Chapter 2

Existing Transportation System

&

Non-Motorized Plan

NOTE: This document has been prepared using Federal funding from the United States Department of Transportation. The United States Department of Transportation assumes no responsibility for its contents or use thereof.

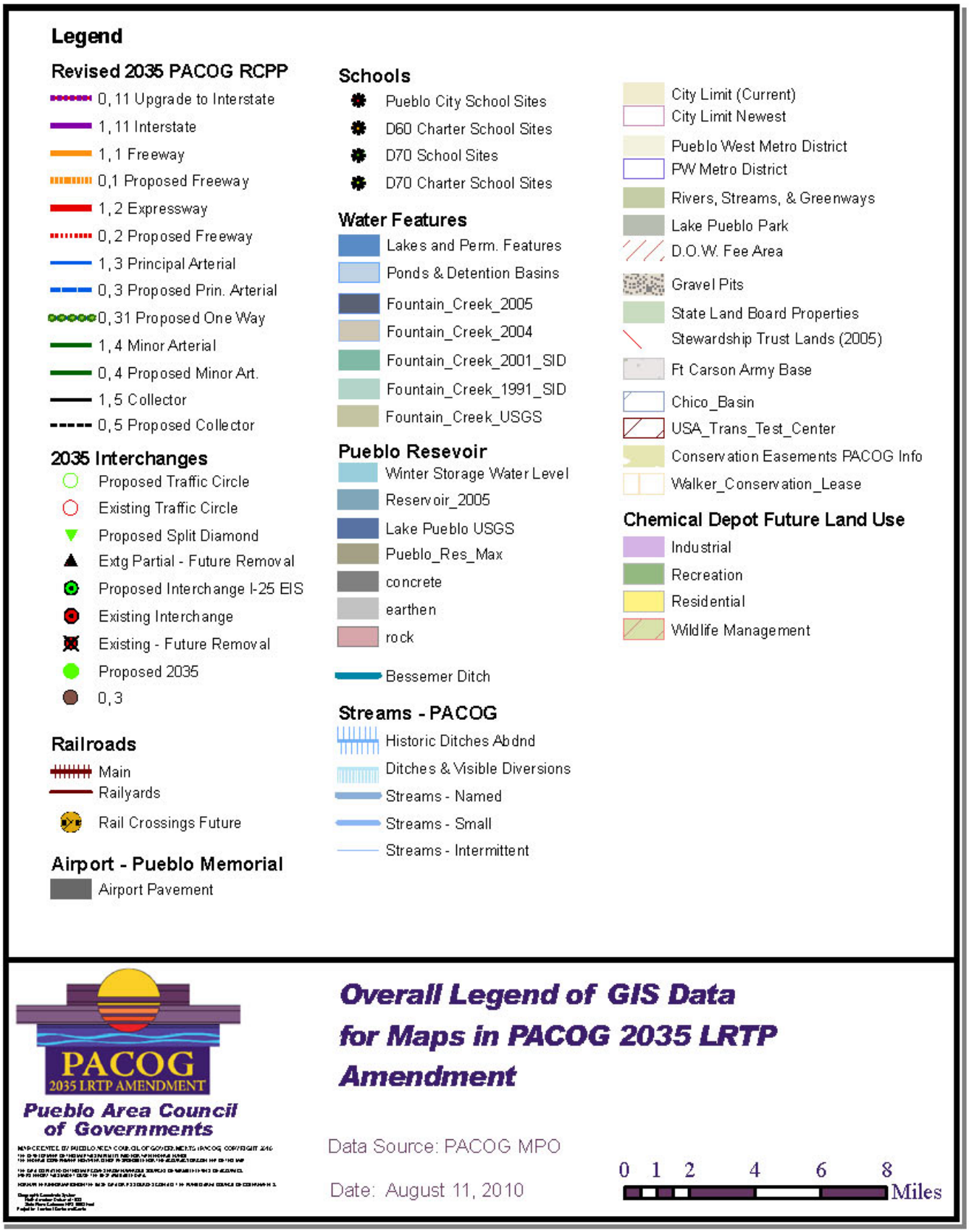

Legend
Revised 2035 PACOG RCPP
0, 11 Upgrade to Interstate
1, 11 Interstate
1, 1 Freeway
0, 1 Proposed Freeway
1, 2 Expressway
0, 2 Proposed Freeway
1, 3 Principal Arterial
0, 3 Proposed Prin. Arterial
0, 31 Proposed One Way
1, 4 Minor Arterial
0, 4 Proposed Minor Art.
1, 5 Collector
0, 5 Proposed Collector
2035 Interchanges
Proposed Traffic Circle
Existing Traffic Circle
Proposed Split Diamond
Extg Partial - Future Removal
Proposed Interchange I-25 EIS
Existing Interchange
Existing - Future Removal
Proposed 2035
0, 3
Railroads
Main
Railyards
Rail Crossings Future
Airport - Pueblo Memorial
Airport Pavement
Schools
Pueblo City School Sites
D60 Charter School Sites
D70 School Sites
D70 Charter School Sites
Water Features
Lakes and Perm. Features
Ponds & Detention Basins
Fountain_Creek_2005
Fountain_Creek_2004
Fountain_Creek_2001_SID
Fountain_Creek_1991_SID
Fountain_Creek_USGS
Pueblo Resevoir
Winter Storage Water Level
Reservoir_2005
Lake Pueblo USGS
Pueblo_Res_Max
concrete
earthen
rock
Bessemer Ditch
Streams - PACOG
Historic Ditches Abdnd
Ditches & Visible Diversions
Streams - Named
Streams - Small
Streams - Intermittent
City Limit (Current)
City Limit Newest
Pueblo West Metro District
PW Metro District
Rivers, Streams, & Greenways
Lake Pueblo Park
D.O.W. Fee Area
Gravel Pits
State Land Board Properties
Stewardship Trust Lands (2005)
Ft Carson Army Base
Chico_Basin
USA_Trans_Test_Center
Conservation Easements PACOG Info
Walker_Conservation_Lease
Chemical Depot Future Land Use
Industrial
Recreation
Residential
Wildlife Management
PACOG
2035 LRTP AMENDMENT
Pueblo Area Council of Governments
Overall Legend of GIS Data for Maps in PACOG 2035 LRTP Amendment
