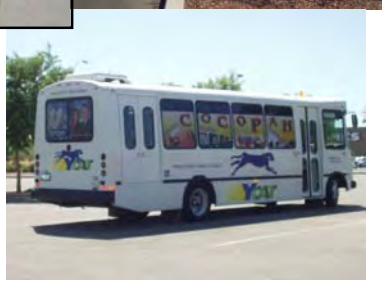
2010 – 2033
REGIONAL TRANSPORTATION PLAN

Final Report



Prepared for:

Yuma Metropolitan Planning Organization

Prepared by:

Ayres Associates Inc

In association with

Jacobs

Makinen Professional Services

April 2010

Expires 3/31/2012

Daniel J Hartig

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

I. INTRODUCTION

The 1980 United States Decennial Census identified that the urbanized portion of Yuma County met the MPO population threshold 50,000. Accordingly, in 1982, the Yuma Metropolitan Planning Organization (YMPO) was formed. The purpose of the YMPO is to serve as a coordinating body for local, state, and federal agencies on traffic, transportation, air quality conformity, and related issues in Yuma County. Since 1984, the motto of the YMPO has been "*Local Governments and Citizens Working Together*." The 2010-2033 Regional Transportation Plan is a multi-modal plan with the premise that it serves people efficiently, affordably, and safely. In addition to the traditional roadway improvements, this plan identifies investments in public transportation, bicycling, and walking to promote health, environmental quality, and mobility for those who do not have access to cars or those who choose to use other modes.

A. BACKGROUND

The primary goal of the Yuma Metropolitan Planning Organization (YMPO), as stated in the 1995-2015 Countywide Transportation Plan, is to "provide the continual development of a complete, dependable, efficient, safe, aesthetic, and economical transportation system, bearing in mind that our quality of life is paramount and that transportation needs must recognize the specific demands of government and businesses, including those of urban areas, rural and agricultural interests, and military operations."

The YMPO boundary area encompasses all of Yuma County and a portion of Imperial County, California that qualifies the YMPO as a bi-state MPO. The jurisdictions that comprise the YMPO include the cities of Yuma, Somerton, and San Luis, the Town of Wellton, the Cocopah Indian Tribe, Yuma County, and the Arizona Department of Transportation. It should be noted that while the Quechan Tribe and Winterhaven are within the geographic boundaries, they are not members of the Technical Advisory Committee or the Executive Board.

In recent years, the area population has grown by more than four percent a year, although there was a decrease in the rate of growth in 2008. In addition, there is an influx of winter visitors and part-time residents each year, which creates unique challenges for the planning, operation, and maintenance of the transportation system.

B. HISTORICAL PERSPECTIVE

Yuma County has a colorful history, which lives on today in a fast-growing, vibrant community. From the 1850's through the 1870's, steamboats on the Colorado River transported passengers and goods to various mines, military outposts in the area, and served the ports of Yuma, Laguna, Castle Dome, Norton's Landing, Ehrenberg, Aubry, Ft. Mohave and Hardyville. For many years, Yuma served as the gateway to the new western territory of California, which brought thousands of people from around the world in search of gold. In 1870, the Southern Pacific Railroad bridged the river. The City of Yuma became a hub for the railroad and was selected as the county seat in 1864.

Yuma County is one of four original counties designated by the first Territorial Legislature. It maintained its original boundaries until 1983 when voters decided to split Yuma County into LaPaz County in the north and a new "Yuma County" in the south. Built in 1914, the Ocean-to-Ocean Bridge (Old Highway 80 Bridge) was the first vehicle bridge across the Colorado River. Prior to the construction of the bridge, cars were ferried across the river.

C. THE 2010-2033 REGIONAL TRANSPORTATION PLAN FORMAT

The 2010-2033 Regional Transportation Plan builds upon the findings and conclusions of the 2006-2029 Regional Transportation Plan. For simplicity, the 2006-2029 Regional Transportation Plan will be referred to as the 2029 RTP and the 2010-2033 Regional Transportation Plan will be referred to as the 2033 RTP. There are also other documents that were used in the development of the 2033 RTP. Primarily, the YMPO Transit Development Plan, adopted by the Executive Board in May 2003, is a resource that outlines a plan for future transit use throughout the Yuma County area.

The seven planning factors contained in SAFETEA-LU, the 2009-2013 TIP, and the YMPO Transportation Policy Framework defines the basis for developing the 2033 RTP. This plan builds on the previous ones, incorporates other recent studies and plans, and establishes a new implementation program to guide area improvements.

Chapter II describes the modeling process and documents the existing and future conditions that form the basis of the travel-forecasting model and the RTP. This information includes socio-economic data, travel characteristics, functional classification, truck routes, traffic volumes, and volume-to-capacity ratios.

Chapter III of this document describes the public involvement process that was used to obtain input at different stages of the development of this plan. There were two rounds of public meetings. The first round was held at two different locations and the second round was held at three different locations. There were periodic updates to the YMPO Technical Advisory Committee (TAC) as well as a presentation to the YMPO Executive Board, all of which were open to the public. There was also a presentation to area stakeholders.

Chapter IV presents the various RTP elements. The roadway element includes maps and a list of projects and costs. The transit element includes a short-range and long-range plan with proposed local bus circulators. The bicycle facilities plan builds on recently completed plans for the cities of Somerton and Yuma.

The appendix includes the YMPO Transportation Policy Framework and the Public Involvement Plan.

There is a companion Executive Summary, which provides a brief description of the analysis and results.

D. PREVIOUS YMPO PLANS

One of the first tasks when the YMPO was established in 1982 was to prepare a regional transportation plan that covered the Yuma County area. That was accomplished when the first plan was adopted on December 8, 1984. The plan served the area by providing a coordinated multi-agency twenty-year listing of transportation projects. Using this plan, a five-year Transportation Improvement Program (TIP) was prepared. During the early 1980s, the population and employment of the Yuma County area continued to grow at an average rate of 3.4 percent per year similar to the growth rate in the 1970's.

In accordance with Federal guidelines, the YMPO was required to update the long-range transportation plan every five years which resulted in the 1990-2010 Countywide Transportation Plan and the 1995-2015 Countywide Transportation Plan.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) was signed into law. TEA-21 and the subsequent transportation act – the Intermodal Surface Transportation Act (ISTEA) included a provision that required non-attainment areas to update transportation plans every three years. This resulted in the 2000-2023 Regional Transportation Plan, the 2003-2026 Regional Transportation Plan, and the 2006-2029 Regional Transportation Plan. The Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) changed the frequency of transportation plan

updates to four years for non-attainment areas or attainment areas with a maintenance plan. The Yuma area is designated nonattainment for PM-10 until EPA approves a maintenance plan and re-designation request for the area. The 2033 RTP is the next scheduled plan update for the region and is prepared in accordance with SAFETEA-LU.

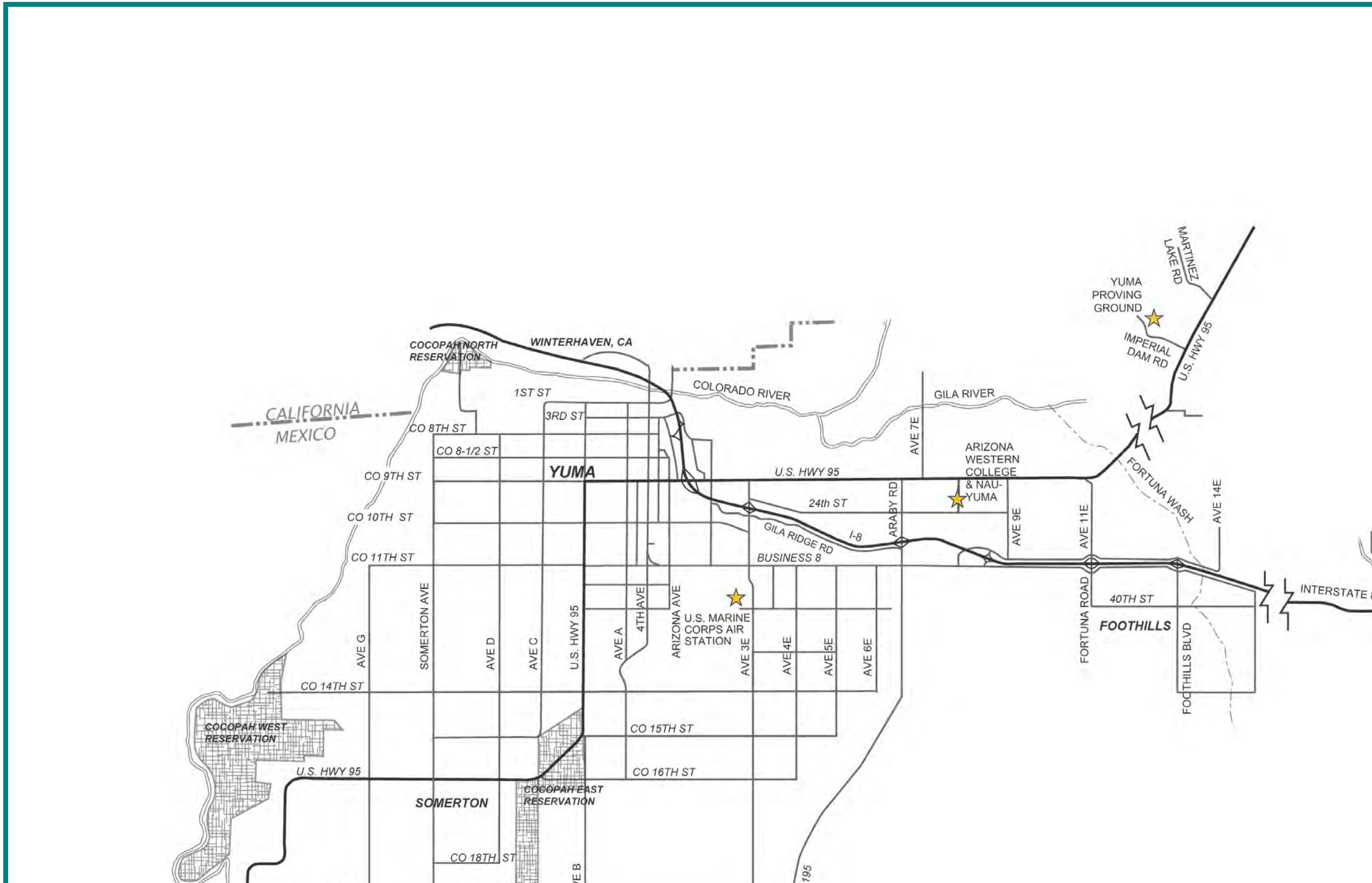
E. STUDY AREA

Yuma County is located in the southwestern portion of Arizona and its southern boundary extends along the Mexican border. The primary study area is depicted in Figure I-1. The county covers 5,522 square miles and includes the cities of Yuma, Somerton, and San Luis, the Town of Wellton, the Cocopah Indian Tribe, and several unincorporated communities. Much of Yuma County is desert land accented by rugged mountains. However, several river valley regions contain an abundance of arable land which is irrigated with water from the Colorado River.

Farming, cattle, tourism, and two military bases - US Marine Corp Air Station (MCAS) and US Army Yuma Proving Ground (YPG) are Yuma County's principal industries. MCAS shares one of the longest runways in the country with the Yuma International Airport. The Yuma region has some of the cleanest skies and best flying weather in the United States. Yuma County has a year-round population of approximately 204,000 residents. During the winter months, the population increases by 80,000 - 100,000 people.

Interstate 8 and U.S. 95 serve regional travel throughout the county. SR 195, a new expressway connecting the international border with I-8, was recently completed and dedicated on September 16, 2009. SR 195 is an ADOT facility and under a previous IGA with local agencies, U.S. 95 will be turned back to the respective jurisdictions between County 22nd Street and Araby Road. Araby Road was originally to be the north extension of SR 195, but further study will be conducted to determine the alignment of SR 195 between 32nd Street and US 95. The section of U.S. 95 in San Luis from the International border to County 22nd Street including the truck route on 1st Street between the port of entry and D Street will remain under ADOT jurisdiction.

The Union Pacific Railroad (UPRR) and AMTRAK provide east-west rail freight and passenger service, respectively. Runways for the US Marine Corps Air Station are also used by the Yuma International Airport, offering additional capacity as a passenger and freight terminal. This strategic location and infrastructure gives Yuma the potential for continued economic growth and the ability to take full advantage of the North American Free Trade Agreement (NAFTA) including opportunities for an inland port.


COCOPAH NORTH RESERVATION
WINTERHAVEN, CA
COLORADO RIVER
GILA RIVER
CALIFORNIA
MEXICO
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
U.S. HWY 95
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARABY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
YUMA PROVING GROUND
MARTINEZ LAKE RD
IMPERIAL DAM RD
U.S. HWY 95
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
COCOPAH WEST RESERVATION
U.S. HWY 95
SOMERTON
COCOPAH EAST RESERVATION
CO 18TH ST
AVE B
195

Yuma County actively participates in economic trade with Mexico. Goods and freight move between the two countries, to other states on both sides of the border, and north via US highways to Canada. Specifically, U.S. 95 and now SR 195, which traverse Yuma County from south to north, permit commercial travel between Mexico and Canada, resulting in increased trade among the North American countries. The continued implementation of NAFTA will increase Yuma County's participation in and importance to North American continental trade. The geographic location, infrastructure, and favorable weather are assets that the Yuma region can use to provide sustainable growth.

Arizona Western College (AWC) is located in Yuma County. This is a two-year community college, which offers higher education to full-time and part-time on-campus and off-campus students. AWC shares its campus with a satellite campus of Northern Arizona University (NAU), offering a variety of two year, four year and post graduate programs.

F. FEDERAL REQUIREMENTS

The Safe, Accountable, Flexible, Efficient, Transportation Act: A Legacy for Users (SAFETEA-LU) was signed into law by President Bush on August 10, 2005 and expired on September 30, 2009. It has been extended by legislative action twice and that will likely continue until new legislation is in place. At the time new federal legislation becomes law, the YMPO must re-visit its policies and practices, TIP and RTP to determine if revisions are needed.

According to a new book by Policy Link, *Healthy, Equitable Transportation Policy: Recommendations and Research*, there is growing national sentiment among policy makers and industry experts that the new legislation should emphasize transportation accessibility, not just mobility. Instead of designing transportation systems to primarily move cars and goods, the transportation system would be designed to serve people efficiently, affordably, and safely. This approach prioritizes investments in public transportation, bicycling, and walking to promote health, environmental quality, and mobility for those who do not have access to cars. The YMPO fully supports this direction.

1. SAFETEA-LU

SAFETEA-LU addresses the many challenges facing our transportation system today – challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment –

as well as laying the groundwork for addressing future challenges. SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities. SAFETEA-LU provisions feature *safety, equity***,** *innovative finance, congestion relief, mobility & productivity, efficiency, environmental stewardship, and environmental streamlining.*

Section 3005 of SAFETEA-LU describes the intent of metropolitan transportation planning as follows:

It is in the national interest to--

- encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between States and urbanized areas, while minimizing transportation-related fuel consumption and air pollution through metropolitan and statewide transportation planning processes identified in this chapter; and
- encourage the continued improvement and evolution of the metropolitan and statewide transportation planning processes by metropolitan planning organizations, State departments of transportation, and public transit operators as guided by the planning factors identified in subsection (h) and section 135(d).

To accomplish these objectives, metropolitan planning organizations (MPO), such as YMPO, shall develop long-range plans and transportation improvement programs (TIP) for metropolitan planning areas of the state. The plans and TIP for each metropolitan area shall provide for the development and integrated management and operation of transportation systems and facilities that will function as an intermodal transportation system for the MPO. The process for developing the plans and TIP shall provide for consideration of all modes of transportation and shall be continuing, cooperative, and comprehensive to the degree appropriate based on the complexity of the transportation problems to be addressed.

2. Environmental Mitigation

YMPO is sensitive to the impacts that transportation projects may have on the environment and its associated resources. Additionally, it is the intent of the RTP to examine environmental impacts regionally rather than at the project level and that the appropriate level of consultation is utilized to maximize participation in the planning process. Further consideration of potential environmental impacts will also reflect the strategies and processes as detailed in the ADOT National Environmental Policy Act (NEPA) Action Plan.

In order to identify areas within Yuma County that may require potential environmental mitigation, YMPO will solicit comments from the entities listed below in the section titled: ***Consultation with Regional Partners***. The consultation list should be amended periodically to reflect changes in agency orientation and/or changes in federal, state, or local environmental legislation or rulemaking. Table 1-1 presents a list of governing agencies and their associated legislative or planning document(s).

Any formal comments the YMPO receives will be retained as part of the official comment record. If further clarification is necessary, a follow-up meeting will be held. Figure I-2, ***Areas of Possible Mitigation by Agency,*** is designed to identify areas of **potential** environmental sensitivity, not to identify every specific environmental concern. Individual agencies will be expected to contact the appropriate planning/conservation entity to discuss potential environmental mitigation related to a specific project.

The YMPO will also encourage participating entities to submit comments not specifically related to environmental mitigation.

CONSULTATION WITH REGIONAL PARTNERS

YMPO will consult with local, state, regional, and tribal entities that are affected by its planning projects. For example, the YMPO may host a meeting(s) to review and receive comment concerning transportation-related projects in addition to mass mailings and all other official comment methods.

The following is a primary list of stakeholders within the YMPO planning area:

- U.S. Department of Energy (Western Area Power Administration)
- U.S. Army Yuma Proving Grounds
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of the Interior (Bureaus of Reclamation and Land Management)
- U.S. Forest Service
- U.S. General Services Administration
- Bureau of Land Management
- National Park Service
- Federal Aviation Administration
- Federal Highway Administration
- Bureau of Indian Affairs
- Cocopah Indian Tribe
- Quechan Indian Tribe
- Arizona Department of Transportation Office of Environmental Services
- Arizona Department of Environmental Quality
- Arizona Game and Fish Department
- Arizona State Historic Preservation Office
- Arizona State Land Department
- Arizona State Parks
- Arizona Department of Transportation
- Arizona Department of Water Resources
- Marine Corps Air Station Yuma
- YMPO Technical Advisory Committee Members

TABLE I-1: LIST OF ENVIRONMENTAL GOVERNING DOCUMENTS

Governing Agency	Associated Governing, Legislative, or Planning Document(s)
US Environmental Protection Agency	Clean Air and Clean Water Acts, National Environmental Policy Act
National and State Historical Societies	National and State Historic Preservation Act; http://www.statemuseum.arizona.edu/aip/index_aip.shtml
Arizona Game and Fish Department	Comprehensive Wildlife Conservation Strategy http://www.azgfd.gov/w_c/cwcs.shtml
Marine Corps Air Station Yuma	The Gila Bend Air Force Auxiliary Field/Barry M. Goldwater Range Joint Land Use Study; Joint Land Use Plan (Yuma County, City of Yuma)
	Arizona SB1525 (Chapter 23: MILITARY AIRPORTS; PRESERVATION)
	Arizona SB 1514 - Amends A.R.S. 41-1531 and 41-3301.
	Arizona HB 2523 - Amends A.R.S. 28-8486, relating to Public Airport Disclosures
	All rezoning, special use permits and development proposals will be reviewed for compliance with SB 1525.
US Army Yuma Proving Grounds	Yuma County Comprehensive Plan
US Fish and Wildlife Service	Endangered Species Act http://www.fws.gov/endangered/policies/index.html
US Army Corps of Engineers	http://www.usace.army.mil/howdoi/publications.htm
US Bureau of Land Management	**Yuma Field Office Resource Management Plan (1986-1987)** A draft of an updated RMP will replace this document once adopted. The draft plan and the governing rules can be found at the following web address: http://www.blm.gov/az/lup/yuma/drmp.htm Resource Management Plan: Appendix 1-B "Laws, Regulations, and Executive Orders http://www.blm.gov/az/gis/files.htm
US Bureau of Reclamation	Reclamation Manual 2006 http://www.usbr.gov/excellence/results/finalproducts.html http://www.usbr.gov/lc/lcrmscp/publications/eireis2004.html.
US Forest Service	N/A
Arizona Department of Water Resources	A.R.S. 45-101 to 45-2712
National Parks Service	http://www.nps.gov/kefj/planyourvisit/rules-and-regulations.htm
Arizona State Land Department	A.R.S. 11-806 (D)(2); A.R.S. 11-806 (E); A.R.S. 11-821 (A); A.R.S. 37-251; A.R.S. 11-824 (F)
	Arizona Preserve Initiative (API) - **API was passed by the Arizona State Legislature as HB 2555**
	Proposition 303
Quechan Indian Tribe	Quechan Tribal Council
Cocopah Indian Tribe	Constitution of the Cocopah Indian Tribe, Somerton, Arizona
Bureau of Indian Affairs	Upon consultation with Tribes during specific projects
Arizona Department of Environmental Equality	Yuma PM_{10} State Implementation Plan

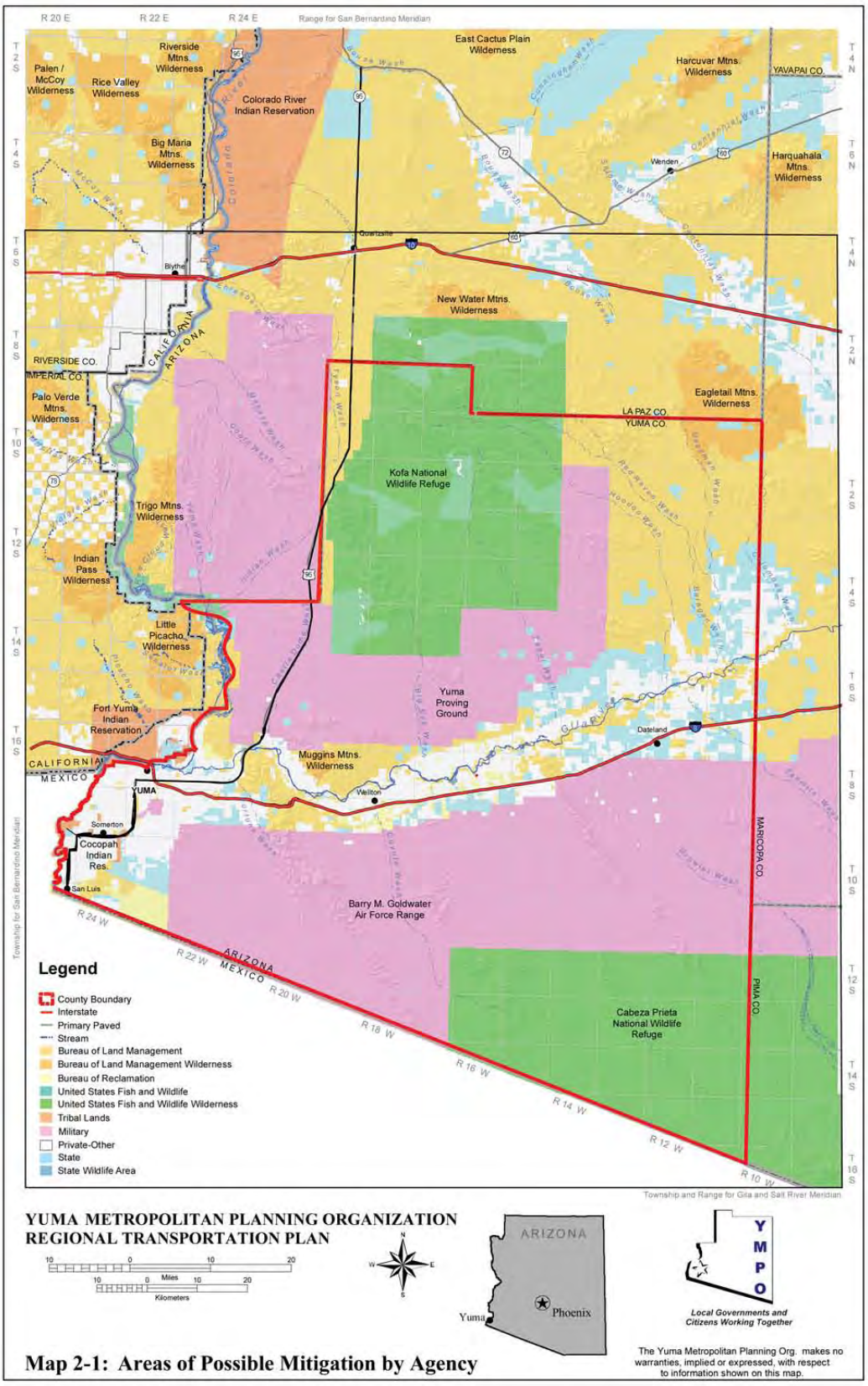

R 20 E
R 22 E
R 24 E
Range for San Bernardino Meridian
Riverside Mtns. Wilderness
East Cactus Plain Wilderness
Harcuvar Mtns. Wilderness
YAVAPAI CO.
Palen / McCoy Wilderness
Rice Valley Wilderness
Colorado River Indian Reservation
Big Maria Mtns. Wilderness
Harquahala Mtns. Wilderness
Wenden
Quartzsite
Blythe
New Water Mtns. Wilderness
CALIFORNIA
ARIZONA
RIVERSIDE CO.
IMPERIAL CO.
Palo Verde Mtns. Wilderness
Eagletail Mtns. Wilderness
LA PAZ CO.
YUMA CO.
Kofa National Wildlife Refuge
Trigo Mtns. Wilderness
Indian Pass Wilderness
Little Picacho Wilderness
Yuma Proving Ground
Fort Yuma Indian Reservation
Dateland
Muggins Mtns. Wilderness
CALIFORNIA
MEXICO
YUMA
Wellton
Somerton
Cocopah Indian Res.
San Luis
MARICOPA CO.
Barry M. Goldwater Air Force Range
R 24 W
R 22 W
R 20 W
R 18 W
R 16 W
R 14 W
R 12 W
R 10 W
ARIZONA
MEXICO
PIMA CO.
Cabeza Prieta National Wildlife Refuge
Township for San Bernardino Meridian
Township and Range for Gila and Salt River Meridian
Legend
County Boundary
Interstate
Primary Paved
Stream
Bureau of Land Management
Bureau of Land Management Wilderness
Bureau of Reclamation
United States Fish and Wildlife
United States Fish and Wildlife Wilderness
Tribal Lands
Military
Private-Other
State
State Wildlife Area
YUMA METROPOLITAN PLANNING ORGANIZATION
REGIONAL TRANSPORTATION PLAN
Miles
Kilometers
ARIZONA
Yuma
Phoenix
Y M P O
Local Governments and Citizens Working Together
The Yuma Metropolitan Planning Org. makes no warranties, implied or expressed, with respect to information shown on this map.
Map 2-1: Areas of Possible Mitigation by Agency

Figure I-2

3. Air Quality

The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. Two of those, which are related to transportation, are presented in Table I-2. Units of measure for the standards are parts per million (ppm) by volume and micrograms per cubic meter of air ($\mu g/m^3$). EPA recently proposed to reduce the allowable ozone in the air from 0.075 ppm to a level between 0.060 and 0.070 ppm. The final level will be established after public hearings, a comment period, and a final review.

TABLE I-2: SELECT NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Level	Averaging Time
Particulate Matter (PM_{10})	150 $\mu g/m^1$	24-hour [2]
Particulate Matter ($PM_{2.5}$)	15.0 $\mu g/m^1$	Annual [3] (Arithmetic Mean)
	35 $\mu g/m^1$	24-hour [4]
Ozone	0.075 ppm (2008 std)	8-hour [5]

(1) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
(2) Not to be exceeded more than once per year on average over 3 years.
(3) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.
(4) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).
(5) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)

G. YMPO GOALS AND POLICIES

The YMPO is the designated metropolitan planning organization for the Yuma urbanized area, is responsible for transportation planning in accordance with federal guidelines, and coordinates federal funds for the Yuma area. According to the YMPO by-laws,

> *"The objective of the YMPO is to carry out planning, coordination, and integration of activities necessary to maintain a comprehensive, cooperative, and continuing multi-agency transportation planning program; and further, as specified by the Executive Board of the YMPO, carry out other related specific tasks including implementation thereof."*

The underlying concept of the YMPO shall be "Local Governments and Citizens Working Together". The YMPO will contribute to the planning and future development of the Yuma region. The YMPO recognizes the need to develop and maintain a multi-modal transportation system for the region and works with member agencies to achieve such a system. The YMPO also understands the need to develop a regional plan that is environmentally sensitive, reduces greenhouse gases, and incorporates the latest technology to maximize the investment in the region.

1. YMPO Transportation Policy Framework

The YMPO created a Transportation Policy Framework that was originally adopted on December 18, 1986. It has been updated on two occasions and the Executive Board adopted the most recent version on December 3, 2009. The framework serves as a guide for transportation planning in the region. The Policy's eight major issues are as follows:

- compatible regional land use plan and transportation plan
- improve and preserve the existing transportation system
- future arterial/expressway/freeway needs
- alternative modes of transportation
- financing transportation improvements
- air quality
- rural transportation system needs
- transportation of hazardous materials

These issues are still valid today and definitely provide the framework for the YMPO to coordinate transportation planning for the region. The full text of the adopted Transportation Policy Framework is included in the appendix.

2. YMPO Mission Statement

The YMPO recently developed a mission statement that will guide the purpose and intent of the agency. The YMPO mission is to:

> *"Attain a balanced multimodal transportation system within the Yuma regional transportation planning boundary area, as designated by the Governor of Arizona, with finite resources, while promoting a safe environment and enhancing the quality of life in the region."*

The YMPO will coordinate and integrate sustainable solutions in the RTP, while maintaining a multi-agency comprehensive transportation plan and promoting public involvement.

In accordance with federal requirements, the YMPO RTP shall provide for consideration of projects and strategies that will--

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

As economic and environmental conditions continue to change, transportation investments must be cost effective and contribute to a healthy environment. One of the keys will be to provide transportation choices such as public transportation and non-motorized options as well as technology options that promote telecommuting and reduce the need for travel. Another example, the concept of complete streets is intended to provide for all users to travel safely and efficiently along and across a street.

II. TRAVEL AND SOCIO-ECONOMIC CHARACTERISTICS

This chapter documents the modeling process used in this study and provides a description of the data used in the modeling process. Existing and future travel conditions and socio-economic data were gathered and refined throughout the study process, including such data as existing roadway network characteristics and public transit service.

The Year 2033 is the planning horizon for this update to the Regional Transportation Plan. Existing socio-economic data was updated to the year 2008 based on information obtained from the YMPO agencies, while the 2033 socio-economic data was projected using the previous 2029 data as a base. Both sets of data were used in the travel-forecasting model process and are described in this section.

A. TRAVEL FORECASTING MODEL

The YMPO travel-forecasting model was developed using the TransCAD microcomputer software and was calibrated using the year 2008 transportation network and estimated 2008 socio-economic data. Previous versions of the model were used as the basis for developing the 2008 transportation model socio-economic and network characteristics. The latest model was further enhanced to include refinement of the traffic analysis zone (TAZ) structure, modification of the residential land use categories, and conversion of the employment categories from size to number of employees.

1. Model Process

The travel-forecasting model is a representation of the Yuma area's transportation facilities and it approximates the travel patterns using these facilities. The model contains inventories of the existing roadway facilities and of residential and non-residential land use by TAZ.

In general, the traffic model process consists of several steps including estimating the number of daily vehicle trips generated by TAZ from the socio-economic inventory, distribution of vehicle trips to/from various TAZs, and then assigning the vehicle trips to the street network. The traffic model assignments are then compared with current traffic counts. When the model assigned volumes match the traffic counts within acceptable ranges of error, the model can then be used to test future year scenarios. These

scenarios may contain changes in numbers of housing units, employment, travel patterns, or roadway improvements. The traffic-forecasting model will provide traffic volume forecasts, which aid the YMPO and its member agencies in making decisions regarding future projects.

The YMPO model process included the following steps:

- Development of 2008 transportation roadway network
- Estimate of 2008 dwelling units and employment by TAZ
- Trip generation - generation of trips by TAZ
- Trip distribution - geographical distribution of vehicle trips between origin and destination TAZ
- Trip assignment - assignment of traffic volumes to specific network routes.

a. Roadway Network

The first step in the travel demand modeling process was to update the geographical roadway network which is comprised of nodes and links. A node is an intersection of two or more links similar to an intersection of two street segments. A centroid is a special node that depicts the point where trips originate and terminate in a traffic analysis zone. A network link is a street segment between two nodes.

The roadway network from the previous model was updated to incorporate improvements made to the street network such as new roadways or widening of existing roadways. In general, the model includes streets functionally classified as collector or higher. The TransCAD model network database includes the following information:

- Roadway Functional Classification
- Daily Link Capacity
- Link Distance
- Daily Traffic Volume (ground counts)
- Speed
- Link Number of Lanes

b. Traffic Analysis Zones

TAZs are geographic areas generally bounded by the roadway network, another physical feature, or a municipal boundary. Each TAZ is allocated socio-economic data that approximates the population and employment based on the land use in that zone. This data is then used to generate trips that begin or end in that TAZ. Each TAZ centroid is connected to the network based on the street system available. The model area includes the urban areas of the cities of Yuma, Somerton, and San Luis, the Town of Wellton, the Foothills area, the Cocopah Indian Reservation, and unincorporated portions of Yuma County. In general, the area is bounded on the west and north by the Colorado River, on the east by Tacna, and on the south by the Mexico border. The model area along with the TAZ designations is depicted in Figure II-1.


N
W
E
S
See Yuma Inset
Yuma Inset
Eastern
US Hwy 95
Co 9th St
Compress Rd
Co 10th St
26th St
Frontage Rd
32nd St
40th St
56th St
Co 13th St
Co 14th St
Co 15th St
Co 16th St
Co 17th St
Co 18th St
Co 19th St
16th St
8th St
Main St
Avenue A
Avenue B
Avenue C
Avenue D
Avenue E
Avenue F
Avenue G
Avenue 3E
Avenue 4E
Avenue 5E
Avenue 6E
Avenue 7E
Araby Rd
Fortuna Rd
Foothills Blvd
Somerton Ave
1st Ave
4th Ave
12th Ave
Redondo Center Dr
Magnolia Ave
Castle Dome Ave
1st St
3rd St
5th St
8th St
12th St
16th St
County 9th St

c. Land Use Data

As part of the update to the YMPO travel-forecasting model several changes were made to the socio-economic data. The residential categories were revised to more accurately reflect the current housing distribution. The non-residential categories were consolidated and converted from size of land use to number of employees. The new land use categories along with the trip generation rates are shown in Table II-1. As can be seen in Table II-1, there are minor variations in trip generation rates based on jurisdiction.

TABLE II-1: LAND USE CATEGORIES & TRIP GENERATION RATES

		DAILY TRIP RATE PER UNIT					
LU Description	**Units**	Yuma	Cocopah	Somerton	San Luis	Wellton	County
Single Family-Rural	DU	13	11.5	12.5	13	11.5	11.5
Single Family-Urban	DU	13.5	10	12	13	12	11
Multi Family	DU	11	10	12	13	10	13
Mobile Home-Winter	DU	7	7	7	7	7	7
RV Park – Winter	DU	5	5	5	5	5	5
Retail	Employees	16	15	16.5	22	15	15
Service	Employees	16	8	11	18	8.5	10
Office	Employees	10	8	10	15	8	10
Public	Employees	10	8	10	10	8	8
Industrial	Employees	4	4	4	4	4	4
Manufacturing	Employees	2.5	2	2	2.5	2	2
Casino	Employees	3	3	3	3	3	3
Jr. High/Elementary	Employees	22.5	22.5	22.5	22.5	22.5	22.5
High School	Employees	25	25	25	25	25	25
University	Employees	9	9	9	9	9	9

d. Trip Generation

The final step of the trip generation phase is to estimate the number of trips produced by or attracted to each TAZ. A trip is defined as a one-way trip between an origin and a destination. The number of trips produced by a TAZ is a function of the residential uses and the number of trips attracted to a TAZ is a function of the employment.

e. Trip Distribution

The trip distribution phase produces a vehicle trip table that estimates the number of trips to/from a TAZ to every other TAZ. For example the distribution of trips between zone I and zone J is a function of the following variables:

- The number of trips produced in zone I
- The number of trips attracted to zone J
- The travel time between zone I and zone J
- The magnitude of the total "attractiveness" of all the zones in the network

The number of trips traveling between zone I and zone J are directly proportional to the total number of trips generated in zone I and the total number of trips attracted to zone J. The number of trips between zones I and J is inversely proportional to the travel time between the two zones. The number of trips traveling between the two zones decreases as the travel time between the zones increases.

f. Traffic Assignment

The traffic assignment phase assigns the trips between two zones to a specific route based on the travel times between those zones. This process is continued for every pair of zones. The assignment is usually performed incrementally based on user input. Traffic assignment includes the following steps:

- Computation of the minimum time path between TAZs based on free flow link speeds
- Initial assignment of the trips to the links which lie on the minimum time paths between the TAZs
- Computation of volume-to-capacity (v/c) ratios on the links after the initial assignment
- Re-computation of travel times on the links incorporating the v/c ratio
- Assignment of the next increment of trips repeated until all trips are assigned.

The final product of the traffic assignment process is an estimate of the daily traffic volume on each street in the network.

g. Model Calibration

The model was calibrated and validated based on the existing transportation network, socio-economic estimates, and average traffic counts for the year 2008. Calibration of the model involves a series of simulation runs to review the assumptions used to construct the model. In the trip distribution portion of the simulation, the exponents for the distance function of the gravity model were examined. During the trip assignment portion of the simulation, the assumptions for link speed, capacity, and delay were studied. Between each run, different parameters were evaluated and necessary adjustments made so that the desired results were reached. Before any adjustments were made to the model parameters, they were justified by collected travel pattern data,

local knowledge of travel conditions, or by empirical knowledge. The model validation included review of several performance measures including percent assignment error and root mean square error (RMSE).

B. EXISTING CONDITIONS

Documentation and analysis of existing conditions provides a basis for understanding the factors that influence the transportation system. Socio-economic data, transportation system characteristics, and traffic data are discussed in this section.

The YMPO region is unique because of the substantial seasonal fluctuations in population. It should be noted that the data summarized here and used in the travel-forecasting model represents average conditions over the entire year. This provides a balance between the summer months when the population is less than the average and the winter months when the population is higher.

1. Socio-Economic Data

As was noted above in the travel-forecasting model discussion, there are two key main socio-economic data elements – population or dwelling units and employment. Population estimates and forecasts are maintained by the Arizona Department of Commerce, Population Statistics Unit. The most recent population estimates for 2008 are presented in Table II- 2 for Yuma County and the incorporated areas. The 2004 estimates are also provided to show the growth since the last update of the RTP. The 2001 estimates are provided to compare annual growth rates between 2001 and 2004 and between 2004 and 2008. As can be seen in the table, the annual growth rate has decreased slightly except in Somerton and Wellton.

TABLE II-2 – POPULATION ESTIMATES FOR YUMA COUNTY AND INCORPORATED AREAS*

Jurisdiction	2001**	2004**	2008***	Annual Increase (2001-2004)	Annual Increase (2004-2008)
City of Yuma	79,530	86,310	93,719	2.8%	2.1%
Unincorporated Area	59,280	63,650	69,660	2.4%	2.4%
City of San Luis	17,635	21,670	26,705	7.6%	5.8%
City of Somerton	7,520	8,980	11,377	6.5%	6.7%
Wellton	1,860	1,910	2,318	0.9%	5.3%
Total – Yuma County	165,825	182,520	203,779	3.3%	2.9

*Year-round resident population only
** Arizona Department of Commerce Estimate (Feb 2006)
***Arizona Department of Commerce Estimate (12/12/08)

The population data presented in Table II-2 provides a check for the population data developed in the travel-forecasting model. The 2008 population numbers developed from the travel-forecasting model are based on the dwelling unit estimates used in the model. Since the data in the model is extrapolated to the TAZ level based on dwelling units, the resulting population estimates from the model do not match the Department of Commerce estimates exactly.

Figure II- 2 presents a summary of the 2008 model data by geographic sub-area. These sub-areas are used by the YMPO for the purpose of summarizing annual traffic count data.

