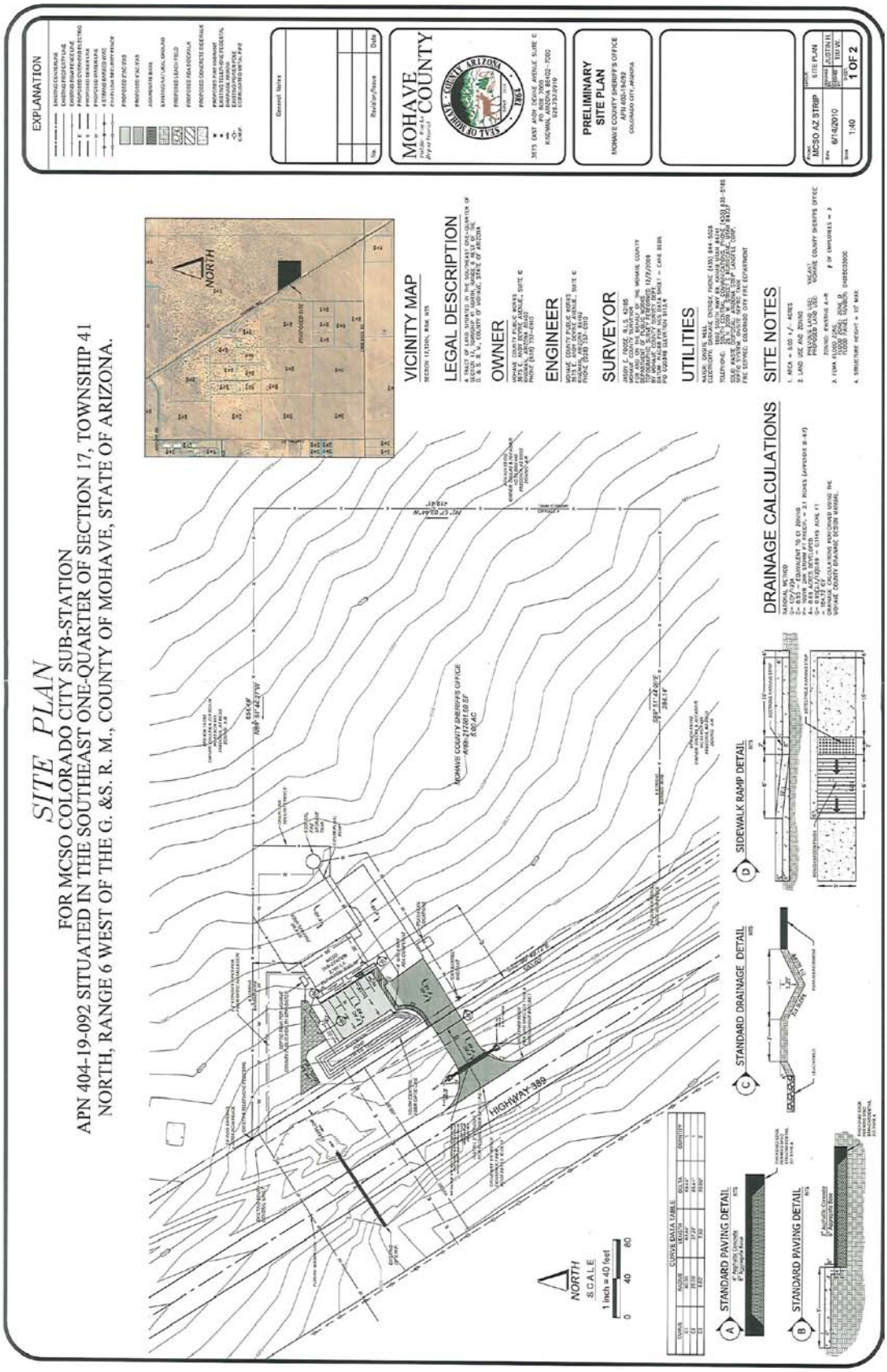
Day: Wednesday	*Date:* October 6, 2010	*Time:* 3:00 pm MST	*Location:* Mohave County, Kingman, AZ
Person Interviewed:	**Steven P. Latoski, PE/PTOE, Public Works Director, Mohave County Public Works**		

These notes summarize the comments made and information provided as related to the Town of Colorado City Transportation Study.

1. Rosy Canyon Road is not in Mohave County's five year program for any improvements. Mohave maintains the road status quo (as is).
2. Roads and streets in Mohave County can be found on the County's web site in the interactive GIS mapping area. County maintained roads are shown in the GIS mapping in orange.
3. An entity or a group of landowners can make a request for Mohave County to maintain a roadway by petition to the Mohave County Board of Supervisors.
4. For the County to approve a petition to accept a roadway for maintenance through the petition process, it will need to be improved to County road standards and right-of-way perfected to County standards. When improved and accepted by the County, the County then assumes maintenance of the road and right of way.
5. A site plan was provided for the Mohave County Sheriff's substation and Court facility located on the east side of SR 389 between Cane Beds Road and Airport Avenue. A copy of this site plan is included on the page following these interview notes.
6. Mohave County has been made aware of the "Southern Corridor". The Southern Corridor is a concept, but to the knowledge of the County, the corridor has not progressed any further than that.
7. Regarding the proposal to extend 3200 south to connect between School Boundary Road and 1900 East; there are two ways that this can occur.
    a. The private land owners of the proposed road right of way can offer to dedicate the proposed right of way per County standards to the County. The County Board of Supervisors would then need to accept the right of way. The land owners would then need to petition the County and improve the road to County standards for the county to accept the road and its maintenance. The road could be improved through an improvement district with the cost of improvement assessed to the abutting properties.
    b. The second method is to request the County to acquire the road. The Board of Supervisors would need to designate the road as a County highway. Then the County would need to acquire the right of way and improve the road. Note, since this method involves the County improving the road, a good case justifying a regional need and County thoroughfare would need to be made to justify the action.
8. Mohave County is interested in seeing the current traffic volumes and the forecasted travel demand and traffic volumes for roads that are under County jurisdiction.
9. For the County to decide to improve a county road (e.g. Rosy Canyon Road and/or Lost Spring Road), the County will look at :
    a. Whether the road serves a regional need versus a local need,
    b. The accident history as it may relate to roadway surfacing and conditions,
    c. The cost of maintaining an improved road compared to the unimproved road,
    d. A minimum threshold of traffic volume,
    e. And other significant criteria that may be applicable to the roadway being considered.

10. County roadway design standards are available for review on the County's web site.
11. Mohave County is focused at this time on maintaining county roads in and around the Colorado City area. Generally, they are not in a position to build capacity improvements. Of primary importance is the cost effectiveness of maintaining the existing road surfacing. If a less expensive option is available, they will consider this on its merits.

*** End of Steven Latoski Interview Notes ***


SITE PLAN
FOR MCSO COLORADO CITY SUB-STATION
APN 404-19-092 SITUATED IN THE SOUTHEAST ONE-QUARTER OF SECTION 17, TOWNSHIP 41 NORTH, RANGE 6 WEST OF THE G. &S. R. M., COUNTY OF MOHAVE, STATE OF ARIZONA.
EXPLANATION
VICINITY MAP
LEGAL DESCRIPTION
OWNER
ENGINEER
SURVEYOR
UTILITIES
SITE NOTES
DRAINAGE CALCULATIONS
MOHAVE COUNTY
PRELIMINARY SITE PLAN
MCSO AZ STRIP
6/14/2010
1:40
1 OF 2
HIGHWAY 389
NORTH
SCALE
1 inch = 40 feet
STANDARD PAVING DETAIL
STANDARD DRAINAGE DETAIL
SIDEWALK RAMP DETAIL
CURVE DATA TABLE

Day: Wednesday	*Date:* October 6, 2010	*Time:* 4:00 pm MST	*Location:* Mohave County, Kingman, AZ
Person Interviewed:	**Nicholas Hont, Karl Taylor & Christine Ballard, Mohave County Development Services**		

These notes document and summarize the comments and information provided by representatives of Mohave County Development Services regarding their input on the Town of Colorado City Transportation Study.

1. It is highly recommended that the study team visit with Steven Latoski, Public Works Director, Mohave County, since Public Works has direct charge of the county road system. It was confirmed that a meeting with Mr. Latoski was complete immediately prior to this meeting.
2. Engineering is currently being conducted regarding floodplain mapping in the Colorado City vicinity. Surveys are being conducted to better delineate the floodplains. The Town has issues with the floodplain mapping and wants better mapping to define the limits of floodplains. DFIRM maps are available on-line.
3. Refer to the on-line County GIS mapping to view parcel maps in the area that show county road rights of way. There are TIF map files contained in the options area that may be of use as well (Assessor's Office cartography). These maps also show lot split activities and right of way access to properties.
4. The County's land use map/plan is also available for viewing and download on-line. This map is current.
5. Documents the study team should obtain and review include:
   a. DFIRM maps
   b. General Plan
   c. Zoning Maps
   d. TIF Maps showing county road rights of way
   e. Land Use Maps (contained in the General Plan)
6. Karl Taylor, Planning Manager, provided a printed copy of the Mohave County General Plan. A copy of the document cover is contained on the next page for reference purposes.

*** End of Mohave County Development Services Interview Notes ***

Mohave County, Arizona General Plan

Original text by Freilich, Leitner & Carlisle
1000 Plaza West 460 Madison Kansas City, Missouri 64112-3012 (816) 561-4414 FAX (816) 561-7931
Revised by Mohave County, December 2005.

March 10, 1995

Revised December 5, 2005

TOWN OF COLORADO CITY
P. O. Box 70 ✳ Colorado City, Arizona 86021
Phone & TDD: 928-875-2646 ✳ Fax: 928-875-2778

November 4, 2010

Dale E. Miller, PE, RLS
Associate in Charge - Arizona
Wilbur Smith Associates
1475 North Scottsdale Road, Suite 480
Scottsdale, AZ 85257

RE: Stakeholder Interview Notes

Dear Mr. Miller:

Instead of duplicating a lot of the questionnaires, I thought I would clarify or expand on some of the other stakeholder discussions for my viewpoint:

Carole Timpson:
Note 7 & 9: As we discussed already, the Lost Springs Road (2400 South) referred to by Carole Timpson as the Mount Trumbull Road is supposed to be Cane Beds Road. The road east of SR-389 has always been called Cane Beds Road and west of SR-389 in the past it was called Lost Springs Road, however, our 9-1-1 dispatch center and emergency responders had frequent mis-communications due to the "west side" versus "east side" and in conjunction with the Mohave County addressing coordinator, the road is now being called Cane Beds Road, east and west – in place of Lost Springs Road.