Data Source: PACOG MPO
Date: August 11, 2010
0 1 2 4 6 8
Miles

Table of Contents

List of Tables

List of Figures

2.1 Roadway Element

Pueblo's roadway system consists of over 2,400 miles of public roadways, of which approximately 420 miles are classified as "major roadways" – those classified as a Minor Arterial or above. These major roadways serve to transport people and goods to destinations around the region and in the case of the highway system, move goods and people across the region as quickly and safely as possible.

2.1.1 Use of Roadways

Roadways continue to be the dominant transportation system in Pueblo, as they have since the 1940s, when automobiles and motorized buses took over from walking and rail as the dominant form of transportation nationwide. Journey-to-Work data from the US Census confirms the continued use of automobiles as the favored mode of transportation for Pueblo workers. Mode use by workers is an important indicator, since much of the transportation system is designed for peak-hour use, when the work force is on their way to or returning from work.

Table 2.1 shows the modes of transportation reported by Pueblo workers in the 2000 Census. As in 1990, the vast majority of workers (over 79 percent) drove to work alone while approximately 14 percent carpooled and an additional 0.9 percent traveled by motorcycle or public transportation. These modes all require roadway facilities to operate. Approximately 2 percent of workers walked to work while 3.3 percent worked from home.

Table 2.1
U.S. Census "Journey To Work" Data
(Workers 16 And Over)

	1990	2000	2006-2008*	
	Percent of Total	Percent of Total	Number	Percent of Total
Drove alone	80.6%	79.4%	52,030	80.2%
Carpooled:	13.2%	13.6%	8,280	12.7%
Public transportation (excluding taxicab)	0.9%	0.7%	475	0.7%
Bicycle	0.3%	0.4%	190	0.3%
Walked	2.6%	1.9%	1,125	1.7%
Taxicab, motorcycle, or other means	0.4%	0.7%	660	1.0%
Worked at home	2.0%	3.3%	2,225	3.4%
TOTAL	**100%**	**100.0%**	**64,985**	**100.0%**