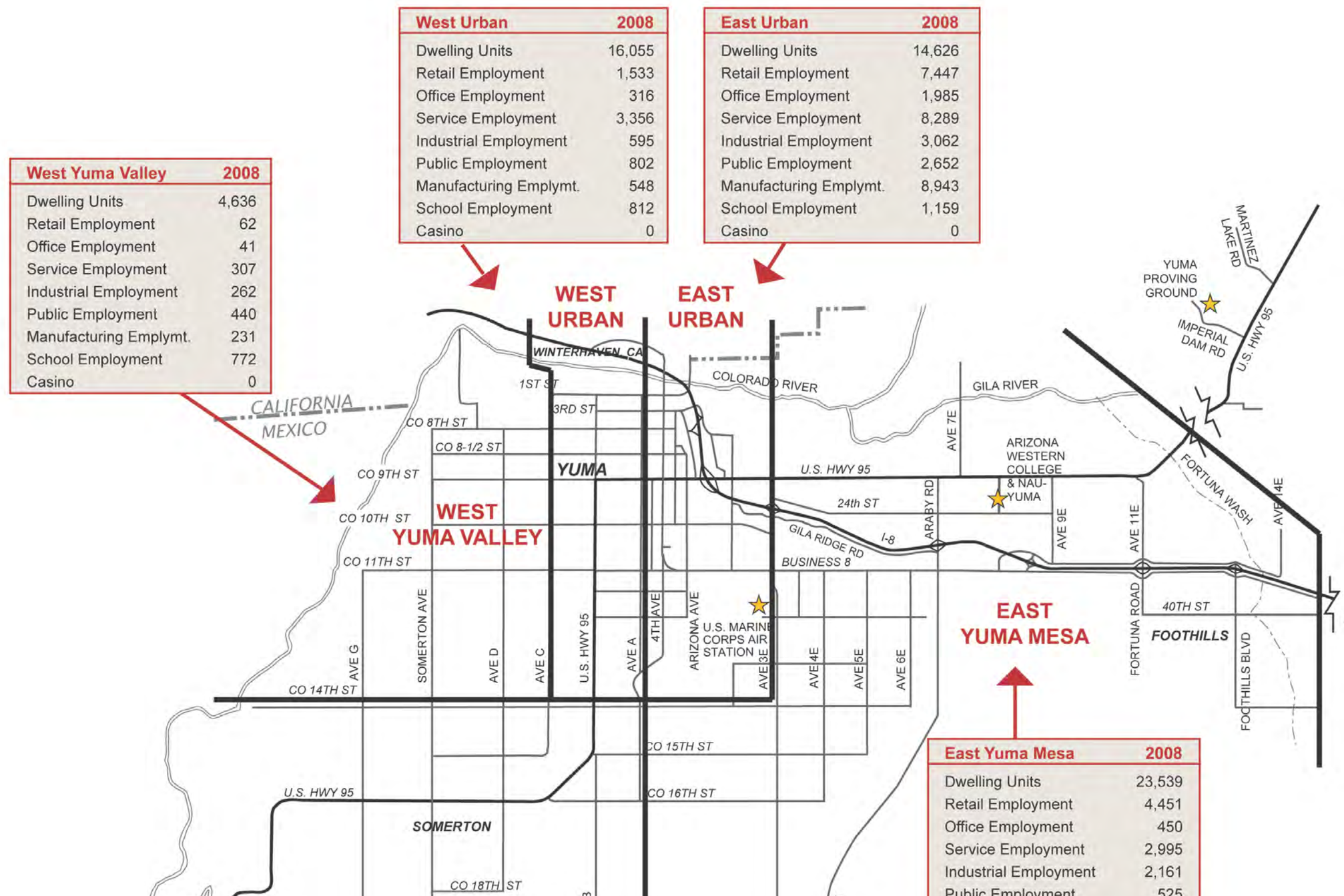
The employment data was developed using the 2008 InfoUSA employment database for the YMPO region. The employers were identified by Standard Industrial Codes (SIC) and aggregated into 10 main categories.

The 2008 model data is summarized by jurisdiction in Table II-3.

West Yuma Valley	2008
Dwelling Units	4,636
Retail Employment	62
Office Employment	41
Service Employment	307
Industrial Employment	262
Public Employment	440
Manufacturing Emplymt.	231
School Employment	772
Casino	0

West Urban	2008
Dwelling Units	16,055
Retail Employment	1,533
Office Employment	316
Service Employment	3,356
Industrial Employment	595
Public Employment	802
Manufacturing Emplymt.	548
School Employment	812
Casino	0

East Urban	2008
Dwelling Units	14,626
Retail Employment	7,447
Office Employment	1,985
Service Employment	8,289
Industrial Employment	3,062
Public Employment	2,652
Manufacturing Emplymt.	8,943
School Employment	1,159
Casino	0



East Yuma Mesa	2008
Dwelling Units	23,539
Retail Employment	4,451
Office Employment	450
Service Employment	2,995
Industrial Employment	2,161
Public Employment	525
Manufacturing Emplymt.	2,691

TABLE II-3: 2008 MODEL DATA BY JURISDICTION

	COUNTY	COCOPAH	SOMERTON	SAN LUIS	WELLTON	YUMA	TOTAL
Population	**57,148**	**1,988**	**11,302**	**26,887**	**2,609**	**92,969**	**192,902**
Single Family DU-Rural*	10,238	489	2	483	519	698	12,429
Single Family DU-Urban*	794	5	2,189	4,176	0	25,716	32,880
Multi-Family	253	12	486	878	0	5,607	7,236
Mobile Home-Winter	4,528	6	42	1	0	4,086	8,663
RV Park-Winter	6,292	24	40	7	649	2,477	9,489
Retail Employment	3,792	22	327	1,278	164	9,966	15,549
Service Employment	2,561	175	666	598	361	12,664	17,025
Office Employment	382	4	95	282	18	2,428	3,209
Public Employment	898	38	184	545	224	3,720	5,609
Industrial Employment	3,401	54	134	174	34	3,408	7,205
Manufacturing Employment	2,872	102	150	1,150	8	10,142	14,424
Elementary/JRHS Employment	346	0	358	620	68	2,220	3,612
High School Employment	165	7	20	200	0	929	1,321
University Employment	48	0	50	10	0	573	681
Casino Employment	0	907	0	0	0	0	907
Total Dwelling Units	**22,105**	**536**	**2,759**	**5,545**	**1,168**	**38,584**	**70,697**
Total Employment	**14,465**	**1,309**	**1,984**	**4,857**	**877**	**46,050**	**69,542**
POP/DU Ratio	**2.59**	**3.71**	**4.10**	**4.85**	**2.23**	**2.41**	**2.73**
EMP/POP Ratio	**0.25**	**0.66**	**0.18**	**0.18**	**0.34**	**0.50**	**0.36**

* occupied dwelling units

2. Title VI Populations

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

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

The U.S. Department of Transportation issued its final order to implement the provisions of Executive Order 12898 on April 15, 1997. This final order requires that information be obtained concerning the race, color or national origin, and income level of populations served or affected by proposed programs, policies, and activities. It further requires that steps be taken to avoid disproportionately high and adverse impacts on these populations.

One of the first steps in assuring environmental justice is the identification of those populations specifically targeted by the Order – minority and low-income populations and persons older than 60. According to the 2000 U.S. Census which is the latest official data, the racial composition of Yuma County was predominantly white at 68 percent, with 32 percent minorities as shown in Table II-4. Table II-4 also shows the percent of Hispanic origin for information only. Persons of Hispanic origin may be of any race. This information is not used in the Title VI assessment.

Low income and age summaries for the county are shown in Table II-5.

This information is summarized here to provide documentation regarding Title VI and Environmental Justice for the YMPO region, but it is incumbent upon each agency and the YMPO to insure that the intent of Title VI and Environmental Justice is followed when implementing projects.

TABLE II-4: 2000 RACIAL DEMOGRAPHICS (BY PERCENTAGE)

	RACE							
AREA	**WHITE**	**AFRICAN AMERICAN**	**NATIVE AMERICAN**	**ASIAN**	**NATIVE HAWAIIAN**	**OTHER**	**TWO OR MORE RACES**	**HISPANIC ORIGIN**
Foothills CDP	90	<1	<1	<1	<1	7	2	13
Gadsden CDP	41	0	4	<1	<1	54	1	94
San Luis	59	3	2	<1	<1	34	2	89
Somerton	45	<1	<1	<1	<1	51	3	95
Tacna CDP	67	1	<1	<1	<1	25	6	51
Wellton	68	2	1	<1	<1	25	3	41
Yuma	68	3	1	1	<1	25	2	46
County	68	2	1	<1	<1	24	3	51

SOURCE: US Bureau of the Census, Census 2000

TABLE II-5: LOW INCOME AND PERSONS OVER 60

AREA	PERCENT OF FAMILIES BELOW POVERTY LEVEL	PERCENT OF PEOPLE OVER 60
Foothills CDP	7	56
Gadsden CDP	42	8
San Luis	36	6
Somerton	24	10
Tacna CDP	22	19
Wellton	16	37
Yuma	12	18
County	16	21

SOURCE: US Bureau of the Census, Census 2000

3. Transportation System

The existing transportation system includes roadways, truck routes, non-motorized facilities, public transit, the airport, and rail lines. A brief description of each is provided below.

a. Functional Classification

Functional classification defines the hierarchy of streets in a roadway system. The federal functional classification of roadways in the YMPO model area is shown in Figure II-3. The classifications used in the YMPO area conform to FHWA guidelines and include principal arterial interstate, principal arterial other, minor arterial, urban collector, rural major collector, and rural minor collector. In general, the interstate and arterials provide a high level of mobility for the traveling public, with minimal allowance for access, while the collectors and local streets provide for residential and non-residential access.

The roles and standards for each type of roadway must be established in order to plan an efficient and effective system. Functional classification defines the hierarchy of streets in a roadway system. Functional classification is the process by which streets and highways are grouped into systems according to the character of service they are intended to provide. Most travel involves movement through a network of roads of varying functional classification. Functional classification denotes the relationship of mobility, access, and trip length. The following are general characteristics associated with the different classifications in an urban system.

Freeway/Expressway/Parkway

- Provides regional connectivity
- Mobility is the primary objective
- Limited access with capability of moving high volumes at high speeds.

Arterials (5-10% of system miles)

- Higher speed than collector or local
- Serve the highest volume generators
- Longer trip length compared to collector and local
- Carries the majority of trips entering or leaving the area
- Do not usually connect through neighborhoods

Collector (5-10% of system miles)

- Distribute traffic to/from arterials
- Collect traffic from local streets
- May access neighborhoods

Local (65-80% of system miles)

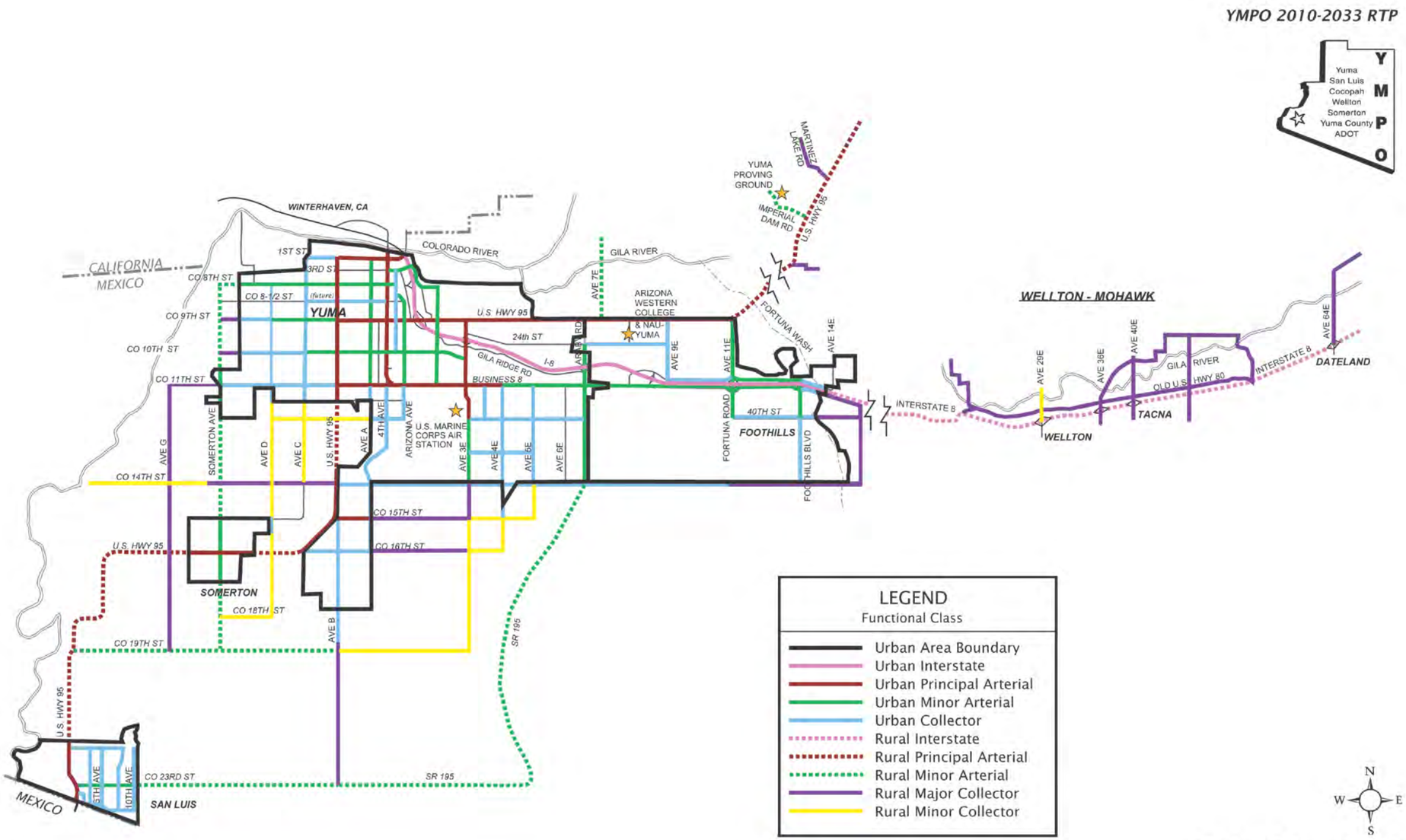
- Provide direct access to abutting land
- Discourage through traffic
- Lower speed limit than other classifications
- Conducive to all modes of travel

b. Number of Lanes

Along with the functional classification of streets in the transportation system, the number of through lanes determines the traffic capacity of the street system. The number of through lanes in the YMPO model area is presented in Figure II-4. As can be seen, the number of through lanes varies from two to six with the majority of streets having two through lanes.

c. Regionally Significant Routes

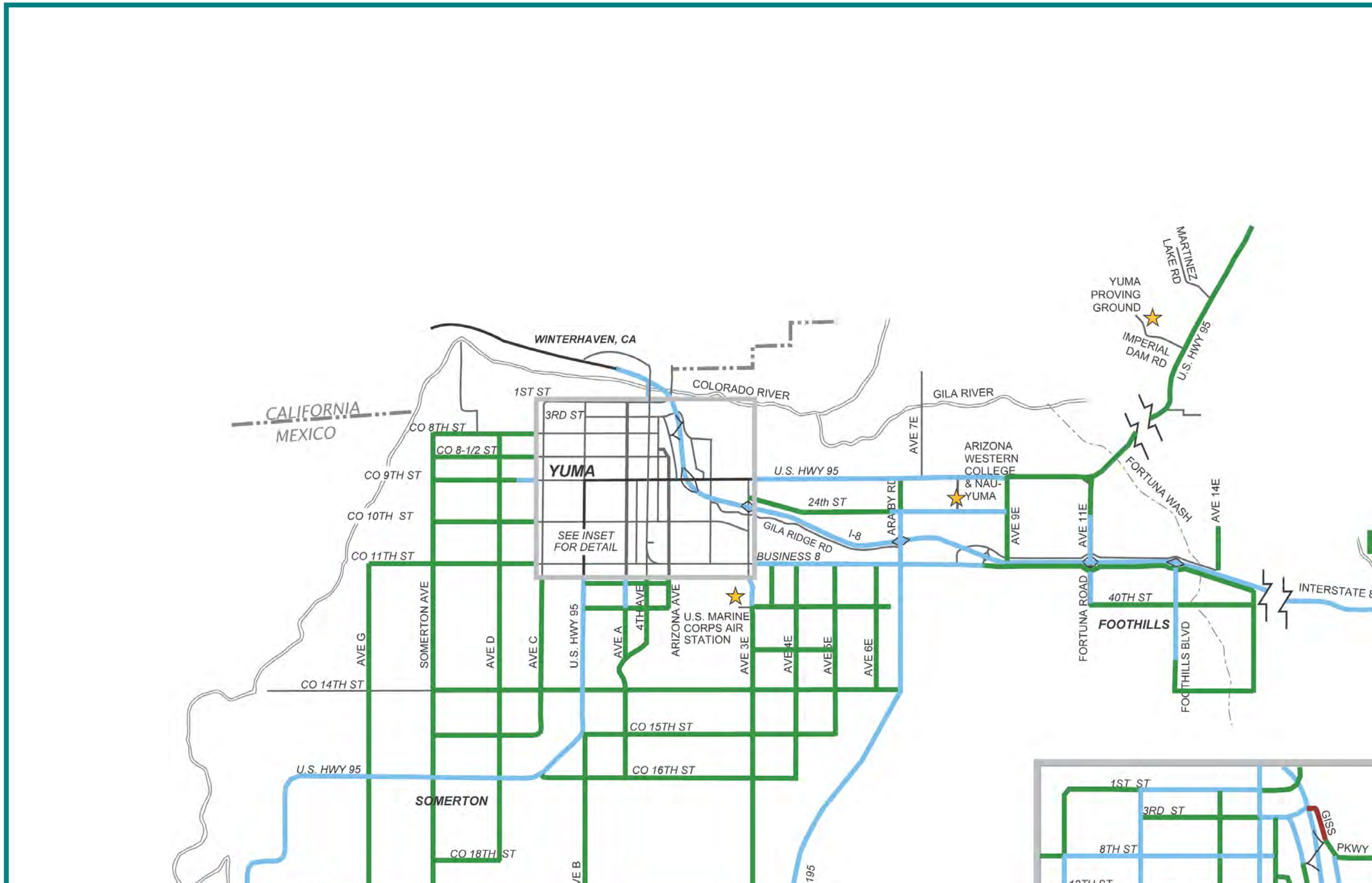
The YMPO has defined a system of Regionally Significant Routes (RSR) for the YMPO study area. These routes include interstates, principal arterials, and those collector streets necessary to identify a complete system. The RSR in the YMPO study area are shown in Figure II-5. SR 195 is fully open to traffic and it has been added as a regionally significant route. Also shown in this figure are the roadways that are part of the Strategic Highway Network (STRAHNET). The STRAHNET is a system of roads deemed

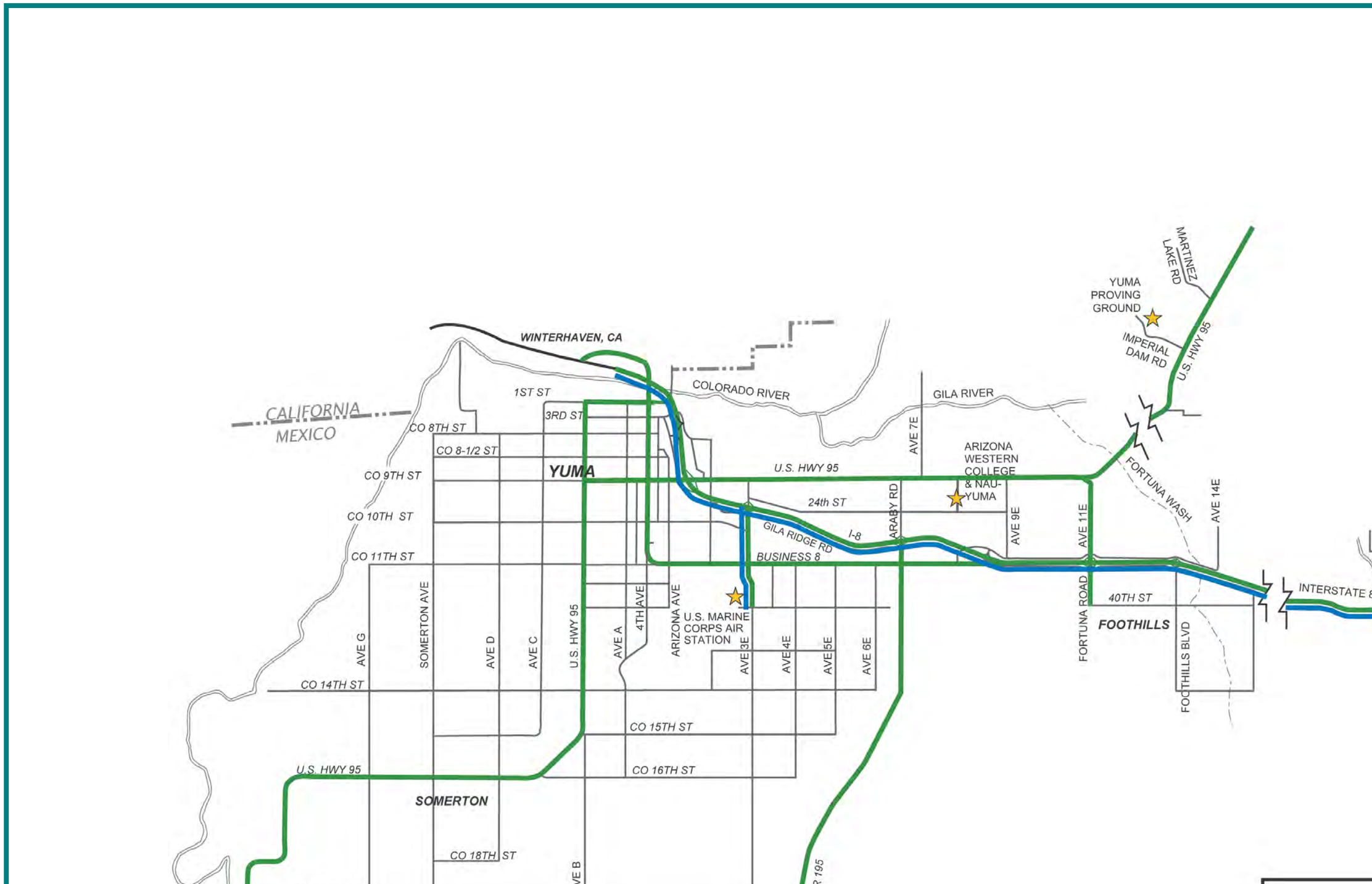


AYRES ASSOCIATES

Federal Functional Classification

FIGURE II-3


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
SOMERTON
U.S. HWY 95
SOMERTON AVE
AVE G
AVE D
AVE C
AVE B
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE 7E
U.S. MARINE CORPS AIR STATION
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARABY RD
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE 8
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
1ST ST
3RD ST
8TH ST
GISS
PKWY


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
U.S. HWY 95
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
AVE 7E
ARABY RD
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
MARTINEZ LAKE RD
YUMA PROVING GROUND
IMPERIAL DAM RD
U.S. HWY 95
INTERSTATE 8
40TH ST
FOOTHILLS
FORTUNA ROAD
FOOTHILLS BLVD
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
AVE B
R 195

necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, or other commodities to support U.S. military operations. It consists of the Interstate system and 16,000 miles of non-Interstate roads. In Yuma County, I-8 and the connection from I-8 to MCAS (Avenue 3E) are on the STRAHNET.

d. Truck Route System

A truck route system provides a method to control the routes used by truck traffic and performs the following three essential functions:

- Accommodates the need to transport goods throughout an area;
- Is compatible with adjacent land uses; and,
- Avoids undue negative impacts on sensitive areas and facilities.

The City of Yuma City Council adopted the 2002 General Plan, which included a truck route plan for the City. The cities of San Luis and Somerton encourage trucks to use through streets although they have no adopted truck route plans. Yuma County and the Arizona Department of Transportation have no limitations on the use of their highways by trucks; however, ADOT has designated 1st Street from Urtuzuastegui Street to D Street and D Street from 1st Street to U.S. 95 as a truck route.

YMPO member agencies have taken significant steps to accommodate truck traffic between Mexico and I-8 by establishing and constructing SR 195, upgrading Avenue E between SR 195 and Mexico as well as supporting the new commercial port of entry, San Luis POE II, which is scheduled to open in 2010. These actions are expected to reduce truck traffic at San Luis POE I as well as along Co. 23rd Street and US 95.

e. Safety Data

Intersection crash data for Yuma County was obtained from the Arizona Department of Transportation for the period from January 1, 2006 through December 31, 2008. During that period, there were 9,180 reported crashes. Table II-6 summarizes the crashes by injury type and collision type for the three-year period. As seen in Table II-6, nearly two-thirds of the crashes were non-injury and less than 1% resulted in a fatality. The most common crash type was rear end followed by right angle which combined accounted for more than half of the total crashes.

The data was further summarized by intersection to identify the high crash locations in Yuma County. Figure II-6 shows the crash rate at locations that average more than 10 intersection related crashes per year. The crash rate equals the average number of annual crashes per million entering vehicles at each location. The crash rates range from 0.89 to 4.5. The highest crash rate occurs at 16th Street and I-8 and 16th Street and Redondo.

TABLE II-6: CRASH SUMMARY

	2006	2007	2008
No. of crashes	**3146**	**3141**	**2893**
Severity (percent by type)*			
Fatal	1	1	1
Incapacitating injury	3	4	4
No injury	66	66	65
Non-incapacitating injury	13	12	15
Possible injury	18	17	15
Crash type percent*			
Opposite direction	10	9	9
Right angle	20	21	20
Head on	1	1	1
Rear end	30	29	32
Rear-side to side	4	3	3
Sideswipe-opposite direction	1	1	1
Sideswipe-same direction	9	11	11
Single vehicle	21	23	21
Other	3	2	3

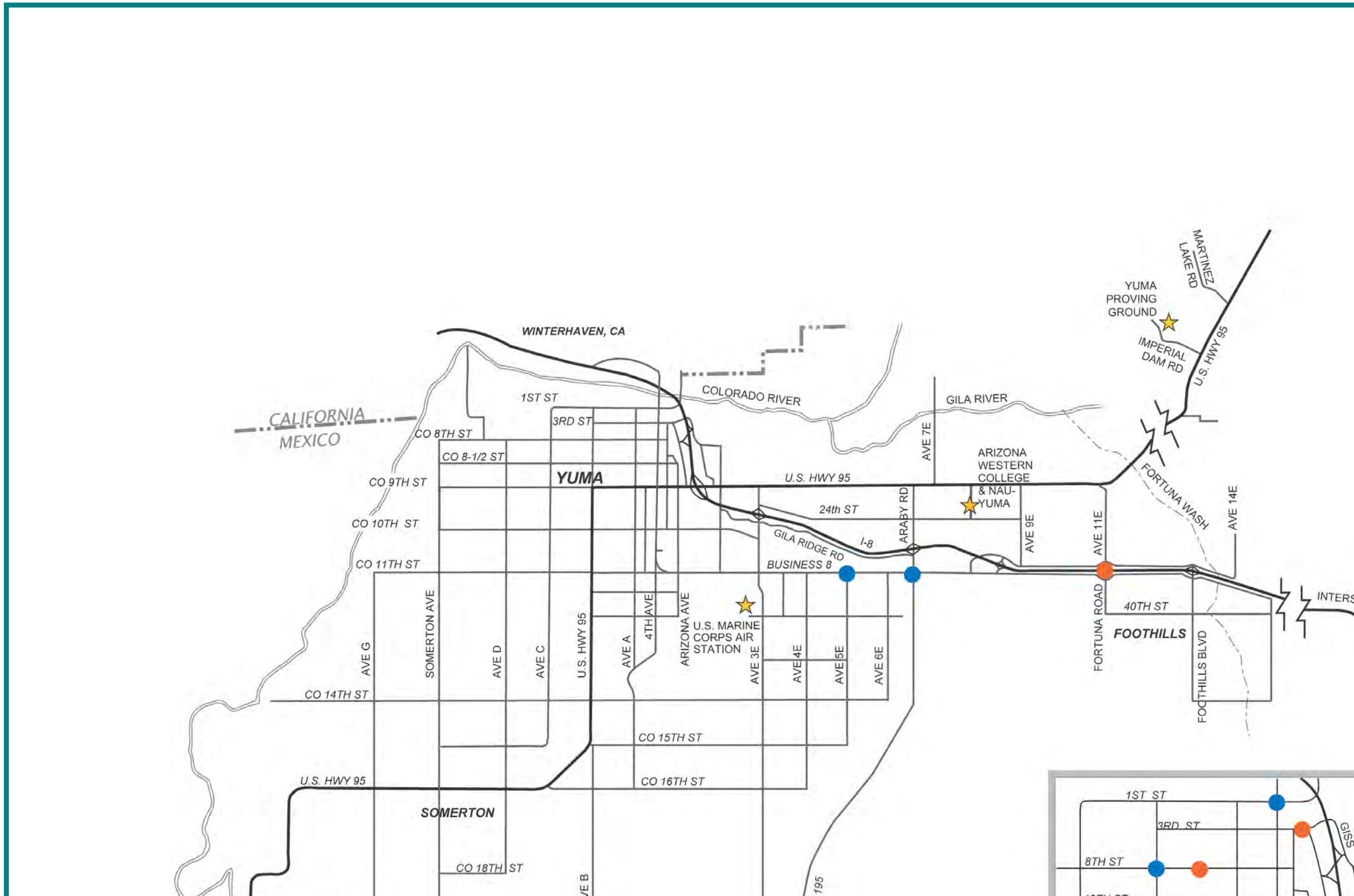
*percent may not total 100 due to rounding

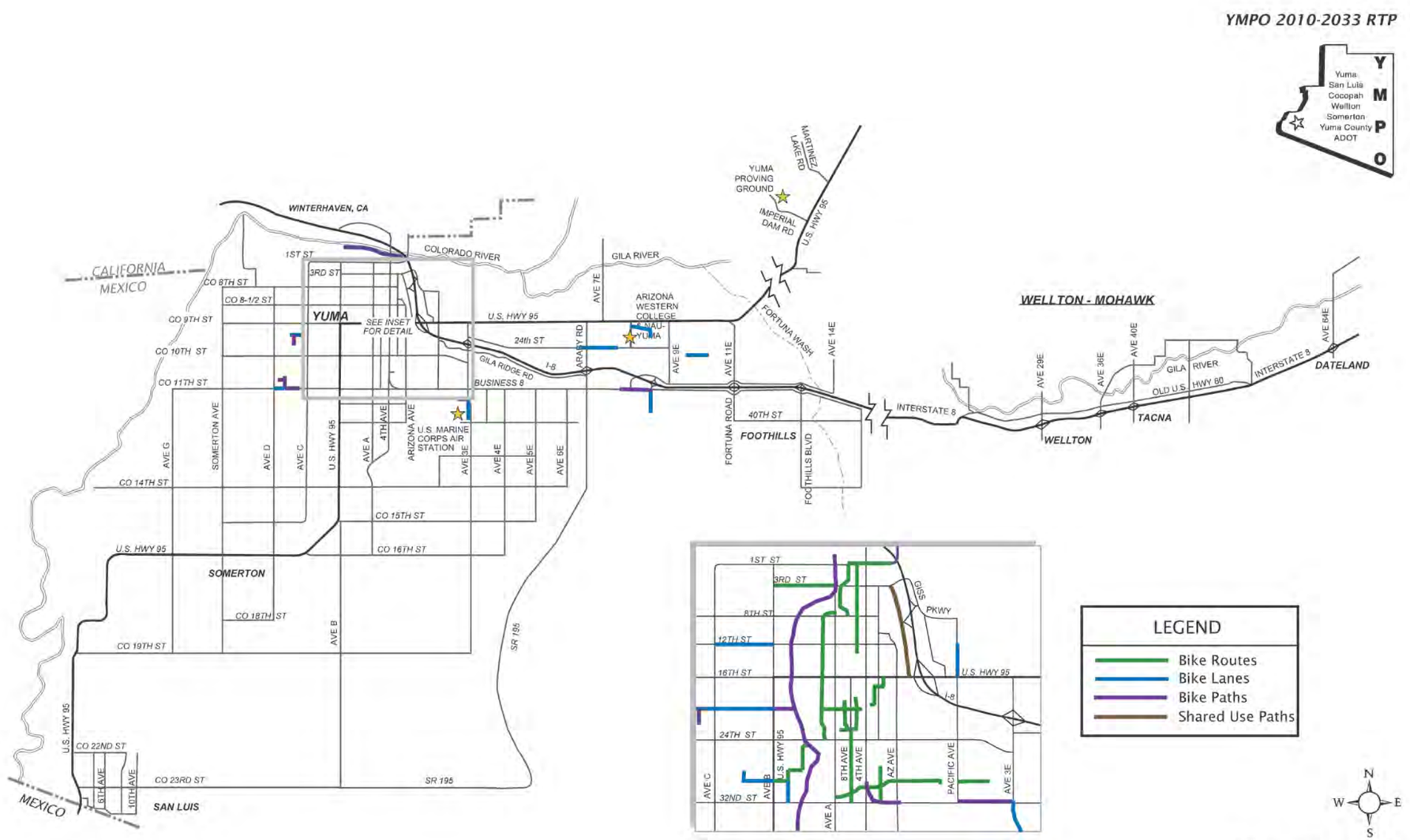
f. Non-Motorized Facilities

It is becoming increasingly important that an area's transportation system accommodate all modes of travel. The City of Yuma continues to incorporate bicycle facilities into the design of the street system as well as constructing separate bicycle paths. The purpose and need for additional paths has been identified by public input and existing plans, and will be incorporated into the 2033 RTP. The existing bicycle facilities are shown in Figure II-7. As can be seen, there are significant gaps in the existing system.

g. Public Transit

Since 1999, the Yuma County Area Transit (YCAT) system has grown from a new transit service offering only paratransit service to the current mix of demand-responsive service and fixed-route, which reached a peak of 34,000 riders in October 2008, with an annual operating budget of $2.0 million. Paratransit is a term used to define transit service that operates in response to calls from passengers or their agents to the transit operator,


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SOMERTON
U.S. HWY 95
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARABY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
ARIZONA WESTERN COLLEGE & NAU-YUMA
U.S. MARINE CORPS AIR STATION
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
AVE G
SOMERTON AVE
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
8TH ST



AYRES ASSOCIATES

Existing Bicycle Facilities

FIGURE II-7

who then dispatches a vehicle to pick up the passengers and transport them to their destination. It does not operate over a fixed route or a fixed schedule. Yuma County's paratransit is a Dial-a-Ride service.

Before 1999, only private transportation companies operated transit service in Yuma County, with taxis serving the urbanized areas and private van services providing transportation between San Luis and Yuma. The Saguaro Foundation began operating a public dial-a-ride system funded by YMPO in February 1999. YCAT's fixed-route service began in 2000 with service between San Luis and Yuma. YCAT service between Yuma and Foothills was initiated in 2001, but the ridership was not considered high enough to justify the cost, and the system was shortened to terminate at Arizona Western College.

After financial and operating difficulties in 2003 nearly caused the fixed-route transit to shut down, the City of Yuma and a consortium of local groups contributed additional funding to the system. The YMPO selected a new operating contractor and the service began to grow. Two routes were added to the system in 2004, and an additional route to Wellton initiated service in January 2006. Seven routes now operate Monday through Saturday. Both demand-response and fixed-route service is administered and funded by the YMPO. The fixed route service is operated by Yuma Transit LLC and the demand response service is operated by Kay Transportation, LLC. YMPO owns all the vehicles for the fixed-route and demand-response service and leases the 14th Street and Atlantic Avenue maintenance facility. (Yuma Transit LLC resides in and operates the maintenance facility.)

Fixed-route system

The current YCAT fixed-route system consists of seven separate routes, all of which are operated by the YMPO. There are three circular one-way, center-city routes (blue, red, and green routes) and three long-distance routes (orange, purple, yellow north, and yellow south routes). A short-distance line serving the Cocopah Indian Tribe (grey route) is funded by the Cocopah Indian Tribe. The total fleet for the fixed-route service consists of 15 vehicles total. All buses are wheelchair accessible and have bicycle racks on the front. The FY2008 operating budget for the fixed-route service is just over $1.4 million. Figure II-8 shows the existing YCAT fixed-route system.

The June 2009 ridership was approximately 24,000, but it should be noted that since September 2008, ridership each month has been higher than the corresponding month the previous year.

Except for the grey and purple routes, routes originate from the Yuma Palms Regional Shopping Center and operate on one-hour frequencies. Transfers between routes can occur wherever the routes overlap. YCAT fixed-route service operates Monday through Saturday, from 6:00 a.m. to 10:00 p.m.

One-way fares on the fixed-route system are $1.50 for Green, Red, and Blue routes; $3.50 for Yellow and Orange routes; $2.50 for Somerton to Yuma, $2.50 for Yuma to the Foothills, and free on the Gray route. Transfers to the Yellow line from any other line cost $2.50.

Dial-a-Ride system

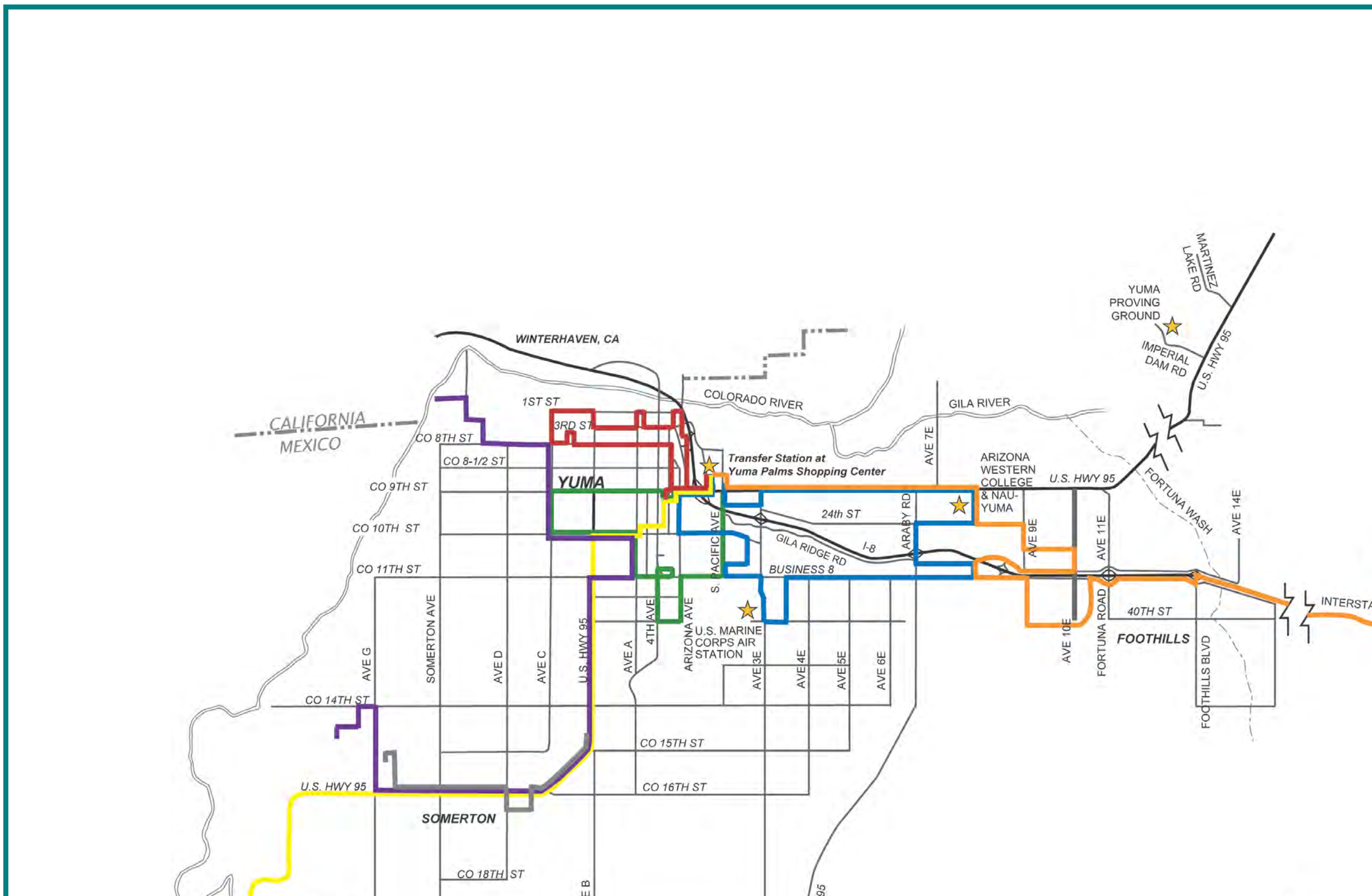
YMPO's dial-a-ride service operates throughout Yuma County serving Yuma, San Luis, Somerton, Gadsden, the Foothills, and Wellton. Service operates Monday through Saturday, from 5 a.m. to 10 p.m. The service is provided for Yuma County residents who are 60 years and older; or those of any age who are disabled. Dial-a-ride riders must have an identification card indicating that they qualify for the service. Although reservations are requested 24 hours in advance of the desired trip, the popularity of the service means that schedules are often filled more than 24 hours in advance.