Note 15: The Town does have a fence height ordinance for intersections that is enforced. The code is as follows:

§ 150.37 CORNER LOT HEIGHT RESTRICTION.

(A) No solid fences or walls above 4 feet shall be built on any corner lot within a triangular area formed by the street property lines and a connecting line at points 25 feet from the intersection.

(B) The Building Official may require additional height restrictions or modifications demonstrated to be in the best interest of public safety.
(Ord. 2007-4, passed 7-16-2007)

Dan Barlow, Sr:
Note 5: The planned CDBG street improvement project is tentatively scheduled for construction in August.

Note 6: I would characterize the "major drainageway" as a "secondary wash".

Note 12: The potential Redwood Street crossing warrants a field visit as to analyze bridge versus low flow crossing. The costs associated with each should also be evaluated.

Note 16: The private school on Garden Avenue is between Barlow Street (300 West) and Hammon Street (200 West). Note that north of Arizona Avenue 300 West is Lauritzen Street and south of Arizona Avenue it is Barlow Street.

Note 17: Extend Township Avenue from Richard Street (400 West) to Homestead Street (500 West) through Short Creek. This would require a low flow crossing. This would enable commercial traffic from SR 389 direct access into downtown Colorado City which would reduce commercial traffic in residential areas.

Note 20: Future development is also expected west of SR-389 along Mohave Avenue and Arizona Avenue.

Note 23: The Utah Avenue/Central Street Intersection has some very unique problems including angled right-of-ways which create sight problems, very steep rocky outcropping and Federal BLM land encroaching.

Note 28: Options to facilitate traffic entering onto Hildale Street from Academy Avenue and from the adjacent parking lots would be valuable, such as widening Hildale Street to two lanes heading north to Utah Avenue, or maybe just an acceleration lane that merges?

Note 29: Sidewalks from the LSJ Meeting House at Hildale Street and University Avenue south along Hildale Street to the Isaac Carling Memorial Cemetery to accommodate foot traffic. Other areas of focus for sidewalks include Edson Avenue south of the Post Office from Central Street to Richard Street and Cooke Avenue from Central Street east to the Zoo. (of course many more)

Note 31: All four sides of the school facilities already have sidewalks.

Note 45 (d): The Township Avenue crossing would be a higher priority than the Redwood Street crossing.

John Barlow:
Note 8: I would have to add Arizona Avenue and Utah Avenue.

Note 14: Flood control improvements should continue along Willow Street south from Arizona Avenue and Warren Avenue west from Central Street. Also note that Carling Street (200 East) from 100 North in Hildale to 500 North in Colorado City collects significant storm water drainage and should also be identified as a high priority for improvements.

Frank Barlow:
Note 15: Hildale Street from university Avenue north to Utah Avenue has a lot of pedestrian traffic and sidewalks would be a significant safety and accessibility consideration.

Note 39n: There is not a Canyon Avenue west of Hammon Street. Canyon Street is 500 East.

Vance Barlow:
Note 2: The intersection at Uzona Avenue and SR-389 at the state line is in a commercial area with expanding development and greater highway traffic entering and exiting at the intersection. The intersection is designed with off-angle approaches which creates a safety hazard. A mitigating factor could be the installation of traffic lights and turn lanes.

Note 9: See note 2 above.

Note 21: The Township crossing to connect to SR 389 would directly relieve significant Arizona Avenue traffic through residential areas.

Note 25: See note 2 above.

Brian Zitting:
Note 3: There have been some offers to Subdivide with development, but not any that have come to fruition. There has also been mini-development such as commercial sites and larger residential homes where private individuals have funded the installation of curb, gutter and sidewalk. Both cities have relatively new subdivision ordinances that would require street improvements for new subdivisions.

Note 6: The Town has been awarded safety grants totaling $75,000 for signage and striping to focus on the major streets such as Central Street, Arizona Avenue and Richard Street. The projects are planned to be completed by mid 2011.
Also, due to the large amount of blowing sand, painted striping does not last very long on the street surfaces. Town staff usually re-paints crosswalks and center striping on major intersections on an annual basis.

Note 8: A potential bicycle/pedestrian route would be along the north side of Short Creek along a low flood control dike from Utah Avenue at Canyon Street, then crosses Hildale Street just north of the creek crossing heading west along the south side of the ZOO to a pedestrian bridge that connects the Zoo on the north side of the creek to the Cottonwood Park on the south side of the creek. From the park, the installed sidewalk system ties directly into the down-town services. The route could be expanded to the north to access the Maxwell Park and Water Canyon areas, and to the east to connect to the flood control dike near the reservoirs.

Jake Barlow
Note 19: I was unable to see an obstruction in the roadway. The manhole cover appeared flush with the asphalt to me. This was near Arizona Avenue and Homestead Street. The Town is implementing a pavement preservation program that also includes assessments of each street that is recorded and inventoried. These assessments include identifying safety hazards.

Note 22: Note that Lost Springs Road is really Cane Beds Road.

Charles Hammon:
Note 10: Cane Beds Road south of Centennial Park heading west is an access for the entire Arizona Strip. Clayhole Road (also known as Mount Trumbull Road) intersects Cane Beds Road (formerly Lost Springs) heading south to Mount Trumbull and the Grand Canyon Toroweep overlook, as well as other connecting roads to other points of interest. Many cattle ranchers, recreationalists and tourists use this access.

Laurie Ford, BLM:
Note 7: The Town is interested in identifying roads and trails that are used locally to request that public access remain open.

Note 10: The Town Manager has no knowledge of the referenced shooting range.

Note 11: It would be beneficial to accurately identify the ownership. The Town is interested in identifying the exact property that Redwood Street is located on south of Airport Avenue as this is a regionally important connector street.

Note 12: The Town is interested in maintaining the public access to some of the identified points of interest, such as the Little Sand Dunes and adjacent spring in Cottonwood Canyon.

Also refer to my notes from the June 11, 2010 email which included the following:

What are the top three outcomes you would like to see come from this study?

1. The Town would like to be able to update functional classification of roads.
2. Project the needs for traffic impacts such as main access from state highway, collector streets, etc for the local region.
3. Maps, street details, cross sections and data would be helpful after the study is complete to assist with ongoing planning and future general plan updates.

*** End of David Darger Provided Notes ***

Appendix 2 – Reference Documents

1. Colorado City Transportation Study, Town of Colorado City, 1993
2. Colorado City General Plan, Town of Colorado City, 2002
3. Colorado City Airport Master Plan, Town of Colorado City, 2008
4. Mohave County General Plan, Mohave County, Az, 2005
5. Eastern Washington County Transportation Study, UDOT, 2008
6. 2007-2030 Regional Transportation Plan, Dixie Metropolitan Planning Organization, 2007
7. Wilderness Management Plan for Cottonwood Point Wilderness, U.S. Department of the Interior, Bureau of Land Management, 1991
8. Old Spanish Trail Map and Information, Bureau of Land Management, no date given
9. California Condor Reintroduction and Status, Arizona Game and Fish Department, 2009
10. Road Safety Assessment, SR 389, Milepost 30 to 31, ADOT, 2010
11. ALISS Database Crash Data for Town of Colorado City and surrounding area, ADOT, 2005-2010
12. SR 389 bridge sufficiency ratings, ADOT, 2010
13. Traffic Projections for 2028 for SR 389, ADOT, 2008
14. Population Projections for Study Area, States of Arizona and Utah, 2008
15. Population Projections for Hildale, Utah, Five County Association of Governments, 2009
16. Community Profile for Colorado City, Arizona Department of Commerce, 2009
17. Economy of Colorado City, Arizona Department of Commerce, 2008
18. 2000 Census Data, U.S. Census Bureau, 2003
19. Flood Insurance Rate Maps, Federal Emergency Management Agency, 2009

Appendix 3 – FEMA Flood Insurance Rate Maps

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0276G

FIRM

FLOOD INSURANCE RATE MAP

MOHAVE COUNTY, ARIZONA

AND INCORPORATED AREAS

PANEL 276 OF 6700

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLORADO CITY, TOWN OF	040059	0276	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04015C0276G

EFFECTIVE DATE
NOVEMBER 18, 2009

Federal Emergency Management Agency

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 12
6000000 M — 5000-foot grid ticks: Arizona State Plane coordinate system, west zone (FIPSZONE 0203), Transverse Mercator
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

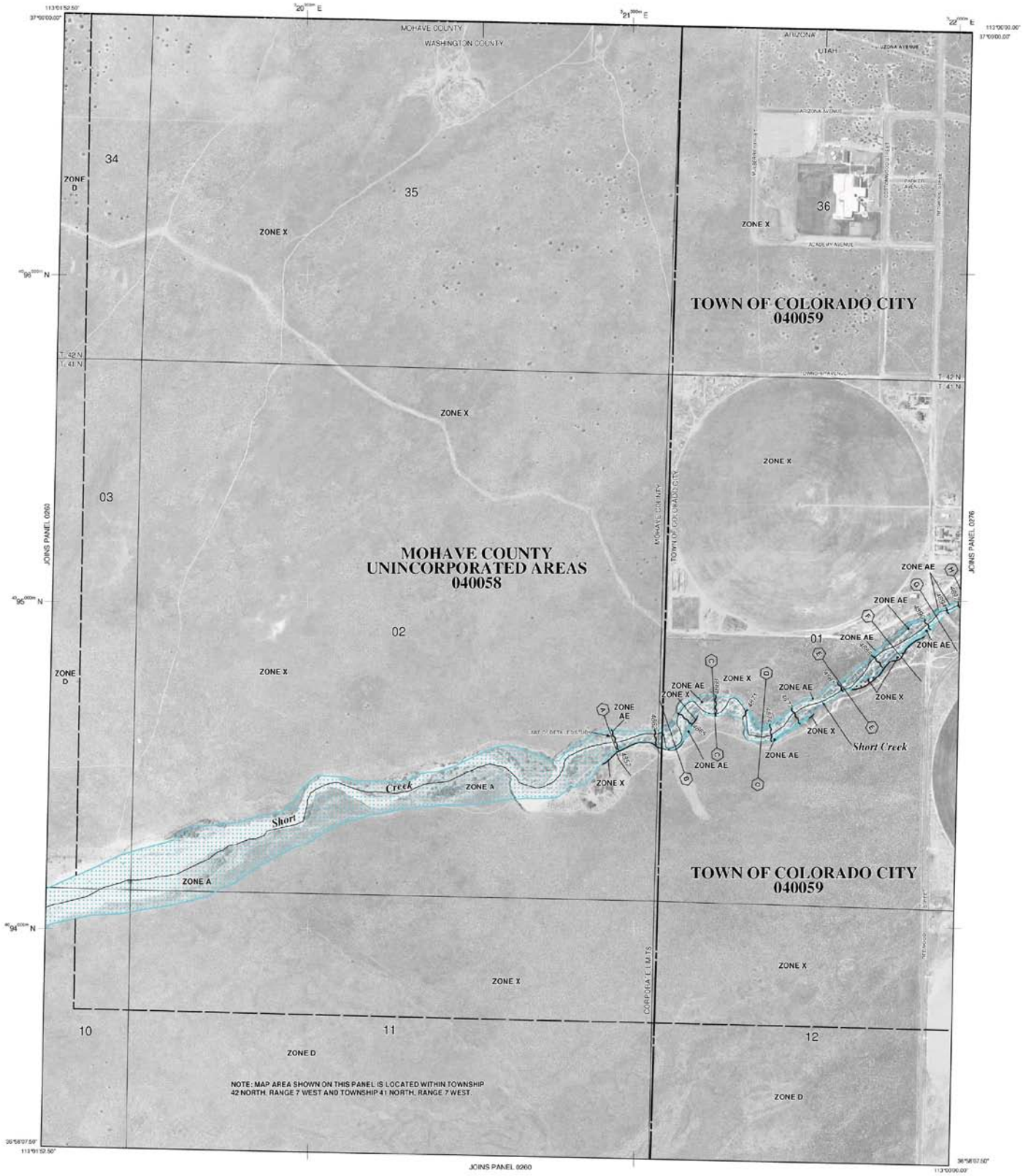
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
November 18, 2009
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