**NOTE: Sample data collected over 3 years.*

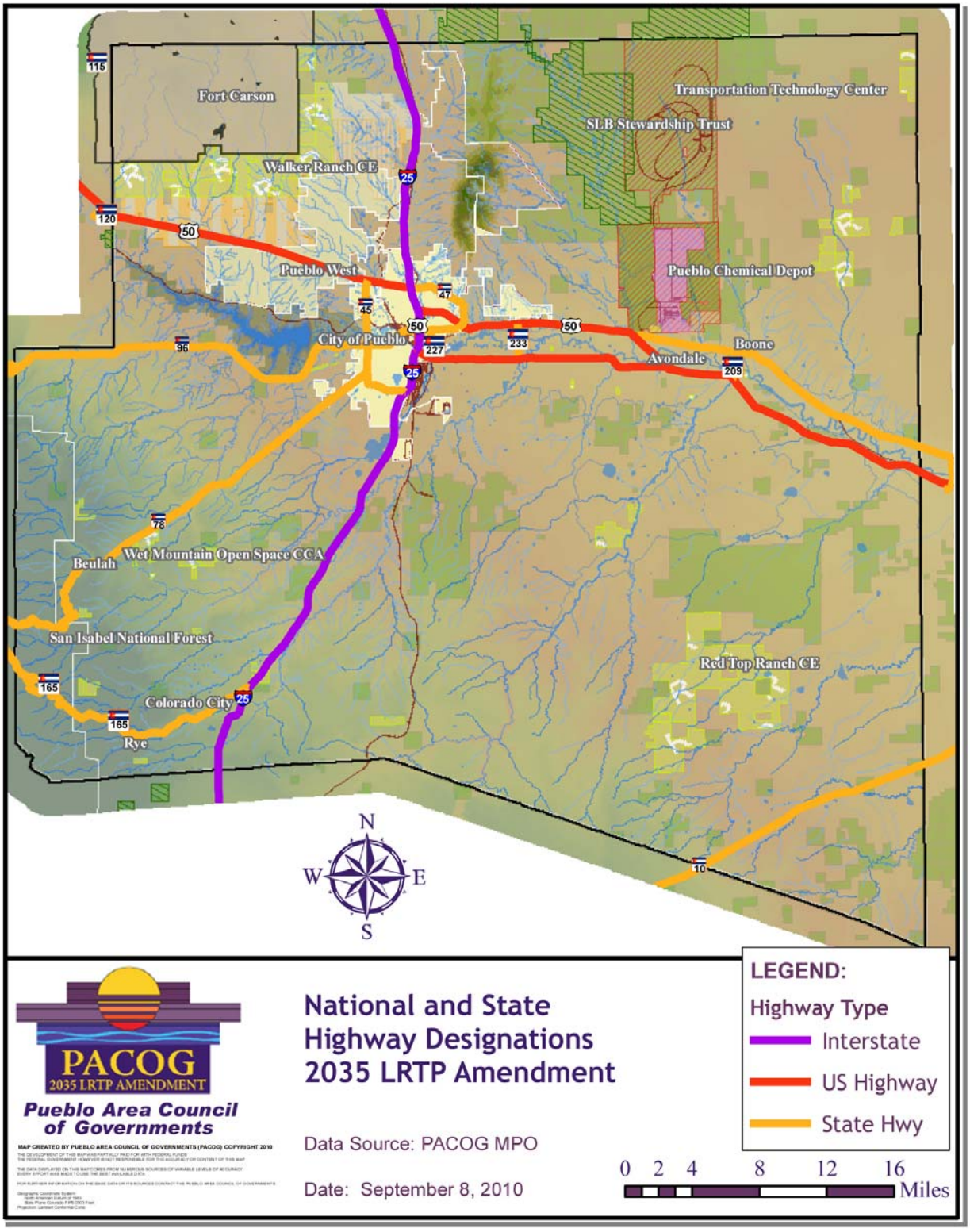
This use of automobiles for work travel is reflected in the large amount of local peak-hour traffic on the state highway system in Pueblo.

2.1.2 State Highways

The two major roadways bisecting Pueblo County, Interstate 25 and US Highway 50, almost exclusively carry the trans-regional traffic through Pueblo. These two roads form the framework of the State Highway network through Pueblo that comprises 250 miles of the 420 miles of major roads. Other significant state highways that traverse the region include SH96 and SH78. SH45 runs the majority of the way through the urban section of Pueblo, carrying traffic from the south interchange with I-25 to US50A. SH10 also cuts through the southern portion of Pueblo County, but is not generally utilized by Pueblo traffic; rather it is a connection between La Junta and Walsenburg.