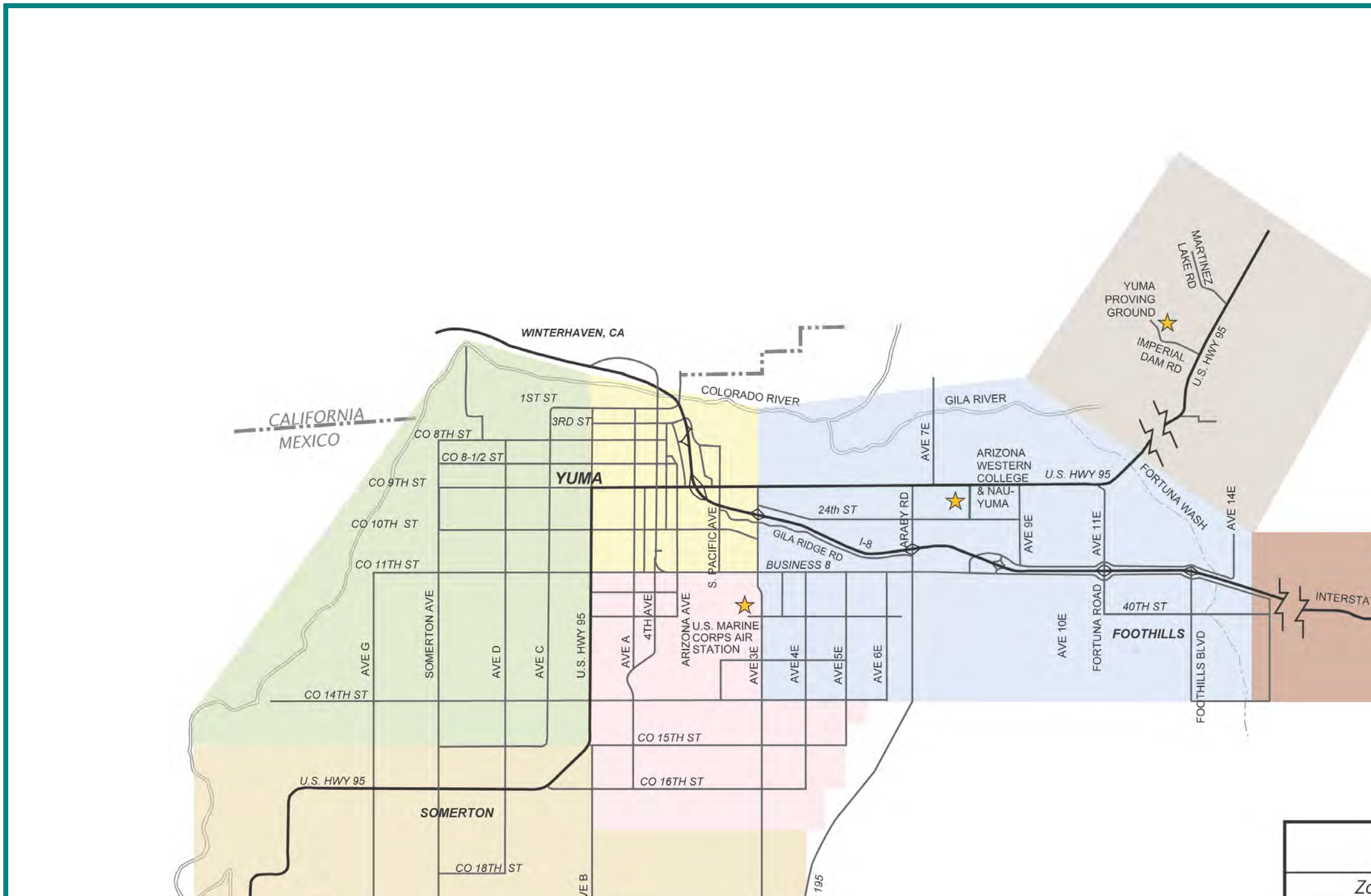
Ridership on the dial-a-ride system was approximately 3,100 people in June 2009. The FY2008 operating budget was $586,000. The dial-a-ride fleet consists of 13 vehicles total. There are nine fare areas ranging from $4.00 to $15.00. Figure II-9 shows the fare boundary areas.

h. Airport

The existing airport was originally known as Fly Field and opened in 1928. The War Department took control of the facility during World War II. It was deactivated at the end of the war and its control reverted to Yuma County. During the Korean War, it was reactivated as a military airfield. In 1956, the land was divided into two areas and a joint-use patent was deeded to Yuma County for the area that is currently the civilian portion of Yuma International Airport. The balance of the area, including all runways and taxiways remained under military control and became known as MCAS in 1962. The joint-use patent provides for unrestricted civil aviation use of the airport. The existing airport site, including MCAS, encompasses approximately 4861.4 acres.

The Yuma County Airport Authority (YCAA) was established in 1964 to administer civil activities at Yuma International Airport. The YCAA controls and operates approximately 423.4 acres of land owned by both Yuma County and the YCAA. The YCAA operates the Airport in accordance with a long term lease agreement with Yuma County.


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SOMERTON
U.S. HWY 95
Transfer Station at
Yuma Palms Shopping Center
S. PACIFIC AVE
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARABY RD
AVE 7E
AVE 9E
AVE 10E
AVE 11E
AVE 14E
ARIZONA
WESTERN
COLLEGE
& NAU-
YUMA
U.S. HWY 95
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTA
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE
CORPS AIR
STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
YUMA
PROVING
GROUND
IMPERIAL
DAM RD
MARTINEZ
LAKE RD
U.S. HWY 95


WINTERHAVEN, CA
CALIFORNIA
MEXICO
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SOMERTON
U.S. HWY 95
SOMERTON AVE
AVE G
AVE D
AVE C
AVE B
AVE A
4TH AVE
ARIZONA AVE
S. PACIFIC AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
COLORADO RIVER
GILA RIVER
AVE 7E
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARABY RD
AVE 9E
AVE 10E
AVE 11E
FORTUNA ROAD
FORTUNA WASH
AVE 14E
40TH ST
FOOTHILLS
FOOTHILLS BLVD
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
195

The YCAA is managed by an Airport Director with the guidance of a 14 member Board of Directors. The YCAA concept of management has allowed the Airport to provide and foster civil aviation in the community without a financial burden being placed on the taxpayers of Yuma County. The Authority is a self supporting entity generating the revenue necessary to operate the airport through rates and charges assessed directly to the users of the Airport.

The Yuma International Airport operates in conjunction with the United States Marine Corps Air Station (MCAS). The commercial air activity through the airport includes two airlines and provides service to Phoenix and Los Angeles. There are four runways, with two being used primarily for military aircraft and two being used primarily for civilian operations. The current taxiway system at the airport includes full-length parallel taxiways, runway exit/entrance taxiways, and stub taxiways providing access to landside facilities (passenger terminal facilities, aircraft storage facilities, aircraft parking aprons, and support facilities). The passenger terminal building provides five air carrier gate positions, expanded ticketing and departure areas, as well as a mechanized baggage claim system. There is an air cargo parking ramp at the airport.

The FC "Frosty" Braden Passenger Terminal at the Yuma International Airport offers travelers the latest in airport amenities and comfort. The $10 million Terminal building was completed in February of 1999 using local contractors and financing provided through the Federal Aviation Administration, the Arizona Department of Transportation and the issuance of tax exempt bonds. Visitors to the Airport will find four automobile rental agencies, a restaurant and lounge, a gift shop and a game room in addition to the two commercial airlines.

The Yuma Airport Master Plan has nine specific objectives:

- Document the issues that the proposed development will address.
- Justify the proposed development through the technical, economic, and environmental investigation of concepts and alternatives.
- Provide an effective graphic presentation of the development of the airport and anticipated land uses in the vicinity of the airport.
- Establish a realistic schedule for the implementation of the development proposed in the plan, particularly the short-term capital improvement program.
- Propose an achievable financial plan to support the implementation schedule.
- Provide sufficient project definition and detail for subsequent environmental evaluations that may be required before the project is approved.
- Present a plan that adequately addresses the issues and satisfies local, state, and Federal regulations.
- Document policies and future aeronautical demand to support municipal or local deliberations on spending, debt, land use controls, and other policies necessary to preserve the integrity of the airport and its surroundings.

- Set the stage and establish the framework for a continuing planning process. Such a process should monitor key conditions and permit changes in plan recommendations as required.

i. Rail

Freight

The Union Pacific Railroad handles all freight rail operations in the Yuma area. Yuma is situated along the Union Pacific Railroad's primary east-west freight corridor known as the Sunset Route. The Sunset Route handles as many as 70 trains per day. This all-weather freight corridor links the Port of Los Angeles in California with the Port of Houston in Texas. These two ports are the two largest shipping volume, inter-modal, deepwater ports in the United States. The majority of imported and exported goods consumed or produced in the United States pass through these two ports.

Industrial growth along the US/Mexican border region has been influenced by the North American Free Trade Agreement (NAFTA) and has increased the amount of freight traffic along the border region. Current US/Mexican rail freight traffic in the west moves through the ports of entry at Ambos Nogales, Sonora and Mexicali, Baja California. Rail freight through the Port of Entry at Ambos Nogales is primarily manufactured goods, cement, and copper concentrates from central Sonora. Additionally, intermodal container freight from the deepwater Port of Guaymas, Sonora is increasing as well. Freight rail trains from Guaymas along the Nogales branch of the Union Pacific Railroad has increased significantly since 1993.

Rail freight through the Port of Entry at Mexicali is primarily farm produce goods, livestock, and manufactured goods from the farming regions and the maquiladoras in the Colorado River delta and northwestern Sonora. Rail freight is brought to this port of entry by the Ferrocarril Nacional de Mexico (NDeM).

Freight along the U.S./Mexico border near Yuma enters at the Port of San Luis, approximately 25 miles south of Yuma. Freight is exported and imported through the region primarily by truck. Food and electrical equipment imports have generally increased in recent years. Produce from northwest Sonora supplies much of the U.S. market during the winter months. Additionally, produce is grown year round in northwest Sonora, and the Yuma Valley, and shipments continue year round. Electrical equipment from the maquiladoras in San Luis Rio Colorado is shipped through the port of entry at San Luis.

There is an inactive, unmaintained federal spur line that extends from the Main Yuma Freight Yard west and then south along the bank of the Colorado River to the Somerton Siding, paralleling the West Main Canal.

Passenger

Amtrak operates three passenger trains in each direction that travel between Los Angeles, California and Orlando, Florida on a weekly basis. The trains stop in Yuma at the Amtrak station (281 Gila Street). There are no services provided at the station.

4. Traffic Data

a. Traffic Volumes

The YMPO conducts an annual traffic count program, which consists of quarterly counts at 195 locations throughout the county. The volumes are then reported by the YMPO for each quarter along with an annual average. In addition, a select number are performed monthly. Figure II-10 shows the 2008 average daily traffic volumes for the area. A sample of the high-volume locations include:

- 36,100 vehicles along 16th Street, east of Arizona Avenue
- 30,900 vehicles along 24th Street, east of Avenue A
- 28,400 vehicles along 32nd Street, east of Arizona
- 26,900 vehicles along I-8, west of Fortuna Road
- 26,100 vehicles along Avenue B, south of 20th Street
- 21,600 vehicles along 4th Avenue, north of 24th Street

The YMPO also aggregates the traffic volume data by geographic area to highlight growth patterns throughout the region. Table II-7 shows the average percent change from 2007 to 2008 by geographic area (geographic areas are shown in Figure II-2). While there is variation in the traffic volume change among the different geographic areas, overall traffic volumes decreased one percent between 2007 and 2008.

TABLE II-7: TRAFFIC VOLUME CHANGE

GEOGRAPHIC REGION	PERCENT CHANGE 2007 TO 2008
South Valley	1.0%
West Yuma Valley	-2.6%
West Urban	-6.0%
East Urban	-7.2%
East Yuma Mesa	3.4%
Wellton-Mohawk	6.6%
All Areas	-1.0%

Another traffic volume statistic compiled by the YMPO is the fluctuation of traffic volumes between the summer and winter months by geographic region. It is summarized in Table II-8 for the years 2004 through 2008. This is an indication of the winter visitor population throughout the county. For example in 2008, the winter volumes in the South Valley were 27% higher than the summer volumes. The highest fluctuation in 2008 occurred in the East Yuma Mesa region. It is interesting to note that the overall trend is a smaller fluctuation between winter and summer. This is indicative of 1) a smaller winter visitor population compared to the permanent population or 2) former winter visitors becoming permanent residents.

TABLE II-8: 2004-2008 WINTER/SUMMER TRAFFIC VOLUME FLUCTUATION

GEOGRAPHIC REGION	2004	2005	2006	2007	2008
South Valley	44%	23%	27%	31%	27%
West Yuma Valley	3%	20%	19%	17%	16%
West Urban	2%	13%	3%	22%	25%
East Urban	40%	20%	35%	25%	11%
East Yuma Mesa	120%	52%	49%	56%	61%
Wellton-Mohawk	63%	59%	25%	40%	30%

Traffic data was also obtained from US Customs and Border Protection regarding the number of crossings into the US by private vehicle, pedestrian, and commercial vehicles. Data for the last eight years is summarized in Table II-9. It is interesting to note that the highest year is not the same for each type of crossing. The peak crossing for private vehicles occurred in 2004 and it has been declining ever since. The peak crossing for pedestrians occurred in 2002, and the highest crossing for commercial vehicles occurred in 2005.

There are two factors that likely contribute to this recent decline: 1) the increased level of security has resulted in longer lines and longer time to cross and 2) there are not sufficient vehicle lanes at San Luis POE I and it is believed that people do not cross as frequently as before. The port expansion, which will add capacity and the new SENTRI cards, which will expedite crossing the border will improve these conditions.

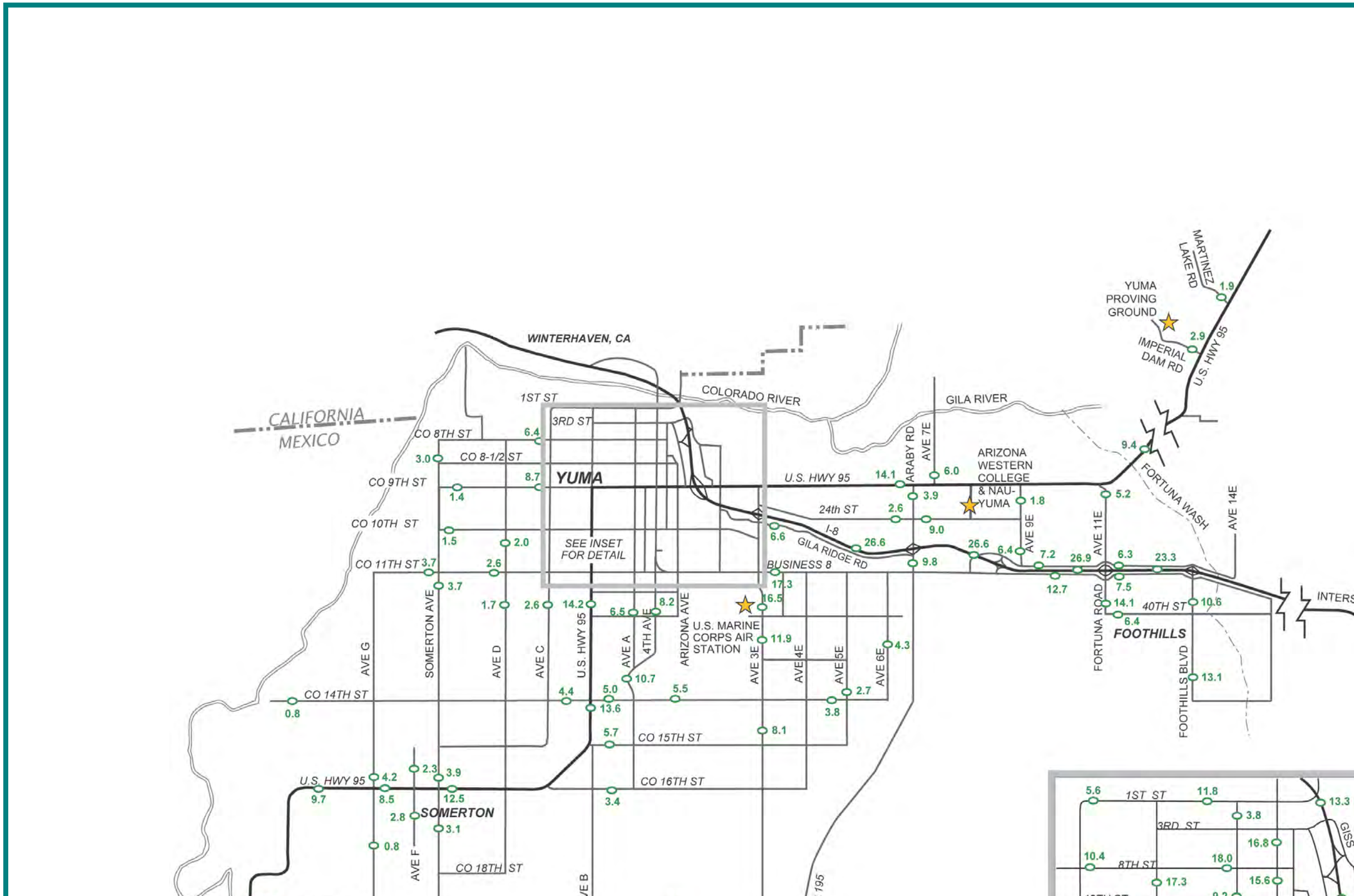

WINTERHAVEN, CA
COLORADO RIVER
1ST ST
3RD ST
CALIFORNIA
MEXICO
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
I-8
GILA RIDGE RD
BUSINESS 8
GILA RIVER
ARABY RD
AVE 7E
ARIZONA WESTERN COLLEGE & NAU-YUMA
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
FOOTHILLS
40TH ST
FOOTHILLS BLVD
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
SOMERTON AVE
AVE G
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
AVE F
AVE B
SOMERTON
U.S. HWY 95
1ST ST
3RD ST
8TH ST
GISS

TABLE II-9: SAN LUIS PORT OF ENTRY CROSSING STATISTICS

YEAR	Private Vehicle	Pedestrian	Commercial Vehicle
2001	2,596,180	3,170,269	40,032
2002	3,213,375	2,968,278	37,671
2003	3,189,867	2,825,907	38,016
2004	3,755,829	2,316,812	41,273
2005	3,472,277	2,211,286	46,522
2006	2,705,113	2,669,311	45,851
2007	2,481,013	2,798,782	42,716
2008	2,313,661	2,564,499	44,250

b. Volume-to-Capacity Ratio and Level of Service

The ratio of the volume on a segment of road compared to the traffic capacity of the segment is known as the volume to capacity or v/c ratio. The vehicle capacity of a roadway can be defined as "the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic, and control conditions." (Highway Capacity Manual 2000, Transportation Research Board) The capacity values used for the various types of roadway in the study area are presented in Table II-10.

TABLE II-10: ROADWAY CAPACITIES (VEHICLES PER DAY)

Facility Type	2-Lane	4-Lane	6-Lane
Interstate	-	75,000	115,000
Principal Arterial	-	34,500	51,800
Minor Arterial	-	32,900	49,300
Rural Major Collector	12,600	25,200	-
Rural Minor Collector	12,600	-	-
Urban Collector	14,100	28,200	-

The v/c ratios can be equated to levels of service to provide a standard way of reporting operating conditions along a roadway. Levels of service are qualitative measures of a roadway's effectiveness at handling traffic. Levels of service (LOS) range from LOS A to LOS F, where LOS A represents free flow conditions and LOS F represents a congested, unstable flow. Table II-11 provides definitions for each LOS and the corresponding ranges of v/c ratios.

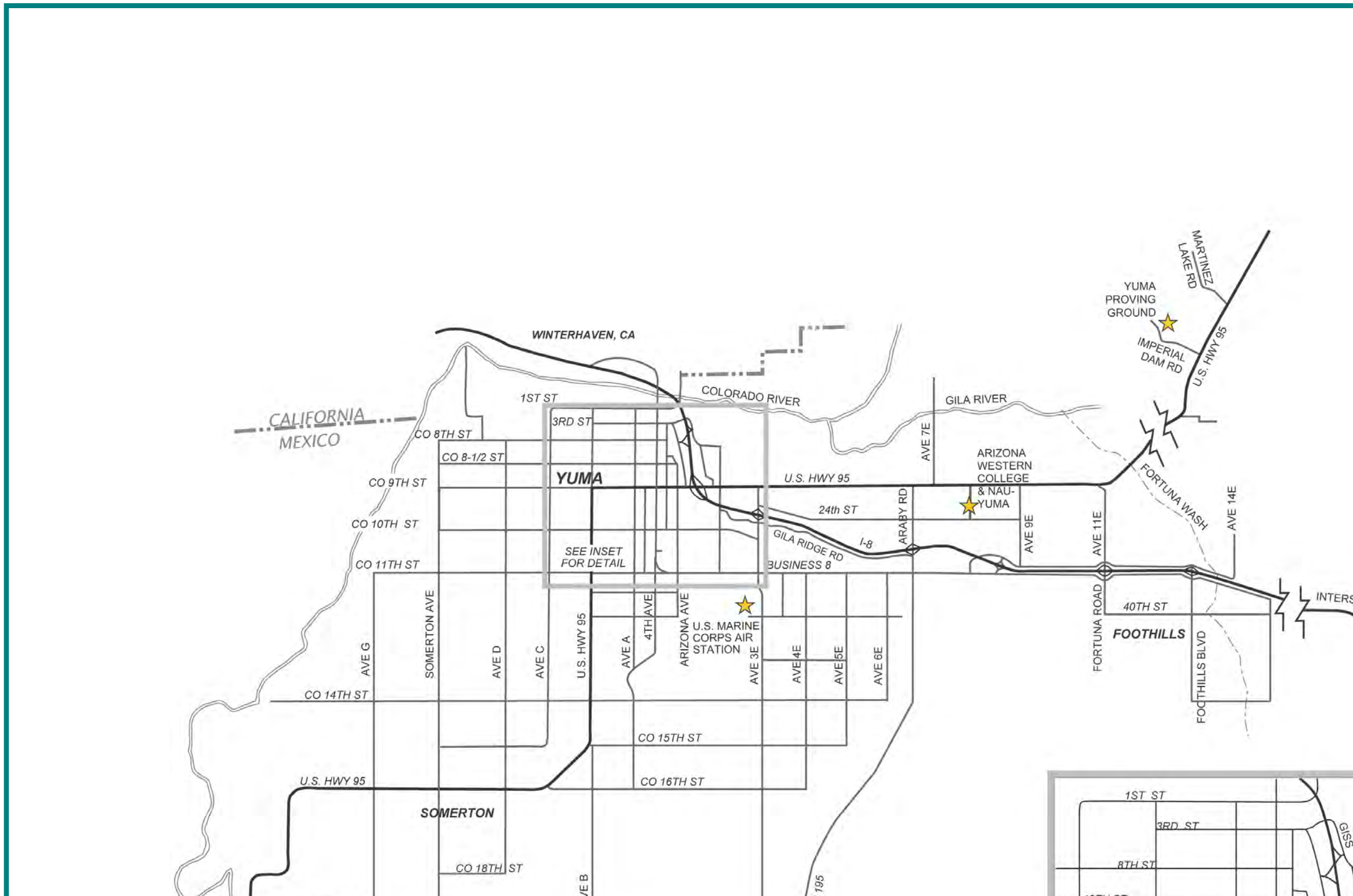
TABLE II-11 – LOS DEFINITIONS AND CORRELATED V/C RATIOS

LOS	Definition	V/C Ratio Range
A	Free flow conditions; virtually no delay	0.0 to 0.50
B	In the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable.	0.51 to 0.60
C	Still in the range of stable flow, but marks the beginning of the range in which the operation of individual users becomes significantly affected by others	0.61 to 0.72
D	High-density but still stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience	0.73 to 0.84
E	Represents operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value	0.85 to 1.00
F	Traffic stream is defined as forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point	> 1.00

Source: Highway Capacity Manual 2000, Transportation Research Board

LOS D is generally considered the minimum acceptable level of service for roadways in an urban area. As such, a v/c ratio of 0.85 was considered to be the maximum acceptable v/c ratio.

Figure II-11 shows those roadways that currently have level of service E or F, i.e. a volume to capacity ratio of 0.85 or higher based on the 2008 average daily traffic volumes. As can be seen, portions of 16th Street, 24th Street, and Avenue 3E are currently at LOS E or F.


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
SOMERTON
SOMERTON AVE
AVE G
AVE D
AVE C
AVE B
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE 7E
ARABY RD
24th ST
I-8
GILA RIDGE RD
BUSINESS 8
ARIZONA WESTERN COLLEGE & NAU-YUMA
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
U.S. MARINE CORPS AIR STATION
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
1ST ST
3RD ST
8TH ST

C. FUTURE CONDITIONS

A projection of future conditions forms the basis for analyzing the transportation needs of the YMPO region. Existing population and employment data used in the travel-forecasting model is projected to the year 2033 for each TAZ in order to estimate travel demand. A future base street network is developed based on the 2029 RTP and input from staff regarding any modifications to the 2029 RTP. The future conditions data used in the 2033 RTP analysis is summarized in the following sections.

1. Socio-Economic Data

Population projections for the year 2033 were obtained form the Arizona Department of Commerce and are shown in Table II-12 along with the 2008 estimates. As can be seen, the projected growth in the region over the 26 year period ranges from 13 percent to 120 percent with an average for the entire county of 61 percent.

TABLE II-12: POPULATION PROJECTIONS FOR YUMA COUNTYAND INCORPORATED AREAS*

Jurisdiction	2008**	2033***	Increase
City of Yuma	93,719	140,729	50%
Unincorporated Area	69,660	104,474	50%
City of San Luis	26,705	58,696	120%
City of Somerton	11,377	21,428	88%
Wellton	2,318	2,621	13%
Total – Yuma County	203,779	327,948	61%

*Year-round resident population only
**Arizona Department of Commerce Estimate (12/12/08)
*** Arizona Department of Commerce Projection (Dec 2006)

The 2033 model data projections are summarized by jurisdiction in Table II-13. It should be noted that since the data in the model is extrapolated to the TAZ level based on dwelling units, the resulting population estimates from the model do not match the Department of Commerce estimates exactly.

TABLE II-13: 2033 TRAFFIC MODEL SOCIO-ECONOMIC FORECASTS

	COUNTY	COCOPAH	SOMERTON	SAN LUIS	WELLTON	YUMA	TOTAL
Population	**89,057**	**3,368**	**20,310**	**61,320**	**2,820**	**146,560**	**323,435**
Single Family DU	16,545	860	2	601	566	671	19,245
Single Family DU-Urban	794	8	4,649	10,748	0	37,024	53,224
Multi-Family	491	14	699	1,259	0	7,874	10,338
Mobile Home-Winter	6,089	6	53	65	0	5,235	11,448
RV Park-Winter	9,294	24	71	20	695	5,299	15,403
Retail Employment	8,452	132	792	2,093	213	15,146	26,828
Service Employment	8,570	462	1,479	1,812	483	21,647	34,453
Office Employment	3,122	178	217	590	26	3,343	7,475
Public Office Employment	2,614	70	280	738	240	5,589	9,530
Industrial Employment	5,765	217	196	728	49	4,844	11,800
Manufacturing Employment	2,782	203	300	1,744	28	10,534	15,590
Elementary/JRHS Employment	1,068	0	588	1,004	82	3,966	6,707
High School Employment	474	20	25	699	0	1,852	3,071
University Employment	68	0	74	80	0	1,396	1,618
Casino Employment	0	1,179	0	0	0	0	1,179
Total Employment	**32,917**	**2,461**	**3,949**	**9,488**	**1,120**	**68,316**	**118,252**
Total Dwelling Units	**33,213**	**912**	**5,475**	**12,693**	**1,261**	**56,104**	**109,657**
POP/DU Ratio	**2.68**	**3.69**	**3.71**	**4.83**	**2.24**	**2.61**	**2.95**
EMP/POP Ratio	**0.37**	**0.73**	**0.19**	**0.15**	**0.40**	**0.47**	**0.37**
Dwelling unit growth	**54%**		**98%**	**124%**		**63%**	**63%**
Employment growth	**187%**	**54%**	**109%**	**221%**	**28%**	**25%**	**62%**

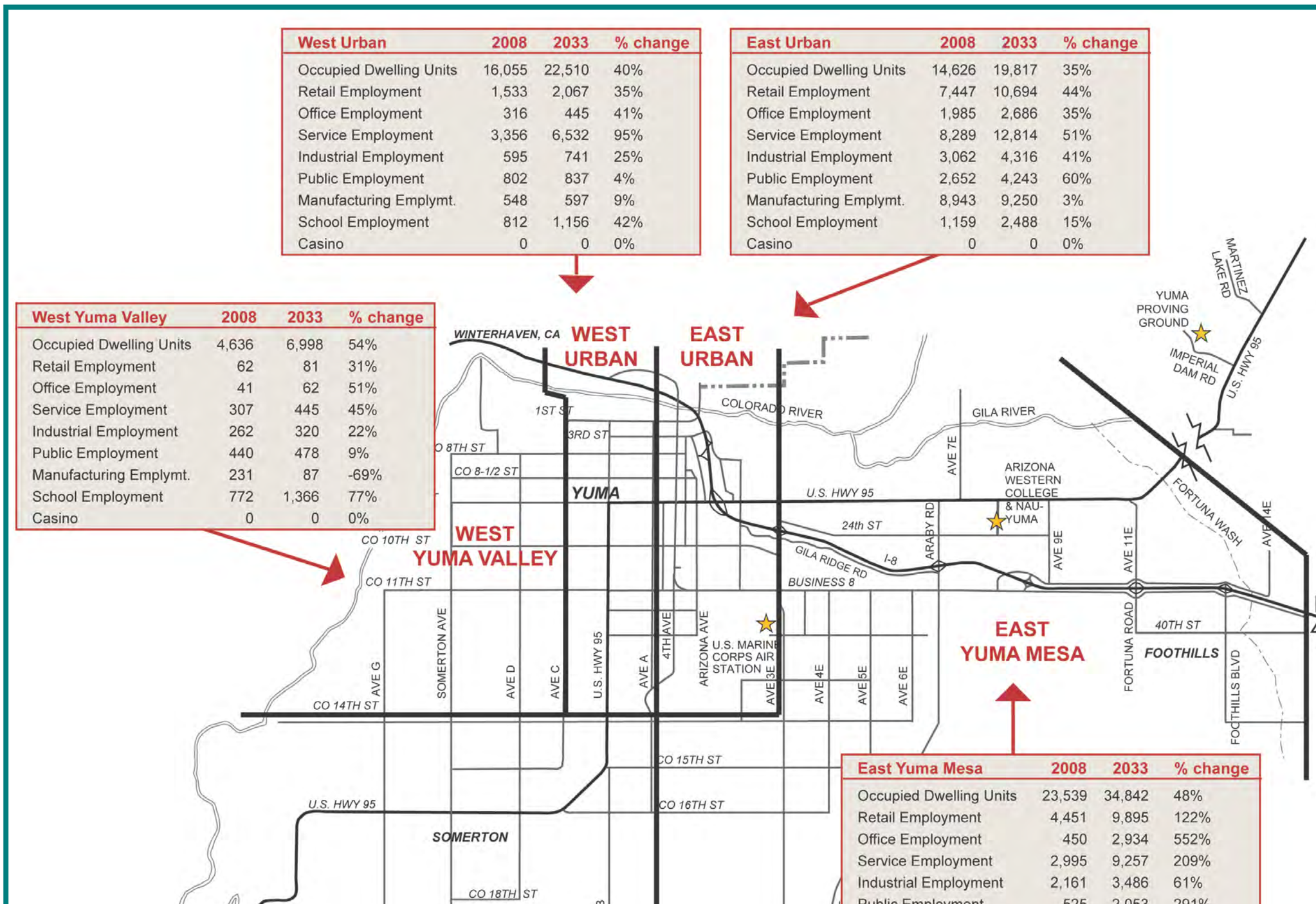
Figure II- 12 on the following page presents a comparison of the 2008 and 2033 model data by geographic sub-area. As would be expected, the largest growth is projected for those areas that are not fully developed; however, the entire region is expected to experience significant growth.

West Urban	2008	2033	% change
Occupied Dwelling Units	16,055	22,510	40%
Retail Employment	1,533	2,067	35%
Office Employment	316	445	41%
Service Employment	3,356	6,532	95%
Industrial Employment	595	741	25%
Public Employment	802	837	4%
Manufacturing Emplymt.	548	597	9%
School Employment	812	1,156	42%
Casino	0	0	0%

East Urban	2008	2033	% change
Occupied Dwelling Units	14,626	19,817	35%
Retail Employment	7,447	10,694	44%
Office Employment	1,985	2,686	35%
Service Employment	8,289	12,814	51%
Industrial Employment	3,062	4,316	41%
Public Employment	2,652	4,243	60%
Manufacturing Emplymt.	8,943	9,250	3%
School Employment	1,159	2,488	15%
Casino	0	0	0%

West Yuma Valley	2008	2033	% change
Occupied Dwelling Units	4,636	6,998	54%
Retail Employment	62	81	31%
Office Employment	41	62	51%
Service Employment	307	445	45%
Industrial Employment	262	320	22%
Public Employment	440	478	9%
Manufacturing Emplymt.	231	87	-69%
School Employment	772	1,366	77%
Casino	0	0	0%

East Yuma Mesa	2008	2033	% change
Occupied Dwelling Units	23,539	34,842	48%
Retail Employment	4,451	9,895	122%
Office Employment	450	2,934	552%
Service Employment	2,995	9,257	209%
Industrial Employment	2,161	3,486	61%
Public Employment	525	2,053	291%



2. Future Base Roadway Network

A future base street network is developed for use in the travel-forecasting model. The future network is built from the existing network using the 2029 RTP, which represents projects that have a commitment from the sponsoring agency. These projects were reviewed with staff and are based on published documents including the City of Yuma 2010-2019 CIP, Yuma County 2010 CIP, and recommended projects from the recently completed San Luis SATS. The resulting future base network is shown in Figure II-13. Several of the added projects, outlined below, will have a significant impact on capacity and mobility:

- 4 lanes on Co 23rd from U.S. 95 to SR 195
- A 6-lane expressway on 32nd Street from Avenue 3E to Avenue 9E
- A 6-lane expressway on 16th Street from Avenue 2E to Avenue 10E
- 5 lanes on Co 14th (56th Street) from SR 195 to Avenue 13E
- 7 lanes on 24th Street from Avenue C to Avenue D
- 7 lanes on 32nd Street from Avenue C to Avenue D
- 7 lanes on Fortuna from I-8 to US 95
- 7 lanes on 40th Street from Avenue 3 ½E to Avenue 10E

Additionally, the City of Yuma has included funding in their CIP to study two new corridors – an expressway corridor along Co 14th Street and Avenue D from SR 195 to I-8 in California and a new corridor for the continuation of SR 195 from I-8 to US 95. ADOT is currently completing an Alternatives Selection Study, which is evaluating alternatives to extend SR 195 from I-8 to US 95.

a. Traffic Forecasts

The travel-forecasting model was used to develop traffic forecasts for the year 2033 base network as described above. After successful calibration of the model for the year 2008, the future socio-economic data and future base network are used to develop 2033 forecasts. Figure II-14 presents the 2033 traffic forecasts for the base condition.

The daily traffic forecasts for the same high-volume locations documented in the existing conditions are as follows:

- 52,000 vehicles along 16th Street, east of Arizona Avenue (44% growth)
- 28,000 vehicles along 24th Street, east of Avenue A (9% decrease)
- 38,000 vehicles along 32nd Street, east of Arizona (34% growth)
- 42,000 vehicles along I-8, west of Fortuna Road (56% growth)
- 28,000 vehicles along Avenue B, south of 20th Street (7% growth)
- 26,000 vehicles along 4th Avenue, north of 24th Street (20% growth)

The projected decrease on 24th street is due to some future diversion of traffic to 16th Street and 32nd Street, which are both planned for widening.

b. Future Base Roadway Analysis

Similar to the existing conditions, the ratio of the traffic forecast to the traffic capacity of a segment of road was computed. The v/c ratios were compared to levels of service to determine those road segments that are expected to have a level of service E or F under the 2033 base condition. The result is shown in Figure II-15. As can be seen in the figure, even with the improvements included as part of the 2033 base, the continued growth expected in the region will result in several road segments with level of service E and F conditions.

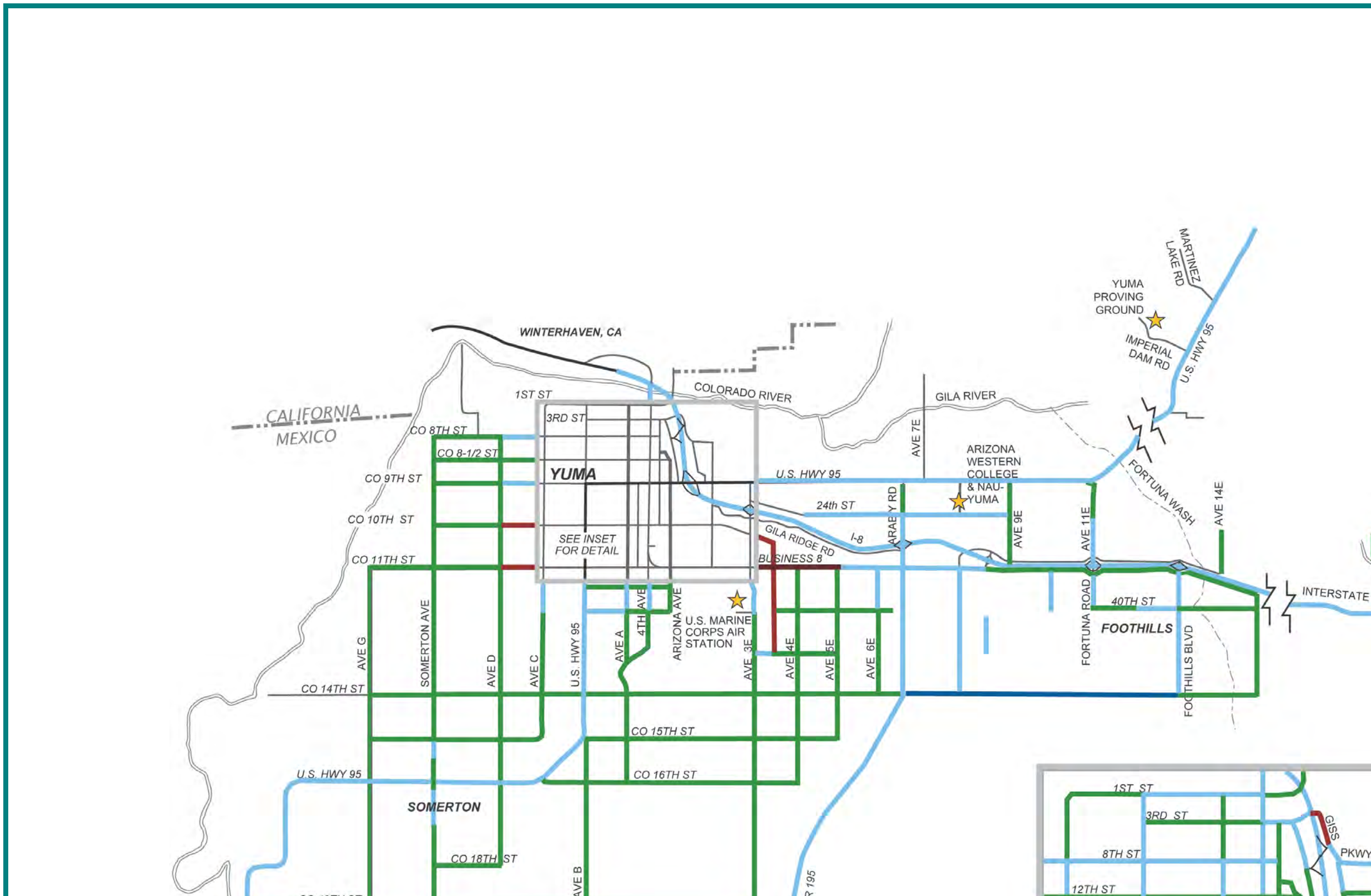
Specifically, the roadways that are expected to have unacceptable levels of service in the future are summarized below.