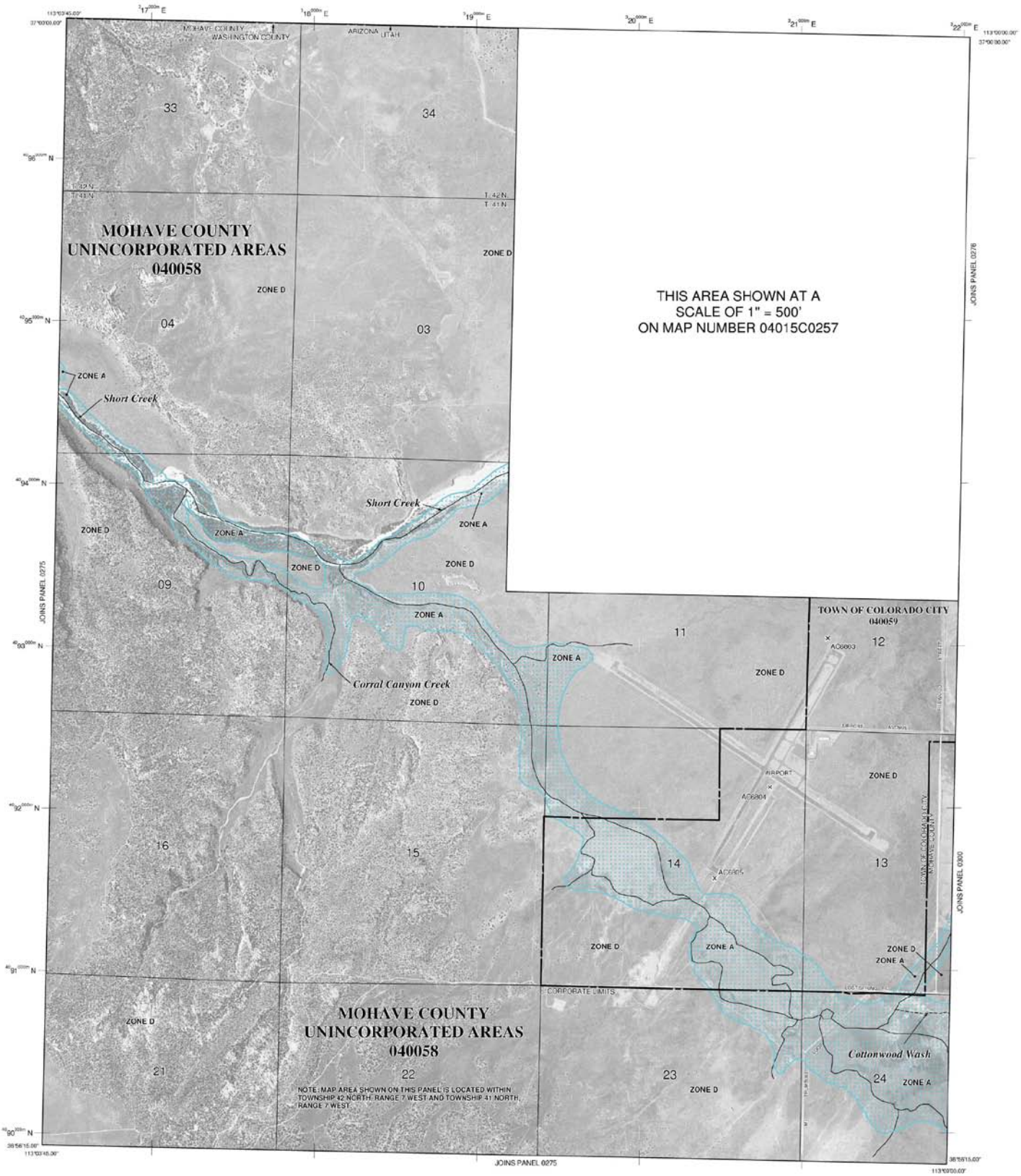
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

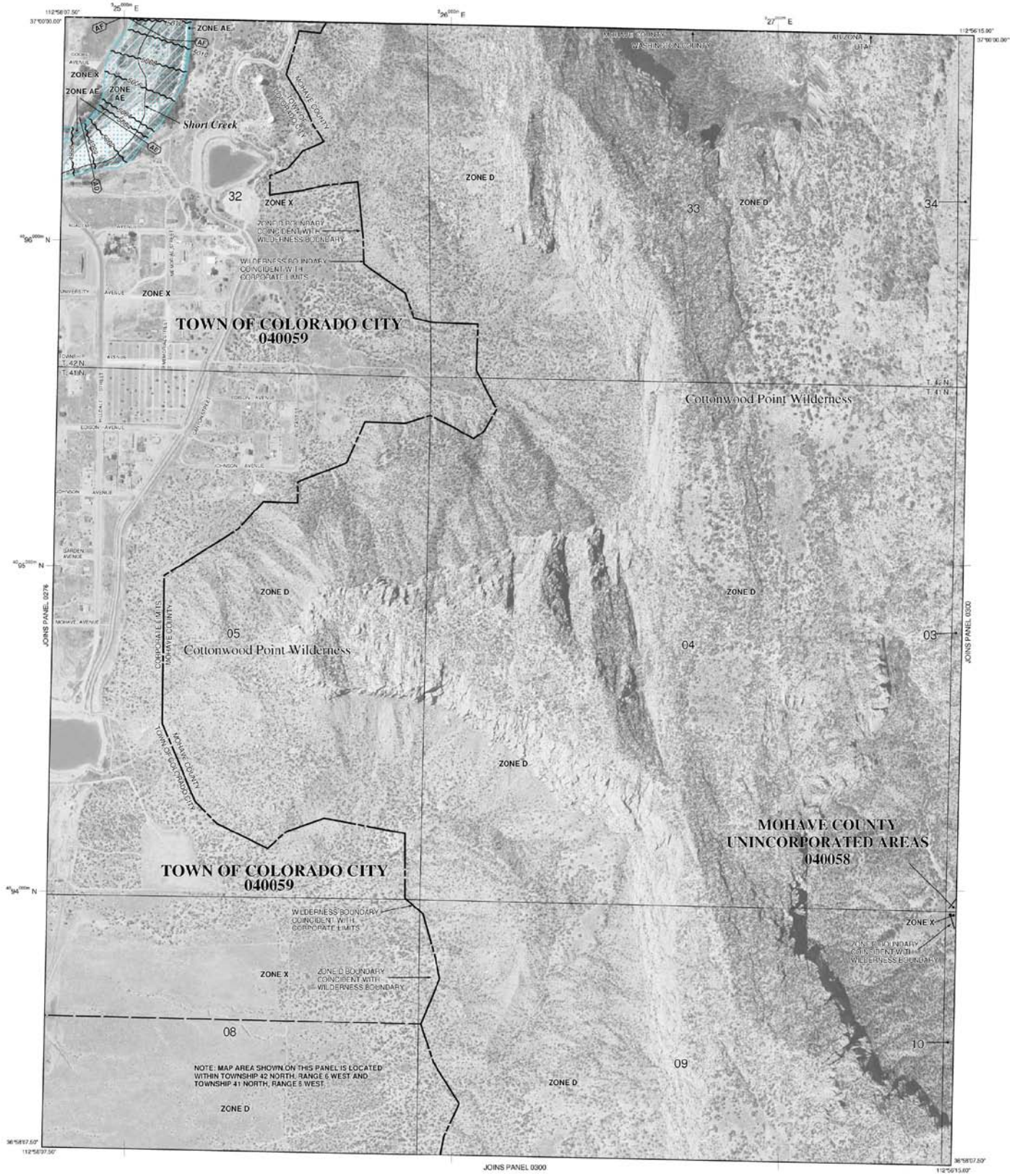
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