Figure 2.1 below shows the State Highway network within Pueblo County along with the existing CDOT highway classifications. CDOT classifications combine the three lowest MPO functional classifications into a single category shown as *Principal Arterials*.

Figure 2.1 State Highways in Pueblo County



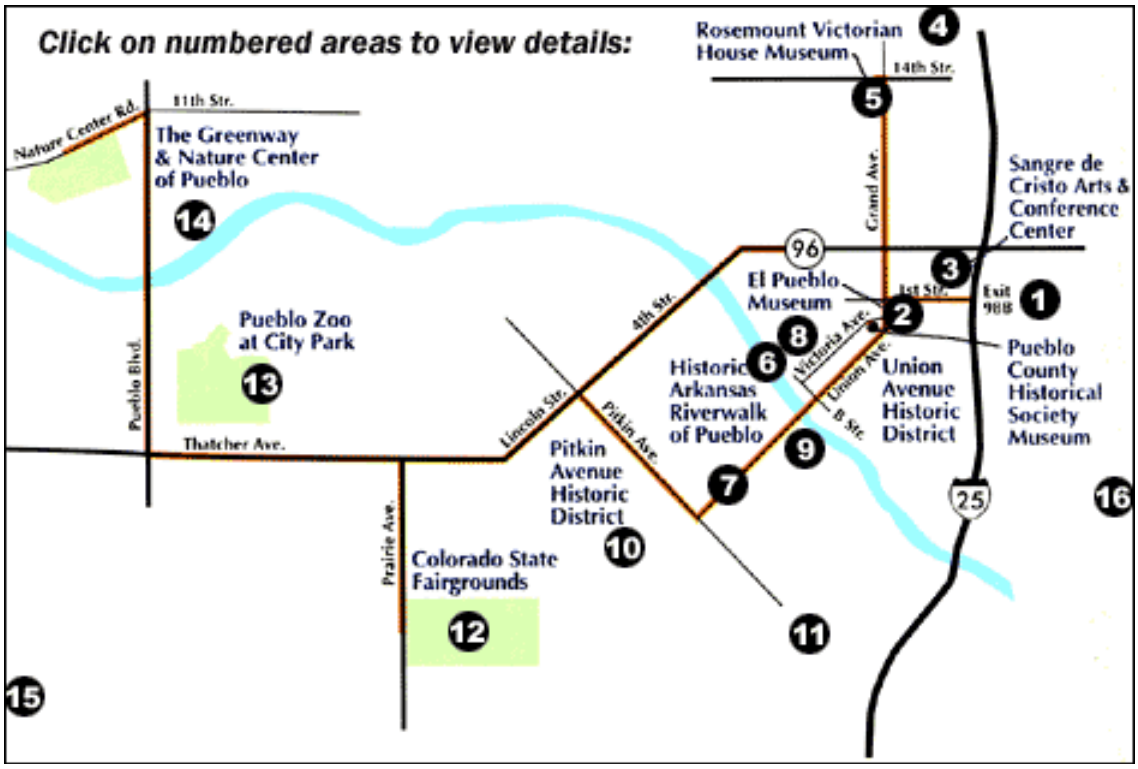
2.1.3 Scenic Byways

Within Pueblo County and the PACOG MPO/TPR boundary there is a single designated Scenic Byway. This is the Frontier Pathways National Scenic & Historic Byway, which has its headquarters and Information Center at the El Pueblo History Museum located at 301 North Union Ave Pueblo, CO 81003. On the web, they can be found at: http://www.frontierpathways.org/index.html

This Byway is significant because it provides access to the San Isabel National Forest and Lake Isabel. It was in this area that the first auto-based recreation facilities within the U.S. Forest Service were created in 1919. It was Arthur Carhart, the first "recreational engineer" in the Forest Service, whose ideas included establishing the first developed campground in the National Forest system at Squirrel Creek.