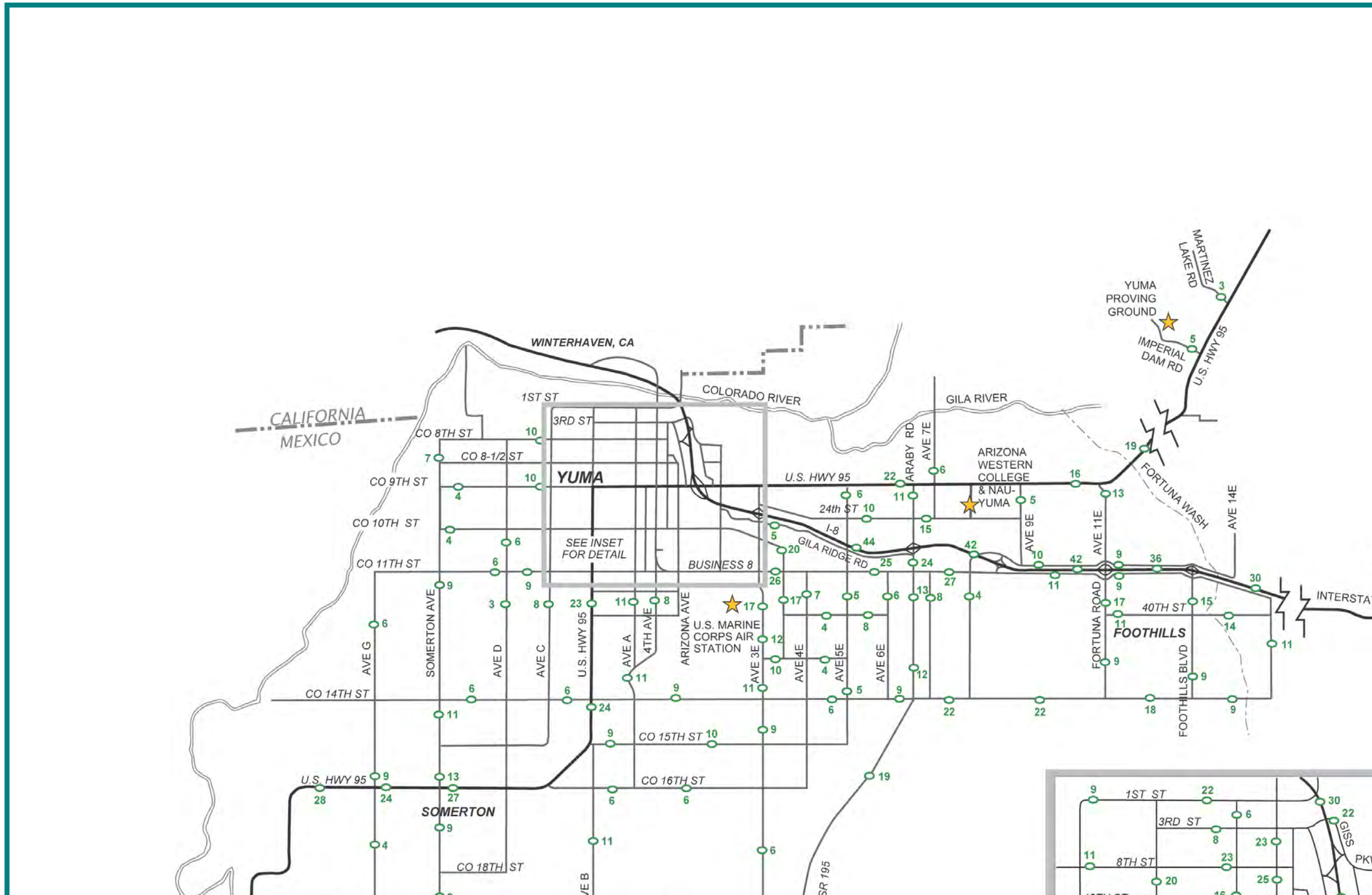
- US 95: Fortuna Road north
- US 95: Co 22nd Street to two miles north of Co 19th Street
- Somerton Avenue: Co 14th to U.S. 95
- 16th Street: Avenue B to I-8
- 32nd Street: Avenue B to 4th Avenue
- Avenue E: SR 195 to POE II
- Co 12th: Avenue 13E to Avenue 15E
- Fortuna: Co 12th to Co 13th
- Avenue 3E: 40th Street to 48th Street
- Avenue B: Co 19th Street to Co 23rd Street

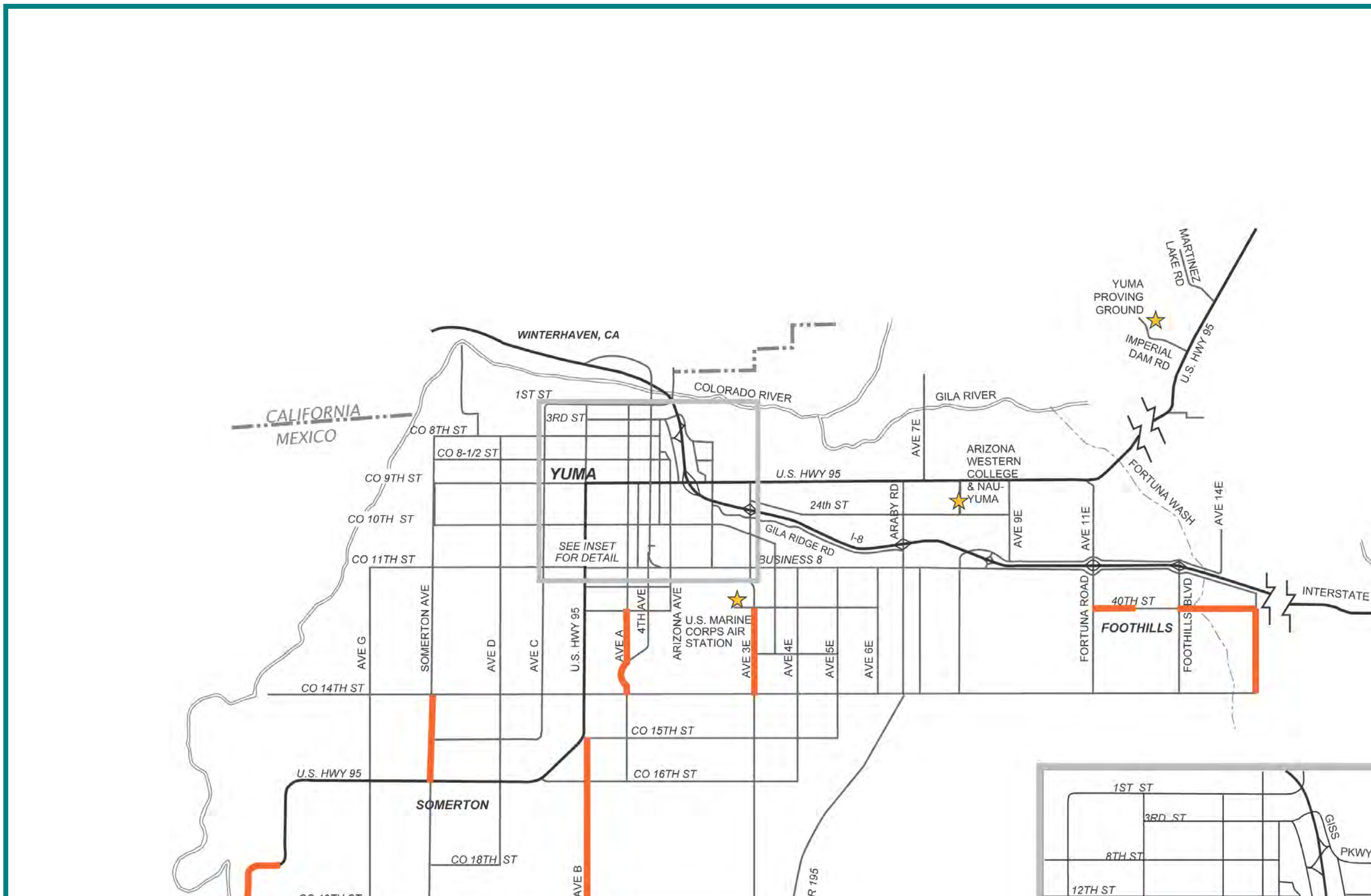
The next step in the process is to develop the roadway element, which will identify additional projects that would improve the level of service, increase mobility, and provide system continuity. This will be presented in the next chapter.

3. Transit Demand Analysis

This section provides an overview of current ridership and transit demand forecasts. There are many different methods available for transit demand forecasting, and no one method can claim full accuracy. However, forecasts using these methods produce reasonable results and since passenger revenues make up a small part of most transit systems' total budget (10 to 25 percent). As a result, even large variations in transit ridership forecasts have a relatively small impact on projected revenue. If projected ridership is underestimated, additional resources could be used to respond to demand. Thus, the projections in this report can be relied upon to show the level of need for local and regional transit service in Yuma County. Additionally, although new transit ridership surveys were not conducted as part of the 2033 RTP, surveys conducted for the 2029 RTP still provide meaningful input regarding transit needs.


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARAEY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
AVE G
SOMERTON AVE
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
U.S. MARINE CORPS AIR STATION
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
AVE B
MARTINEZ LAKE RD
YUMA PROVING GROUND
IMPERIAL DAM RD
U.S. HWY 95
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKWY


WINTERHAVEN, CA
COLORADO RIVER
CALIFORNIA
MEXICO
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
BUSINESS 8
U.S. HWY 95
SOMERTON
GILA RIVER
ARABY RD
AVE 7E
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
I-8
GILA RIDGE RD
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTA
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
AVE G
SOMERTON AVE
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
SR 195
1ST ST
3RD ST
8TH ST
GISS
PKW


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
SOMERTON
SOMERTON AVE
AVE G
AVE D
AVE C
AVE B
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE 7E
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
ARABY RD
I-8
GILA RIDGE RD
BUSINESS 8
AVE 9E
AVE 11E
AVE 14E
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
8TH ST
12TH ST
GISS PKWY

Three transit demand forecasting models were used to estimate future transit demand in Yuma County. The first model is the Arkansas Public Transportation Needs Assessment (APTNA) model, which was recently used by the State of Arizona for its Rural Transit Needs Study (RTNS). The APTNA method projects transit demand using the following trip rates:

- An elderly person age 60 and over would make about 6.79 one-way passenger trips annually;
- A person with disabilities under age 60 would make about 4.49 one-way passenger trips annually; and
- A person living in poverty under age 60 would make about 20.50 one-way passenger trips annually.

The other two models are commonly used by transit agencies to estimate the potential high point of transit demand given the sheer amount of certain transit-dependent populations. These estimates are made regardless of realistic barriers in choosing to use public transportation.

The first of these two models is the Peterson and Smith Regression Model.[1] This model is based on observing correlations of ridership on existing transit systems of two "target" population groups: elderly persons aged 65 and over and non-elderly low-income populations with disabilities. These two population groups are singled out, because typically generate approximately 80 percent of total transit demand.

Peterson and Smith Transit Demand =

[12(Elderly Population) +19*(Non-Elderly Low Income Population)]/0.8*0.77*

The second of these two models is the Elderly and Disabled Transit Trip Factors Model.[2] The rates in this model were developed based on research conducted in rural areas involving the frequency of transit ridership among the elderly and disabled.

Elderly and Disabled Transit Demand =

*[(0.03 trips/day * Elderly Population) + (0.26 trips/day * Disabled Population)] * 260 days*

Table II-14 summarizes the calculated transit demand estimates using these models. Population data was obtained from the U.S. Census Bureau for 2000, and population projections were obtained from a calculated growth factor using TAZ data from the Yuma Metropolitan Planning Organization. Not surprisingly, the models show that as Yuma

[1] Source: Estimating Demand for Rural Transportation, Proceedings of the First National Conference on Rural Public Transportation, October 27, 1976, p. 95

[2] Source: Peat, Marwick, Mitchell and Co., January 1978.

County's population is forecasted to double by 2033, transit demand is also anticipated to double.

TABLE II-14: POPULATION GROWTH AND TRANSIT DEMAND FORECAST

	2000	2033
Population		
Elderly (Above Age 60)	33,855 [1]	67,356 [2]
Disabled (Below Age 60)	149,687 [1]	297,810 [2]
Poverty (Below Age 60)	157,758 [1]	313,868 [2]
Annual Trip Demand		
Ridership	341,300	679,034
APTNA Model	4,136,009	8,228,799
Peterson & Smith Model	3,276,025	6,517,817
Elderly & Disabled Model	10,382,910	20,657,325

[1] Source: U.S. Census Bureau, 2000

[2] This figure was calculated as follows:

1) The percentage change in growth was by using current population data for 2000 from the U.S. Census Bureau (160,026) and projected population forecasts from the Yuma Metropolitan Planning Organization (318,380) to obtain a growth factor of 98.96%.

2) This growth factor was subsequently applied (i.e., multiplied) to the 2000 population data for the relevant sub-population data (e.g., population age 60 and older, etc.)

4. Mode choice

Yuma County's travel patterns, specifically mode usage, are compared with those of the state and country in Table II-15. The percentage of people using a personal vehicle, whether it is driving alone or carpooling, is about 90 percent of the population in Yuma County. This is comparable to the state and national rates (although the rate of carpooling is somewhat lower across the country than it is in Yuma County and Arizona). Public transportation usage of 1.1% in Yuma County is low. It is almost one percentage point lower than Arizona (1.9%) and more than three percentage points lower than national rates (4.7%). In contrast, a higher percentage of people walk to work in Yuma County (4.3%) than in Arizona (2.6%) and across the country (2.9%). In fact, almost four times as many people walk to work in Yuma County than take public transportation.

TABLE II-15: TRAVEL MODE TO WORK STATISTICS

Travel Mode	Yuma County		AZ	US
	Persons	Percent	Percent	Percent
Drove alone	38,086	74.5%	74.1 %	75.7 %
Carpooled	8,245	16.0%	15.4 %	12.2 %
Public transportation	586	1.1%	1.9 %	4.7 %
Bicycle	418	0.9%	1.0 %	0.4 %
Walk	2,234	4.3%	2.6 %	2.9 %
Other means	676	1.3%	0.9 %	0.7 %
Work at home	970	1.9%	3.7 %	3.3 %
Total Workers (Age 16+)	51,675			

Source: U.S. Census Bureau, 2000 Census

D. NEEDS AND DEFICIENCIES SUMMARY

The analysis presented in the existing and future conditions sections documented the transportation needs and deficiencies of the region. The following presents a summary of the issues for each mode.

The transit system analysis resulted in the following findings.

- One hour headways limit mobility and convenience
- Service gaps exist in the current network, e.g. between 8th Street and 16th Street
- Transit riders, especially seasonal workers, have no transit options on Sundays and holidays
- Service during the planting and harvest seasons and during the school year may not be adequate for demand
- Demand-response service is not well known outside of the urbanized area and is more expensive to provide to remote areas

Other factors may affect the growth of the current transit system.

- Difficulty of accurately predicting the growth in transit and non-motorized demand
- Perception that the YCAT system is in an evaluation phase, rather than an established and successful system
- Reliance on state and federal sources of funding, which are not guaranteed and will change when the region's population reaches 200,000.
- Contractor reimbursement rates are based on 96,000 annual passengers for fixed-route service and 64,000 annual passengers for demand-response service, which do not reflect current ridership trends

The non-motorized analysis included documentation of existing facilities, which identified the gaps in the existing system. However, recently completed member agency plans (City of Yuma and City of Somerton) present a solid foundation for a long- range plan for bicycle facilities in the YMPO region.

The freight/rail evaluation detailed the current commercial activity across the international border that indicates potential for a freight/rail connection to a deepwater port. A multi-modal logistics study currently underway will provide additional direction regarding international freight movement and possible opportunities for an inland port. The current passenger rail service through Yuma is provided by Amtrak on the Sunset Limited three days a week. New passenger rail service funding and particularly high speed passenger rail are being considered at the federal level in conjunction with re-authorization.

The roadway analysis indicates a street system with several areas of unacceptable levels of service in the year 2033 even with the improvements included in the future base network. New roadway projects that address capacity deficiencies, system continuity, and mobility are presented in the roadway element plan.

III. PUBLIC PARTICIPATION

In order to solicit and encourage input from various components of the community including agency staff, the public, business leaders, and elected officials and to present the plan results to the public, the following public involvement activities were conducted.

A. COMMUNICATION TOOLS

1. Technical Advisory Committee Meetings

The YMPO has a Technical Advisory Committee (TAC) that includes representatives from each of the member agencies. As part of the study process, the TAC met on a regular basis to review progress, evaluate the plan, and provide input on priorities.

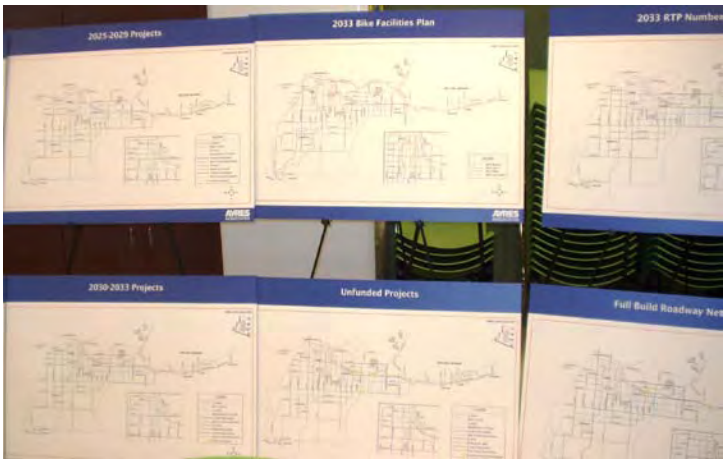
2. Public Forums

Two rounds of public forums were conducted during the study process to define the study objectives, to report the plan's progress to the citizens, and to solicit input. The locations and dates of the meetings are listed Table III-1.

TABLE III-1: PUBLIC MEETING LOCATIONS

Location	Meeting No. 1
City of Somerton	May 20, 2009
City of Yuma	May 20, 2009
Location	**Meeting No. 2**
City of Somerton	December 8, 2009
Foothills	December 9, 2009
City of Yuma	December 9, 2009

The meetings were advertised by the YMPO in accordance with their public involvement policies. Flyers announcing the meetings were distributed to the communities and invitations were sent to the RTP stakeholders, specifically those in minority communities.



The public information meetings were informal, a project information bulletin was prepared in English and Spanish, and comment forms were provided for citizens to provide input. At the first round of public meetings, five people attended the City of Yuma meeting, and three people attended the City of Somerton meeting. There were no attendees at the second round of public meetings.

No comments forms were received at any of the meetings and one form was received subsequent to the meetings

3. Executive Board Presentation

Presentations of the draft 2033 RTP were made to the YMPO Executive Board on October 29, 2009, December 10, 2009, and January 28, 2010.

4. Stakeholder Consultation

A presentation of the draft 2033 RTP was made to the YMPO region stakeholders on October 28, 2009. The stakeholder agencies in attendance were

- ADOT
- Arizona Game and Fish
- Yuma Visitors Bureau
- Yuma Proving Ground
- U.S. Border Patrol
- EPA (via telephone)

5. Project Information Bulletins

Two project information bulletins were prepared to update the general public on the project status. They were prepared in conjunction with the two rounds of public meetings and were available at the meetings. The first information bulletin included a description of the purpose of the project, the plan components, and the study schedule. The second bulletin included maps displaying the components of the draft 2033 RTP.

IV. PLAN ELEMENTS

A. INTRODUCTION

Similar to the previous YMPO Regional Transportation Plans, the 2033 Regional Transportation Plan is multi-modal. The intent of the plan is to support the continued growth that is expected in accordance with the City/County Joint Land Use Plan as well as the General Plans of the other communities. These general plans consider all aspects of development including quality of life, compatible land uses, neighborhoods, wetlands, prime and unique farmland, air quality, noise, and other environmental issues. The development of this plan recognizes on-going changes in transportation planning to address the need to serve people efficiently, affordably, and safely as well as to promote health, environmental quality, and mobility.

This plan was developed in conformance with federal requirements including SAFETEA-LU and Title VI. The YMPO has an adopted Title VI report dated December 3, 2009, which outlines their commitment to support nondiscrimination in federally assisted programs.

The YMPO supports a comprehensive public input process in their programs. The YMPO solicits the participation of disadvantaged and minority citizens through local meetings of Executive Board members in their respective areas and by advertising major public meetings in both English and Spanish.

YMPO is sensitive to the impacts that transportation projects may have on the environment and its associated resources. The YMPO has identified local, regional, and state agencies that may be affected by the implementation of this plan. These agencies were offered the opportunity to review and comment on the plan.

Additionally, the Cocopah Indian Tribe was added to the YMPO in January 1999 with voting membership on the Executive Board. This membership allows input from the Cocopah Indian Nation on all transportation decisions affecting the planning area and specifically the transportation needs of their three Reservation locations.

This chapter describes each element of the 2033 RTP and as appropriate includes a discussion on the cost of the element, revenue, and implementation priorities. The elements include roadway, transit, non-motorized, rail (passenger and freight), and airports.

B. ROADWAY

The roadway element continues to build on the previous plans prepared by the YMPO – specifically the 2029 RTP, the 2007-2011 TIP, and the draft 2011-2015 Draft TIP as well as the needs and deficiencies documented in Chapter II.

Several projects have been implemented since the completion of the 2029 RTP. These projects address the continued growth of the area and demonstrate the member agencies' commitment to improving the region's transportation system. The notable ones include:

- SR 195 – Avenue E to 32nd Street
- 24th Street widening – Avenue 6E to Avenue 9E
- Avenue E – San Luis POE II to SR 195

Despite the current economic conditions, population and employment growth will continue and it is important that improvements to the roadway system accommodate that growth at an acceptable level of service. Any existing or projected volume to capacity ratio that exceeds 0.85 indicates a capacity deficiency that was evaluated to identify potential improvements. An unacceptable level of service can be addressed in different ways including widening the subject street, widening a parallel street, or constructing a new parallel street. Additionally, roadway segments that promote grid continuity and provide the backbone network in developing areas should be considered. All these factors were examined in developing the roadway element for the 2033 RTP.

1. Improvement Options

The evaluation of the roadway element was an iterative process. The first step was defining the future base network which was described in Chapter II. The second step was to identify projects that addressed capacity deficiencies that are expected with the future base network. The third step included projects that addressed remaining capacity deficiencies, system continuity, as well as projects from the 2029 RTP. The individual projects are summarized in this section by type of improvement. The definition of each improvement is discussed below with an estimated construction cost. The construction cost presented here is a planning estimate in current dollars based on a general roadway configuration. Some individual project costs are more specific because of available information. Actual project costs are adjusted for inflation and other changes as appropriate with each update of the YMPO TIP.

NEW TWO LANE ROAD

A two-lane road would be constructed where no road or a dirt road exists today. The road would be 40 feet wide with no curb. The project would include drainage and irrigation improvements as well as intersection improvements where needed. The estimated construction cost for one mile of new two-lane road is $1.5 to $2.0 million.

NEW THREE LANE ROAD

A three-lane road is one travel lane in each direction and a two-way left turn lane. This cross section is 40 feet wide if curb and gutter is constructed and 52 feet wide without curb and gutter. If bike lanes are to be included in the curb and gutter section, nine feet of pavement is added. The estimated construction cost for one mile of this cross section ranges from $2.0 to $3.0 million.

NEW OR WIDENED FOUR LANE ROAD

A four-lane road includes two travel lanes in each direction with a physical median. The pavement width for each direction of travel is 26 feet and the median width varies. If bike lanes are to be included in the section, 5.5 feet of pavement is added in each direction. The estimated construction cost for one mile of this cross section is $4.0 to $6.0 million and assumes reconstruction of any existing pavement.

NEW OR WIDENED FIVE LANE ROAD

A five-lane road is two travel lanes in each direction and a two-way left turn lane. This cross section is 68 feet wide with curb and gutter. If bike lanes are to be included in the section, 11 feet of pavement is added. The estimated construction cost for one mile of this cross section ranges from $5.0 to $6.0 million and assumes reconstruction of any existing pavement.

WIDENED SIX LANE ROAD

A six-lane road includes three travel lanes in each direction with a physical median. The pavement width for each direction of travel is 38 feet and the median width varies. If bike lanes are to be included in the section, 5.5 feet of pavement is added in each direction. The estimated construction cost for one mile of this cross section is $6.0 to $8.0 million.

WIDENED SEVEN LANE ROAD

A seven-lane road is three travel lanes in each direction and a two-way left turn lane. This cross section is 88 feet wide with curb and gutter. If bike lanes are to be included in the section, 11 feet of pavement is added. The estimated construction cost for one mile of this cross section ranges from $6.0 to $8.0 million.

INTERSECTION IMPROVEMENT

The scope of an intersection improvement could include additional turn lanes and/or additional through lanes, and traffic signal improvements. The estimated construction cost for an intersection improvement is $1.5 to $3.0 million.

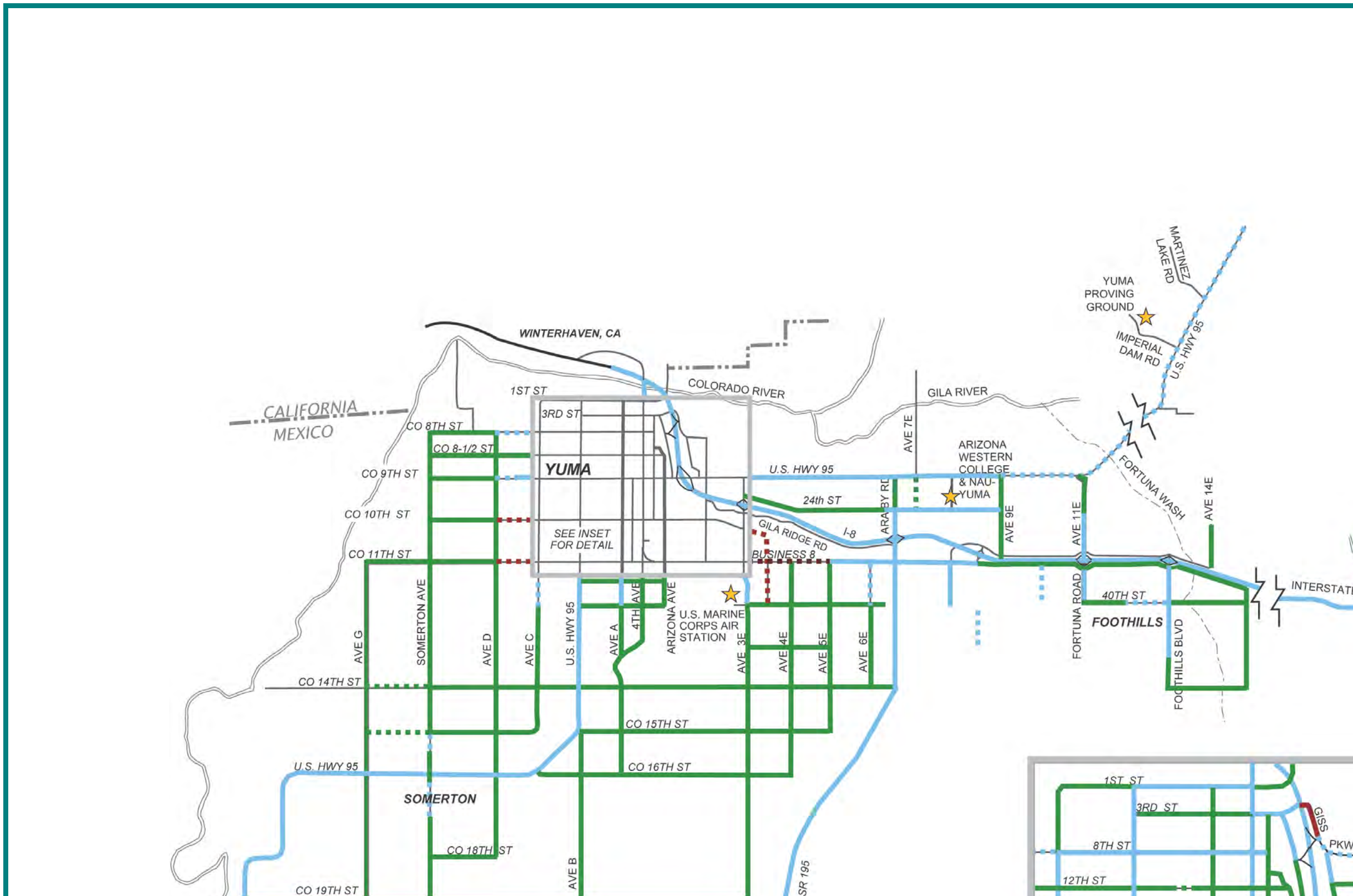
NEW/IMPROVED INTERCHANGE

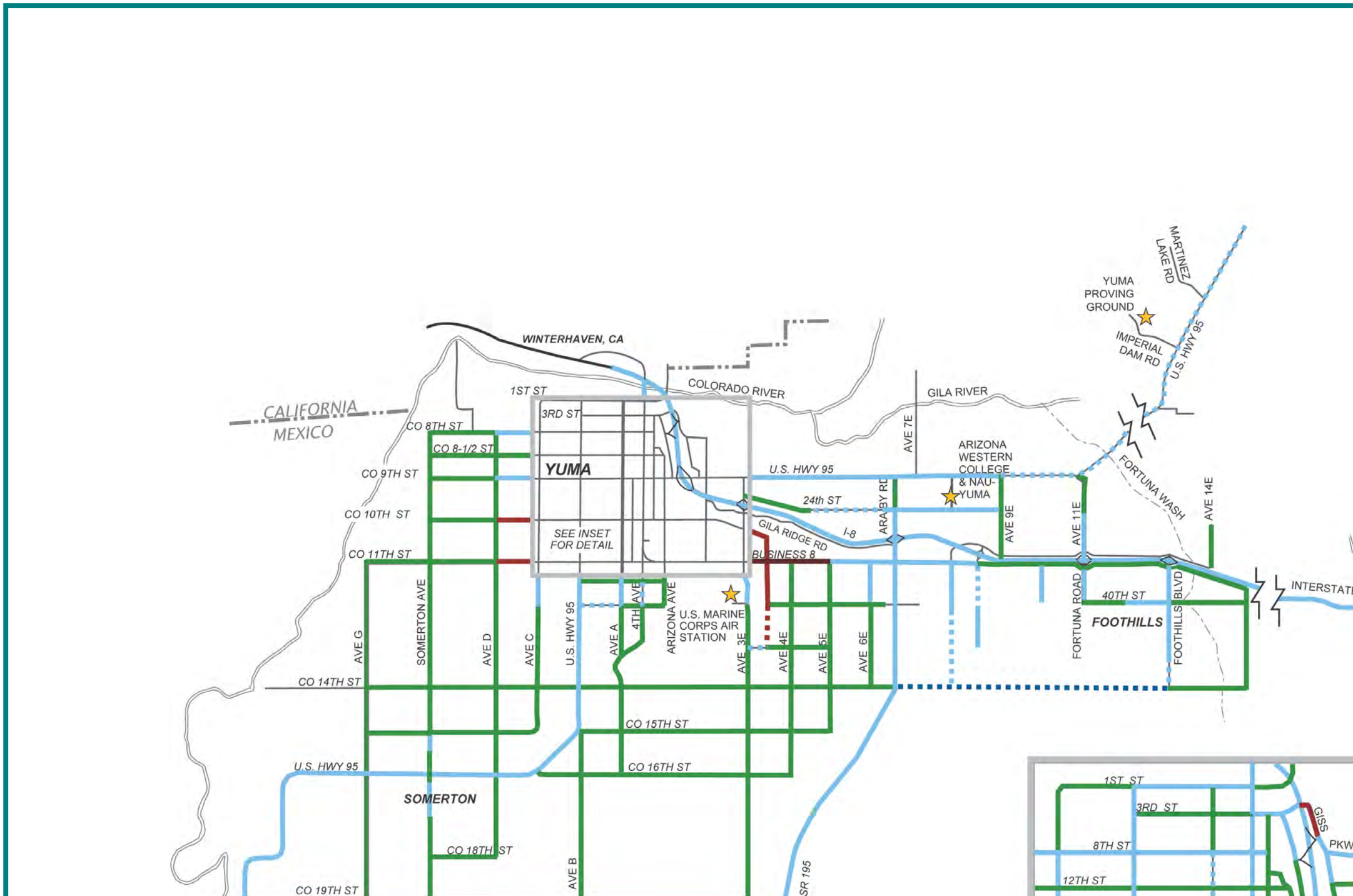
A new or improved interchange includes a grade separation between the two roadways, ramps, traffic signals, and related street improvements. The estimated construction cost for an interchange project varies from $10.0 to $25.0 million.

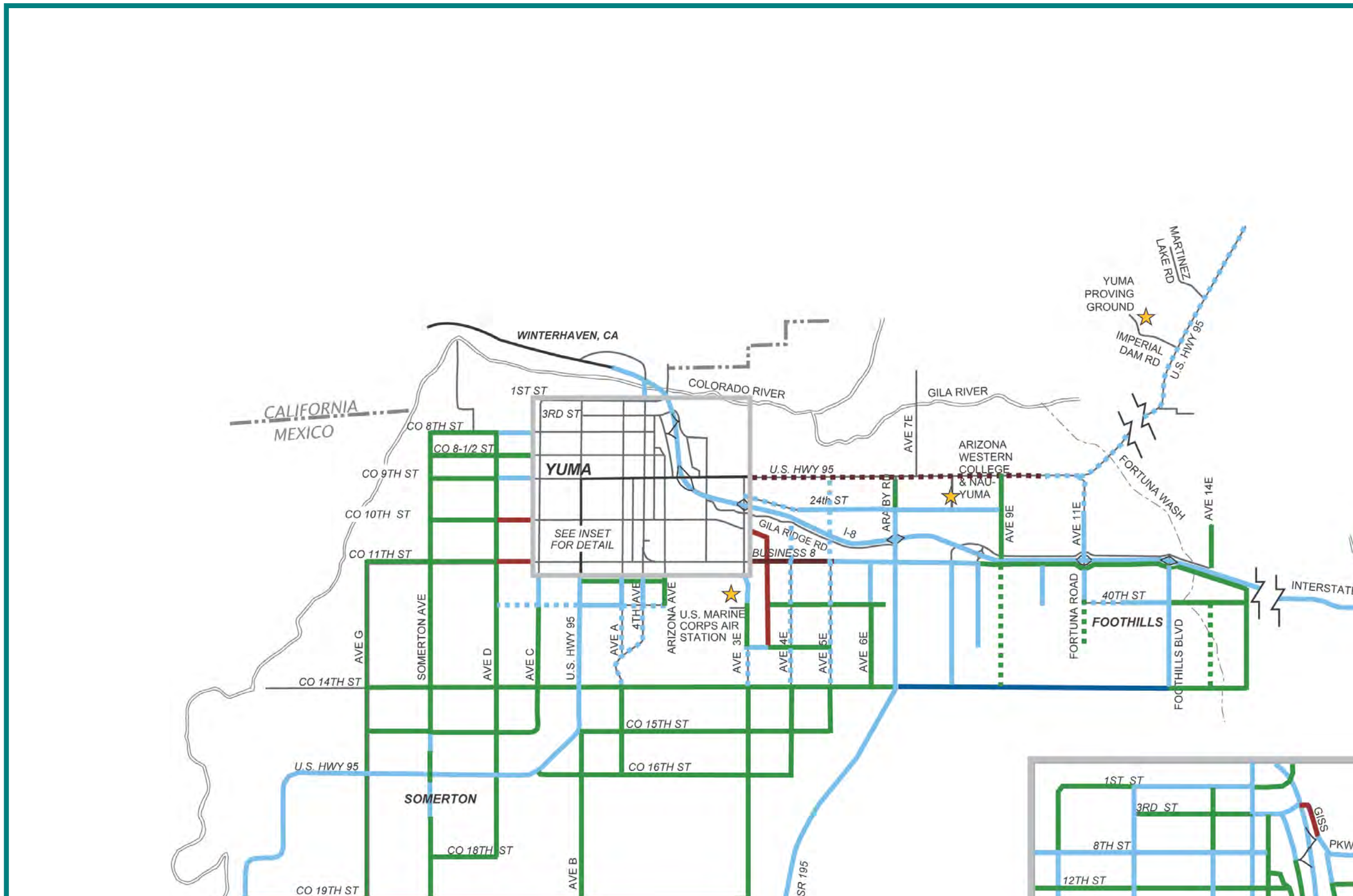
2. Projects and Cost

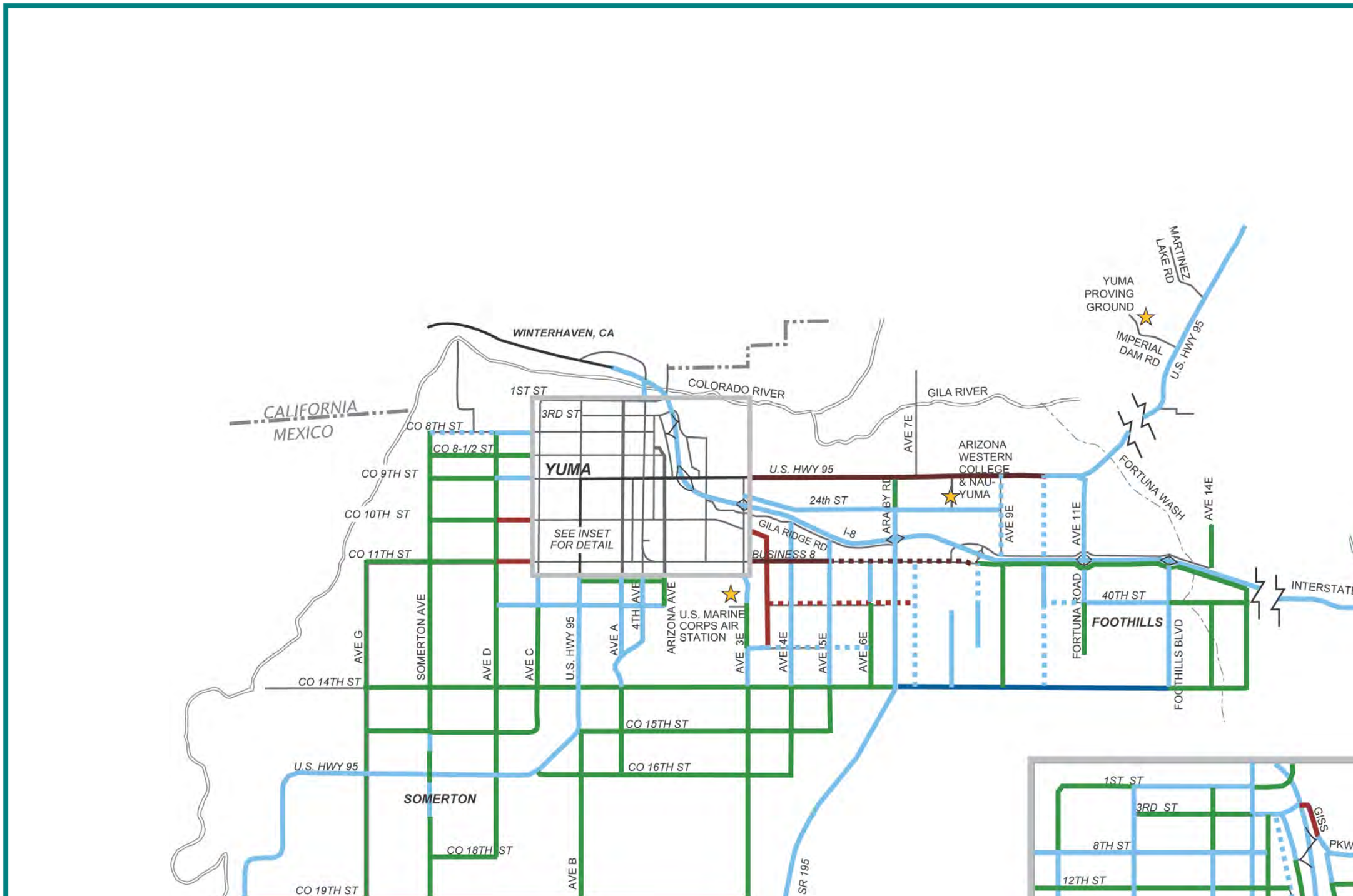
The roadway element of the 2033 RTP is presented in a series of Figures, IV-1 to IV-5 which represent the implementation periods during the life of the plan. It is a combination of the projects that were included in the 2033 base network and additional projects that address capacity needs, mobility, and grid continuity not met by the 2033 base network within the financial constraints of the plan. It includes a variety of projects such as widening to 5 or 7 lanes, new street construction, new interchanges, and reconstruction of existing interchanges and intersections. The maps show colored dashed lines and solid lines for various numbers of lanes. The solid lines represent improvements that are already in place during the particular period and the dashed lines represent improvements to be implemented during the period.