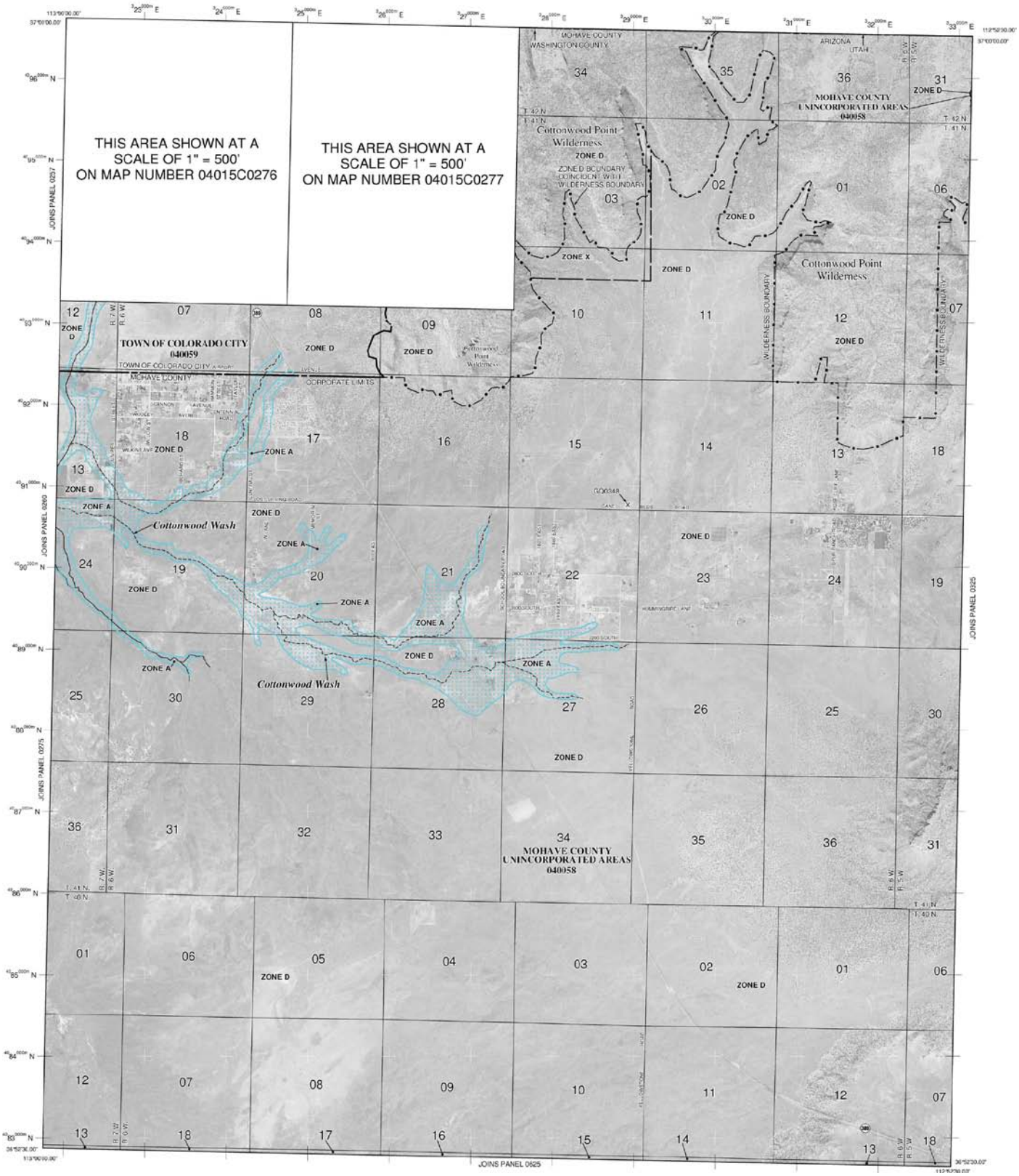
MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS


TOWN OF COLORADO CITY
040059
Short Creek Tributary 1
Short Creek
Short Creek Tributary 2
ZONE AE
ZONE X
ZONE A
ZONE D
36
31
32
01
06
05
12
07
08
JOINS PANEL 0057
JOINS PANEL 0277
JOINS PANEL 0300


MOHAVE COUNTY
WASHINGTON COUNTY
ARIZONA
UTAH
ZONE X
ZONE D
ZONE A
ZONE AE
TOWN OF COLORADO CITY
040059
MOHAVE COUNTY
UNINCORPORATED AREAS
040058
TOWN OF COLORADO CITY
040059
Short Creek
Short Creek
ACADEMY AVENUE
ARIZONA AVENUE
JOINS PANEL 0260
JOINS PANEL 0276
CORPORATE LIMITS
NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 42 NORTH, RANGE 7 WEST AND TOWNSHIP 41 NORTH, RANGE 7 WEST.


MOHAVE COUNTY
WASHINGTON COUNTY
ARIZONA
UTAH
MOHAVE COUNTY UNINCORPORATED AREAS 040058
THIS AREA SHOWN AT A SCALE OF 1" = 500' ON MAP NUMBER 04015C0257
TOWN OF COLORADO CITY 040059
Short Creek
Corral Canyon Creek
Cottonwood Wash
ZONE A
ZONE D
AIRPORT
CORPORATE LIMITS
NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 42 NORTH, RANGE 7 WEST AND TOWNSHIP 41 NORTH, RANGE 7 WEST.
JOINS PANEL 0275
JOINS PANEL 0276
JOINS PANEL 0300


ZONE AE
ZONE X
ZONE AE
ZONE AE
Short Creek
ZONE D
32
ZONE X
33
ZONE D
34
ZONE X
TOWN OF COLORADO CITY
040059
Cottonwood Point Wilderness
ZONE D
ZONE D
05
Cottonwood Point Wilderness
04
03
ZONE D
MOHAVE COUNTY
UNINCORPORATED AREAS
040058
TOWN OF COLORADO CITY
040059
ZONE X
ZONE X
08
09
10
NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 42 NORTH, RANGE 6 WEST AND TOWNSHIP 41 NORTH, RANGE 5 WEST.
ZONE D
ZONE D
JOINS PANEL 0276
JOINS PANEL 0300
JOINS PANEL 0300


THIS AREA SHOWN AT A SCALE OF 1" = 500' ON MAP NUMBER 04015C0276
THIS AREA SHOWN AT A SCALE OF 1" = 500' ON MAP NUMBER 04015C0277
TOWN OF COLORADO CITY 040059
MOHAVE COUNTY UNINCORPORATED AREAS 040058
Cottonwood Point Wilderness
Cottonwood Wash
ZONE A
ZONE D
ZONE X
JOINS PANEL 0525
JOINS PANEL 0575
JOINS PANEL 0625
JOINS PANEL 0257

Appendix 4 –Public Open House 1 Summary

Arizona Department of Transportation and the Town of Colorado City
Town of Colorado City Transportation Study
Public Open House 1 Summary
January 24, 2011

Meeting date:	Monday, December 20, 2010 5 p.m. to 7 p.m.
Meeting Location:	Colorado City Town Hall, 25 S. Central Street, Colorado City AZ 86021
Participants:	22 community members attended

Project Overview

The Arizona Department of Transportation (ADOT) is working with the Town of Colorado City to develop a transportation plan. The plan will recommend improvements to the existing transportation system, identify new infrastructure needs, and propose new multimodal facilities. Multimodal facilities incorporate various modes of transportation into one system; such as driving vehicles, bicycling, walking, and riding public transportation. With a Plan in place, the town and regional planners will have a tool to meet future transportation needs.

The community's input is essential to the study results to help refine the recommended improvement projects. The first of two public open houses was held on Monday, December 20, at the Town of Colorado City Town Hall. Project team members presented information on existing transportation issues, projected and existing traffic volumes, historical crash locations, and projected growth within and surrounding Colorado City. Participants were asked to provide comments on transportation issues and suggested solutions.

The study team will use the comments provided from the community to help develop improvement projects. A second open house will be scheduled to present these projects.

Public Meeting Notification

Efforts were made to notify residents within the communities of Colorado City, Hildale, Cane Beds, and Centennial. Study team members developed a notification postcard which was mailed to approximately 4,000 to residents and businesses. Additionally, a poster was developed and provided to the Town to post in highly visible locations. Notification materials can be found in Appendix A: Publicity

Public Meeting Overview

ADOT Multimodal Planning Division Project Manager, Justin Feek welcomed and thanked participants for attending, provided a brief overview of the Planning Assistance for Rural Areas (PARA) program, and explained the study objectives and timeline. Dale Miller, Project Manager with Wilbur Smith continued the presentation by providing an overview of the Study's technical background and projected growth in traffic volumes. At the conclusion of the presentation, the floor was opened for discussion. Materials from the meeting can be found in Appendix B: Meeting Materials. A summary of the discussion can be found beginning on the second page.

Arizona Department of Transportation and the Town of Colorado City
Town of Colorado City Transportation Study
Public Open House 1 Summary
January 24, 2011

Open Discussion

Verbal Comments:

- Don't forget to include the Moccasin Core Station south of Cane Beds on SR 389.
- There have been 20 years of meetings and talk of a southern corridor between St. George and Hurricane, connecting north of Hildale. The corridor would remain entirely within Utah borders and would be managed by the Dixie Metropolitan Planning Organization.
- The idea to extend a new highway from Utah Highway 59 on Uzona Avenue heading west has been mentioned in the past. The concept was built around the coal mine, which would pay for improvements through taxation. However, this idea was dropped because Hurricane did not want the increased truck traffic through town.
- The opinions of the residents in Cane Beds are important. Better roads are needed but not at the expense of higher taxes.
- The school district is in favor of improving 3200 South in order to make bus routes all weather and more efficient. Improving 3200 South would also greatly improve emergency service response times.
- Improvements could increase taxes but decrease insurance costs.
- Another name for 3200 South is Liberty Lane and the impacted land owner does not want to lose property or donate land to the County.
- Many community roads need improvements.

Questions and Answers:

Q: There is a lack of markings and signage from SR 389 into town. This is discouraging for out of town visitors traveling to Colorado City. Can improvements be made?
A: The Town has applied for two grants to install new striping and signage. This is a high priority. The Town will work with ADOT to complete these improvements within the next year.

Q: Children cross SR 389 to get to and from school. This is unsafe. Can something be done to improve safety when crossing the highway?
A: The Town will apply for a grant to make safety improvements. At this time there is no guarantee that funding will be available.

Q: Who will pay for all the needed improvements?
A: The intent of this study is to identify needs for a 20 year period and recommend projects to meet these needs. With the completion of this study, funding opportunities can be identified and pursued. At this time, no funding has been allocated.

Q: Cane Beds is not an organized community. Who decides what is needed in that area?
A: Cane Beds is located within Mohave County, as such the County has the ability to make decisions. Most likely the County will not make any improvements without the community first expressing interest.

Arizona Department of Transportation and the Town of Colorado City
Town of Colorado City Transportation Study
Public Open House 1 Summary
January 24, 2011

Q: What can be done to stop development in Cane Beds? We feel powerless there.
A: The community will need to work together to decide which developments are necessary. As a citizen, you have the right to disagree with development; however, if such development is for the greater good of the community, it could go forward. There needs to be a consensus.

Q: What is planned for Rosy Canyon Road?
A: The three mile gap on Rosy Canyon Road between the Utah State line and Cane Beds Road has been identified to be improved with an all weather road surface. This improvement would need to be initiated by Mohave County and approved by the Bureau of Land Management because it is located within their jurisdictions.

Q: What is the process of dedicating privately owned roads?
A: A petition needs to be made to Mohave County requesting them to accept the dedication of the road right of way as public road right of way. Mohave County can accept or decline the dedication of privately owned roads depending upon the need, and whether or not it's in the best interest of the community and the County.

Q: Does 3200 South fall on a section line?
A: Yes.

Q: Are there plans to install traffic signals?
A: Not at this time. However, the warrants and needs for signals will be reviewed as part of this study.

Arizona Department of Transportation and the Town of Colorado City
Town of Colorado City Transportation Study
Public Open House 1 Summary
January 24, 2011

Comments Received in Writing on Comment Forms

Participants were given a comment form as they signed in. Below are comments received on the comment forms.