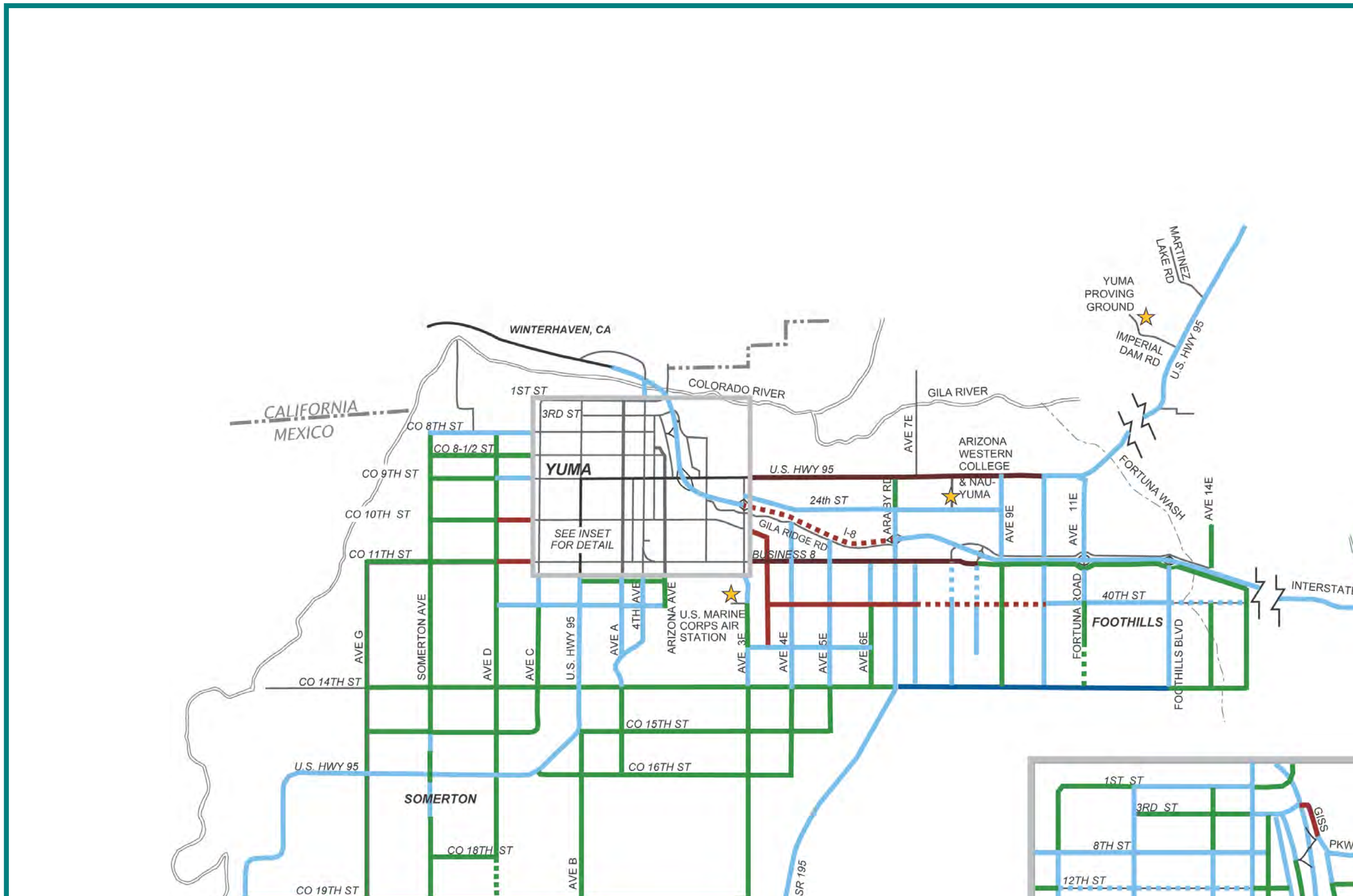
The details of the roadway element projects are presented in Tables IV-1 to IV-5, which correlates with Figures IV-1 to IV-5 for each implementation period. The tables show the project and limits, type of improvement, responsible agency(s), and planning cost estimate. If the project involves widening an existing roadway both the existing and proposed number of through lanes is shown. Generally, a median or a two way left turn lane is also included with the project. Projects that are described as expressway will include a median and access control. In some instances there are general project descriptions such as traffic signals or shared use paths. These represent an allocation of money to fund that type project, but the location is not known. Project listings such as


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARAIBY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
CO 19TH ST
AVE B
SR 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKW


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARIZONA WESTERN COLLEGE & NAU-YUMA
YUMA PROVING GROUND
MARTINEZ LAKE RD
IMPERIAL DAM RD
FORTUNA WASH
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARAY RD
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
AVE G
SOMERTON AVE
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 6E
U.S. MARINE CORPS AIR STATION
CO 14TH ST
CO 15TH ST
CO 16TH ST
SOMERTON
CO 18TH ST
CO 19TH ST
AVE B
SR 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKW


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
CO 19TH ST
YUMA
SEE INSET FOR DETAIL
SOMERTON
U.S. HWY 95
GILA RIDGE RD
BUSINESS 8
I-8
24th ST
40TH ST
FOOTHILLS
FORTUNA ROAD
FORTUNA WASH
FOOTHILLS BLVD
ARIZONA WESTERN COLLEGE & NAU-YUMA
U.S. MARINE CORPS AIR STATION
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
AVE G
SOMERTON AVE
AVE D
AVE C
AVE B
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
SR 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKW


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARA BY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
CO 19TH ST
AVE B
SR 195
YUMA PROVING GROUND
IMPERIAL DAM RD
U.S. HWY 95
MARTINEZ LAKE RD
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKW


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARIZONA WESTERN COLLEGE & NAU-YUMA
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
FORTUNA WASH
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
40TH ST
FOOTHILLS
FORTUNA ROAD
FOOTHILLS BLVD
INTERSTATE
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
CO 14TH ST
CO 15TH ST
CO 16TH ST
SOMERTON
CO 18TH ST
CO 19TH ST
AVE B
SR 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKW

pavement preservation, canal bridge, or irrigation culverts can be considered operations and maintenance projects that are included to maintain the existing system.

Although the project list is presented in five-year periods, from a revenue standpoint, only the first five year period is typically described as programmed and the anticipated revenues are more reliable. Beyond the first five years, the revenue is less predictable and priorities can change.

Highlights of the roadway element include

- 4 lanes on Co 12th (40th St) from Fortuna to Ave 15E
- 4 lane expressway on Co 14th from SR 195 to Foothills Blvd
- 6 lane expressway on U.S. 95 from Ave 2E to Fortuna Rd
- 4 lanes on U.S. 95 from Fortuna Road north
- 6 lanes on I-8 from 16th St to Araby Rd
- 6 lanes on 32nd St from Ave C to 4th Ave
- 4 lanes on Ave E from SR 195 to border
- 4 lanes on 24th St from Ave 3E to Araby Rd

The first five year period includes a proposed study for a railroad grade separation on Dome Street in the Town of Wellton using Section 130 funds. Section 130 funds can be used for the elimination of hazards of railway-highway crossings including the separation of grades at crossings. These funds are allocated 90 percent federal, 10 percent local.

Another project of note in Table IV-5: "2030-2033 Projects" is a new connection from the current termination of SR 195 to US 95. ADOT is currently preparing an Alternatives Selection Report and four alternatives are recommended for further study:

- Alternative A – Avenue 3E
- Alternative B3 – Araby Road at-grade
- Alternative F – Fortuna Road
- Alternative H – A Canal

The planning cost estimates for these four alternatives range from $3 million to $58 million. The YMPO and member agencies will continue to work with ADOT to identify a preferred alternative.

Figure IV-6 shows the 2033 roadway RTP. Figure IV-7 shows the 2033 traffic forecasts that result from the roadway RTP and Figure IV-8 shows the expected level of service with the 2033 RTP. Notable improvements in level of service occur on portions of Co 23rd Street, Ave A, Ave B, 32nd Street, 16th Street, Arizona Avenue, and Co 12th Street.

TABLE IV-1: RECOMMENDED PROJECTS: 2010 - 2014

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Traffic Signals	Various	ADOT	--	--	--	$1,000,000
Enhancement funds	Various	ADOT				$1,190,000
Pavement Preservation	I-8: MP 0-14	ADOT	14	-	-	$20,000,000
U.S. 95 Widening	Ave 9E to Aberdeen-Phase 1	ADOT	15.9	2	4	$20,000,000
U.S. 95 DCR	MP42 to Cibola Lake Rd	ADOT	24			$500,000
Cocopah Reservation	Misc	BIA	--	--	--	$304,700
12th St-Phase 1	Ave A to Ave B	COY	1	0/2	2	$4,329,000
16th St Widening	45th Ave to Ave D	COY	0.5	2	4	$2,870,000
16th St Widening	6th Ave to Arizona Ave	COY	0.63	4	6	$7,236,000
1st Ave Reconstruction	16th St to 12th St	COY	0.5	2	2	$320,000
1st St Reconstruction	Ave B to Figueroa St	COY	0.9			$5,877,000
24th St Widening	Ave B to Ave C	COY	1	2	4	$2,377,963
24th St Widening	Ave C to Ave D	COY	1	2	6	$5,430,000
28th St	Ave B to Ave C	COY	1	--	4	$1,580,000
32nd St Reconstruct	4th Ave to Ave B	COY	1.5	4	4	$756,710
32nd St	Pacific Ave Intersection	COY				$945,000
32nd St mill & replace	Catalina to Ave 3E	COY	2	6	6	$909,300
32nd St Expwy	Ave 3E to Ave 5E	COY	2	4	6	$4,836,255
32nd St Widening	Ave C to Ave D	COY	1	2	6	$6,200,000
3rd St (design)	4th Ave to Ave A	COY	0.5	2	2	$200,000
4th Ave mill & replace	1st St to Catalina	COY	4	4	4	$4,836,255
40th St (design)	Arizona to Ave A	COY	1	2	4	$1,084,700
48th St (design)	Ave 5 1/2E to Ave 6E	COY	3	0	4	$300,000
8th Ave Widening	24th St to 32nd St	COY	1	2	4	$6,435,000
Arizona Ave Widening	16th St Intersection	COY	0.25	2	4	$1,825,000
Arizona Ave	32nd St to 40th St	COY	1	2	2	$5,184,700
Arizona Ave Widening	Giss Pkwy Intersection	COY	0.25	2	4	$1,825,000
Arizona Ave (design)	16th St to Palo Verde	COY	1.5	2	4	$250,000
Ave 10E	32nd St to 40th St	COY	1	--	4	$11,930,000
Ave 3½E	Ave 3E & 24th St to 40th St	COY	2.3	--	6	$18,385,000
Ave 3E Widening	Gila Ridge to 32nd St	COY	1.25	2	4&6	$7,813,000
Ave 5½E Widening	32nd St to 40th St	COY	1	2	4	$5,700,000
Ave 6E Widening	32nd St to 40th St	COY	1	2	4	$5,230,000
Ave 7E	16th St to 24th St	COY	1	--	2	$3,210,000
Ave 8 1/2E Widening	40th St to 48th St	COY	1.5	2	4	$6,440,000
Ave A Widening	16th St to 24th St	COY	1	2	4	$3,400,000
Ave A (design)	32nd St to 36th St	COY	0.5	4	4	$128,100
Ave A (design)	40th St to Airport Loop	COY	1.25	2	2	$50,000
Ave C Widening	24th St to 32nd St	COY	1	2	4	$7,685,000

TABLE IV-1: RECOMMENDED PROJECTS: 2010 – 2014 (CONTINUED)

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Ave C Widening	32nd St to 40th St	COY	1	2	4	$7,050,000
Giss Pkwy	4th Ave to I-8	COY	0.5	2	4	$4,400,000
Giss Pkwy Extension	I-8 to Pacific Ave to 16th St	COY	2	2	4	$13,850,000
Pacific Ave Access Study	I-8 to 32nd St	COY	1.5	4	4	$1,210,000
Yuma Expwy (planning)	ASH (SR 195) to I-8	COY	13	--	6	$500,000
16th St Widening	Arizona Ave to Pacific Ave	COY/ADOT	2	4	6	$11,500,000
North/South Frontage Rd	Ave 9 1/2E to Ave 10E	COY/YC	0.5	2	2	$1,100,000
Ave E Widening	POE to SR 195	SL	2.5	2	4	$13,125,000
Co 22nd St	9th Ave to10th Ave	SL	0.25	-	2	$840,000
Co 24th St	10th Ave to Ave F	SL	2	-	2	$972,440
Juan Sanchez Blvd	Overlay	SL	--	--	--	$613,060
Ave B	Co 15th St intersection	SOM	--	--	--	$369,950
Cesar Chavez	Ave F intersection	SOM	--	--	--	$1,122,000
U.S. 95 Pavement Pres	Ave D to Ave G	SOM	3	--	--	$528,500
Somerton Ave Widening	Fern to Co 17th St	SOM	0.75	2	4	$710,000
Somerton Ave Widening	Jefferson to Co 15th St	SOM	0.5	2	4	$1,300,000
Somerton Ave	Main St to Jefferson	SOM	0.5			$1,457,000
Misc. Projects	Various	WELLTON	--	--	--	$285,000
Enhancement funds	Various	WELLTON				$523,000
Ave 3E Widening	U.S. 95 to I-8	YC	0.4	2	4	$1,000,000
Ave B - Phase I&II	Co 15th St to Co 18th St	YC	3	2	2	$2,300,000
Ave C	1st St to 8th St	YC	1	2	2	$5,992,000
Bridge Replacement	Ave 7E at South Gila Canal	YC	--	--	--	$150,000
Bridge Replacement	Co 17th St at Somerton Ave	YC	--	--	--	$300,000
Bridge Replacement	Co 19th St at Main Drain	YC	--	--	--	$940,000
Co 12th St Widening	Ave 12E to Ave 13E	YC	1	2	4	$3,570,000
Co 14th St	Somerton Ave to Ave G	YC	1.5	2	2	$1,119,688
Co 14th St	Various intersections	YC	--	--	--	$1,615,000
Co 15th St	Ave F to Ave G	YC	1	2	2	$500,000
Co 8th St	Ave 36E to Ave 37E	YC	1	2	2	$554,500
Co 8th St Widening	Ave C to Ave D	YC	1	2	4	$3,818,273
Co 14th St	Ave 3E to Ave 6 1/2E	YC	3.5	2	2	$832,000
Co 18th St	Ave 3E to Ave A	YC	3			$400,000
Drainage & Irrigation	Various	YC	--	--	--	$1,007,697
Intersection	Various	YC	--	--	--	$250,000
North/South Frontage Rd	Ave 9E to Ave 13E	YC	3	2	2	$11,722,105
Street lights	Various	YC				$200,000
Traffic Signals	Various	YC	--	--	--	$600,000
Enhancement funds	Various	YC				$762,000

TABLE IV-2: RECOMMENDED PROJECTS: 2015 – 2019

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Misc. Projects	Various	ADOT	--	--	--	$2,000,000
Pavement Preservation	Various	ADOT	--	--	--	$5,400,000
Rest Areas	Mohawk Rest Area	ADOT	--	--	--	$12,700,000
SR 195	I-8 to U.S. 95	ADOT	1.5	--	4	$4,650,000*
Traffic Signals	Various	ADOT	--	--	--	$1,000,000
U.S. 95 Widening	Ave 9E to Aberdeen Rd-Phase 2	ADOT	15.9	2	4	$35,000,000
US 95	Indian Wash Bridge	ADOT	--	--	--	$1,400,000
Misc. Projects	Various	COCOPAH	--	--	--	$250,000
12th St-Phase 2	Ave A to Ave B	COY	1	0/2	2	$4,329,000
16th St Widening	6th Ave to 13th Ave	COY	0.6	4	6	$13,072,000
16th St Expwy (design)	Ave 2E to Ave 10E	COY	8	4	6	$5,500,000
24th St Widening	Ave 4 1/2E to Ave 6E	COY	1.5	2	4	$2,918,375
28th St Widening	Ave C to Ave D	COY	1	2	4	$3,050,000
32nd St Expwy (design)	Ave 5E to 9E	COY	4	4	6	$2,800,000
32nd St Widening	Ave B to Ave C	COY	1	2	4	$7,940,000
33rd Drive (Ave. B½)	28th St to 32nd St	COY	0.5	0	4	$3,060,000
33rd Drive (Ave. B½)	32nd St to 40th St	COY	1	0	4	$5,430,000
36th St (design)	4th Ave to 8th Ave	COY	0.5	2	2	$450,000
36th St (design)	3 1/2 E to 6E & 7E to 10E	COY	5.5	2	4	$1,621,625
40th St Widening	Ave A to Ave B	COY	1	2	4	$6,300,000
40th St (design)	Ave B to Ave D	COY	1	2	4	$2,694,000
40th St/Co 12th St design	Ave 3½E to Ave 10E	COY	6.5	4	4	$7,000,000
44th St (design)	Ave 3½E to 4½E & 7E to 8½E	COY	2.5	2	4	$1,193,000
45th Ave Widening	5th St to 28th St	COY	2.75	2	4	$17,220,000
48th St Widening	Ave 3E to Ave 3 1/2E	COY	0.5	2	4	$2,625,000
4th Ave Widening	32nd St to 40th St	COY	1	2	4	$5,980,000
52nd St (design)	Ave 5E to Ave 6E	COY	1	2	4	$700,000
Ave 3½E	40th St to 48th St	COY	1		6	$9,540,000
Ave 4 1/2 E (design)	32nd St to 44th St	COY	1.5	2	4	$795,000
Ave 4E (design)	Gila Ridge Rd to Yuma Expwy	COY	4	2	4	$2,400,000
Ave 5E (design)	16th St to Yuma Expwy (56th St)	COY	5	2	4	$5,200,000
Ave 7 1/2 E (design)	32nd St to 56th St	COY	3	2	4	$3,150,000
Ave 7E (design)	32nd St Expwy to 56th St	COY	3	2	4	$2,950,000
Ave 8E Widening	40th St to 56th St	COY	3	2	4	$15,100,000
Ave A Widening	8th St to 16th St	COY	1	2	4	$5,000,000
Ave B Widening	24th St to 32nd St	COY	1	4	6	$10,000,000
Canal Bridge	Various	COY	--	--	--	$4,200,000

*Currently under study. Cost estimates for the various alternatives range from $3 million to $58 million. This is also listed in 2030-2033 if additional funding is required for selected alternative.

TABLE IV-2: RECOMMENDED PROJECTS: 2015 – 2019 (CONTINUED)

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Shared Use Paths	Various	COY	--	--	--	$2,000,000
Pavement Preservation	Various	COY	--	--	--	$2,000,000
R/W Acquisitions	Various	COY	--	--	--	$2,000,000
Traffic Signals	Various	COY	--	--	--	$1,000,000
56th St	ASH(SR 195) to Ave 13E	COY/YC	6.5	0	4	$37,300,000
Misc. Projects	Various	SL	--	--	--	$3,600,000
Misc. Projects	Various	SOM	--	--	--	$2,800,000
Traffic Signals	Various	SOM	--	--	--	$800,000
Misc. Projects	Various	WELLTON	--	--	--	$252,926
Ave B - Phase III Widening	Co 15th St to Co 18th St	YC	3	2	2	$1,100,000
Foothills Blvd Widening	Co 13th St to Co 14th St	YC	1	2	4	$1,700,000
Irrigation culverts	Various	YC	--	--	--	$1,000,000
Misc. Projects	Various	YC	--	--	--	$5,000,000
North/South Frontage Rd	Ave 8 1/2E to Ave 9 1/2E	YC	1	2	2	$2,250,000
North/South Frontage Rd	Ave 11 E to Ave 12E	YC	1	2	2	$2,250,000
Traffic Signals	Various	YC	--	--	--	$600,000

TABLE IV-3: RECOMMENDED PROJECTS: 2020 - 2024

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Pavement Preservation	Various	ADOT	--	--	--	$8,400,000
Traffic Signals	Various	ADOT	--	--	--	$1,000,000
U.S. 95 Widening	Ave 9E to Aberdeen Rd-Phase 2	ADOT	15.9	2	4	$63,600,000
Misc. Projects	Various	COCOPAH	--	--	--	$270,000
16th St Widening	Ave B to 13th Ave	COY	0.75	4	6	$3,000,000
16th St Expwy	Ave 2E to Ave 10E	COY	8	4	6	$24,000,000
24th St Widening	Ave 3E to Ave 4 1/2E	COY	1.5	2	4	$7,875,000
36th St	4th Ave to 8th Ave	COY	0.25	2	2	$562,500
3rd St	4th Ave to Ave A	COY	0.5	2	2	$1,125,000
4th Ave	40th St to Co 14th St	COY	2	2	4	$10,500,000
40th St Widening	Arizona to Ave A	COY	1	2	4	$5,250,000
40th St Widening	Ave B to Ave D	COY	2	2	4	$10,500,000
52nd St Widening	Ave 5E to Ave 6E	COY	1	2	4	$5,250,000
8th Ave	16th St to 24th St	COY	1	2	2	$2,250,000
Arizona Ave Widening	16th St to Palo Verde	COY	1.5	2	4	$7,875,000
Ave 3E Widening	48th St to Co. 14th St	COY	1	2	4	$5,250,000
Ave 4E Widening	Gila Ridge Rd to Yuma Expwy	COY	4	2	4	$21,000,000
Ave 5E Widening (Grade Separation @ I-8)	16th St to Yuma Expwy (56th St)	COY	5	2	4	$26,250,000
Ave 9E (new)	32nd St to Co 14th St	COY	3	--	2	$6,750,000
Ave A	32nd St to 36th St	COY	0.5	4	4	$2,500,000
Ave A	40th St to Airport Loop	COY	1.25	2	4	$6,562,500
Ave A Widening	24th St to 32nd St	COY	1	2	4	$5,250,000
Intersection	16th St & Ave B	COY	--	4	6	$2,800,000
Shared Use Paths	Various	COY	--	--	--	$1,600,000
Pavement Preservation	Various	COY	--	--	--	$3,000,000
R/W Acquisitions	Various	COY	--	--	--	$2,000,000
Traffic Signals	Various	COY	--	--	--	$1,300,000
Juan Sanchez Blvd Widening	U.S. 95 to 10th Ave	SL	1.75	2	4	$18,117,000
6th Ave	Union St to Co 22nd St	SL	0.75	--	2	$1,050,000
Traffic Signals	Various	SL	--	--	--	$400,000
Misc. Projects	Various	SOM	--	--	--	$3,200,000
Traffic Signals	Various	SOM	--	--	--	$800,000
Misc. Projects	Various	WELLTON	--	--	--	$210,000
5th St	Ave B to Ave C	YC	1			$3,400,000
8th St (new)	Ave 2E to Ave 3E	YC	1	--	2	$2,250,000
Ave 14E (new)	Co 12th St to Co 14th St	YC	2	--	2	$4,500,000
Ave 3E	8th St to 16th St	YC	1	2	2	$2,250,000
Ave 9E (new)	32nd St to Co 14th St	YC	3	--	2	$6,750,000

TABLE IV-3: RECOMMENDED PROJECTS: 2020 – 2024 (CONTINUED)

Project	Location	Agency	Length (Miles)	Lanes		Cost
				Old	New	
Co 12th St Widening	Ave 11E to Ave 12E	YC	1	2	4	$5,250,000
Fortuna Rd Widening (With RR grade separation)	U.S. 95 to Co 10th St	YC	1	2	4	$10,250,000
Irrigation Culverts	Various	YC	--	--	--	$500,000
Misc. Projects	Various	YC	--	--	--	$1,200,000
North/South Frontage Rd	Ave 12E to Ave 13E	YC	1	2	2	$2,250,000
R/W Acquisitions	Various	YC	--	--	--	$2,500,000
Traffic Signals	Various	YC	--	--	--	$700,000

TABLE IV-4: RECOMMENDED PROJECTS: 2025 - 2029

Project	Location	Agency	Length (miles)	Lanes		Cost
				Old	New	
Pavement Preservation	Various	ADOT	--	--	--	$2,000,000
Traffic Signals	Various	ADOT	--	--	--	$1,000,000
U.S. 95 Widening	Aberdeen Rd to MP70	ADOT	22.6	2	4	$45,567,080
Misc. Projects	Various	COCOPAH	--	--	--	$250,000
26th St (new)	Araby Rd to Ave 7E	COY	0.5	--	4	$2,600,000
32nd St Expwy	Ave 5E to Ave 8 1/2E	COY	3.5	4	6	$10,500,000
36th St Widening	Ave 3 1/2 E to Ave 6E & Ave 7E to Ave 10E	COY	5.5	2	4	$28,875,000
48th St	Ave 3 1/2E to Ave 5 1/2E	COY	2	0	4	$10,500,000
48th St	Ave 5 1/2E to Ave 6E	COY	0.5	0	4	$2,625,000
Arizona Ave Widening	16th St to Giss Pkwy	COY	1.5	2	4	$7,875,000
Ave 10E	16th St to North Frontage Rd	COY	1		4	$5,250,000
Ave 10E	40th St to 56th St	COY	2		4	$10,500,000
Ave 4 1/2E Widening	32nd St to 44th St	COY	1.5	2	4	$7,875,000
Ave 7 1/2E Widening	32nd St to 56th St	COY	3	2	4	$15,750,000
Ave 7E Widening	32nd St Expwy to 56th St	COY	3	2	4	$15,750,000
8th St	1st Ave to Arizona Ave	COY	0.25	--	4	$1,312,500
Ave 8 1/2E	32nd St to 40th St	COY	1		4	$5,250,000
Ave 9E Widening	16th St to N Frontage Rd	COY	2	2	4	$10,500,000
Shared Use Paths	Various	COY	--	--	--	$1,200,000
Pavement Preservation	Various	COY	--	--	--	$3,000,000
R/W Acquisitions	Various	COY	--	--	--	$5,000,000
Traffic Signals	Various	COY	--	--	--	$2,000,000
Ave H	Co 19th St to Co 22nd St	SL	3	-	2	$6,750,000
Co 22nd St	10th Ave to Ave E	SL	3	-	2	$7,000,000
Co 24th St	10th Ave to Ave F	SL	2	-	2	$5,600,000
Misc. Projects	Various	SOM	--	--	--	$3,700,000
Traffic Signals	Various	SOM	--	--	--	$350,000
Misc. Projects	Various	WELLTON	--	--	--	$260,000
40th St/Co 12th St Widening	Ave 3 1/2E to Ave 7E	YC/COY	3.5	2	6	$24,500,000
Co 10th St	Somerton Ave to Ave D	YC	1.5	2	2	$3,375,000
Co 12th St (new)	Ave 10E to Fortuna Rd	YC	1	--	4	$5,250,000
Co 8th St Widening	Ave D to Somerton Ave	YC	1.5	2	4	$7,875,000
Irrigation Culverts	Various	YC	--	--	--	$2,400,000
North/South Frontage Rd	Ave 10E to Ave 11E	YC	1	2	2	$2,250,000
Traffic Signals	Various	YC	--	--	--	$800,000

TABLE IV-5: RECOMMENDED PROJECTS: 2030 - 2033

Project	Location	Agency	Length (miles)	Lanes		Cost
				Old	New	
I-8 Widening	16th St to Araby Rd	ADOT	5.5	4	6	$41,250,000
Pavement Preservation	Various	ADOT	--	--	--	$6,000,000
Traffic Signals	Various	ADOT	--	--	--	$1,000,000
SR 195 Extension	I-8 to Highway 95	ADOT/COY	2		4	*
Misc. Projects	Various	COCOPAH	--	--	--	$150,000
12th St Widening	Ave C to 4th Ave	COY	2.5	2	4	$13,125,000
Arizona Ave	26th St to 32nd St	COY	0.75	2	4	$3,937,500
Ave 8E Widening	32nd St to 40th St	COY	1	2	4	$5,250,000
Ave 8 1/2E Widening	32nd St to 40th St	COY	1	2	4	$5,250,000
Intersection	24th St & 8th Ave	COY	--	--	--	$3,000,000
Intersection	32nd St & 4th Ave	COY	--	--	--	$2,000,000
Intersection	32nd St & Ave B	COY	--	--	--	$3,300,000
Shared Use Paths	Various	COY	--	--	--	$1,000,000
Pavement Preservation	Various	COY	--	--	--	$2,000,000
R/W Acquisitions	Various	COY	--	--	--	$4,000,000
Traffic Signals	Various	COY	--	--	--	$1,000,000
Co 24 1/2 St	6th Ave to Ave E	SL	4		2	$11,200,000
Misc. Projects	Various	SL	--	--	--	$1,300,000
Misc. Projects	Various	SOM	--	--	--	$2,500,000
Misc. Projects	Various	WELLTON	--	--	--	$250,000
40th St/Co 12th St Widening	Ave 7E to Ave 10E	YC/COY	3	2	6	$21,000,000
Ave D (new)	Co 18th St to Co 19th St	YC	1	--	2	$2,250,000
Co 12th St Widening	Foothills Boulevard to Ave 15E	YC	2	2	4	$10,500,000
Irrigation Culverts	Various	YC	--	--	--	$750,000
Misc. Projects	Various	YC	--	--	--	$300,000
R/W Acquisitions	Various	YC	--	--	--	$730,000
Ave E/Ave D	Co 19th St to Co 23rd St	YC/SL	4	--	2	$9,000,000
Traffic Signals	Various	YC	--	--	--	$300,000

*Currently under study. Cost estimates for the various alternatives range from $3 million to $58 million

The estimated cost of the roadway element by responsible agency for each implementation period is summarized in Table IV-6. For joint projects, the cost is divided between the responsible agencies. The 2010-2014 projects and associated costs are from the YMPO Transportation Improvement Program (TIP), the City of Yuma Capital Improvement Program (CIP), and the Yuma County CIP. The 2015-2019 City of Yuma projects are also from the city CIP. The projects and costs for the remaining implementation periods were updated from the 2029 RTP and the needs identified in this analysis.

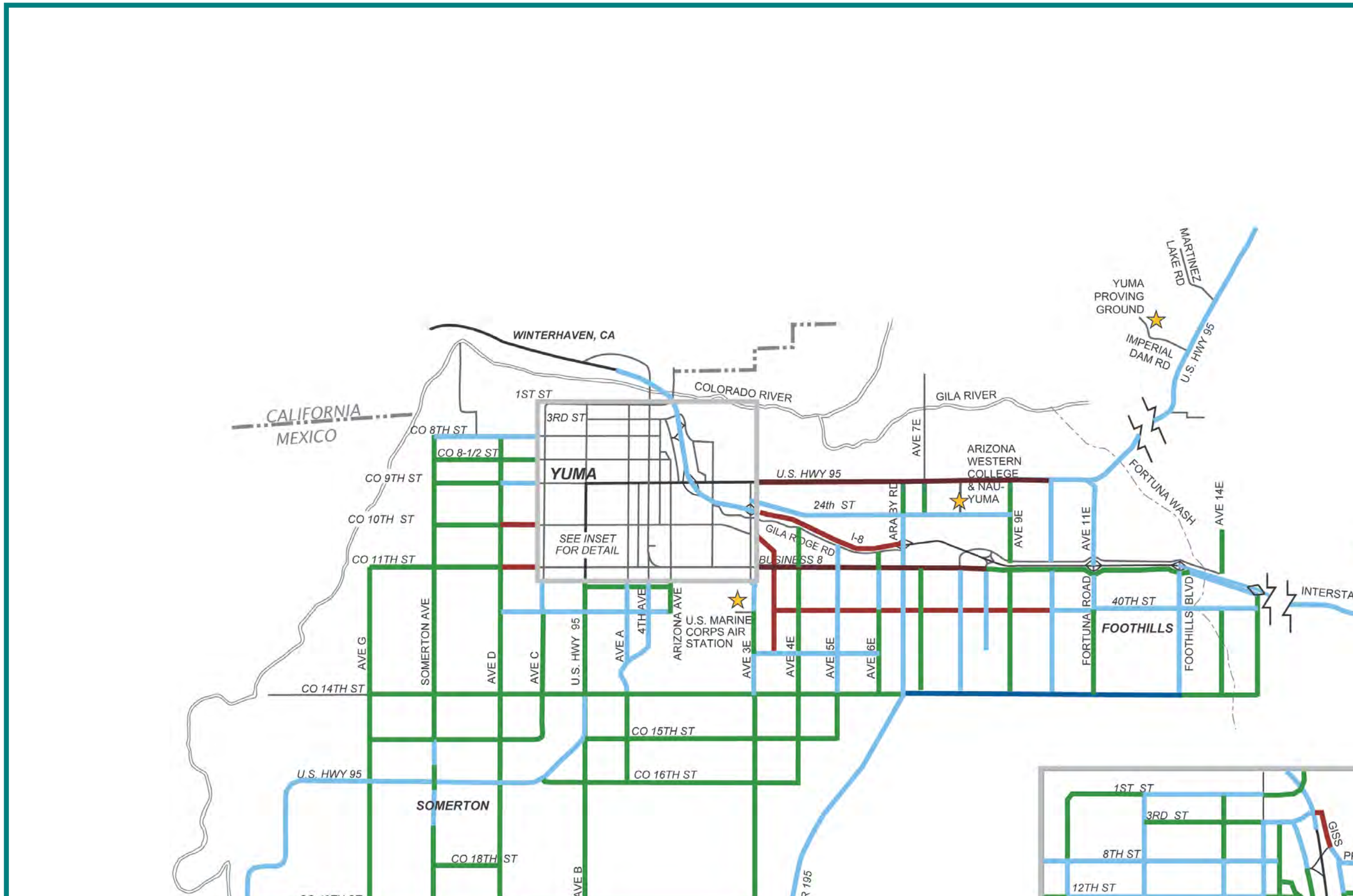
TABLE IV-6: 2033 RTP ROADWAY ELEMENT PLANNING COST ESTIMATE BY JURISDICTION (2009 DOLLARS)

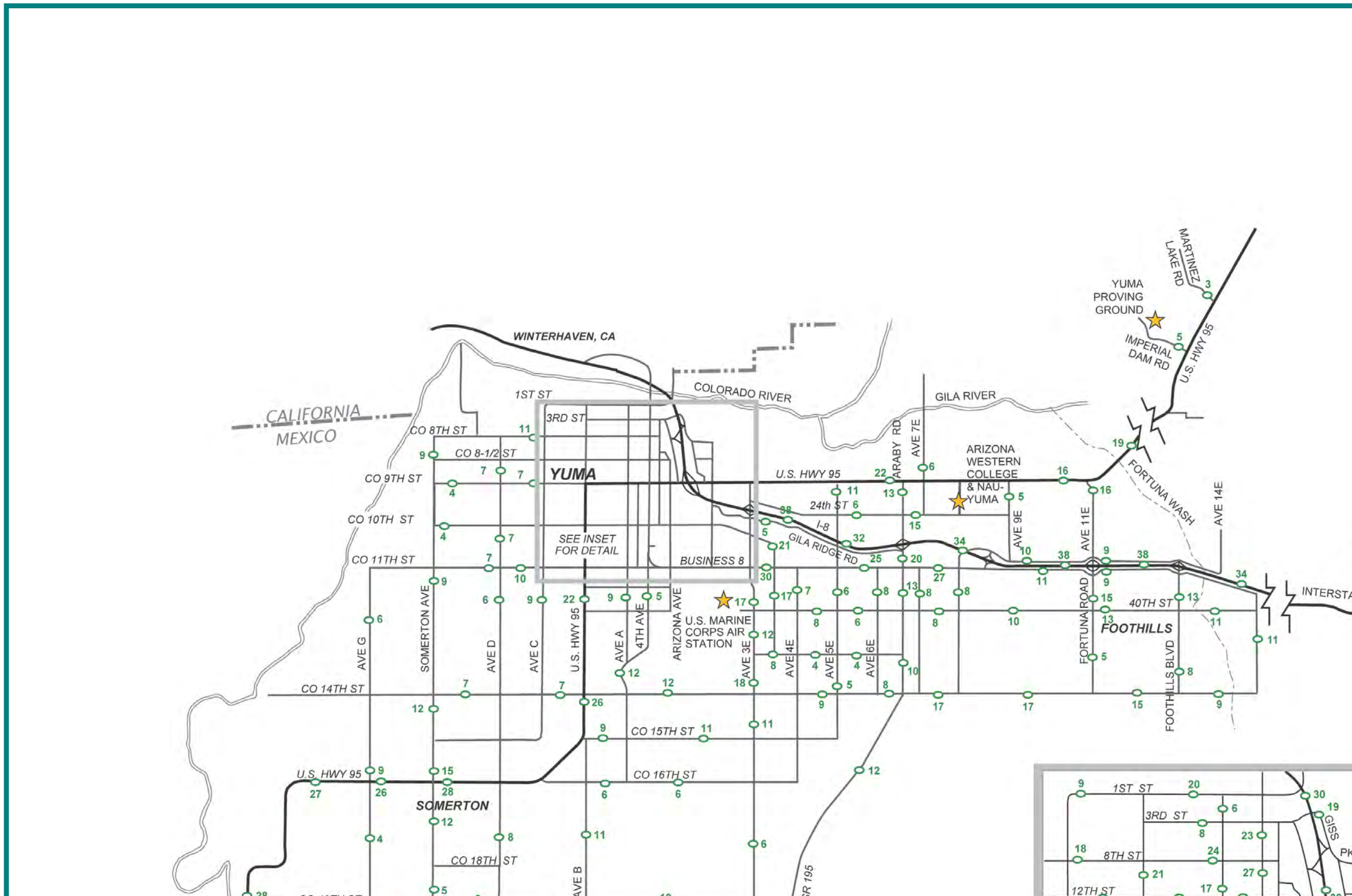
JURISDICTION	2010-2014	2015-2019	2020-2024	2025-2029	2030-2033*	TOTAL
ADOT	$48,440,000	$62,150,000	$73,000,000	$48,567,080	$48,250,000	$280,407,080
COCOPAH	$304,700	$250,000	$270,000	$250,000	$150,000	$1,224,700
YUMA	$168,888,983	$177,868,000	$159,637,500	$158,612,500	$54,362,500	$719,369,483
SAN LUIS	$15,550,500	$3,600,000	$19,567,000	$13,750,000	$17,000,000	$69,467,500
SOMERTON	$5,487,450	$3,600,000	$4,000,000	$4,050,000	$2,500,000	$19,637,450
WELLTON	$808,000	$252,926	$210,000	$260,000	$250,000	$1,780,926
YUMA CO.	$38,183,263	$32,550,000	$41,800,000	$34,200,000	$29,830,000	$176,563,263
TOTAL	$277,662,896	$280,270,926	$298,484,500	$259,689,580	$152,342,500	$1,268,450,402

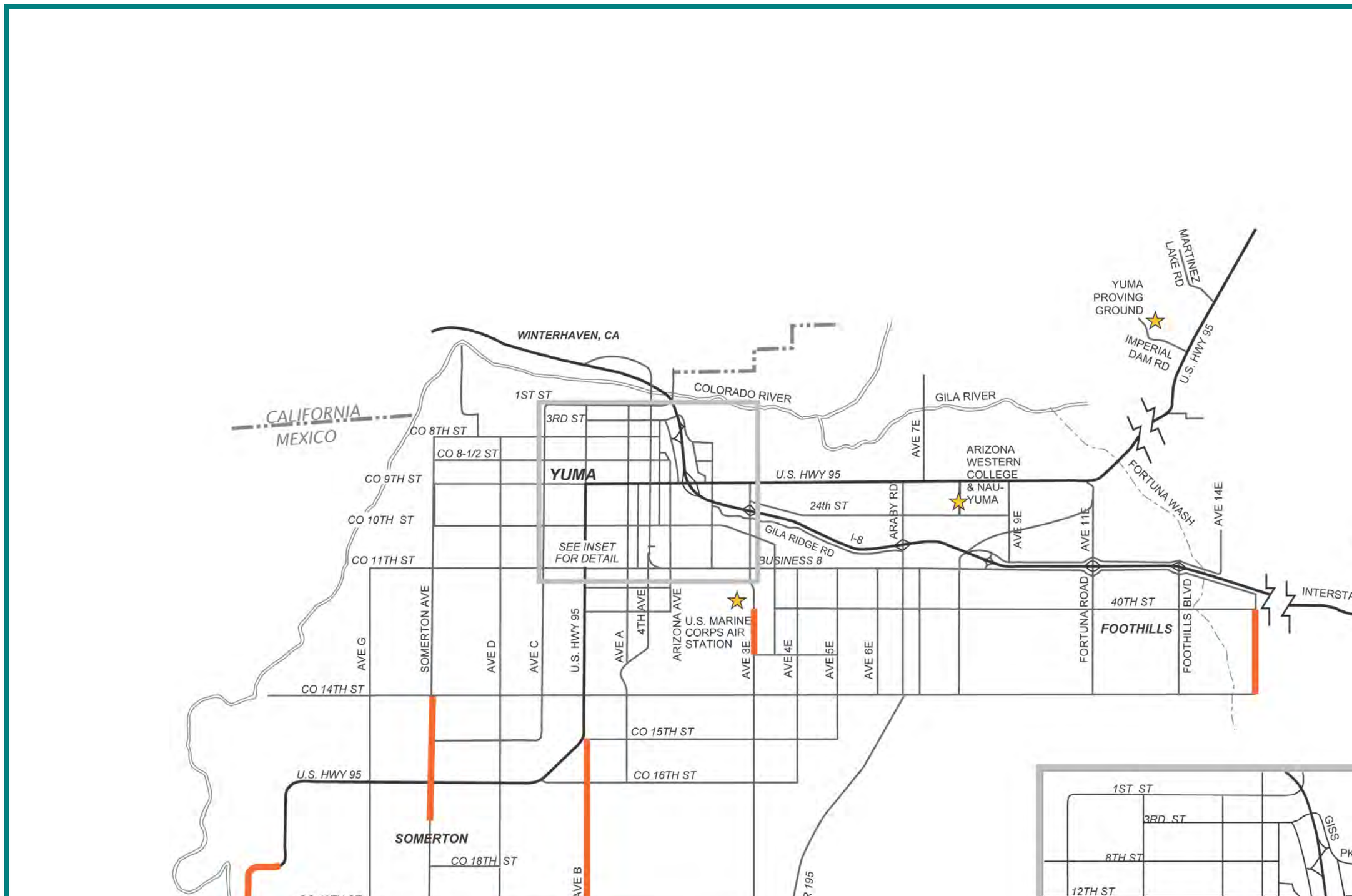
*The 2030-2033 group includes a project to extend SR 195 from I-8 to US 95. Several alternatives are being considered and the cost of this project is not included in this project group or the total.