1. Are there important transportation issues that you are aware of that were not identified?
    - The people in the communities need to know what is being projected for them and their area and what will be the increase in taxes and financial involvement. We live in Cane Beds and our taxes are far too high now.
    - The southbound right turn lane into Centennial Park needs to be widened and extended to allow vehicles to slow down out of the heavily used southbound lane (typical semi-trucks and trucks with boat trailers). "The existing streets will meet the forecasted traffic demand" except that speeds will be reduced to non-functional speeds. Must create a bypass to 389 which will also help address the reality of the Southern Corridor (Utah's plan).
    - The proposed super highway past the new International St. George Airport through the gap and passing just north of Hildale to its terminus was not discussed enough. Nor was the future of the "crickers".
2. What should be done to address any of the transportation issues discussed during this meeting?
    - Information to the people. Everything done that can be afforded and truly needed.
    - Functionally classified roadways.
    - A master-planned road crossing (separated grade) is needed to allow local traffic to cross 389 without entering 389. This is critical to the long-term safety. A number of locations would facilitate this type of crossing (bridges in the future).
    - We need a detailed map of this super highway because of its future impact on this whole area. Also, how can you/we plan if we don't know what is expected from or for these "cricker" residents.
3. Do you think there is a need for alternate modes of transportation such as transit service, sidewalks, bicycle lanes, or multi-use paths? If so, where?
    - The crossing at Arizona Avenue to the school should be marked and improved for safety for school children. I don't think sidewalks along Arizona Avenue are necessary.
    - Is there a Federal funded project that pays for a disabled or senior citizen van pickup service? No percentage of Federal funded – Van – Driver and Fuel?
    - Crossing over 389 – bridges, tunnels under vehicle, bike and sidewalk. Logical crossings – Central Street at Highway 389 (Berry Knoll) and under bridge crossing – Short Creek Bridge. Rosy Canyon being completed to hard surface is a critical part of the local traffic, recreational, and business use.
    - None of these appear to be necessary. On the contrary, most of the residents are doubtful about your remark which suggested that the economy would return to normal. If it does not, this study will be for naught! If it does revive, we will need a new county in the Arizona Strip. Because Mohave County will not let us build what we want or need to survive. We can carry a concealed weapon but we can't build to conceal ourselves from radiation. And if we build a green house, we have to pay high taxes. Perhaps the state legislature will help us by creating a new county? We believe in miracles, huh?
4. Do you have additional comments or ideas you wish to share with the study team?
    - Thank you for coming. The information was well presented.

Arizona Department of Transportation and the Town of Colorado City
Town of Colorado City Transportation Study
Public Open House 1 Summary
January 24, 2011

- Alternative routes need to be developed from South Central Street to Arizona Avenue. Frontage on the east, crossings and alternative east/west extension of Central Street intersection.
- I serve as Chairman of the Water District and Wastewater District in Centennial Park so I have a working knowledge of that community's needs.
- You seem worried about future traffic. We are concerned about our future lives! In other words, traffic may cease completely. Then the only things that will matter are: water, gardens, orchards, animals, chickens, and surviving. We will also be concerned with medical/dental, emergency preparedness, protection/self-defense, green burial, and existing in this rural area. One of our greatest concerns is being able to build small self-contained homes. Why not get real and help us get ready for future calamities? Are you listening? Suggest a real meeting in the old Cane Beds School.

Appendix 5 Public Open House 2 Summary

Meeting date: Monday, April 4, 2011
5 p.m. to 7 p.m. (MDT)

Meeting Location: Colorado City Town Hall, 25 S. Central Street, Colorado City AZ 86021

Participants: 13 community members signed in at the meeting

Project Overview

The Arizona Department of Transportation (ADOT) is working with the Town of Colorado City to develop a transportation plan. The plan will recommend improvements to the existing transportation system, identify new infrastructure needs, and propose new multimodal facilities. Multimodal facilities incorporate various modes of transportation into one system; such as driving vehicles, bicycling, walking, and riding public transportation. With a Plan in place, the town and regional planners will have a tool to meet future transportation needs.

The community's input is essential to the study results to help refine the recommended improvement projects. The first of two public open houses was held on Monday, December 20, at the Town of Colorado City Town Hall. Project team members presented information on existing transportation issues, projected and existing traffic volumes, historical crash locations, and projected growth within and surrounding Colorado City. Participants were asked to provide comments on transportation issues and suggested solutions. The second and final public open house for the study was held Monday, April 4, 2011. Project team members presented recommended projects produced from the study to date. Participants were informed that funding had not yet been identified to implement the projects and that available funding, if any, is limited. Following the presentation, attendees were asked to participate in an activity to prioritize projects into short- (5 year), mid- (10 year), or long-term (20 year) time frames.

The study team will use the comments provided from the community to help develop improvement projects. A second open house will be scheduled to present these projects.

Public Meeting Notification

Efforts were made to notify residents within the communities of Colorado City, Hildale, Cane Beds, and Centennial. Study team members developed a notification postcard which was mailed to approximately 4,000 to residents and businesses. Additionally, a poster was developed and provided to the Town to post in highly visible locations. Notification materials can be found in Appendix A: Publicity

Public Meeting Overview

ADOT Multimodal Planning Division Project Manager, Justin Feek welcomed and thanked participants for attending, provided a brief overview of the Planning Assistance for Rural Areas (PARA) program, and explained the study objectives and timeline. Randy Overmyer, Project Manager with Wilbur Smith continued the presentation by providing an overview of the Study's progress to date, explained functionally classified roadways, and presented recommended improvement projects. At the conclusion of the presentation, the floor was opened for discussion and participant asked the project team questions which are summarized on page 2. Materials from the meeting can be found in Appendix B: Meeting Materials.

Following the meeting, participants were asked to partake in an activity to prioritize the improvement projects identified through this draft plan. Participants were provided colored dots and asked to place their dot next to

a project in one of the three timeframes, short-, medium- or long-range. A summary of the activity can be found on pages 3 through 5.

Open Discussion

Questions and Answers:

Q: What if the community opposes the proposed projects?
A: The community is encouraged to provide their comments in writing to be included in the study documentation, including their opinions on improvement projects. At this time there is no funding identified for the recommended improvement projects. This is a transportation plan that will allow the Town to pursue future funding opportunities. There is no timeline for construction for any of the improvement projects presented.

Q: Why is Cane Beds included in the study?
A: The Town of Colorado City included Cane Beds, Hildale, and Centennial Park in the study because all affect the traffic traveling to and from the Town. It was essential to include the surrounding areas to develop a more accurate transportation plan. It also is a benefit to the surrounding communities because they would not need to conduct another study.

Q: Will these projects increase taxes?
A: Taxes would be assessed by Mohave County (not represented at the meeting). No tax increases are anticipated at this time. This study will develop a transportation plan to allow the Town to pursue funding opportunities that may not include tax increases.

Q: What if someone is opposed to a roadway through 3200 to Yellowstone?
A: The most logical place for this project would be on a section line, which would not require right-of-way from the property owner.

Q: Does a new road on 3200 to Yellowstone address a functional purpose?
A: This project was recommended by both emergency services and the school district. However, the project is located within Mohave County and they would be the ones who would need to pursue it. They do not need to follow the recommendation made here; however, if they choose to do so they would need to conduct environmental and design studies and acquire any necessary right-of-way.

Q: What percentage would the federal government provide for these improvement projects?
A: The amount of federal funding varies between states and is based on a formula used which calculates the percentage of federal land within the state. Arizona is 83% federal land, therefore the federal government typically provides 94% funding for surface transportation projects.

Q: What is an improvement district?

A: An improvement district is a method in which property owners share the cost of infrastructure improvements. The property owners would need to vote for or against the improvement district. In order for the improvement district to pass, it would need 60% approval from property owners.

Prioritization Activity Summary

The following summarizes the prioritization activity following the open house presentation. The projects identified below had the highest number of participant selections within the respective category (short-, medium-, or long-range). There were several projects in which there were one or less prioritization selections. A complete matrix showing all projects can be found in Appendix C: Prioritization Summary.

Prioritization	Project Number	Location (Description)	Number of Dots
Short-Range Prioritization	21	Hildale Street from Mohave Avenue to Uzona Avenue (Curb, Gutter and Sidewalk Projects)	4
	2	Township Avenue at Short Creek (Bridge)	3
	31	Widening of SR 389 from Uzona Avenue to Arizona Avenue (Roadway Widening)	
Medium-Range Prioritization	9	Uzona Avenue from SR 389 to Richard Street (Paving)	3
	23	Uzona Avenue from Redwood Street to Richard Street (Curb, Gutter and Sidewalk)	
Long-Range Prioritization	30	Widening of SR 389 from Uzona Avenue to Airport Avenue (Roadway Widening)	4
	4	Central Street at Short Creek (Bridge)	2
	11	Arizona Avenue from SR 389 to Elm Street (Paving and Widening)	
	16	Cane Beds Road from Redwood Street to Rosy Canyon Road (Paving)	
	18	School Boundary Road from Cane Beds Road to 3200 South (Paving)	
	20	Rosy Canyon Road from	

		Cane Beds Road to Utah State Line (Paving)	

Comments Received in Writing on Comment Forms

Participants were given a comment form as they signed in. Below are comments received on the comment forms.

1. What are the top transportation problems/needs in the community that you think need to be addressed?
    - I feel the roadways are adequate as current form to meet the needs of its citizenry. With the exception of the highway to highway 89 through the Coral Pink Sand Dune-Utah State Park. However, that is Utah's need not Arizona's.
2. Do you think the proposed improvement projects address the transportation problems/needs of the community? If not, what improvement projects should be added or removed to better address the problems/needs?
    - I believe we should allow the community members to address the needs of their own roads by their own sources of funding, without the taxation of others and without the aid of any federal funding.
3. Do you have any additional comments?
    - I appreciate the ability for us to contact and work with those who are overseeing projects such as these so that we have an input of our concerns that affect our surroundings. Thank you.

Prioritization Summary

Project No.	*Project Location* / Project Description	Priority: Short-Range (5 years)	Medium-Range (10 Years)	Long-Range (25 Years)
Structural Projects				
1	*Redwood Street at Short Creek* Bridge	1	1	0
2	*Township Avenue at Short Creek* Bridge	3	2	0
3	*Academy Avenue at Short Creek* Bridge	2	1	0
4	*Central Street at Short Creek* Box Culvert	0	0	2
5	*Hildale Street at Short Creek* Box Culvert Roadway and Intersection Improvements	0	0	1
Roadway Improvement Projects				
6	*Redwood Street from Mohave Avenue to Township Avenue* Paving	0	0	0
7	*Redwood Street from Airport Avenue to Cane Beds Road* Paving	0	1	1
8	*Township Avenue from SR 389 to Richard Street* New Roadway	2	2	0
9	*Uzona Avenue from SR 389 to Richard Street* Paving	0	3	1
10	*Central Street from Cherry Avenue to SR 389* Paving and Drainage Improvements	2	0	0
11	*Arizona Avenue from SR 389 to Elm Street* Paving and Widening	1	0	2

12	*Edson Avenue from Richard Street to Central Street* Paving	1	1	1
13	*Cooke Avenue from Central Street to Hildale Street* Paving	0	2	0
14	*Uzona Avenue to SR 389* Realignment to Highway	0	1	0
15	*Water Canyon Road* Widening and Chip Seal	0	0	0
16	*Cane Beds Road from Redwood Street to Rosy Canyon Road* Paving	0	1	2
17	*3200 South from SR 389 to Yellowstone Road* Paving	1	0	0
18	*School Boundary Road from Cane Beds Road to 3200 South* Paving	0	0	2
19	*Yellowstone Road from Cane Beds Road to 3200 South* Paving and Extension	2	0	0
20	*Rosy Canyon Road from Cane Beds Road to Utah State Line* Paving	2	2	2

Curb, Gutter and Sidewalk Projects

21	*Hildale Street from Mohave Avenue to Uzona Avenue* Curb, Gutter and Sidewalk	4	0	0
22	*Arizona Avenue from Cottonwood Street to Juniper Street* Curb, Gutter and Sidewalk	0	0	0
23	*Uzona Avenue from Redwood Street to Richard Street* Curb, Gutter and Sidewalk	0	3	1
24	*School Area (University, Academy, Colvin and Carling)* Curb, Gutter and Sidewalk	2	0	0
25	*Church Area (University, Academy, Carling and Hildale)*	2	0	0

	Curb, Gutter and Sidewalk			
26	*Edson Avenue from Richard Street to Central Street* Curb, Gutter and Sidewalk	1	0	0
27	*Cooke Avenue from Central Street to Hildale Street* Curb, Gutter and Sidewalk	1	2	0
28	*Redwood Street from Uzona Avenue to Arizona Avenue* Curb, Gutter and Sidewalk	0	1	0
State Highway Projects				
29	*Widening of SR 50 from Utah Avenue to Uzona Avenue* Roadway Widening	0	0	1
30	*Widening of SR 389 from Uzona Avenue to Airport Avenue* Roadway Widening	0	0	4
31	*SR 389 Intersection from Utah Avenue to Yellowstone Road* Intersection Improvements (left and right turn lanes)	3	0	0
32	*SR 389 near Arizona Avenue* Grade Separated Pedestrian Crossing	0	0	0

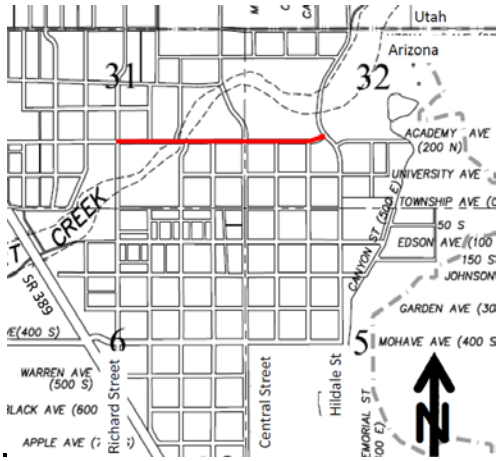
Appendix 6

Application Drafts for Revised Functional Classification for Submittal to WACOG

Functional Classification Worksheet

Road Name: Academy Avenue, Town of Colorado City, AZ	**Length:**	**.83 mile**
Limits (termini): Richard Street to Hildale Street		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 1500 (estimate from model) 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

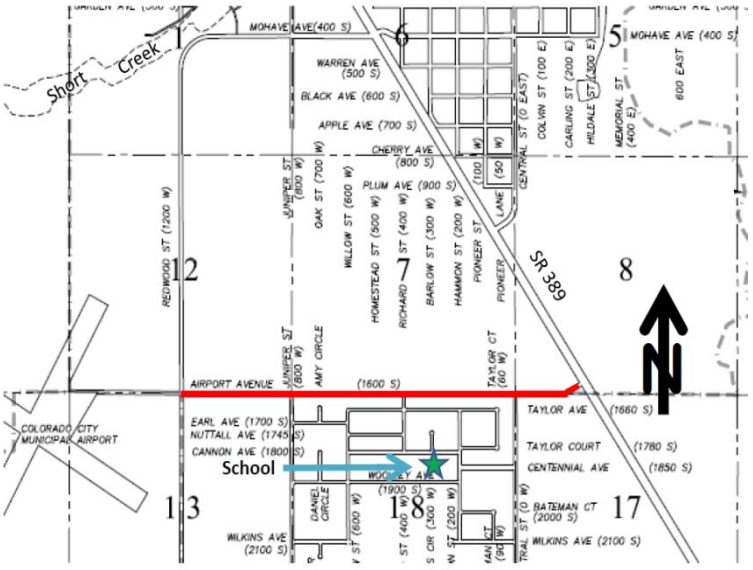
Academy Avenue traverses the community in an east/west direction connecting Hildale Street to Richard Street and ultimately to Arizona Avenue (functionally classified as a major collector) and SR 389. Academy Avenue serves a major local church as well as the Mohave County Health office. Academy Avenue also crosses Short Creek and is an important alternative route during flooding events. Due to larger than average household size in the area, streets through residential areas have higher than usual number of home based trips, and significant pedestrian and bicycle activity.



Functional Classification Worksheet

Road Name: Airport Avenue, Town of Colorado City AZ	**Length:**	**1.85 miles**
Limits (termini): Redwood Street to SR 389		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): _1600_____11/17/2010_____		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

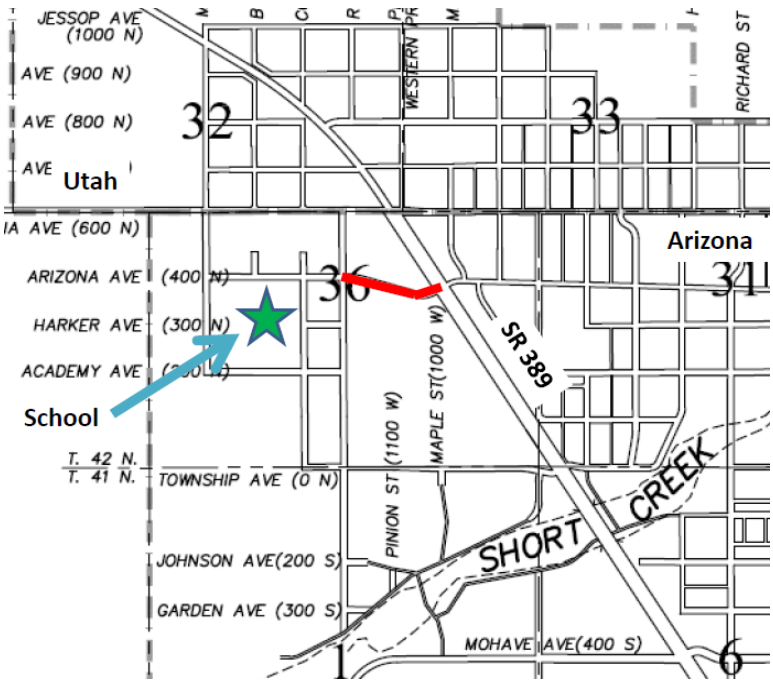
This is the only access to the airport from SR 389. The airport provides general aviation services as well and emergency services and medical transport. The roadway is also the primary access to the Centennial Park neighborhood, Masada Charter School, and a small business complex with medical offices along Central Street to the south. The school enrollment is 402 students, plus staff. There is no bus service to this school, increasing bicycle and pedestrian traffic.



Functional Classification Worksheet

Road Name: Arizona Avenue, Town of Colorado City AZ	**Length:**	**.3 mile**
Limits (termini): SR 389 to Redwood Street		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 670 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

Arizona Avenue is currently classified as a Major Collector east of SR 389. This segment west of SR 389 connects to the Colorado City Unified School District K-12 El Capitan School. The school has over 450 students and is served by school buses bringing in students from more remote locations. While the volumes are low, they are clustered in the a.m. peak period, sometimes resulting in conflicts between school traffic on Arizona Avenue and through traffic on SR 389.



Functional Classification Worksheet

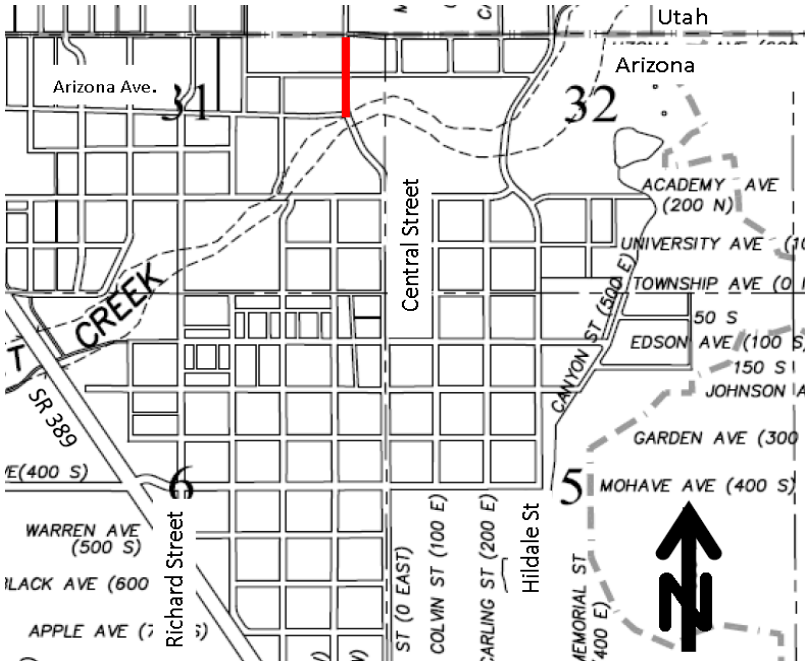
Road Name: Cane Beds Road, Mohave County, AZ	**Length:**	**7 miles**
Limits (termini): Redwood Street to Rosy Canyon Road		
Current Functional Classification: Rural Local Roadway		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 640 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

This roadway extends to the west to the Mt. Trumball Road, connecting to a large portion of the Arizona Strip. Although the volumes are low, it provides one of the few access corridors to a vast area to the west. East of SR 389, it extends to Rosy Canyon Road, which crosses into Utah and connects to US 89 near Kanab. This is used as a regional bypass route. Also east of SR 389, it connects to Yellowstone Road, a north/south route providing access into the Cane Beds Community and south to SR 389.