Even with a long-range roadway plan of nearly $1.3 billion, there are additional projects that would help the YMPO and its member agencies meet their goal of a comprehensive, safe, and efficient transportation system. These projects are beyond the estimated funding levels of the 2033 RTP and are shown separately in Table IV-7 and Figure IV-9 as “Projects Not In 2033 RTP”. The total estimated cost of these projects is $826,985,000.

From a long term planning perspective, at such time when funding is available to implement the 2033 RTP as well as the Post 2033 RTP projects, the full build roadway network would be as shown in Figure IV-10.


WINTERHAVEN, CA
1ST ST
COLORADO RIVER
GILA RIVER
CALIFORNIA
MEXICO
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
I-8
BUSINESS 8
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARA 3Y RD
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTA
U.S. MARINE CORPS AIR STATION
ARIZONA AVE
4TH AVE
AVE A
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE G
SOMERTON AVE
AVE D
AVE C
CO 14TH ST
CO 15TH ST
CO 16TH ST
SOMERTON
CO 18TH ST
AVE B
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
1ST ST
3RD ST
8TH ST
12TH ST
GISS


WINTERHAVEN, CA
COLORADO RIVER
1ST ST
3RD ST
CALIFORNIA
MEXICO
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
BUSINESS 8
U.S. HWY 95
GILA RIVER
ARABY RD
AVE 7E
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
I-8
GILA RIDGE RD
FORTUNA WASH
AVE 9E
AVE 11E
AVE 14E
INTERSTA
40TH ST
FOOTHILLS
FORTUNA ROAD
FOOTHILLS BLVD
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. MARINE CORPS AIR STATION
ARIZONA AVE
4TH AVE
AVE A
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE G
SOMERTON AVE
AVE D
AVE C
AVE B
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
SOMERTON
R 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PK


WINTERHAVEN, CA
1ST ST
COLORADO RIVER
CALIFORNIA
MEXICO
3RD ST
CO 8TH ST
CO 8-1/2 ST
YUMA
CO 9TH ST
U.S. HWY 95
CO 10TH ST
SEE INSET
FOR DETAIL
CO 11TH ST
BUSINESS 8
GILA RIDGE RD
I-8
24th ST
ARABY RD
AVE 7E
GILA RIVER
ARIZONA
WESTERN
COLLEGE
& NAU-
YUMA
FORTUNA WASH
AVE 9E
AVE 11E
AVE 14E
MARTINEZ
LAKE RD
YUMA
PROVING
GROUND
IMPERIAL
DAM RD
U.S. HWY 95
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE
CORPS AIR
STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
AVE B
1ST ST
3RD ST
8TH ST
12TH ST

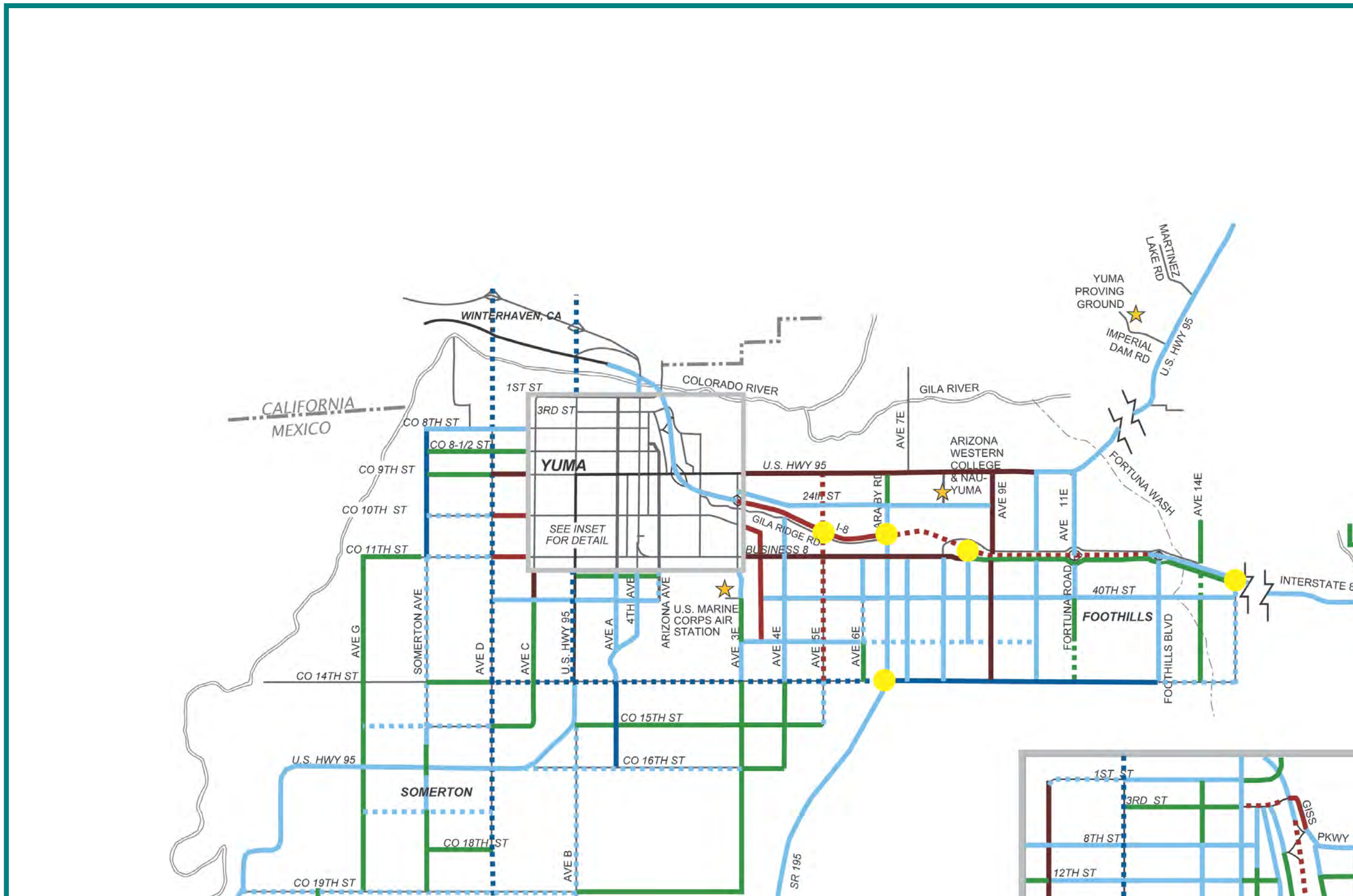
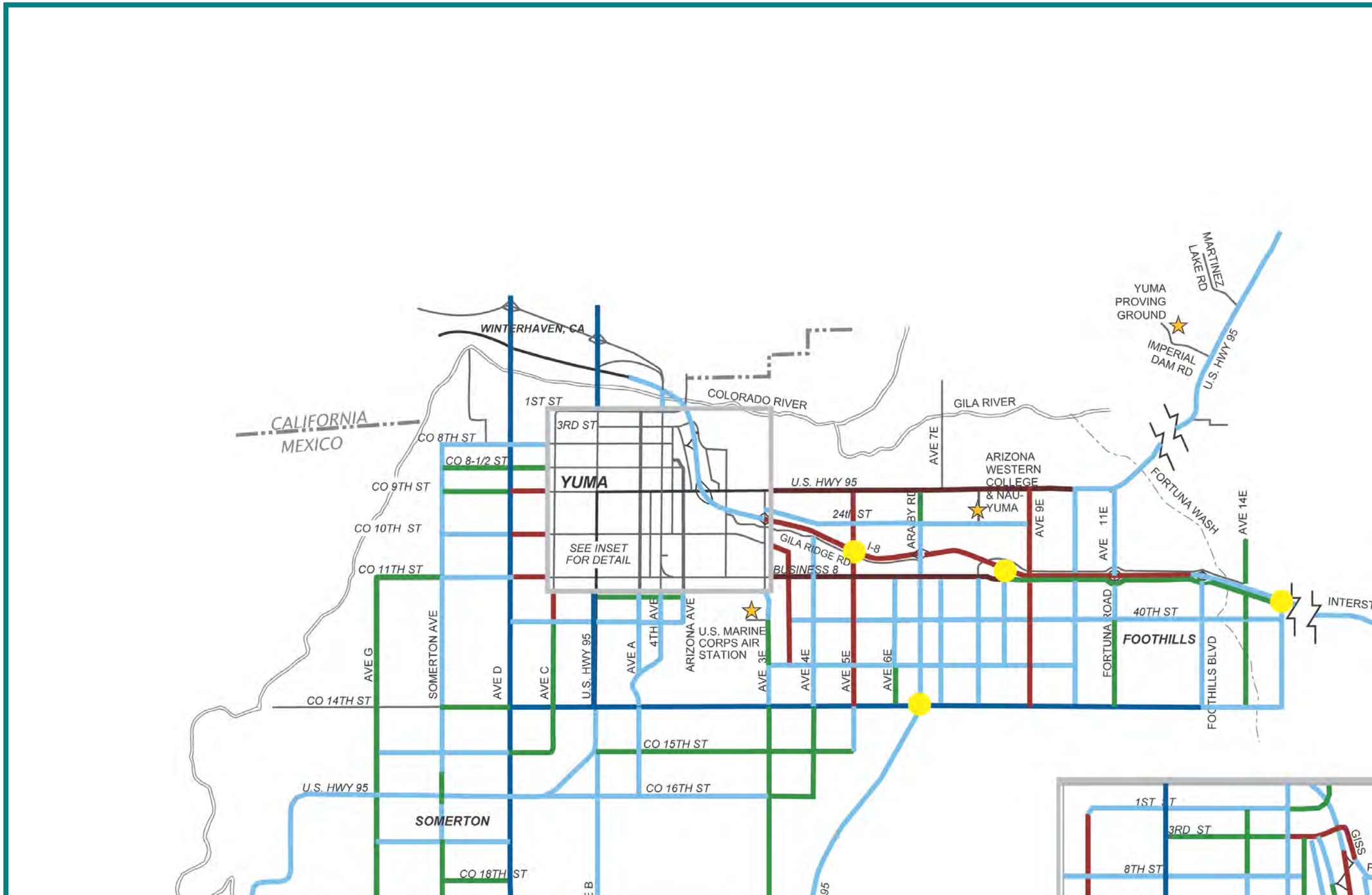

WINTERHAVEN, CA
CALIFORNIA
MEXICO
1ST ST
3RD ST
COLORADO RIVER
GILA RIVER
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARA BY RD
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. HWY 95
INTERSTATE 8
40TH ST
FOOTHILLS
FORTUNA ROAD
FOOTHILLS BLVD
AVE G
SOMERTON AVE
AVE D
AVE C
U.S. HWY 95
AVE A
4TH AVE
ARIZONA AVE
U.S. MARINE CORPS AIR STATION
AVE 3E
AVE 4E
AVE 5E
AVE 6E
CO 14TH ST
CO 15TH ST
CO 16TH ST
U.S. HWY 95
SOMERTON
CO 18TH ST
CO 19TH ST
AVE B
SR 195
1ST ST
3RD ST
8TH ST
12TH ST
GISS
PKWY

TABLE IV-7: PROJECTS NOT IN 2033 RTP

Project	Location	Agency	Length (miles)	Lanes		Cost
				Old	New	
I-8 Widening	Araby Rd to Foothills Blvd	ADOT	6.5	4	6	$48,750,000
I-8 Widening	Giss Pkwy to 16th St	ADOT	1.5	4	6	$11,250,000
I-8 New TI	Interchange at Ave 31E	ADOT	--	--	--	$25,000,000
I-8 New TI	Interchange at Ave 45E	ADOT	--	--	--	$25,000,000
I-8	Reconstruct Araby Rd TI	ADOT	--	--	--	$14,000,000
I-8	Reconstruct Business 8 TI	ADOT	--	--	--	$10,000,000
I-8 New TI	Interchange at Ave 5E	ADOT/COY	--	--	--	$25,000,000
SR 195	Interchange at Co 14th St	ADOT/COY	--	--	--	$25,000,000
SR 195	Interchange at Ave B	ADOT/SL				$25,000,000
I-8	Interchange at Ave 15E	ADOT/YC	--	--	--	$25,000,000
16th St Widening	Ave B to Ave D	COY	2	4	6	$8,000,000
1st St Widening	Ave B to Ave C	COY	1	2	4	$5,250,000
24th St Widening	Ave C to Ave 3E	COY	5	4	6	$20,000,000
40th St	SR 195 Grade Separation	COY				$15,000,000
48th St	Ave 6E to Ave 10E	COY	4	0	4	$21,000,000
Arizona Ave Widening	32nd St to 40th St	COY	1	2	4	$7,500,000
Ave 5 E Widening	16th St Expwy to Yuma Expwy	COY	5	4	6	$40,000,000
Ave 5 E Widening	Yuma Expwy to Co 15th St	COY	1	2	4	$5,250,000
Ave 6E Widening	40th St to 48th St	COY	1	2	4	$5,250,000
Ave 9E Widening	16th St to North Frontage Rd	COY	2	4	6	$8,000,000
Ave 9E Widening	South Frontage Rd to Co 14th St	COY	3	4	6	$12,000,000
Ave A Widening	Co 14th St to Co 16th St	COY	2	2	4	$10,500,000
Ave B Expwy	Co 14th St to I-8	COY	9	4	4	$31,500,000
Ave C Widening	1st St to 8th St	COY	1	2	6	$7,000,000
Ave C Widening	8th St to 40th St	COY	4	4	6	$16,000,000
Ave C½	36th St to 40th St	COY	1			$2,860,000
Co 16th St Widening	U.S. 95 to Ave 3E	COY	5	2	4	$26,250,000
Somerton Ave Widening	8th St to 32nd St	COY	3	2	4	$15,750,000
Yuma Expwy	Ave D to Ave SR 195	COY	9.5	2	4	$57,000,000
Yuma Expwy	Co 14th St to I-8	COY	9	2	4	$54,000,000
Co 22nd St	Ave H to Ave E 1/2	SL	2.5	-	2	$5,625,000
Juan Sanchez Blvd Widening	10th Ave to Ave E	SL	3	2	4	$29,700,000
Co. 15th St Widening	Ave G to Ave D	Som	2	2	4	$10,500,000
Co. 17th St Widening	Ave G to Ave D	Som	2	2	4	$10,500,000
Ave D/Ave E Expwy	Co 14th St to Mexican border	Som/SL	11	2	4	$66,000,000
Dome St	RR Grade Separation	WELLTON	--	--	--	$15,000,000
Ave 12E (new)	Camino Del Sol to Co. 10th St	YC	1	--	2	$1,300,000
Ave 14E (new)	S Frontage Rd to Co. 12th St	YC	1	--	2	$1,300,000

TABLE IV-7: PROJECTS NOT IN 2033 RTP (CONTINUED)

Project	Location	Agency	Length (miles)	Lanes		Cost
				Old	New	
Ave 15E Widening	Co 12th St to Co 14th St	YC	2	2	4	$10,500,000
Ave 27E	Old Highway 80 to Co. 11th St	YC	1	2	2	$700,000
Co 10th St Widening	Somerton Ave to Ave D	YC	1.5	2	4	$7,875,000
Co 11th St Widening	Somerton Ave to Ave D	YC	1.5	2	4	$7,875,000
Co 14th St Widening	Foothills to Ave 15E	YC	2	2	4	$10,500,000
Co 21st St	U.S. 95 to Ave B	YC	8	-	2	$18,000,000
Fortuna Rd	Co 12th St to Co 14th St	YC	2	-	2	$4,500,000
Somerton Ave Widening	Co. 11th St to Co. 15th St	YC	4	2	4	$21,000,000


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
SOMERTON
SOMERTON AVE
AVE G
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
AVE 7E
AVE 9E
AVE 11E
AVE 14E
U.S. MARINE CORPS AIR STATION
ARIZONA WESTERN COLLEGE & NAU-YUMA
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARABY RD
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
8TH ST

3. Revenue

This section describes various revenue sources that are available to fund roadway construction projects. The amount of these funds can vary from year to year depending on inflation, budget constraints, and other funding needs.

SALES TAX

The City of Yuma has a ½ cent sales tax in place. The tax is used for capital transportation improvements, exclusive of transit, and has no expiration.

LTAF

The Local Transportation Assistance Fund is generated by the state lottery. The amount distributed to cities and towns varies from year to year with a maximum of $23 million per year. The maximum has been available the last several years and is also expected to continue. This money is also distributed on a population basis. The counties do not receive LTAF.

HURF

The Highway User Revenue Funds are primarily gasoline and vehicle license tax. These funds are available to the State, counties, and cities. The state receives 50.5 percent of the HURF dollars to be used statewide, the cities receive 27.5 percent, cities over 300,000 population receive an additional 3 percent, and counties receive 19 percent. The city and county distribution is based on population and gasoline sales. The HURF revenues have been increasing over the recent years and that pattern is assumed to continue for the purpose of estimating revenues. It should be noted that agencies are using more HURF revenue for operations and maintenance and less for construction.

The allocation of ADOT HURF to the Yuma area was assumed to be distributed based on the county proportion of population and highway miles compared to the state. The HURF revenue estimate for the next ten years was obtained from the ADOT web site. Based on those estimates, HURF revenue was projected through the year 2033. The HURF estimate is presented in Table IV-8. It should be noted that recently YMPO member agencies have been using their HURF funds for operations and maintenance and not construction projects.

TABLE IV-8: HURF REVENUE ESTIMATES

FY	ADOT	Somerton	San Luis	Wellton	Yuma	Yuma Co
2008	$17,744,400	$889,408	$2,093,903	$180,925	$8,144,889	$12,024,938
2009	$17,097,800	$860,211	$2,025,166	$174,986	$7,877,514	$11,630,191
2010	$19,053,500	$946,088	$2,227,343	$192,455	$8,663,944	$12,791,259
2011	$19,954,500	$991,071	$2,333,245	$201,605	$9,075,883	$13,399,437
2012	$20,956,200	$1,041,106	$2,451,040	$211,784	$9,534,083	$14,075,914
2013	$22,037,400	$1,094,989	$2,577,896	$222,745	$10,027,529	$14,804,427
2014	$23,105,350	$1,148,151	$2,703,053	$233,559	$10,514,366	$15,523,183
2015	$24,276,650	$1,206,605	$2,840,669	$245,450	$11,049,667	$16,313,490
2016	$25,493,000	$1,267,464	$2,983,948	$257,830	$11,606,997	$17,136,319
2017	$26,653,700	$1,325,197	$3,119,865	$269,574	$12,135,689	$17,916,869
2018	$27,920,400	$1,388,462	$3,268,808	$282,443	$12,715,048	$18,772,221
2019	$29,291,911	$1,456,666	$3,429,379	$296,318	$13,339,638	$19,694,354
2020	$30,730,793	$1,528,220	$3,597,837	$310,873	$13,994,911	$20,661,783
2021	$32,240,357	$1,603,290	$3,774,571	$326,144	$14,682,371	$21,676,735
2022	$33,824,073	$1,682,047	$3,959,986	$342,165	$15,403,601	$22,741,543
2023	$35,485,585	$1,764,673	$4,154,509	$358,973	$16,160,259	$23,858,658
2024	$37,228,714	$1,851,357	$4,358,588	$376,606	$16,954,087	$25,030,647
2025	$39,057,470	$1,942,300	$4,572,691	$395,106	$17,786,908	$26,260,207
2026	$40,976,058	$2,037,710	$4,797,311	$414,515	$18,660,640	$27,550,165
2027	$42,988,891	$2,137,807	$5,032,966	$434,877	$19,577,291	$28,903,489
2028	$45,100,599	$2,242,821	$5,280,196	$456,239	$20,538,970	$30,323,291
2029	$47,316,038	$2,352,993	$5,539,571	$478,650	$21,547,889	$31,812,837
2030	$49,640,305	$2,468,577	$5,811,687	$502,162	$22,606,368	$33,375,553
2031	$52,078,745	$2,589,839	$6,097,169	$526,830	$23,716,842	$35,015,033
2032	$54,636,966	$2,717,057	$6,396,676	$552,709	$24,881,865	$36,735,048
2033	$57,320,853	$2,850,525	$6,710,894	$579,859	$26,104,117	$38,539,553
TOTAL	**$818,314,558**	**$40,688,925**	**$95,792,552**	**$8,277,015**	**$372,615,019**	**$550,120,757**

DEVELOPER

It is common practice for all the municipalities and Yuma County to require developers to make roadway improvements adjacent to their new development. This will usually include a dedication of right-of-way as well as construction of the planned “half street” adjacent to the development. The City of Yuma requires the same from developers and also has impact fee contributions from developers, which are used to supplement City funding to construct full-width streets.

The cities of Yuma, San Luis, and Somerton have impact fees for roads. The Town of Wellton negotiates impact fees and road improvements via individual development agreements.

Federal

Federal funding is available through a number of programs in SAFETEA-LU. Although SAFETEA-LU has expired, continuing resolutions have extended the funding until a new transportation authorization is passed. Several of the programs are outlined below.

National Highway System (NHS)

The National Highway System is significant rural and urban roads serving major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. It includes the Interstate System, other urban and rural principal arterials, highways that provide motor vehicle access between the NHS and major intermodal transportation facilities, the defense strategic highway network, and strategic highway network connectors.

Interstate Maintenance (IM)

The National System of Interstate and Defense Highways retain a separate identity within the NHS. The IM program, established under ISTEA provides for the on-going work necessary to preserve and improve Interstate highways.

Surface Transportation Program (STP)

The STP provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and public bus terminals and facilities. STP eligibilities include advanced truck stop electrification systems, high accident/high congestion intersections, and environmental restoration and pollution abatement. Each State must set aside a portion of their STP funds (10 percent or the amount set aside in 2005, whichever is greater) for transportation enhancements activities.

Bridge Program

The Bridge program is intended to fund systematic preventative maintenance. Each State must spend at least 15% of its bridge apportionment for bridges on public roads that are not Federal-aid highways. The discretionary bridge program was funded only through 2005; beginning in 2006, $100 million is to be set aside annually to fund designated projects.

Highway Safety Improvement Program (HSIP)

The highway safety improvement program is a core program with flexibility provided to allow States to target funds to their most critical safety needs. The HSIP requires States to develop and implement a strategic highway safety plan and submit annual reports to the Secretary of Transportation.

C. TRANSIT

1. Short-Range Plan

YCAT's Short-Range Transit Plan (SRTP) provides guidelines for meeting the needs of Yuma County transit users over the next five years to build a strong foundation for implementation of the Long-Range Transit Plan (LRTP). The strong growth on the YCAT and Dial-a-Ride systems demonstrates high potential; thus, the focus of this plan is to improve the experiences of riders and manage system growth in a way that attracts new ridership. The Para transit system is more stable, with little change foreseen. The SRTP builds on the existing YCAT configuration.

Improving the fixed route system will allow more focused use of additional equipment in serving eligible riders, thereby promoting the long-term goal of enhanced accessibility. Encouraging people, to use fixed-route public transit more; through improved service, including headways that are more frequent, which could mitigate complaints about timeliness and delays. Priority remains on giving riders a higher level of comfort and protection. The purchase of 28 new bus shelters with federal stimulus money provides the passenger with more comfort at some bus stop located throughout the county - 11 were installed in the City of Yuma, 4 in San Luis, 2 in Somerton, 5 in Wellton, 3 on the Cocopah Reservation, and 3 on the AWC campus. Other transit infrastructure, especially enhancing the current transit center and/or building a new one(s), remain a fundamental element of YCAT goals. Infrastructure enhancements will encourage multi-modal travel.

Some short-term recommendations require capital investment as well as ongoing operating and maintenance funding; others are network-oriented and require re-routing of the bus network with nominal cost implications. Operational recommendations are incremental service improvements, which can be evaluated, and adjusted according to their level of success to ensure their effectiveness in the long term. Since effective transit systems are highly dependent on frequency and accessibility, many of the recommendations concern expanding frequency. Network improvements can increase

the efficiency of the system, at a minimal cost without significantly changing the overall operating parameters of the service.

Recommendations for Transit Operations

- Increase service frequencies on existing routes
  - Yellow North Line: add one bus to shorten headway to 30 minutes
  - Yellow South Line: add one bus to shorten headway to 30 minutes
  - Orange Line: add three buses to shorten headway to 30 minutes
  - Green Line: implement a reverse direction bus and shorten headway to 30 minutes
  - Blue Line: implement a reverse direction bus and shorten headway to 30 minutes
  - Red Line: implement a reverse direction bus and shorten headway to 30 minutes
  - Purple Line: implement a reverse direction bus and shorten headway to 30 minutes
- Create new local circulator routes in Yuma, San Luis, Foothills, Mesa Del Sol, and Wellton
  - Three routes in the City of Yuma (see Figures IV-12 & IV-13)
  - One route in the City of San Luis (see Figure IV-11)
  - Two routes in the Foothills (see Figure IV-14)
  - Two routes in the Mesa Del Sol area (see Figure IV-15)
  - One route in the Town of Wellton (see Figure IV-16)

The circulator routes shown on the figures are preliminary. When funding is available, the routes will be refined to meet expected demand and serve destination points. The specific routes will be driven to ensure bus travel is safe and practical. The circulator routes can be implemented one at a time as funding is available and priorities established.

Recommendations for Management and Coordination

- Develop Coordinated Human Services Plan to coordinate services in Yuma County
- Study structure of contractor compensation and revise contract and remuneration accordingly
- Study structure of potential future Transit Authority to manage expanded YCAT system operations

Recommendations for Capital Improvements

In 2009, YMPO purchased eight new 34-passenger buses with federal stimulus funds to replace some of the current YCAT fleet of older vehicles. The funds also provided the opportunity to retrofit six older buses with the same type of equipment, such as camera systems, electronic destination sign, and accufare smartcard system, to make them

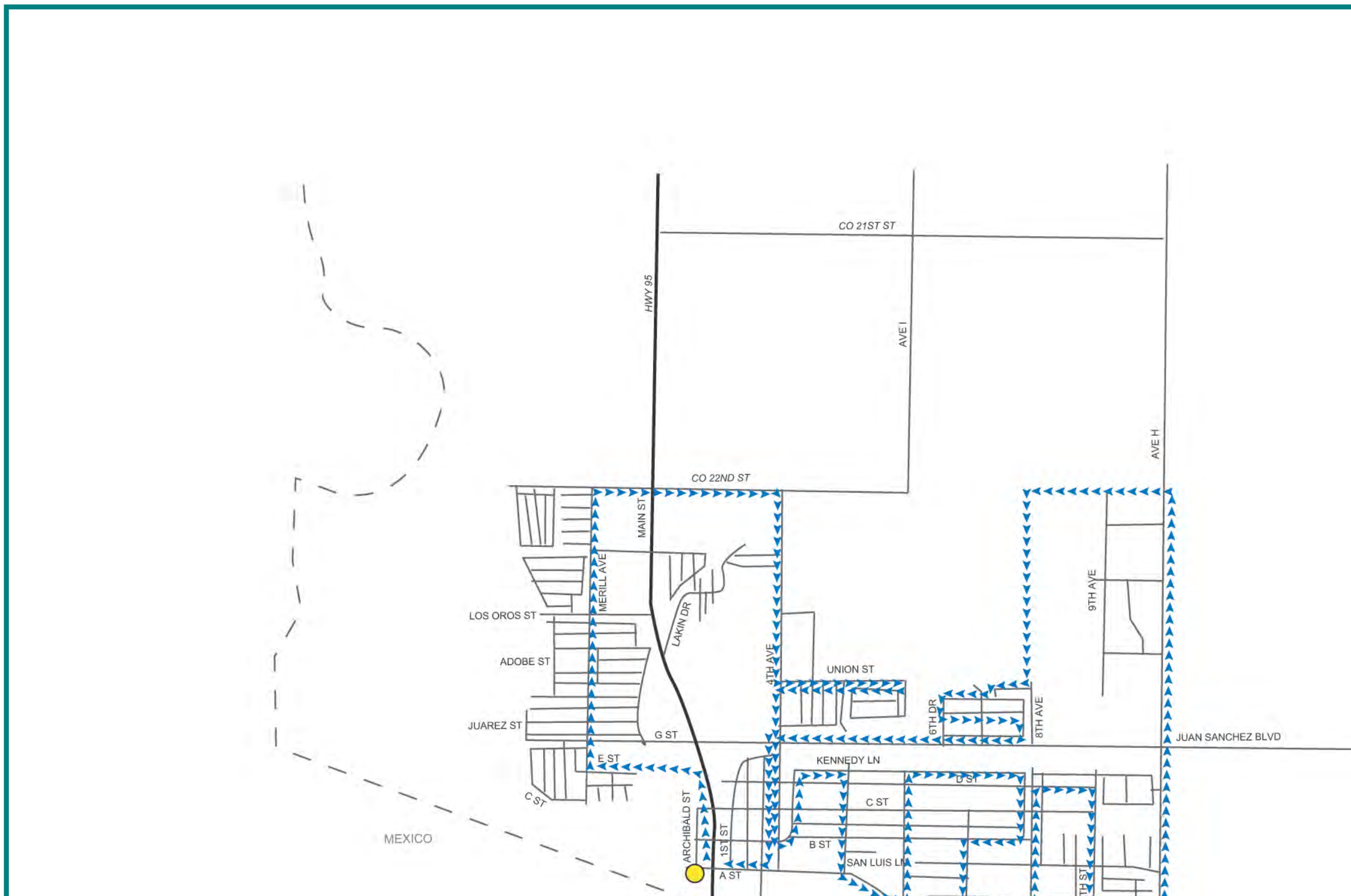
compatible with the new buses. The new buses provide a significant increase in vehicle capacity compared to the old cutaway bus fleet, which had a maximum of 17 passenger seats per vehicle. Eight new vehicles were purchased with the federal stimulus funds to replace and upgrade the paratransit (dial-a-ride) older vehicle fleet.

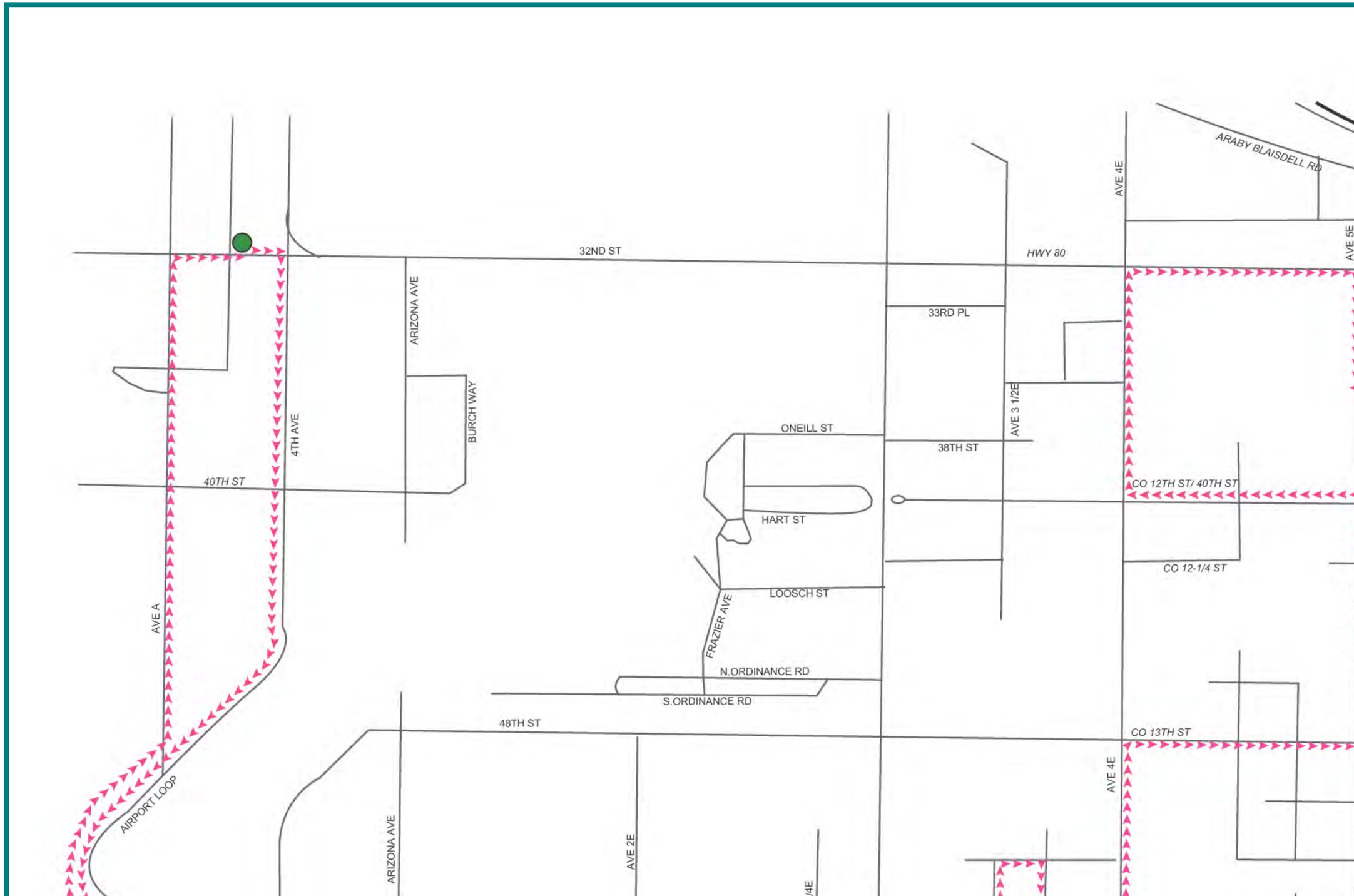
Table IV-9 lists the estimated cost and projected revenue for transit operations for the years 2007 to 2012. Based on current operations and funding, there is a surplus projected for this year and the next two, although the surplus continues to decline. It should be noted that in any given fiscal year, the surplus may not be immediately realized because federal and state reimbursements will lag. If the SRTP recommendations are implemented in 2010, 2011, and 2012, the surplus changes to a deficit of nearly $2 million in 2012. Additional funding sources would be needed to implement the recommendations of the SRTP. Additionally, it should be noted that when the region population reaches 200,000 and is confirmed by a census, the federal funding sources will change and the new funding amounts are not known.

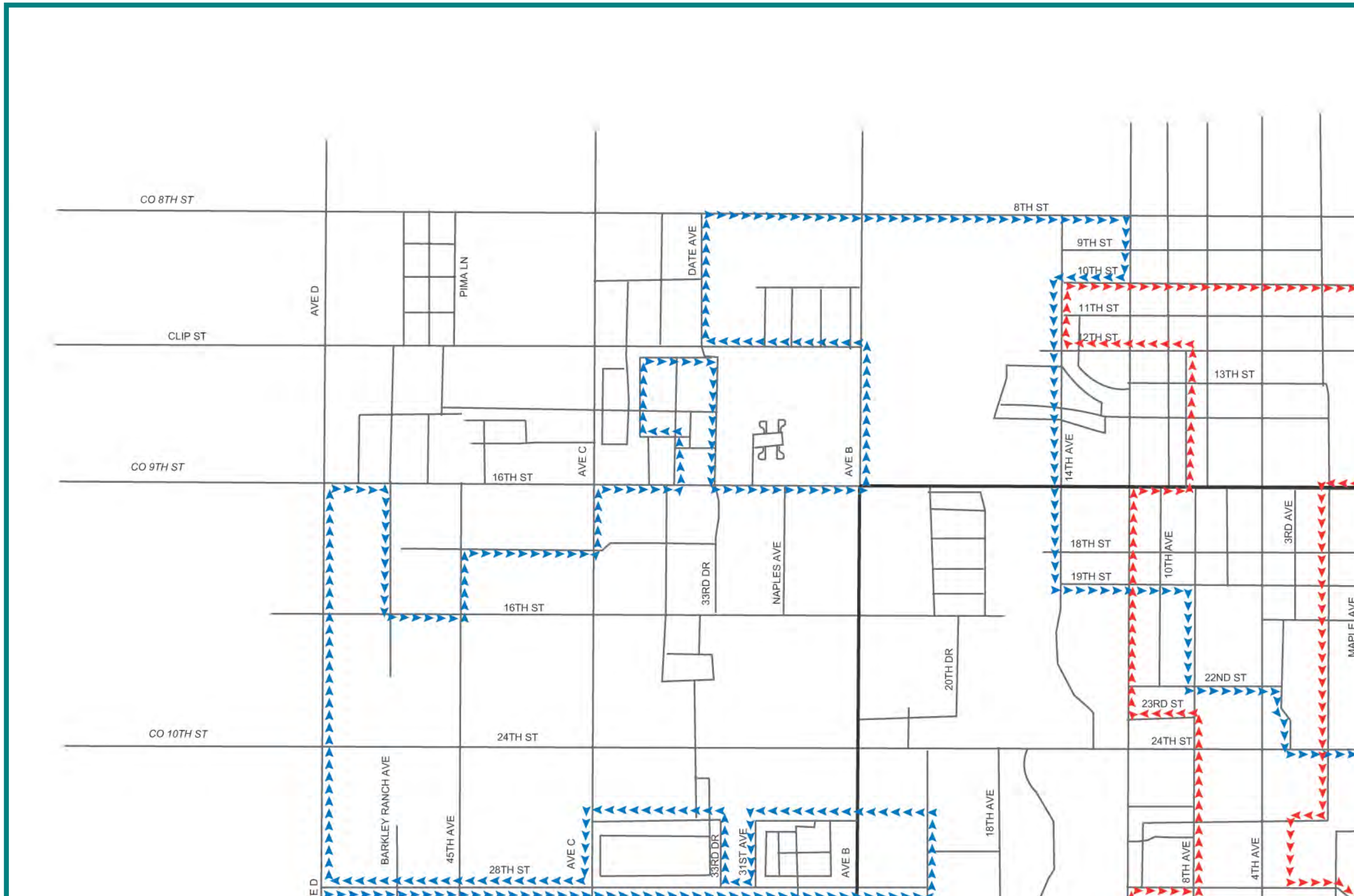
The following recommendations are for additional capital purchase to support the operational changes detailed above and would be phased based on the availability of funding. Table IV-10 summarizes the recommended actions and implementation.

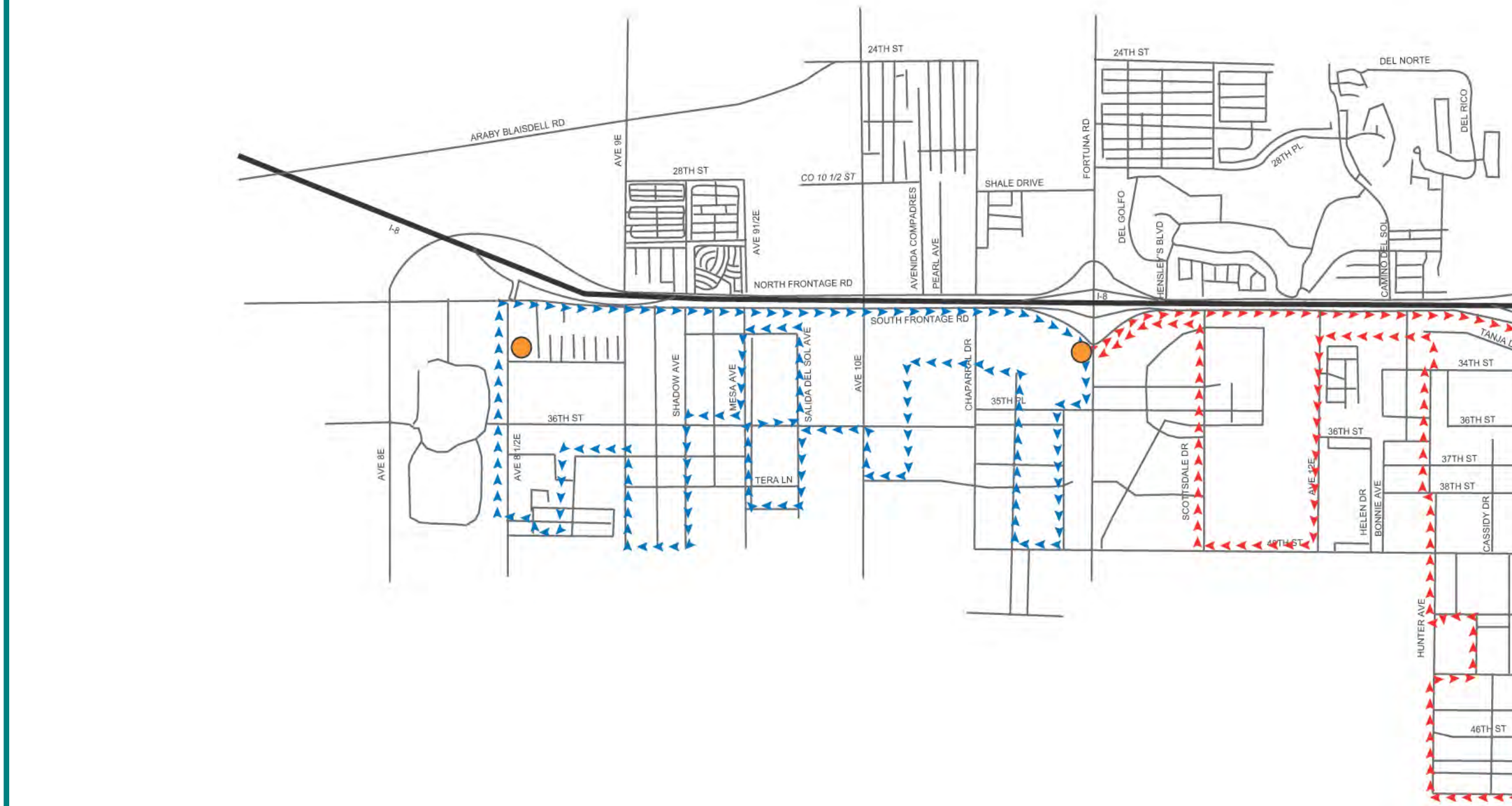
- Purchase ten buses to improve the frequency of service to 30 minutes for the yellow, red, green, blue, and orange routes
- Purchase two vans for paratransit capacity expansion
- Improve existing Transit Center - the Yuma Palms Shopping Center parking lot serves as the transfer center for the YCAT system. This is the site of the highest average daily boarding and transfers. Over the next five years, the Transit Center will experience significant activity and will require additional amenities to enhance the experience of the bus rider as well as provide a central location identity for the YCAT system. Amenities could include shelter, shade structures, lighting, seats, trash cans, bike racks and security call box. Other considerations include:
  - Ensure conformity to ADA design guidelines.
  - Improve landscaping of the waiting area. A natural shady environment increases temporal comfort, lowers perceived waiting time, and improves the image of the YCAT system.

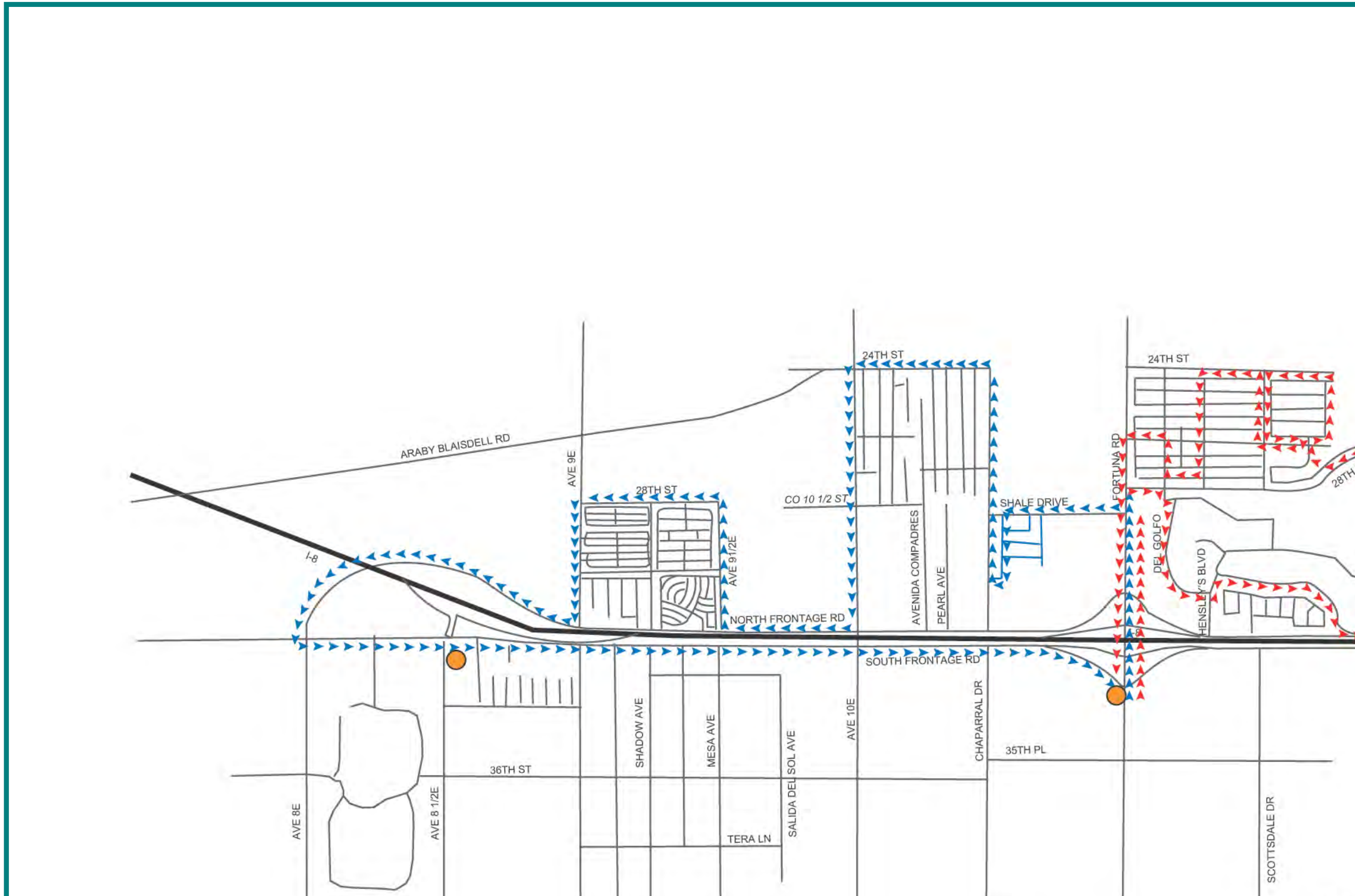
The ultimate goal for the transit system is to obtain land for a true multi-modal Transit Center, as was originally envisioned, in a location that is more central to the system, such as north of the Yuma Palms Center, behind Harkins Theater, north of 12th Street.


CO 21ST ST
HWY 95
AVE I
AVE H
CO 22ND ST
MAIN ST
MERILL AVE
LOS OROS ST
LAKIN DR
ADOBE ST
4TH AVE
UNION ST
9TH AVE
6TH DR
8TH AVE
JUAREZ ST
G ST
JUAN SANCHEZ BLVD
E ST
KENNEDY LN
D ST
C ST
C ST
ARCHIBALD ST
1ST ST
B ST
SAN LUIS LN
A ST
MEXICO


32ND ST
HWY 80
ARABY BLAISDELL RD
AVE 4E
AVE 5E
ARIZONA AVE
BURCH WAY
4TH AVE
33RD PL
AVE 3 1/2E
ONEILL ST
38TH ST
40TH ST
CO 12TH ST/ 40TH ST
HART ST
CO 12-1/4 ST
LOOSCH ST
FRAZIER AVE
N.ORDINANCE RD
S.ORDINANCE RD
AVE A
AIRPORT LOOP
48TH ST
CO 13TH ST
AVE 2E
AVE 4E


CO 8TH ST
CLIP ST
CO 9TH ST
CO 10TH ST
AVE D
PIMA LN
DATE AVE
8TH ST
9TH ST
10TH ST
11TH ST
12TH ST
13TH ST
14TH AVE
16TH ST
AVE C
AVE B
33RD DR
NAPLES AVE
18TH ST
19TH ST
10TH AVE
3RD AVE
20TH DR
22ND ST
23RD ST
24TH ST
BARKLEY RANCH AVE
45TH AVE
28TH ST
31ST AVE
18TH AVE
8TH AVE
4TH AVE


ARABY BLAISDELL RD
I-8
AVE 9E
28TH ST
AVE 9 1/2E
NORTH FRONTAGE RD
24TH ST
CO 10 1/2 ST
AVENIDA COMPADRES
PEARL AVE
SHALE DRIVE
FORTUNA RD
24TH ST
DEL NORTE
DEL RICO
28TH PL
DEL GOLFO
CAMINO DEL SOL
I-8
SOUTH FRONTAGE RD
AVE 8E
36TH ST
AVE 8 1/2E
SHADOW AVE
MESA AVE
TERA LN
SALIDA DEL SOL AVE
AVE 10E
CHAPARRAL DR
35TH PL
34TH ST
36TH ST
37TH ST
38TH ST
SCOTTSDALE DR
AVE 12E
HELEN DR
BONNIE AVE
CASSIDY DR
HUNTER AVE
46TH ST


ARABY BLAISDELL RD
I-8
AVE 9E
28TH ST
AVE 91/2E
24TH ST
CO 10 1/2 ST
AVENIDA COMPADRES
PEARL AVE
SHALE DRIVE
FORTUNA RD
DEL GOLFO
HENSLEY'S BLVD
NORTH FRONTAGE RD
SOUTH FRONTAGE RD
AVE 10E
CHAPARRAL DR
35TH PL
SCOTTSDALE DR
SHADOW AVE
MESA AVE
SALIDA DEL SOL AVE
TERA LN
36TH ST
AVE 8E
AVE 8 1/2E

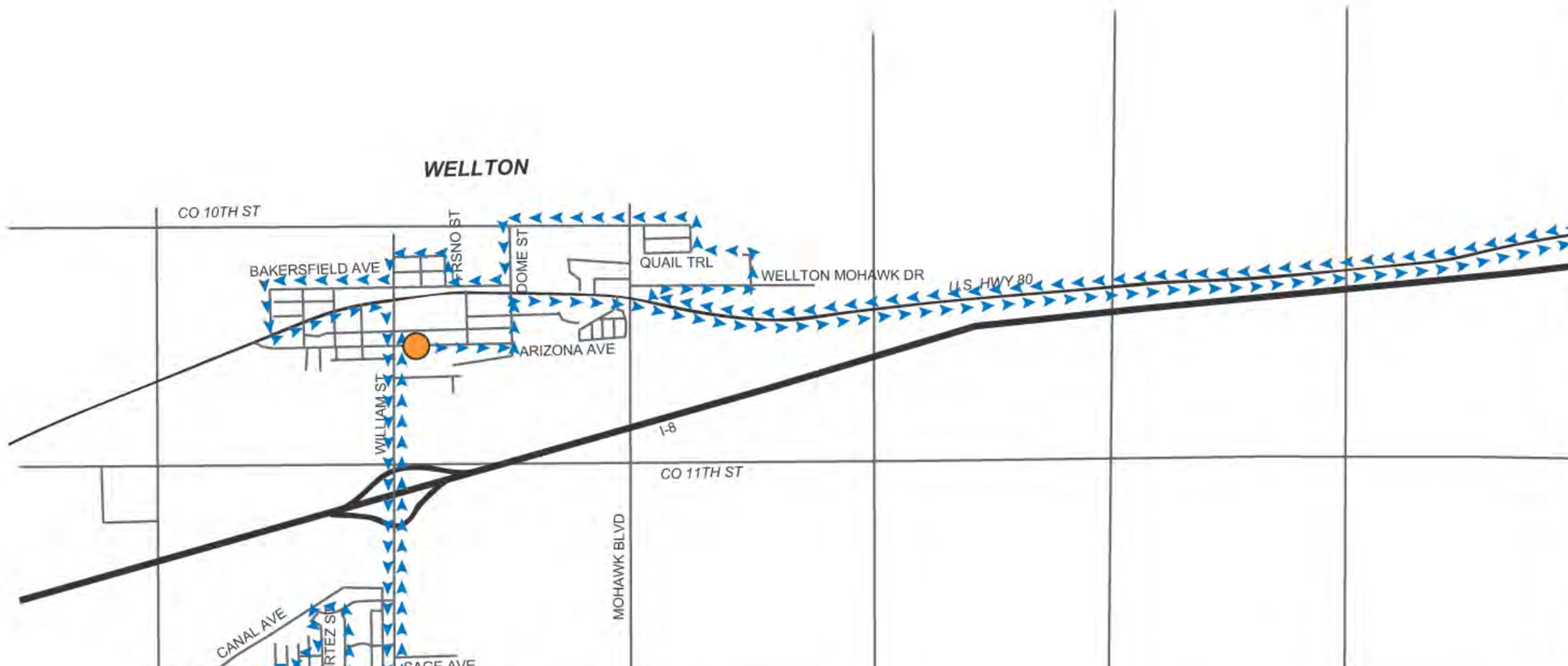

WELLTON
CO 10TH ST
BAKERSFIELD AVE
FRESNO ST
DOME ST
QUAIL TRL
WELLTON MOHAWK DR
U.S. HWY 80
ARIZONA AVE
WILLIAM ST
I-8
CO 11TH ST
MOHAWK BLVD
CANAL AVE

TABLE IV-9: ESTIMATED COSTS AND REVENUE FOR TRANSIT OPERA

	2007**			2008**			2009 **			2010 **			2
	Local	Federal	Total	Local	Federal	Total	Local	Federal	Total	Local	Federal	Total	Local	F
CURRENT EXPENSES														
CAPITAL EXPENSES														
Fixed Route Bus	206,667	516,632	723,299	80,564	322,254	402,818	222,867	516,432	739,299	222,867	548,444	771,311	222,867	
DAR	111,165	301,243	412,408	50,960	203,840	254,800	111,165	301,243	412,408	111,165	301,243	412,408	111,165	
Bus Stops	3,600	14,400	18,000	5,493	21,971	27,464	5,200	20,800	26,000	14,900	59,600	74,500	13,750	
Lease Maintenance Facility	0	0	0	5,980	23,920	29,900	0	0	0	0	0	0	0	
Mobile Surveillance Equipment	0	0	0	8,000	32,000	40,000	0	0	0	0	0	0	0	
Bus Turnout	0	0	0	0	0	0	0	0	0	25,000	100,000	125,000	25,000	
Buses and bus stops (ARRA)								0	0		2,414,178	2,414,178		
Transit Center	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL CAPITAL EXPENSES	**321,432**	**832,275**	**1,153,707**	**150,997**	**603,985**	**754,982**	**339,232**	**838,475**	**1,177,707**	**373,932**	**3,423,465**	**3,797,397**	**372,782**	**1**
OPERATING EXPENSES														
Fixed Route	176,158	282,342	458,500	302,114	302,114	604,228	162,658	308,842	471,500	162,658	304,019	466,677	162,658	
Dial-a-Ride	69,727	147,295	217,022	165,600	165,600	331,200	69,727	147,295	217,022	69,727	147,295	217,022	69,727	
Wellton RTCS Pilot Program	48,642	123,705	172,347	48,642	123,705	172,347								
TOTAL OPERATING EXPENSES	294,527	553,342	847,869	516,356	591,419	1,107,775	232,385	456,137	688,522	232,385	451,314	683,699	232,385	
PLANNING AND ADMINISTRATION	0	23,400	23,400	0	23,400	23,400	0	35,600	35,600	0	42,500	42,500	0	
TOTAL ANNUAL EXPENSES	**615,959**	**1,409,017**	**2,024,976**	**667,353**	**1,218,804**	**1,886,157**	**571,617**	**1,330,212**	**1,901,829**	**606,317**	**3,917,279**	**4,523,596**	**605,167**	**1**
SHORT-TERM TRANSIT PLAN RECOMMENDATIONS - Additional Costs														
CAPITAL EXPENSES														
Fixed Route Bus										98,280	393,120	491,400	51,597	
DAR										26,670	106,680	133,350	28,004	
Bus Stop										6,668	26,670	33,338	7,001	
Transit Center										0	0	0	0	
TOTAL CAPITAL EXPENSES										**131,618**	**526,470**	**658,088**	**86,602**	
OPERATING EXPENSES														
Fixed Route										159,415	637,660	797,075	218,261	
Dial-a-Ride										0	0	0	0	
TOTAL OPERATING EXPENSES										**159,415**	**637,660**	**797,075**	**218,261**	
TOTAL EXPENSES FOR SRTP										**291,033**	**1,164,130**	**1,455,163**	**304,863**	**1**
REVENUE														
FUNDING SOURCE														
Federal 5303		40,686	40,686		59,993	59993		50,858	50,858		78,163	78163		
Federal 5307		1,265,863	1,265,863		1,498,379	1498379		1,467,807	1,467,807		1,658,187	1658187		1
Federal 5307 (ARRA)			0			0		0	0		2,414,478	2414478		

TABLE IV-10: TIMING OF SHORT-RANGE TRANSIT RECOMMENDATIONS

BUS PURCHASES	FY
Green line reverse circulator – 1 bus	2012-13
Blue line reverse circulator – 1 bus	2012-13
Red Line reverse circulator – 1 bus	2012-13
Purple Line reverse circulator – 1 bus	2012-13
Yellow Line reverse circulator – 2 buses	2012-13
Orange Line reverse circulator – 4 buses	2012-13
LOCAL CIRCULATORS	
San Luis (1 route)	2013-14
City of Yuma (3 routes)	2013-14
Foothills (2 routes)	2013-14
Mesa Del Sol (2 routes)	2013-14
Wellton (1 route)	2013-14
MULTI-MODAL TRANSIT CENTER	
Preliminary plans for multi-modal transit center	2013-14
Construct transit center	2013-14
PLANNING AND STUDIES	
Coordinated Human Services Transportation Study	2011
Study on structuring a regional transportation authority	2011

2. Vehicle Replacement

The YMPO bus replacement plan is in accordance with the Federal Transit Administration Policies and procedures as documented in the FTA Urbanized Area Formula Program for Grant Application Instruction, Chapter V. The service life of a bus begins on the date the bus is placed into service and continues until the bus is removed from service.

Service Life Policy YCAT BUSES

The minimum normal service life for the 33 foot and a 34 foot YCAT bus is 10 years of service or an accumulation of at least 350,000 miles. The minimum normal service life for the YCAT 37ft Easy Rider bus (a used bus) is 12 years or 500,000 miles.

Table IV-11 shows the YCAT buses currently in operation with the year each bus was placed in service and when it would be scheduled for replacement.

Service Life Policy DIAL-A-RIDE VEHICLES

The minimum normal service life for the 21 foot and the 19 foot DAR vehicles are 5 and 7 years of service respectively or an accumulation of at least 200,000 miles. The minimum normal service life for the El Dorado bus and the Chevy Braun vans are 5 or 150,000 miles and 4 years or 100,000 miles, respectively. Table IV-12 shows the DAR buses/vans currently in operation with the year each was placed in service and when it would be scheduled for replacement.

Conclusion

The estimated cost of vehicle replacement was computed using the Producer Price Index (PPI), which results in an average increase of 3% a year plus there is an allowance for regulatory changes. The regulatory changes are not covered by the PPI. These regulatory changes could be such as engine changes to conform to new emission regulations or new FTA safety standards.

It is also important to note that if the vehicles are not replaced as specified by mileage and/or year; the maintenance cost will increase significantly and could include major items such as engine replacement or transmission replacement which would have a major budget impact and could impact service.

3. Long-Range Plan

The Long-Range Transit Plan (LRTP) provides a course of action to ensure transit will be supported and ridership encouraged over time. To be successful, transit must become part of the overall planning of the region. The LRTP should be able to enhance travel between neighboring cities and expand transportation choices within the regional transportation system.

The LRTP is goal-oriented and sets out clear and unambiguous transit mode share objectives that will support the desired land-use, lifestyle and transportation vision for the region. Transit mode share objectives should become part of the region's process for approving major transportation and land use projects. Implementation of this transit strategy will help to achieve the overall goal of a multi-modal system. The following goals and objectives support the long-range plan.

TABLE IV-11: YCAT BUS REPLACEMENT SCHEDU

YEAR	MAKE	MODEL	VIN #	FUEL	DATE IN SERVICE	MIL
2003	EASY RIDER ELDO	37' BUS 34-P WC/LIFT	1N9FMAC89C084228	DSL	12/8/2006	167
2006	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW96CX62413	DSL	07/25/2006	42
2006	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW06CX62414	DSL	07/25/2006	42
2006	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW76CX62412	DSL	08/21/2006	45
2007	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW67CY51731	DSL	03/21/2007	41
2007	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW87CY51732	DSL	04/06/2007	43
2007	FLT MST-II ELDO	33' BUS 34-P WC/LIFT	4UZAACBW47CY51730	DSL	04/04/2007	46
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	1GBJ5V1928F414619	DSL	02/04/2010	42
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	1GBJ5U1928F414226	DSL	01/04/2010	42
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	1GBJ5U1948F414082	DSL	01/04/2010	45
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	1GBJ5U1948F414809	DSL	02/15/2010	44
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	1GBJ5U1958F414608	DSL	02/15/2010	42
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	NA	DSL	02/26/2010	0
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	NA	DSL	02/26/2010	0
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	NA	DSL	04/01/2010	0
2009	PASSPORT ELDO	33' BUS 34-P WC/RAMP	NA	DSL	On order	0

TABLE IV-12: DIAL-A-RIDE BUS/VAN REPLACEMENT SC

YEAR	MAKE	MODEL	VIN #	FUEL	DATE IN SERVICE	MIL
2006	Ford Eldorado	25' Bus 17-P WC/Lift	1FDWE35S66HB36839	Gas	11/282006	11

Goals and Objectives

Goal 1: Enhance Mobility

Objective 1-1: Achieve a regional non-automotive mode split for Yuma County of 3% by 2033

Implementation Actions:

- Operate half-hour headways or less on all routes by 2033
- Establish a reputation for on-time operation
- Ensure vehicles are safe, comfortable and well-maintained

Objective 1-2: Provide at least three travel choices from and to all points in Yuma County

Implementation Actions:

- Build adopted regional bicycle system by 2021
- Expand transit options to all areas by 2021

Goal 2: Enhance Accessibility

Objective 2-1: Make fixed-route transit accessible to all Yuma County residents by 2033

Implementation Actions:

- Provide fixed-route service to serve all residential, employment and activity centers of 100 residents and/or employees in the region by 2033

Objective 2-2: Expand Dial-a-Ride Service to All Eligible Residents

Implementation Actions:

- Provide service to all persons with disabilities in Yuma County by 2025

Goal 3: Improve Livability

Objective 3-1: Maintain a positive community response about transit and alternative modes in an annual survey at 67% or higher satisfaction

Implementation Actions:

- Maintain automobile travel at an acceptable level of service on streets with transit
- Maintain attainment status for air quality after re-instatement
- Provide a convenient, efficient and cost-effective service that is competitive with the cost of driving

Goal 4: Encourage Multi-modal Options

Objective 4-1: Establish user-friendly links between modes by 2020

Implementation Actions:

- Build transit centers at three primary transit transfer locations by 2020
- Install bicycle lockers and/or racks at the 30 most active YCAT transit stops by 2020
- Provide bike racks on all buses
- Build park-and-ride lots in Wellton-Tacna, San Luis, and Somerton by 2020

Objective 4-2: Work with local communities and agencies to foster multi-modal opportunities in project review and land use planning

Implementation Actions:

- Modify street design standards on transit routes for all Yuma communities to require transit features such as bus pullouts by 2015
- Adopt transit-supportive land use policies in all Yuma County communities by 2015

Goal 5: Ensure Transit System Viability

Objective 5-1: Identify and develop long term funding strategies

Implementation Actions:

- Establish a Transit Authority by 2015
- Identify and implement financial strategies to fund the plan
- Build long-range program on existing services
- Establish comprehensive annual performance review program

Fixed-Route Service

Fixed-route bus service will continue to be the backbone of the YCAT system, and, in the long term, will expand to include express, local, cross-town, and neighborhood circulator bus routes. A modest expansion of YCAT's fixed route bus service would improve service to key locations not currently served by the system.

Much of the service expansion will most likely require the development of a local dedicated revenue source. The changes will need to be introduced gradually to allow for seamless adaptation from current services and audience acceptance but the goal is to ensure widely available access to transit.

Key recommended long-term improvements for YCAT service:

- Add new routes to extend coverage to areas experiencing population and/or job growth and to provide direct transit service between suburban communities and activity centers
- Establish a transit route between Yuma and Wellton, whether by continuing the current pilot route or by combining service to Foothills with a short line to Wellton
- Gradually reconfigure the current circulator routes into a grid network in the downtown areas to offer improved connectivity in the higher-density locations of the region as the population grows

Paratransit / Dial-a-Ride

The Long-Range Transit Plan should provide a substantial increase in paratransit service that addresses the needs of the elderly and disabled community. Paratransit will become increasingly important as the Yuma County population ages. Recommendations for YCAT's DAR service include the following:

- Increase DAR service by 25 percent by 2023 and by 100 percent by 2033 to reflect historical trends and the anticipated growth in the region's elderly population
- Where paratransit/dial-a-ride is not financially viable, promote a taxi voucher service program in outlying areas (such as currently offered in San Luis) to provide reasonably priced service to persons with special transit needs while continuing to offer full ADA paratransit service in the urbanized areas
- Cultivate community partnerships to maximize available funding and resources that can strengthen the efficiency of mobility services
- Implement an ongoing service evaluation system to review existing operations, communicate with users, and implement new service delivery methods to continuously improve service and effectiveness
- Support asset sharing by human services organizations, as is done by the Arizona Rides program

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) are designed to provide measurable improvement in service with relatively modest investment by managing demand and maximizing the use of facilities and networks. ITS can facilitate bus travel for the operators and for passengers by helping manage traffic congestion, providing timely and comprehensive transit information, and improving on-time performance of the transit system. YCAT's Long-Range Transit Plan calls for implementing a variety of ITS technologies, including:

- Automatic Vehicle Location (AVL) information systems that provide real-time bus arrival/departure information at major bus stops, park and rides, and transit centers
- Signal priority systems that adjust traffic signal timing to expedite bus service
- "Smart Card" fare collection systems, which speed passenger boarding, and provide opportunities for riders to renew bus passes remotely, using the Internet

Management Options

YCAT and Dial-a-Ride are currently operated by third-party transportation service contractors for the YMPO. The current service provider has been contracted by YCAT since 2008. As the system matures and the services expand, the Yuma region will require a dedicated management program to address the ongoing operational and funding issues associated with running a transit system. Some of the choices for instituting a management and operating structure include:

- The YMPO could assume the management role on a permanent basis and continue to offer services as they do now. A new structure would need to be established within YMPO to operate a larger transit system with a dedicated staff and management function.
- A private entity could assume full control of operations in the region. Such a plan would reduce control over the system as a private operator would expect to be compensated for service and be allowed to eliminate service where it is not

profitable. Some form of subsidy could be instituted subject to an oversight board.
- A Regional Transportation Authority (RTA) would be created and given responsibility for overseeing the transit program (or even the regional transportation program). This would also likely entail access to and control of the financial resources to permit day-to-day management of the system.

Under the first option, a private entity could be contracted to deliver the service as is done now with Yuma Transit, LLC. In the second option, the intent would be to encourage a private business approach to transit services with some consideration to ensure critical services are maintained where needed.

The third option would significantly expand the region's ability to seek funding and make capital improvements. Recently, adopted state legislation authorizes counties with population between 200,000 and 400,000 to form a transportation authority with the power to levy an excise (sales) tax and bond for projects. When the YMPO region reaches 200,000 resident population, this could generate much needed revenue to operate the transit system.

Transit Capital Investments

Providing and increasing transportation capacity in the region will require investing in facilities that make transit more convenient, reliable, and responsive. Many of the improvements suggested below will require additional capital investments.

- Acquisition of right-of-way in high-demand travel corridors for bus pullouts, transit shelters, bike lockers, and other amenities
- Construction of park-and-ride facilities in collaboration with new residential, employment and commercial developments in specified locations (e.g., Wellton-Tacna, San Luis, and Somerton) along long-distance services
- Planning and development of new multi-use transit centers and intermodal transit hubs at selected locations to encourage transit use and expedite transfers between modes (e.g., San Luis, Wellton-Tacna, Foothills)
- Street improvements that help improve transit operational efficiency or safety, such as bus bays and queue jumpers
- Right-of-way acquisition for park-and-ride lots, transit centers, and maintenance facilities

Transit-Supportive Policies

Transit-supportive land uses and street design make transit easier to access and operate. Transit-oriented development (TOD) is being built in many communities throughout the country, including many with geographic size and characteristics comparable to the YMPO region. Adopting TOD-supportive policies in the communities

that YCAT serves may also assist when seeking grant support for complementary transit services.

Bus Fuel Options

YMPO may wish to consider its fuel options and the types of vehicles used to provide services. Gasoline-powered vehicles are subject to the vagaries of oil market prices and may be less fuel-efficient and less ecologically sensitive than other fuels. As alternative fuels become more reliable and available, YCAT should shift vehicle purchases to alternative fuel choices. In the short term, compressed natural gas, liquid natural gas, or hybrid diesel-electric vehicles make up a large part of new fleets in many communities. Over time, hydrogen fuel cells could also be a part of the fleet. This consideration should be evaluated annually prior to purchase of rolling stock.

4. Transit Revenue

This section summarizes the major funding types that apply to transit projects.

FTA 5303, Metropolitan Transportation Planning Program (MTPP)

This is a formula grant for long-range planning and transit improvement projects distributed to MPOs. It requires a 20% match. MTPP assistance should be used to conduct balanced and comprehensive intermodal transportation planning and technical studies for the movement of people and goods in the metropolitan area.

FTA 5307, Formula Grants

Formula transit capital and operating dollars through this program are distributed annually to the region. The funds must be matched by 20% local funding and must be spent on transit. The match may be reduced to 10% for acquisition of vehicles or equipment to meet ADA or Clean Air Act requirements. The Federal share can not exceed 50% for operating assistance.

This is a primary source of funding for the YMPO system. It is allocated through a formula based on population and population density. The funds can be used for capital improvements, transit support, and operations. However, once the county reaches a population threshold of 200,000 people, which is expected after the 2010 census, the funds are distributed through a different formula. At that time, operating funds are allocated directly to a designated recipient for the Yuma MPO region under a formula that includes vehicle and passenger miles. The 5307 money will be limited to capital

improvement and transit support. The region will have to find additional revenue to meet the operating fund shortfall or drastically cut its current operations.

FTA 5309, Capital

These are discretionary funds allocated for transit capital purchases and construction. They require a 20% match from the local agency. For the Yuma area, this source could help to fund construction of a new multi-modal transportation center or the acquisition of buses. However, it is a competitive program and the best qualified projects are selected. For Yuma, it could be of value to combine requests for capital projects (e.g., bus acquisitions) with another agency such as Phoenix or Tucson to improve the likelihood of success within this program. Projects can sometimes also be funded through earmarks or as a demonstration project if it meets the required criteria.

Transportation Enhancement

This funding source is competitive grant funding designated to provide funding for capital projects that enhance existing surface transportation system. Successful projects must fulfill one of twelve specific goals. This funding source requires a minimum 5.7% local match; the higher the local match, the more competitive the project. The maximum amount is $750,000.

CMAQ

Congestion Mitigation and Air Quality (CMAQ) Improvement Program provides a flexible funding source to fund transportation projects in non-attainment or maintenance area(s) that contribute to improved air quality. A local match of 20% is required. (It should be noted that CMAQ funds are not currently available to YMPO area entities).

Paratransit funding

Section 5310, Elderly & Persons with Disabilities Transportation Program is a formula-based grant program that provides capital funding to purchase vehicles for services geared toward the elderly and people with disabilities. A 20% match is required.

- The Older Americans Act Title III funds are also used to meet the transportation needs of the elderly and people with disabilities. Use of these funds requires coordination with the local area Agency on Aging.
- Job Access / Reverse Commute (JARC) funds are targeted towards employment trips. All projects funded under this program must be the result of a collaborative planning process.

- Temporary Assistance to Needy Families (TANF) funds are another source of funding for employment trips or trips to training facilities. The TANF program is administered by DES in Arizona.

The New Freedom Program is new funding allocated in the 2009 federal highway and transit reauthorization. These funds are part of a broader initiative to integrate people with disabilities into the activities of community life. There is an emphasis in two areas, 1) providing employment transportation and 2) provide a higher level of service to individuals with disabilities than required by the ADA. Alternatively, funds from this program can be used to provide service to those with disabilities who may not otherwise meet stringent, ADA-service eligibility guidelines.

LTAF II

The Local Transportation Assistance Fund II is funded through Powerball proceeds. These funds are passed through to cities, towns, and counties for use for transit operating and capital needs. This is a tiered formula; legislation passed in 2000 requires that funding be spent only on transit for jurisdictions allocated more than $2,500.

YMPO Reserve (Federal 5307/5309 Rollover)

These funds are being held in reserve for the YMPO to be used exclusively for transit capital expenditures.

5. Revenue Shortfall/Surplus

Based on current operations and funding, and the recommendations in the SRTP, there is a projected shortfall of $3.4 million for the three-year period from 2010 to 2012 if the SRTP is implemented.

6. Revenue Options

Although YMPO will continue to rely on Federal sources for much of its long- and short-range transit plan needs, it will need to consider creating a more diversified funding source. A report by the Transportation Research Board detailed the changing funding situation for transit. According to this report, federal and state funding remains an important source of funding, but fares and local dedicated funding have gradually become more important sources, especially at medium and smaller agencies. New funding sources will need to be identified in order to make all the SRTP improvements possible.

The following are local sources that will need to be considered in order to expand service as recommended beyond the five-year plan:

- Fare increases – not recommended, generally decrease ridership
- County half-cent sales tax for transportation including transit service
- Federal 5309 grants for capital and infrastructure projects
- Establish a Regional Transportation Authority and levy up to a ½ percent excise tax

D. NON-MOTORIZED TRANSPORTATION

Non-motorized transportation can reduce congestion and increase the livability of the region. Non-motorized forms of transportation improve the environment and personal health, enhance the quality of life, and increase economic vitality. Increasingly, bicycling and walking are considered indicators of a regions livability which can impact attracting business and workers as well as tourism. Additionally, areas that are bicycle and pedestrian "friendly" provide transportation choices for all citizens.

1. Pedestrian Element

Every trip has a walking component of some length. However, it is also important to understand that some portions of the population do not have access to cars or cannot safely operate a vehicle and their pedestrian trips are significant. Most new urban street design and construction includes sidewalks for pedestrians. In order to provide a safe and effective environment for pedestrians, the following design elements should be considered.

- Provide continuous sidewalks
- Provide comfortable pedestrian access to shopping, schools, and other activity centers
- Provide pedestrian facilities that meet the requirements of the Americans with Disabilities Act (ADA)

The AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities recommends a minimum sidewalk width of five feet, but there are many locations where clear sidewalk widths greater than the minimum are desirable. Along arterials not in a central business district (CBD), sidewalk widths of six to eight feet are desirable where a buffer (planting) strip is provided between the sidewalk and the curb, and sidewalk widths of eight to ten feet are desirable where the sidewalk is flush against the curb. In CBD areas the desirable sidewalk width is ten feet. These widths represent a clear or unobstructed pedestrian travel way. Providing a buffer can improve pedestrian safety and enhance the walking experience. Buffer width is the distance between the sidewalk and the adjacent roadway. The width will vary depending on location. The AASHTO

guide recommends a buffer of two to four feet along local or collector streets and five to six feet along arterial or major streets.

The following goals and actions will result in a pedestrian circulation system that meets the needs of county residents.

Goal 1: Increase the availability of pedestrian facilities and improve safety.

- Provide a system that connects residential origin points with regional destination points.
- Identify the need for sidewalks or sidewalk upgrades along major and minor arterials in urban areas.
- Encourage the coordination of pedestrian facilities with public transit.
- Coordinate with area schools to establish safe routes to school.
- Incorporate national standards for pedestrian facilities as appropriate.

2. Bicycle Element

The basis for the bicycle element is to establish a system of linear facilities and nodes that will provide for safe and convenient travel in the YMPO region. The recommendations for additional bicycle facilities build on the existing plans of the YMPO, the recently completed City of Yuma Bicycle Facilities Plan, and the City of Somerton Shared Use Pathway and Trails Master Plan. The City of Yuma vision for bicycle facilities is "a unified system that provides bicyclists with safe, convenient, accessible facilities." The 2033 bicycle facilities plan is shown in Figure IV-17. One particular facility of note is a portion of the Anza historic trail. The trail commemorates the story of a Spanish Expedition, whose members traveled from Nogales, Arizona to San Francisco, California. The route generally followed the Gila River in Yuma County. The Yuma Quartermaster Depot State Historic Park displays an interpretive exhibit for the Anza Trail.

The following goals and actions along with the implementation of the plan shown in Figure IV-17 will result in a comprehensive bicycle system for the region.

Goal 1: Improve the accessibility of bicyclists to regional destination points within the YMPO jurisdiction area.

- Provide a system that connects residential origin points with regional destination points.
- Connect the Foothills with downtown Yuma and regional shopping centers by supporting City of Yuma plans.
- Provide a continuous route from the Foothills area to the border in San Luis. This should be in the form of shared use paths or bike lanes.
- Coordinate bicycle facilities with public transit.
- Provide continuous path along East Main Canal from Yuma to San Luis.
- Provide bike locker facilities at the future transit center.

- Connect to alternative transportation modes with nodes in San Luis, Foothills, Wellton, Somerton, and Yuma Palms center. A node shall provide parking, water, bike lockers, and other amenities as deemed appropriate.
- Encourage private developer participation in planning and building bicycle facilities by adopting policies that require such action.

Goal 2: Increase bicycle use within the YMPO region through recognition and awareness.

- Coordinate with the YMPO member agencies to develop a bicycle map for the region.
- Continue bicycle safety programs that currently exist and establish safety programs in those jurisdictions where they do not exist.
- Continue the training program targeted toward children and expand to other users as well as jurisdictions where such programs don't exist.

Goal 3: Improve non-motorized use safety within the YMPO region

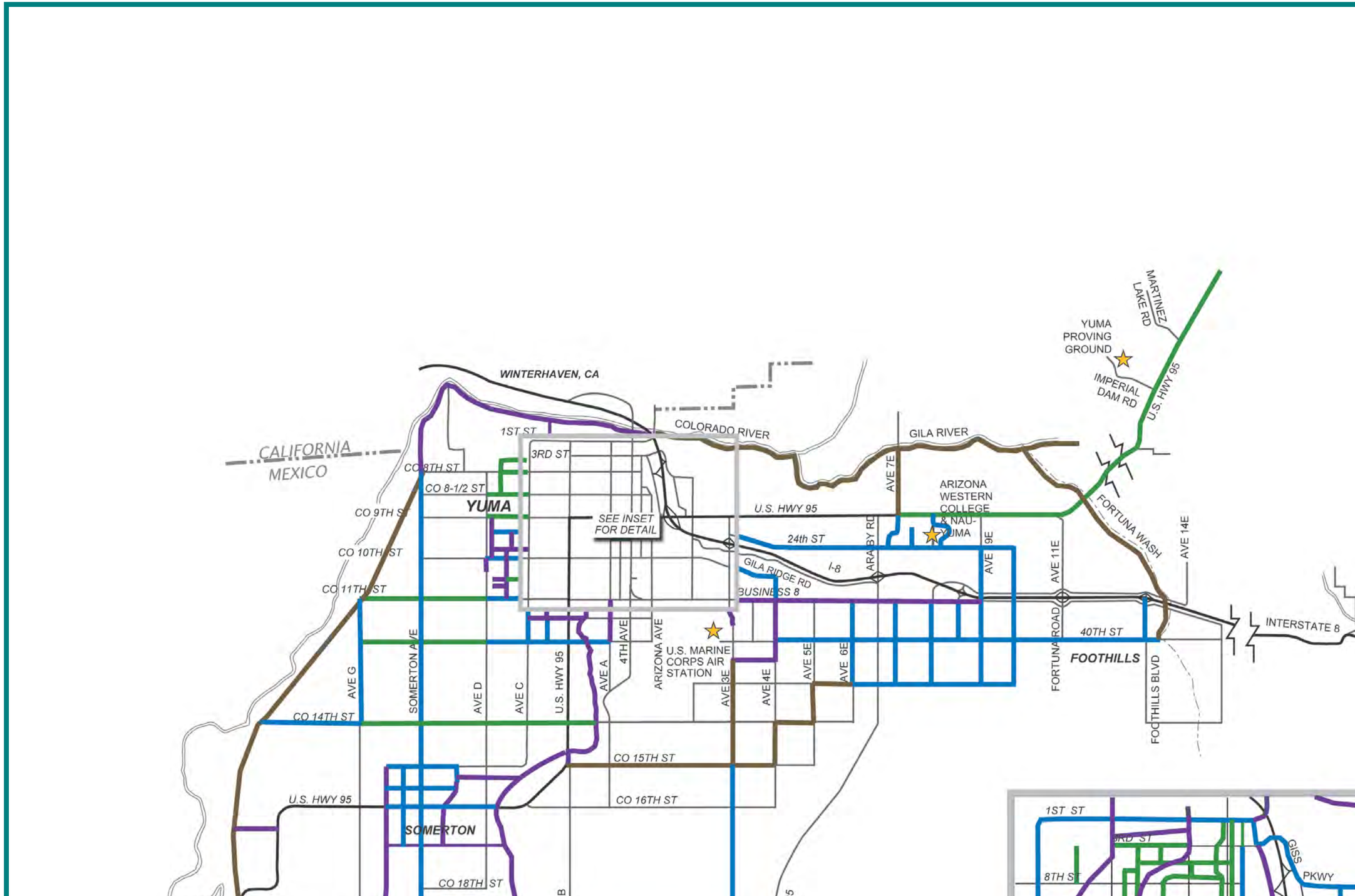
- Incorporate national standards for bicycle facilities as appropriate.
- Minimize non-motorized users' conflicts with vehicles.
- Encourage "Adopt-a-Trail" participation by bicycle groups.
- Provide maintenance funding.
- Provide appropriate marking and signage for bicycle facilities.