Functional Classification Worksheet

Road Name: Central Street, Town of Colorado City, AZ	**Length:**	**.25 mile**
Limits (termini): Uzona Avenue (state border) to Arizona Avenue		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 1860 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

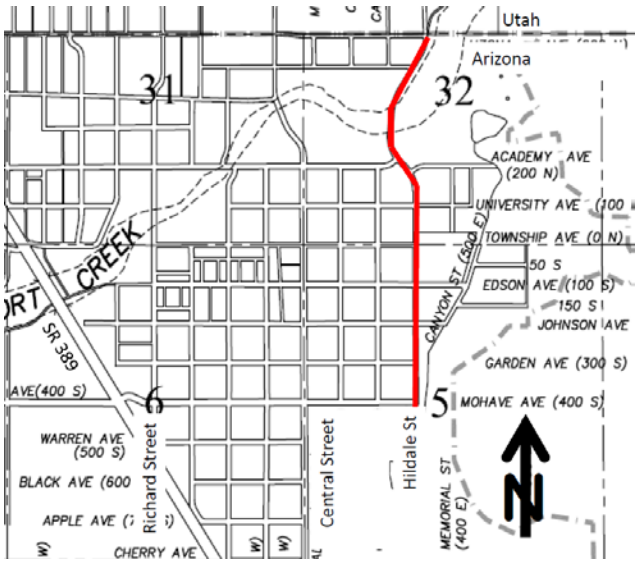
Central Street from Arizona Avenue to SR 389 is currently classified as a major collector. It serves the central business district and Town Hall. This extension of that functional classification is to match recommended classifications in adjacent Hildale, Utah, where it connects to a major collector east/west route and to assure roadway continuity.



Functional Classification Worksheet

Road Name: Hildale Street, Town of Colorado City, AZ	**Length:**	**1.2 miles**
Limits (termini): Uzona Avenue (state border) to Mohave Avenue		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 1770 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

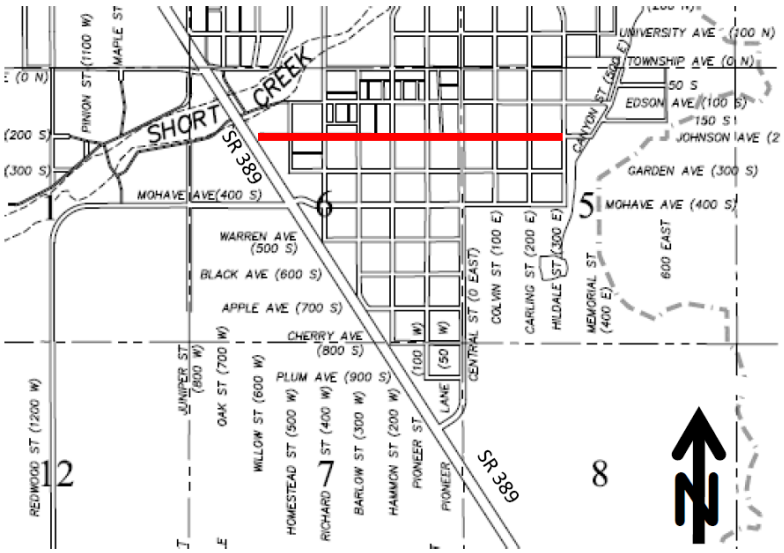
Hildale Street connects Colorado City to adjacent Hildale Utah and is one of three routes crossing Short Creek. This roadway also provides access to BLM trailheads for the Cottonwood Point Wilderness. The roadway serves a large church that is a major activity center for the community, and also functions as an east-side alternative to SR 389 for local traffic, connecting to a number of east/west routes. Due to larger than average household size in the area, streets through residential areas have higher than usual number of home based trips, and significant pedestrian and bicycle activity.



Functional Classification Worksheet

Road Name: Johnson Avenue, Town of Colorado City AZ	**Length:**	**.8 mile**
Limits (termini):Redwood SR 389 to Central Street to		
Current Functional Classification: Major Collector		
Proposed Functional Classification: Rural Local Roadway		
Most recent traffic count (ADT): __200_____11/17/2010__(estimated from model)_		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

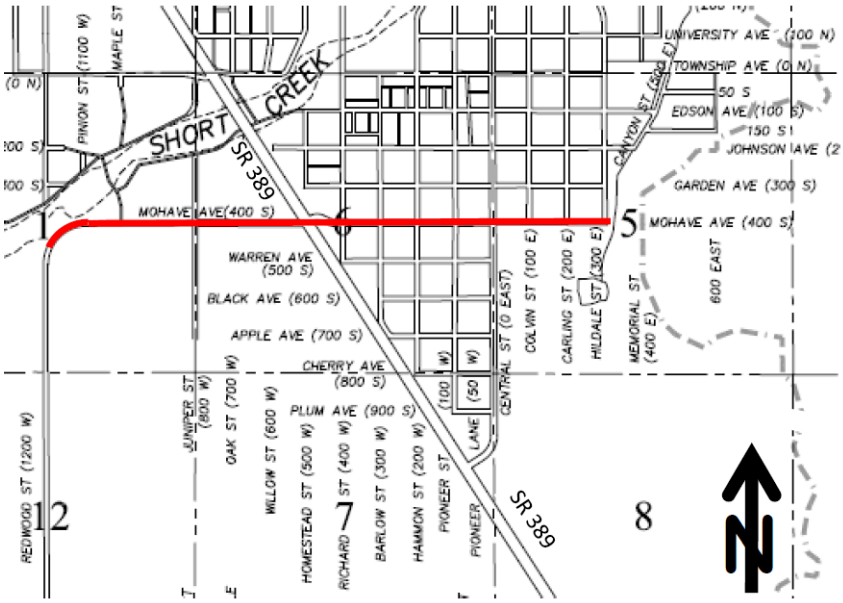
This request is to delete the collector classification for Johnson Avenue. Johnson Avenue formerly connected to SR 389. Due to the skewed intersection and site distance concerns, it was agreed between the Town of Colorado City and ADOT to close this intersection. Primary access to the highway near here is now at Mohave Avenue, with an attached proposal to reclassify that roadway to a major collector in lieu of Johnson Avenue.



Functional Classification Worksheet

Road Name: Mohave Avenue, Town of Colorado City AZ	**Length:**	**1.94 miles**
Limits (termini):Redwood Street to Hildale Street		
Current Functional Classification: Rural Local Roadway		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 1560 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

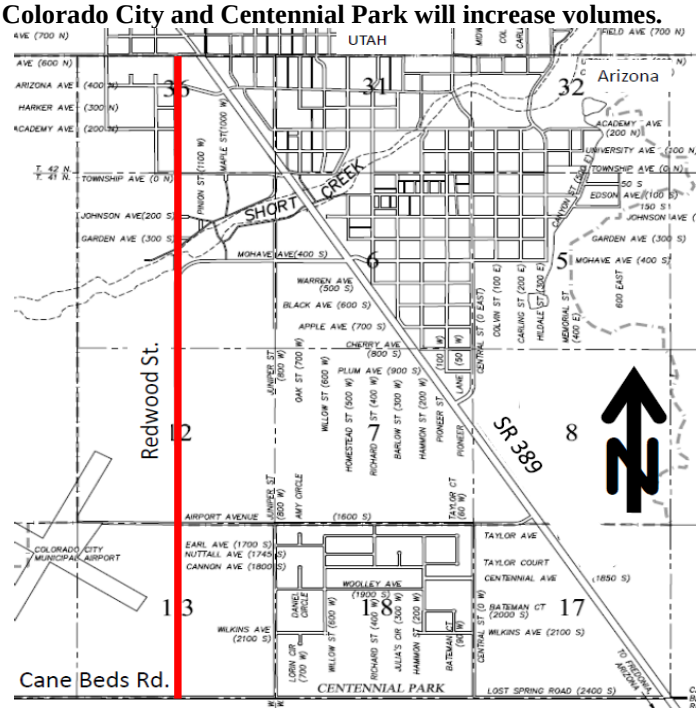
This roadway has assumed the SR 389 access from Johnson Avenue. This is one of the few east/west roadways that completely bisects the community, also providing access to the BLM Cottonwood Point Wilderness Area. Mohave Avenue serves as a primary entrance to the community and a reliever route for Centennial Park. Due to larger than average household size in the area, streets through residential areas have higher than usual number of home based trips, and significant pedestrian and bicycle activity.



Functional Classification Worksheet

Road Name: Redwood Street, Town of Colorado City, AZ	**Length:**	**3.65 miles**
Limits (termini): Uzona Avenue (state border) to Cane Beds Road		
Current Functional Classification: Rural Local Roadway		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 180 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

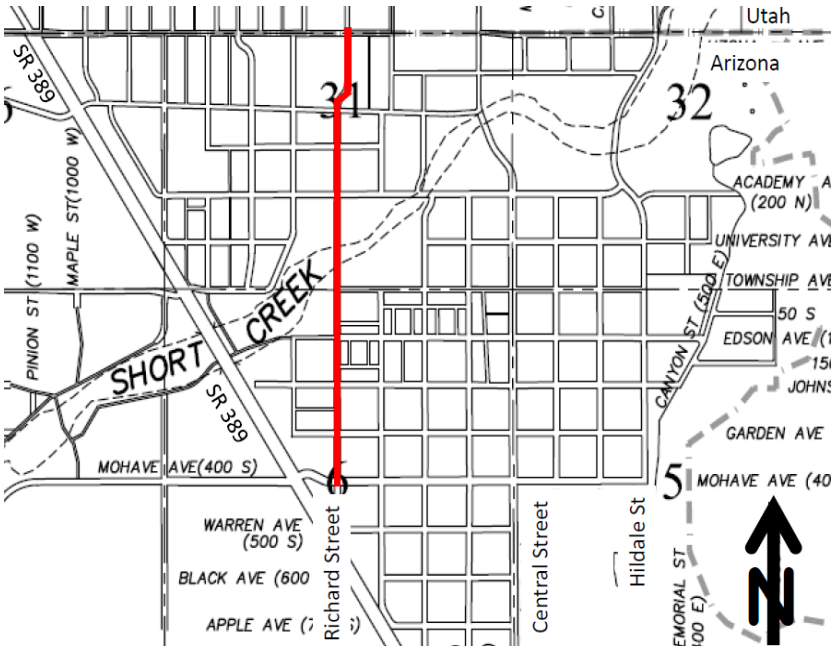
This long north south route is proposed for improvement as a west side bypass to move local traffic off SR 389. It serves the Colorado City Airport, the Colorado City Unified School District campus, and provides a connection to Hildale Utah as well. While volumes are currently low, when improvements are made, the function as a west side bypass for SR 389 between Colorado City and Centennial Park will increase volumes.



Functional Classification Worksheet

Road Name: Richard Street, Town of Colorado City AZ	**Length:**	**1.2 miles**
Limits (termini): Uzona Avenue (state border) to Mohave Avenue		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Minor Arterial		
Most recent traffic count (ADT): 2780 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

This is one of three north south routes crossing Short Creek and providing access to the north side of the community as well as to Hildale Utah. It provides a connection for community traffic to avoid the highway, and has some of the highest traffic volumes in the town. Due to larger household size in the area, streets through residential areas have higher than usual number of home based trips, and significant pedestrian and bicycle activity.



Functional Classification Worksheet

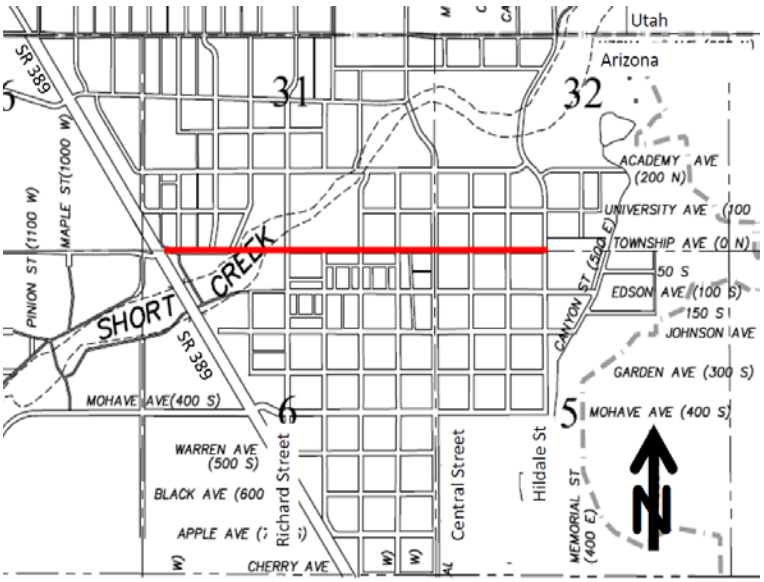
Road Name: Rosy Canyon Road, Mohave County, AZ	**Length:**	**4 miles**
Limits (termini): Cane Beds Road to Utah Border		
Current Functional Classification: Rural Local Roadway		
Proposed Functional Classification: Major Collector		
Most recent traffic count (ADT): 500 (estimate from model) 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

Rosy Canyon Road crosses into Utah and connects to US 89 near Kanab. This is used as a regional bypass route to Kanab in lieu of SR 389, which is a much longer route. It is important for regional recreational and economic development functions. From the state border north, it is a maintained Utah county route.

Functional Classification Worksheet

Road Name: Township Avenue, Town of Colorado City AZ	**Length:**	**1.3 miles**
Limits (termini): SR 389 to Hildale Street		
Current Functional Classification: Rural Local Road		
Proposed Functional Classification: Minor Arterial		
Most recent traffic count (ADT): 2250 11/17/2010		
If this is a future road will construction begin within 4 years?	☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?	☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.		
Has the regional planning body approved this request?	☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.		

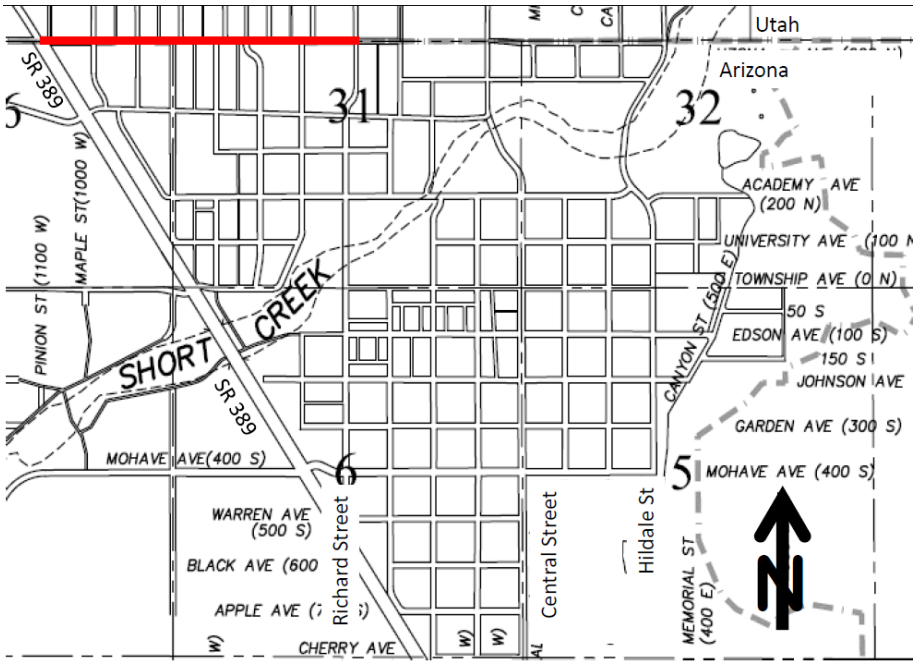
This route connects to the central business district as well as the Town Hall and public safety offices. It connects to SR 389, as well as Central Street, currently functionally classified as a major collector. Due to larger than average household size in the area, streets through residential areas have higher than usual number of home based trips, and significant pedestrian and bicycle activity.



Functional Classification Worksheet

Road Name: Uzona Avenue, Town of Colorado City AZ	**Length:**	**.9 mile**	
Limits (termini): Richard Street to SR 389			
Current Functional Classification: Rural Local Road			
Proposed Functional Classification: Major Collector			
Most recent traffic count (ADT): _530_____11/17/2010_____			
If this is a future road will construction begin within 4 years?		☐ **Yes**	☐ **No**
Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc), excluding or outside of any Federal funds?		☐ **Yes**	☐ **No**
If yes, attach a copy of any documentation to this request.			
Has the regional planning body approved this request?		☒ **Yes**	☐ **No**
If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or b) an approved motion shown in the minutes from an official meeting of the regional planning body.			

This route runs along the border with Utah. This segment is in Arizona. It connects to SR 389, as well as Central Street, currently functionally classified as a major collector. Topography restricts the number of east/west corridors in adjacent Hildale Utah, so this roadway is critical support for Utah Avenue further north. It also connects to commercial and industrial businesses.



Appendix 7

Town of Colorado City Executive Order 2010-01

Mohave County Flood Declaration, December, 2010

TOWN OF COLORADO CITY

P. O. Box 70 * Colorado City, Arizona 86021
Phone & TDD: 928-875-2646 * Fax: 928-875-2778

EXECUTIVE ORDER 2010-01

DECLARATION OF FLOODING EMERGENCY

WHEREAS, it is the duty of the Town of Colorado City to protect health, safety and welfare of the citizens of the Town; and

WHEREAS, rainfall over the last several days has created flooding throughout the community and along the Short Creek drainage channel; and

WHEREAS, Mohave County, Arizona and Washington County, Utah have declared states of emergency due to flooding and conditions of extreme peril to public health and safety of their citizens and damage to public infrastructure; and

WHEREAS, the Short Creek street crossing structures at Hildale Street, Central Street, Academy Avenue and Richard Street have all been closed due to flooding, leaving only the Highway-389 bridge for public service and emergency access; and

WHEREAS, extensive damage has occurred to the infrastructure at the Richard Street creek crossing, necessitating the street to be closed due to safety and traffic concerns; and

WHEREAS, other damage assessment is underway for roads, flood control works and utilities; and

WHEREAS, the flooding is causing increased vehicular and pedestrian traffic creating swiftwater and traffic exposure; and

WHEREAS, the local public safety response capability has been put under the strain of continual response and deployment to mitigate the flood and traffic hazards; and

WHEREAS, the National Weather Service has issued heavy rainfall forecasts with flood hazard warnings for the area; and

WHEREAS, there exists a real threat to life and property which necessitates the declaration of the existence of an emergency; and

WHEREAS, the Vice-Mayor of the Town of Colorado City has determined that extraordinary measures must be taken to protect people and property;

NOW THEREFORE, I, Kimball D. Barlow, Vice-Mayor of the Town of Colorado City, Arizona, by virtue of the authority vested in me by the Laws of the State, including Arizona Revised Statute 26-311,

and the Town Code Chapter 30, Section 30.021 and 30.023, **do hereby declare that a state of public emergency exists** within the Town of Colorado City due to flooding and further order as follows:

1. That the Town emergency operations plan and response be implemented to mitigate the effects of such emergency.

2. I do hereby direct all Town departments including public works, police, dispatch and utilities to immediately survey all public infrastructure under your jurisdiction and implement staffing and equipment measures to mitigate and respond to life and property hazards. Coordinate all response through the Deputy Emergency Manager, Brian Meldrum.

3. I do hereby authorize City personnel assigned to provide emergency services, including but not limited to fire services, traffic control, wastewater maintenance and water distribution, to give directions to the public as necessary to facilitate the provision of said services. The directions given to members of the public by emergency services personnel shall have the force of law.

4. I do hereby appoint the Town Manager to act as the liaison with the Emergency Manager and Town administration to direct and prepare further declarations, implement rules or establish communications that are deemed necessary to maintain health, welfare and safety within the community.

5. That the emergency shall continue for a period of not more than seven days from the date hereof, unless the declaration is continued by the consent of the Town Council.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the seal of the Town of Colorado City, Arizona, this 22nd day of December, 2010.

Vice-Mayor

ATTEST:

Clerk

TOWN OF INCORPORATED SEAL 1985 COLORADO CITY ARIZONA

FLOOD EMERGENCY DECLARATION

WHEREAS, the unusually strong rainfall and flooding of December 19-21, 2010, and the damages resulting therefrom, have caused extensive destruction to private property and to the many public facilities, streets, and roads within Mohave County; and

WHEREAS, the flooding has resulted in a condition of peril to the health and safety of many citizens; and

WHEREAS, the Chairman, Board of Supervisors of Mohave County is authorized by Resolution 11-2-64 and by ARS §§ 26-301 et.seq. to declare a County Emergency,

NOW, THEREFORE, it is hereby declared that an emergency now exists in Mohave County, Arizona; and it is further ordered that during the existence of said emergency, County government agencies assigned emergency roles in the Mohave County Emergency Operations Plan are an Emergency Organization and the Mohave County Emergency Operations Plan is hereby activated and in effect until further notice.

Dated: 12-21-10

Chairman, Board of Supervisors
Mohave County, Arizona

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