E. SAFETY

The Highway Safety Improvement Program (HSIP) was established as a core federal program as part of SAFETEA-LU. The HSIP allocation to Arizona for fiscal year 2009 was $35.2 million of which $2 million is a high risk rural road set aside.

A Strategic Highway Safety Plan (SHSP) is a major component and requirement of the HSIP. An SHSP is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. The SHSP is developed by the State DOT in a cooperative process with Local, State, Federal, and private sector safety stakeholders. The purpose of an SHSP is to identify the State's key safety needs and guide investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads. The emphasis areas in improving highway safety are summarized below. Further information on these programs and funding opportunities is available on the FHWA website.

- Intersection safety is a national, state and local priority. Intersections represent a disproportionate share of the safety problem.
- The FHWA Local and Rural Safety Program provides national leadership in identifying, developing, and delivering safety programs and products to local officials and governments to improve highway safety on local and rural roads.
- Rural roads account for approximately 40 percent of the vehicle miles traveled in the U.S., but almost 57 percent of fatalities.


WINTERHAVEN, CA
CALIFORNIA
MEXICO
COLORADO RIVER
GILA RIVER
1ST ST
3RD ST
CO 8TH ST
CO 8-1/2 ST
CO 9TH ST
CO 10TH ST
CO 11TH ST
CO 14TH ST
CO 15TH ST
CO 16TH ST
CO 18TH ST
YUMA
SEE INSET FOR DETAIL
U.S. HWY 95
24th ST
GILA RIDGE RD
BUSINESS 8
I-8
ARABY RD
AVE 7E
AVE 9E
AVE 11E
AVE 14E
ARIZONA WESTERN COLLEGE & NAU-YUMA
FORTUNA WASH
FORTUNA ROAD
40TH ST
FOOTHILLS
FOOTHILLS BLVD
INTERSTATE 8
YUMA PROVING GROUND
IMPERIAL DAM RD
MARTINEZ LAKE RD
U.S. MARINE CORPS AIR STATION
SOMERTON
SOMERTON AVE
AVE G
AVE D
AVE C
AVE A
4TH AVE
ARIZONA AVE
AVE 3E
AVE 4E
AVE 5E
AVE 6E
1ST ST
8TH ST
GISS PKWY

- Pedestrian fatalities comprise about 11 percent of all traffic fatalities. The FHWA's Office of Safety has established a goal of reducing pedestrian fatalities and injuries by 10 percent by the year 2011.

Roadway departure crashes are frequently severe and account for the majority of highway fatalities. In 2008, there were 17,818 fatal roadway departure crashes or 52 percent of the total fatal crashes For the YMPO region, there were a total of 35 high crash locations identified in Figure II-6. The locations range from a crash rate of 0.89 to 4.5 crashes per million entering vehicles. The locations are listed in rank order by rate in Table IV-13.

TABLE IV-13: INTERSECTION CRASH RATE AND RANK*

INTERSECTION	RATE	INTERSECTION	RATE
16TH St & Redondo Center	4.5	32nd St & Avenue B	1.63
16th St & I-8	3.87	Avenue 2E & 16th St	1.57
16th St & Avenue B	3.05	Avenue 2E & 24th St	1.49
I-8 & Fortuna Rd	2.95	Avenue 2E & 32nd St	1.45
Giss Pkwy & Madison Ave	2.65	Avenue B & 8th St	1.44
24th St & Avenue A	2.6	32nd St & Catalina Dr	1.43
8th St & Magnolia Ave	2.31	4th Ave & 1st St	1.43
Avenue 3E & Gila Ridge Rd	2.29	16th St & Ave A	1.34
24th St & Ave B	2.23	24th St & Ave 3E	1.33
24th St & Arizona Ave	2.21	32nd St & 4th Ave	1.31
4th Ave & Catalina Dr	2.08	32nd St & Avenue A	1.24
24th St & 4th Ave	1.89	32nd St & Avenue 3E	1.22
32nd St & Araby Rd	1.72	32nd St & Arizona Ave	1.21
32nd St & Avenue 5E	1.7	16th St & 14th Ave	1.17
24th St & 8th Ave	1.63	16th St & Arizona Ave	1.15
32nd St & Avenue B	1.63	16th St & Yuma Palms Pkwy	1.12
16th St & 1st Ave	1.6	20th St & Avenue B	0.89
16th St & 4th Ave	1.58		

Rate=annual crashes per million entering vehicles

Locations with a crash rate of 2.0 or greater are considered to be a high priority by the YMPO TAC. It is recommended that further analysis be conducted at these locations to identify crash patterns and/or likely causes for the crashes so that recommended improvements can be identified. This analysis can be performed by the responsible jurisdiction or ADOT can be requested to conduct a Road Safety Audit. Improvements could be implemented as a stand alone intersection project or in conjunction with a widening project that includes the specific intersection. There is $580,000 available to

YMPO member agencies annually to address safety issues. YMPO member agencies should develop a systematic process to regularly update the identification of high crash locations and determine potential improvements.

FHWA prepared a document titled "Desktop Reference for Crash Reduction Factors"; September 2008 that provides the expected crash reduction for a variety of countermeasures on highways. The crash reduction factor (CRF) is an estimate of the percent reduction in crashes for a given countermeasure and will vary based on local conditions. Examples of intersection CRF's are summarized in Table IV-14. More recently, FHWA established a web site using crash modification factors (CMF). Essentially, these are the inverse of the CRF's. Instead of estimating that crashes would be reduced 15 percent, the CMF (85) is applied to current data to estimate the number of crashes after the improvement.

TABLE IV-14: EXAMPLE CRASH REDUCTION FACTORS

Countermeasure	Crash type	Crash reduction factor
Add all red clearance interval	All	15
	Right angle	30
Increase yellow change interval	All	15
	Right angle	30
Install pedestrian signal	All	15-25
	Pedestrian	0-55
Add protected left turn phase	All	15-36
	Left turn	35-70
Signal coordination	All	7-16
Countdown pedestrian signals	Pedestrian	25
Add signal head and upgrade to 12" lenses	All	10-31
	Rear end	28
Provide one signal head per lane	Right angle	46
Right angle	Right angle	35-42
Improve signal visibility	All	3-9
Install signal	All	13-33
	Right angle	29-74
Construct left turn lane (no signal)	All	25-40
Construct right turn lane (no signal)	All	14-35
Construct right turn lane (signal)	All	4-8
Transverse rumble strips	All	23-35
Roadway lighting	All	4-47
Increase capacity	All	10-44
Lengthen culverts	All	30-48
Widen shoulder	All	8-57

F. AIRPORT

The Yuma International Airport General Aviation Strategic Plan was completed in March 2005. Overall, the aviation activity at the Marine Corps Air Station/Yuma International Airport (YIA) aviation complex including commercial, military, and civilian activities is expected to exceed regional and national growth rates in the planning period. The strategic plan has been developed according to a demand-based schedule, which means that improvements are based on airport activity levels instead of points in time. Specifically, facility improvements should only be implemented when the levels of demand experienced at the airport justify their implementation. In addition to the YIA plan outlined below, MCAS is in the process of lengthening the southwest portion of runway 3R-21L.

The YIA development plan is divided into planning horizons as follows:

- short term: 0-5 years
- intermediate: 6-10 years
- long term: 11-20 years
- build out: more than 20 years

1. Recommendation Plan

The recommended implementation of the strategic plan is summarized below for each of the planning horizons along with an estimated cost.

Short Term Planning Horizon

- Expand Apron South - Phase I: $ 450,000
- Environmental Assessment - Land Acquisition: $100,000
- Construct Taxiway I Holding Apron: $150,000
- Land Acquisition (66 acres): $2,409,200
- Expand Apron South - Phase II: $2,780,700
- Construct Automobile Parking: $129,200
- Construct Terminal Building: $386,900
- Construct Hangar Access Taxiways: $736,400
- Construct Corporate Hangars: $364,400
- Construct 18 T-hangars: $453,600
- Replace Shade Hangars: $379,600
- Remove Hangar: $38,400

Subtotal - $8,378,400

Intermediate Term Planning Horizon

- Extend Taxiway I to Runway 35 End: $ 470,900
- Construct Apron North of Taxiway I2: $1,372,100

- Extend Bonanza Avenue: $171,700
- Construct Automobile Parking: $64,600
- Construct Terminal Building: $386,900
- Construct Hangar Access Taxiways: $646,500
- Construct Corporate Hangars: $369,500
- Construct 12 T-hangars: $302,400

Subtotal - $3,784,600

Long Term Planning Horizon

- Construct Hangar Access Taxiways: $ 1,394,000
- Construct Corporate Hangars: $489,500
- Construct 45 T-hangars: $1,134,000

Subtotal - $15,180,500

Full Build Out Projects

- Relocate Fuel Farm: $ 250,000
- Construct Access Road: $324,300
- Construct West Apron: $4,791,000
- Construct West Automobile Parking: $625,600
- Construct Southwest Apron: $3,265,000
- Construct Southwest Automobile Parking: $826,400
- Construct West Corporate Hangar Apron: $1,284,000
- Construct West Corporate Hangar Automobile Parking: $154,100
- Construct West Corporate Hangars: $975,000
- Construct Corporate Hangars: $802,500
- Construct Hangar Access Taxi lanes: $557,600
- Construct Corporate Hangars: $802,500
- Construct Hangar Access Taxi lanes: $557,600
- Construct Corporate Hangars: $1,095,800

Subtotal - $16,311,400

The total cost to implement the YIA strategic plan is $31,491,900.

2. Revenue

Funding for airport improvements is available at the federal, state, and local levels.

Federal

The source for federal funding is the Aviation Trust Fund. The trust fund is funded by user fees and taxes on tickets, fuel, and aircraft parts. Proceeds from the trust fund are distributed each year and a portion of the distribution is to primary commercial service airports such as YIA.

State

The State of Arizona participates in airport improvement projects using the Arizona Aviation Fund. The fund is generated by taxes levied on fuel, property, and aircraft. The State Transportation board establishes the policies for distribution of these funds. An airport can use State funding for one-half of the local match required for federal funding or can receive 90 percent state funding for projects not eligible for federal funding.

Local

The balance of project costs not funded by federal or state programs must be funded through local resources. The Yuma County Airport Authority (YCAA) can fund improvements using airport revenues, issuing bonds, or private funding. The YCAA has relied on a combination of public and private revenue in the past.

G. RAIL/PORT/INTERNATIONAL BORDER

ADOT is conducting two studies related to rail and port activities, 1) the "Statewide Rail Framework Study" which is part of the state long-range plan and 2) the "Arizona Multimodal Logistics Center Study" (AzMLC). Both of these studies and other on-going activities could have a significant impact on future transportation in the Yuma region.

1. Passenger Rail

The "Statewide Rail Framework Study" identifies several opportunities for the Yuma region including:

- Re-open the Wellton branch of the Union Pacific Railroad for freight rail from Phoenix to Yuma
- New high-speed commuter rail from Tucson to California along the I-8 corridor
- Year 2050 forecast of daily ridership as high as 2,600 passengers between Phoenix and Yuma
- Develop incentives and funding mechanisms for inland port development

If both the Phoenix to Yuma and Tucson to California high-speed commuter rail lines occur, there could be a connection/terminal in Yuma. The "Statewide Rail Framework Study" is based on a 2050 horizon year. The YMPO and its member agencies need to monitor the progress of those recommendations so that future updates of the YMPO RTP can incorporate any changes.

Additionally, the federal government has outlined a strategic plan for high-speed passenger rail. The plan identifies $13 billion in federal funds -- $8 billion in the American Reinvestment and Recovery Act (ARRA) and $5 billion requested in the

President's budget -- to jump-start a potential world-class passenger rail system and set the direction of transportation policy for the future. The intent is to connect population centers that are 100-600 miles apart. The USDOT will select the projects to fund. Yuma County is in a key geographic position to link with a Phoenix/Tucson to southern California intercity high-speed rail line, which in turn would connect to an 800 mile high-speed passenger rail system being developed in California. The State of California has made application for ARRA funding.

Several items of note regarding the demand for a high speed passenger rail service along I-8/UPRR.

- San Luis, Rio Colorado, Sonora, Mexico has a population of more than 250,000
- Mexicali, Baja, Mexico has a population of more than 1 million
- Imperial County, California has a population of 200,000

2. Freight Rail

The "Statewide Rail Framework Study" identifies several opportunities for the Yuma region including:

- Re-open the Wellton branch of the Union Pacific Railroad for freight rail from Phoenix to Yuma
- Identify new short line rail opportunities for economic development
- Mexican deepwater port enhancements/development could spur new rail corridors
- Develop incentives and funding mechanisms for inland port development
-

The Union Pacific Railroad (UPRR) provides the freight rail service in the YMPO region. Although construction has temporarily slowed due to the economy, the UPRR continues construction across Arizona to double- or triple-track its lines, including the lines serving Yuma. They are also investigating an alternate crossing of the Colorado River. Member agencies should work with the UPRR, as needed, to coordinate the implementation of the 2033 RTP in conjunction with the UPRR long-range plan.

Opportunities may also develop for short line railroads and operations. Short line railroads are an esssential component of a fully-functioning rail network. Class I carriers (UPRR) efficiently carry goods over long distances, but are less efficent hauling shorter distances. Short line railroads can effectively operate the railroads that connect a Class I mainline with individual users or an inland port. Some short line railroads also provide passenger service.

3. Inland Port

The AzMLC study was undertaken to evaluate the potential opportunities for a multimodal logistics center in southern Arizona. A multimodal logistics center or inland

port is where shipping containers would be taken off trains, unloaded and the goods sorted, warehoused, perhaps processed and then distributed to markets around the region and nation either by train, truck, or air. Inland ports are a relatively new concept that is beginning to gain popularity as maritime ports become more congested. Inland ports can facilitate more efficient and lower cost movement of freight when compared with freight movement through traditional ports. The benefit is that containers are moved from the maritime port area more quickly and that other modes are available for transporting the goods. As the inland port develops, businesses may locate there and other services can be provided. According to preliminary results from the AzMLC, a recommended size for an inland port/multimodal logistics center in the Yuma area is 5,000 acres.

One example of an inland port is the Virginia Inland Port (VIP). The VIP is operated as an intermodal container transfer facility. It provides an interface between truck and rail for the transport of ocean-going containers to and from the Port of Virginia. Containers are transported by truck to the VIP for short-term storage prior to loading or immediate loading to a rail car for transporting to the maritime port. Containers arriving from Hampton Roads terminals are unloaded from the train and dispatched by truck to inland destinations. Land is available to steamship lines for container storage.

The Yuma region is in a perfect position for such a multimodal center because of the excellent transportation facilities including highways, rail, and air serving the region. Mexico has been upgrading the Port of Guaymas in the Gulf of Mexico and exploring a new deep water port at Punta Colonet on the Baja coast. As the economy appears ready to rebound, there is renewed interest from the Mexican government in the Punta Colonet site. Yuma County is the optimal place for rail entry into the U.S. Initial findings from the study indicate that even if a new deepwater port doesn't occur, there is still a need for a multimodal logistics center in southwest Arizona to handle cargo coming from the California ports. The Greater Yuma Port Authority can continue to monitor on-going deep water port activities in order to position the Yuma region for inland port opportunities.

4. International Border

There are activities underway to improve the international border crossing at San Luis. Construction of a new state-of-the-art San Luis II Commercial POE is nearing completion. This new POE will facilitate the movement of commercial vehicle traffic from Mexico into the United States and divert truck traffic from POE I in downtown San Luis. It will have two primary inspection booths one of which will be dedicated to the Free and Secure Trade (FAST) program; a bypass for oversize vehicles; 25 commercial docks with five enclosed for climate control; an export facility with six docks; a Vehicle and Cargo Inspection System (VACIS) gamma ray and X-ray inspection building; and HAZMAT facilities. In addition, a State Motor Carrier Safety Inspection Station was constructed contiguous to the new POE as a separate ADOT project.

The opening of the San Luis II Commercial POE will allow the current San Luis I POE to be reconfigured. Truck traffic will be routed to the new Commercial POE when it opens and the existing San Luis Border Station will be reconfigured to process only pedestrians and passenger vehicles. The passenger vehicle lanes will be relocated from the western side of the compound to the eastern side (which currently is used for commercial traffic), and the number of lanes will be increased from six up to twelve. On the eastern side, special lanes will be created for bus, high occupancy vehicle (HOV) and recreational vehicle (RV) traffic, emergency vehicles and participants enrolled in the SENTRI program. Facilities for processing pedestrian traffic will be significantly expanded.

5. Recommendations

- Monitor the progress and recommendations from the Statewide Rail Framework Study
- Monitor the progress and recommendations from the Multimodal Logistics Center Study
- Monitor deepwater port activities in Mexico
- Monitor the federal high-speed passenger rail planning
- Work with member agencies to identify and preserve right-of-way for future infrastructure needs
- Identify potential funding sources and opportunities for public/private partnerships

APPENDIX A

YMPO TRANSPORTATION POLICY FRAMEWORK

BACKGROUND

This Transportation Policy Framework was first adopted by the YMPO on December 18, 1986 and updated on December 29, 1992 to account for the 1990 Americans with Disabilities Act, the 1990 Clean Air Act Amendments, and the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), which became federal law. In 1993, additional Federal regulations entitled (1) Statewide/ Metropolitan Planning, Final Rule, October 28, 1993; (2) Air Quality Conformity, Final Rule, December 21, 1993; and (3) Management and Monitoring Systems, Interim Final Rule, December 1, 1993 were adopted. In addition, the North American Free Trade Agreement involving the United States, Canada, and Mexico was signed into law in 1994. Subsequently, other federal transportation bills were enacted. Transportation Equity Act for the 21st Century (TEA-21), June 9, 1998 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), August 10, 2005. It should be noted that this act has expired and a new act is being developed in the federal legislature. More recently, the Arizona legislature passed and the governor signed HB2480. This bill allows counties with populations between 200,000 and 400,000 to seek voter approval to create a regional transportation authority (RTA) and adopt an excise tax equal to 1/2 percent. This Policy Framework accounts for each of these pieces of legislation as they affect transportation in the Yuma Metropolitan Planning Organization region.

INTRODUCTION

One of the most fundamental and significant steps in preparing a Transportation Plan is the recognition of transportation and related needs, and the formulation of regional transportation goals, objectives, and policies to meet those needs. Transportation goals are not separate from general development goals of the region, but rather an integral subset, which reflect the consideration of social, environmental, and economic factors in making transportation decisions. These goals and objectives express what the desired result of a regional transportation plan should attempt to achieve. The policies describe actions that will help to achieve those goals and objectives.

No Policy should ever be considered “final” or “cast in concrete.” It may require refinement and amendment, as well as extension, as pertinent issues surface and the goals and needs of the area change.

This **Transportation Policy Framework** addresses eight (8) major issues, or areas of concern, in the region covered by the Yuma Metropolitan Planning Organization. Goals, objectives, and policies, as set forth, are directed toward satisfying, or at least mitigating, those issues of concern.

In applying the statements herein, officials, staff, and citizens should keep in mind that they are interdependent; one is not mutually exclusive to another. That is why the reader will see some Goal statements under more than one issue.

In addition, the reader should recognize that provision of transportation and public works (i.e. water and sewer) infrastructure has the potential to "drive" land use development. While that may be an advantage in certain situations, it is not the current practice. Regional Land Use Plans are normally the overall guide and, as stated in Goal I.A, "Transportation facilities and services… (should) support achievement of adopted land use plans."

The following definitions serve as guidance for the development of the policy framework.

DEFINITIONS

ISSUE – Something of concern - a problem or challenge stemming from past and present growth and development activities, policies, lack of funding, combination thereof, or other comprehensive planning factors.

GOALS – A goal defines a condition to be achieved, an end toward which effort is directed; it is something to be sought, and provides guidance and direction. Goals are general, somewhat abstract, and qualitative measures.

OBJECTIVES – Statements which are specific, attainable, and measurable.

POLICIES – Statements that describe a course of action designed to achieve a particular goal and/or objective.

MAIN GOAL

Provide the continual development of a complete, dependable, efficient, safe, aesthetic, and economical transportation system, bearing in mind that our quality of life and environment are paramount and that transportation needs must recognize the specific demands of households, businesses, and governments, including those of the urban and rural areas, agricultural interests, military operations, and international trade.

ISSUE I: REGIONAL LAND USE PLAN AND COUNTYWIDE TRANSPORTATION PLAN

Growth is occurring in areas where there are inadequate transportation facilities and services to serve such development.

Discussion: Between 1988 and 2009, average daily traffic for all arterials has grown nearly five percent (5%) per year. However, some specific routes have experienced higher annual growth in traffic.

GOAL I.A: Provide transportation facilities and services within the county, which support the achievement of adopted land use plans.

Policy I.P.1: Adopt a regional land use plan and policies that have been prepared cooperatively by Yuma County and incorporated municipalities and considers existing transportation systems, policies, and issues.

Policy I.P.2: Prepare and adopt coordinated regional transportation policies, plans, and programs that support adopted regional land use plans and policies.

ISSUE II: IMPROVE AND PRESERVE THE EXISTING TRANSPORTATION SYSTEM

The regions backbone transportation system is underdeveloped, and in some cases, needs refinement and improved preservation.

Discussion: In the urban and surrounding areas, there are several two-lane facilities that are now carrying traffic volumes that warrant improvement to four-lane standards with left turn capability so that smooth and safe movement of traffic, transit vehicles, freight, bicycles, and pedestrians can be accommodated. In rural and agricultural regions, mobility is often limited due to narrow, substandard, gravel facilities, and in some cases, lack of roadways and/or bridges.

Maintenance and preservation of the existing transportation system is an on-going and increasing challenge for the implementing agencies.

GOAL II.A: A balanced and integrated transportation system, which serves the existing and future transportation needs of the urban and urbanizing area and the rural regions of Yuma County, thus providing mobility with acceptable delays for work, agricultural, military operations and strategic defense, international trade, school, shopping, medical, personal business and recreational purposes.

Objective II.A.1: Evaluate the practicality of innovative technologies as realistic alternative solutions to present and future transportation challenges.

Objective II.A.2: Optimize feasible capacity of existing arterials and collectors prior to creating new ones.

Objective II.A.3: Identify, evaluate, and plan for new and improved route(s) that serve local and regional travel demand, freight movements, and international trade.

Objective II.A.4: Incorporate airport access needs, as identified in the Yuma International Airport Master Plan, into the YMPO Regional Transportation Plan.

Objective II.A.5: Examine feasibility and need for improvements for trucking and freight rail/recreational

rail service in and through the Yuma area.

Objective II.A.6: Prepare and implement a bikeways plan to improve the safety, convenience, and attractiveness of bicycle transportation using existing transportation facilities to the fullest extent possible.

Objective II.A.7: Establish pedestrian facilities (pathways, sidewalks, pedestrian signals, and pedestrian malls) to enhance safe and convenient pedestrian travel within the urbanized portions of Yuma County.

GOAL II.B: A functional and smooth operating transportation system that provides for preservation, safety, and minimal disruption of neighborhoods.

Objective II.B.1: Identify neighborhoods and provide for their minimal disruption by the transportation system.

GOAL II.C: An economical transportation system that optimizes public investment provides for safe and efficient traffic flow, reduce fuel consumption, and protect the natural environment.

Objective II.C.1: Maintain smooth roadway surfaces to increase efficiency and reduce noise of traffic by paving all urban streets and resurfacing rough pavements.

Objective II.C.2: Improve traffic flow by reducing stops through the use of traffic engineering techniques.

Objective II.C.3: Provide synchronization of signals to improve the flow of traffic.

Objective II.C.4: Provide an efficient energy-saving freight movement system through truck delivery consolidation, minimization of operation of empty vehicles, and development of truck access routes.

Objective II.C.5: Encourage the use of quieter, more efficient, and lower emission engines for personal and commercial vehicles to reduce pollution and maximize energy conservation.

Objective II.C.6: Maintain clean air consistent with generally accepted health standards.

Objective II.C.7: Provide guidelines for landscaping that will assure adequate sight distances for mobility requirements.

Objective II.C.8: Maximize travel by walking, bicycling, and car/van pooling, and reduce travel by autos carrying only one person.

GOAL II.D: A well-preserved and maintained transportation system.

Objective II.D.1: Inventory the transportation system and identify

needed pavement, sign, sidewalk, bridge, and safety improvements.

Objective II.D.2: Prepare program(s) to provide for preservation of the existing and future transportation system.

Policy II.P.1: Prepare a multi-modal Regional Transportation Plan (RTP) to provide for the regions existing and future needs, while adequately accounting for mobility; quality of life, the environment; and land use considerations. The RTP will conform to the Yuma PM10 State Implementation Plan.

Policy II.P.2: Annually prepare a five-year Transportation Improvement Program (TIP) to identify which projects from the Regional Transportation Plan will be implemented. The TIP will conform to the Yuma PM10 State Implementation Plan.

Policy II.P.3: Prepare an implementation plan to define the timing of transportation improvements.

Policy II.P.4: Implementation of transportation projects and programs by implementing agencies shall be consistent with the adopted Regional Land Use Plan and the Regional Transportation Plan.

Policy II.P.5: All agencies agreeing on and involved in implementing the Regional Transportation Plan (i.e. Cities of Yuma, Somerton, San Luis, Town of Wellton, Cocopah Indian Tribe, ADOT, and Yuma County) shall adopt and incorporate the RTP into their individual plans, programs, and fiscal policies.

ISSUE III: FUTURE ARTERIAL/ EXPRESSWAY/FREEWAY NEEDS

Interstate 8 and SR 195, are the only limited access facilities that serve through traffic and other long distance trips because access to each adjacent land parcels is usually permitted.

Discussion**:** Continual upgrading/expansion of existing urban and suburban streets to arterial standards place greater and greater demands on non-limited access arterials. Increasing traffic and congestion will eventually justify facility expansion, or upgrading of other parallel minor arterials and/or local streets. The result is that residential neighborhoods often bear the negative impact of too many expanded facilities.

The North American Free Trade Agreement will likely place increased demand on Yuma's countywide transportation system. Federal, state, and local plans need to account for that added travel demand.

GOAL III.A: Expanded transportation system, with limited access facilities that provides for present and future travel demand.

Objective III.A.1: Examine the need for, and plan for, improved and new highways to provide for travel demand resulting from population and economic growth and the North American Free Trade Agreement.

GOAL III.B: A balanced and integrated transportation system, which serves the existing and future transportation needs of the urban and urbanizing area and the rural regions of Yuma County, thus providing mobility with acceptable delay for work, agricultural interests, military operations and strategic defense, international trade, school, shopping, medical, personal business and recreational purposes.

Objective III.B.1: Evaluate the practicality of innovative technologies as realistic alternative solution to present and future transportation challenges.

Objective III.B.2: Limit the number of entrances to arterials so that interference to adjacent traffic flows is minimized, and locate such entrances away from busy intersections and where potential for future synchronization of traffic signals is maximized.

Policy III.P.1: Develop a consistent, coordinated highway classification system for countywide use, which enhances transportation improvements and funding planned by the states of Arizona, California and the country of Mexico.

Policy III.P.2: Investigate and adopt, if feasible and acceptable, a system of "high level: limited access principle arterials to serve the urbanizing regions of Yuma County.

Policy III.P.3: Identify and plan for needed transportation improvements resulting from population and economic growth and the North American Free Trade Agreement.

ISSUE IV: ALTERNATIVE MODES OF TRANSPORTATION:

Travel is difficult and, in some cases, may be impossible without access to a private motorized vehicle.

Discussion: This issue is of particular concern to the transportation-disadvantaged population, i.e. low income, elderly and disabled persons and youth. Public transportation is provided by Yuma County Area Transit (YCAT) and Dial-A-Ride, private taxi and by social service agencies.

GOAL IV.A: A balanced and integrated transportation system which serves the existing and future transportation needs of the urban and urbanizing areas and the rural regions of Yuma County, thus providing mobility for work, agriculture interests, military operations and strategic defense, international trade, school, shopping, medical, personal business and recreational purposes.

GOAL IV.B: An economical transportation system that will optimize public investment, reduce fuel consumption and protect the natural environment.

Policy IV.P.1: Achieve a more efficient and convenient multi-modal transportation system.

ISSUE V: FINANCING TRANSPORTATION IMPROVEMENTS

Funding for needed transportation improvements is limited. There is a need to identify additional funding sources for necessary transportation improvements.

Discussion: Available funds will usually be allocated where they will serve major travel demands, provide for the development of the regions backbone transportation system, and maintain the public investment in existing transportation facilities. A concept that is fundamental to SAFETEA-LU is that of joint public/private provision of transportation improvements. This belief follows because a well-functioning transportation system is essential to the economic growth and vitality of the YMPO area.

GOAL V.A: A balanced and integrated transportation system which serves the existing and future transportation needs of the urban and urbanizing areas and the rural regions of Yuma County, thus providing mobility for work, agriculture interests, military operations and strategic defense, international trade, school, shopping, medical, personal business and recreational purposes.

GOAL V.B: An economical transportation system that optimizes transportation investments, reduces fuel consumption and protects the natural environment.

GOAL V.C: Continuous evaluation and modification of the transportation system in keeping with current needs and desires of the public.

Objective V.A.1: Use a public involvement program to promote continuous monitoring of major transportation needs and concerns of all citizens of the YMPO area.

Policy V.P.1: Encourage and support efforts to attain new/additional sources of revenue for the implementation of the Regional Transportation Plan, Transportation Improvement Program, and Yuma PM10 State Implementation Plan, including local, state, and federal sources, private participation, and/or some combination thereof.

Policy V.P. 2: Adopt a policy outlining guidelines, which encourage and promote joint public/private participation in funding of transportation improvements.

Policy V.P. 3: Maintaining the existing transportation system shall be considered a priority.

Policy V.P. 4: Increase the efficiency of the existing transportation system through traffic management techniques.

Policy V.P. 5: Select the most cost effective transportation improvement projects.

ISSUE VI: AIR QUALITY

A portion of the Yuma Metropolitan Planning Organization region was designated as non-attainment for fine particulate, PM10 by the Environmental Protection Agency (EPA). As a result, in 1991, the cities of Yuma and Somerton and Yuma County adopted a Yuma PM10 State Implementation Plan. In addition, since 1991, the Yuma Metropolitan Planning Organization annually prepares an Air Quality Conformity Analyses to demonstrate conformity between the PM10 State Implementation Plan, the Regional Transportation Plan and the Transportation Improvement Program. However, as of August 2005, this area is now considered a maintenance area, and ADOT is in the process of developing and seeking EPA approval of a Yuma Region PM10 Maintenance Plan.

In order to implement transportation projects using state or federal funds, or local or private funds on Regionally Significant Routes, the Yuma area must have a conforming transportation plan and transportation improvement programs.

Discussion: Air Quality is a vital concern. The 1990 Clean Air Act Amendments require that the State have an adopted (and approved by EPA) Yuma PM10 State Implementation Plan. Further, the Regional Transportation Plan must conform to the Yuma PM10 Plan.

Unpaved roadways and parking lots are common in several portions of the Yuma urbanized area. In addition, many paved roadways have unpaved shoulders, pullouts, and adjacent parking areas that contribute to PM10 emissions.

GOAL VI.A: A Regional Transportation Plan and Transportation Improvement Program that conform with the Yuma PM10 State Implementation Plan.

GOAL VI.B: A frequently prepared Conformity Analyses that shows that the Regional Transportation Plan and Transportation Improvement Program conform to the Yuma PM10 State Implementation Plan.

Policy VI.P.1: Recognize the potential impacts of transportation improvements on the environment, and assure that any negative impacts are mitigated, or at least, minimized.

Policy VI.P.2: Annually develop a Transportation Improvement Program that conforms to the Regional Transportation Plan and Yuma PM10 State Implementation Plan.

ISSUE VII: RURAL TRANSPORTATION SYSTEM NEEDS

Portions of the rural transportation system are insufficient and, in some cases, are non-existent due to lack of bridges or necessary road sections, and/or because of restricted mobility options.

Discussion: Transportation needs outside the metropolitan area are not separate from those identified in ISSUES I through VI. In fact, many urban needs extend into rural areas. However, there are some distinct challenges resulting from specialized needs of agricultural, irrigation and farm-to-market operations; the North American Free Trade Agreement; aging population with restricted mobility options; and lack of opportunity for educational programs and employment because of insufficient transportation.

GOAL VII.A: A balanced and integrated transportation system which serves the existing and future transportation needs of the urban and urbanizing areas and the rural regions of Yuma County, thus providing mobility for work, agriculture, military operations, and strategic defense, international trade, school, shopping medical, personal business, and recreational purposes.

Objective VII.A.1: Evaluate rural and agricultural transportation needs, while adequately considering possible impacts on the United States Marine Corps Air Station.

Objective VII.A.2: Determine, prioritize, and develop cost estimates as a part of the Regional Transportation Plan for the transportation needs of the rural portions of the county. This will include transportation enhancements resulting from population and economic growth and the North American Free Trade Agreement.

Policy VII.P.1: Adopt, as part of the Regional Transportation Plan, a program of improvements to the rural transportation system, with potential sources of revenue for those improvements.

ISSUE VIII: TRANSPORTATION OF HAZARDOUS MATERIALS

Hazardous materials are being transported through the Yuma area and public officials, staffs, and residents may not be prepared to adequately and safely respond to crashes.

Discussion: A study in Dallas-Ft. Worth, Texas found that 5% of trucks in that area carry hazardous materials. The

figure may be higher or lower in the Yuma area, but with Yuma's direct connection to major population centers via Interstate 8, railroad lines, military operations and pipelines, plus extensive agricultural operations, it is highly possible and reasonable that a sufficient volume of hazard materials do pass through the Yuma area, and constitute a potential liability to human welfare. The North American Free Trade Agreement could increase this potential risk in the Yuma area.

GOAL VIII.A: A safe transportation system providing for movement of people, freight and hazardous materials via automobile, truck, rail, air or pipeline modes.

GOAL VIII.B: An Emergency Services Plan that would provide for responsive action in dealing with crashes involving transport of hazardous materials.

Policy VIII.P.1: Recognize that the transport of hazardous materials through the YMPO area constitute a potential risk to the public and determine what, if any, elements should be included in the Regional Transportation Plan to provide for safe movement of hazardous materials, and for responsive action to crashes involving such materials.

In addition to the Transportation Policy Framework, the following issues are also listed for further consideration:

1. The municipal boundary of the City of Yuma is irregular, resulting in some non-conformity of roadway improvements, maintenance responsibilities, and proliferation of necessary joint city-county roadway improvements.

2. Winter visitors to Yuma County cause traffic in some areas to fluctuate by 100% between summer and winter. For six months of the year, motorists are faced with increased congestion and slower travel speeds. The Regional Transportation Plan and Transportation Improvement Program must recognize and plan for the increasing demand being placed on the area's transportation system due to the influx of additional residents during the winter months.

3. Regional economic growth is occurring, and efforts are underway to accelerate the existing patterns. Because of Yuma's geographic position in the "Sunbelt" between heavily populated southern California and Phoenix; close proximity to Mexico; as well as the importance of nearby agriculture and military efforts; Yuma County will continue to grow. However, for it to maintain and increase its position of strength, its citizens must recognize that urban areas, like Yuma, exist due to some form of commerce, and the transportation system – both locally and regionally – is critical to its economic health.

The Yuma metropolitan area should be recognized as the center of an economic region in the southwestern United States. It is located midway between two of the largest metropolitan areas in the country – Phoenix and San Diego; borders on Mexico; centers on vast and rich agricultural lands in Arizona and California; and serves as a training center for military personnel and private aircraft companies from around the U.S. and foreign countries.

4. North American Free Trade Agreement. Also of importance is the North American Free Trade Agreement (NAFTA) between the United States, Mexico, and Canada. Because Yuma County borders on Mexico at San Luis, Arizona, trade between the countries will increase. An improved and expanded transportation system will be necessary.

APPENDIX B

PUBLIC INVOLVEMENT PLAN

This Public Involvement Plan (Plan) has been developed to assist the Yuma Metropolitan Planning Organization (YMPO) and the Ayres Associates Project Team (Ayres) in public involvement efforts related to the 2010-2033 Regional Transportation Plan. It should be used as a framework, revised when needed as the project progresses, for public involvement efforts to provide effective communication mechanisms for project individuals and stakeholders.

Public Involvement Goals

The goals of this plan are to:

- Identify the roles and responsibilities of the YMPO and Ayres in implementing the public involvement program for the project.
- Identify the number of proposed meetings and outline the schedule for TAC meetings, public meetings, small group meetings, and presentations to elected officials and commissions.

Communication Methods:

- *Project Information*
- *Public Meetings*
- *Elected Officials/ Presentations*
- *Technical Advisory Committee*

Public Meetings

Ayres will conduct three (3) public meetings for the Regional Transportation Plan (RTP).

- The first meeting will be held prior to the development of various transportation alternatives. The purpose of the first meeting will be to present the study team, outline the Study purpose, state the goals of the project, and present existing conditions and capacity deficiencies within the transportation system. The meeting will be held at two different sites over two or three days.

- The second meeting will be held after the development and analysis of the transportation alternatives are complete also at two sites. In this meeting, the Consultant will present the roadway, transit, and non-motorized systems with special emphasis on the alternatives and the benefits of each. Comments received at this meeting will be incorporated into the final draft of the RTP.

- The final public meeting may be conducted as a presentation to the YMPO Executive Board and will

present the final plans of each study. Comments received may be used to develop the final plans.

All meetings will be held in an open house format with the Ayres Team making a short presentation followed by a questions and answer session. Ayres will work with the YMPO to coordinate translation of documents and translation at the public meetings.

For each public meeting, Ayres will provide appropriate display boards, bilingual informational handouts, and bilingual comment sheets.

The YMPO will arrange for the meeting space and provide any necessary meeting location advertising. Ayres will be responsible for an informational newsletter and a meeting notice.

The meeting notices will be bilingual. Ayres will be responsible for printing of the newsletters and meeting notices. The YMPO will be responsible for providing the initial mailing list to Ayres. Ayres will supply any update to the mailing list from the public meeting and present it to the YMPO for inclusion in their mailing list database. The YMPO will be responsible for postage and distribution of all project materials sent out by U.S. Postal Service.

After each public meeting, Ayres will prepare notes summarizing the items discussed at the meeting and forward the notes to the YMPO's project manager.

Presentations to Elected Officials / Commissions

Ayres will make up to four (4) presentations to elected officials or commissions as requested by the YMPO.

Technical Advisory Committee (TAC)

The Technical Advisory Committee (TAC) will be used to gain final comments and input on the draft findings and recommendations.

Between these presentations, Ayres will rely on the TAC members to brief their respective agencies and commissions.

Ayres will provide informational handouts. The YMPO will arrange for the meeting space and invite the appropriate attendees.

As part of the project review process, Ayres will utilize the Technical Advisory Committee (TAC) to review the work in progress. This project-specific TAC should be based on the YMPO's established TAC with potential additional key stakeholders as determined by the YMPO project manager.

During the course of the project, Ayres will make presentations to the TAC during their regularly scheduled monthly meetings at the YMPO's office. The purpose of these presentations will be to review work in progress and to discuss issues that arise during the course of the project.

Communication Tools

To accomplish these goals, the following communication tools may be utilized.

Project Handouts

Project handouts will be developed, in English and Spanish, for use at public meetings and presentations.

Project Comment Forms

Project Comment Forms will be developed, in English and Spanish, for the public to provide input during public events.

Website Information

Information will be available to post on the YMPO website for stakeholder use and information.

Project Contact

A project contact will be provided on project information, handouts, and the website for stakeholders to have access to the project team or YMPO for further information or to provide their comments and suggestions.