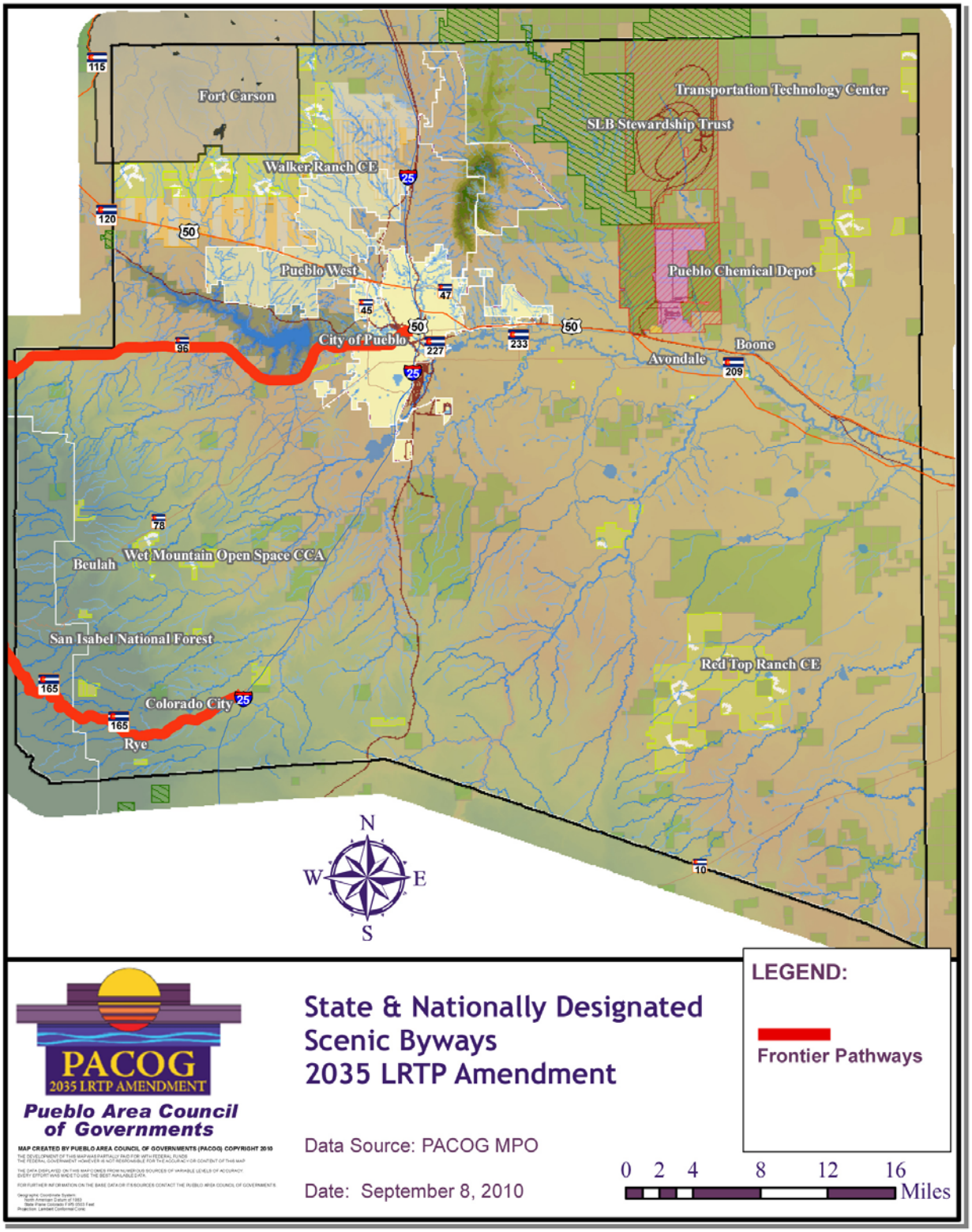
The Frontier Pathways Scenic and Historic Byway emphasizes history, nature, and recreation throughout its span. Stories of 19th Century pioneers are scattered across the region and tell of survival and success. The traveler can learn about several cultures and their relationships with each other at El Pueblo Museum through bright murals, interesting artifacts, and enthralling tales of the colorful history of American Indians, Mexicans, and Americans.

The Byway hosts distinctive exhibits and lands found nowhere else. Bishop's Castle is one such display. Comprised of over two million acres, the Pike and San Isabel National Forests showcase nature in alluring combinations. The majestic Sangre de Cristo Mountains tower with 22 peaks reaching at least 13,000 feet; they extend for 50 miles, easily seen from a number of points along the byway. Lake Isabel offers adventure year-round; and Lake Pueblo State Park provides over 7,000 acres of outdoor excitement.
Within the Pueblo MPO, the Byway includes an historic Pueblo Loop Tour that visits numerous neighborhoods and historic landmarks within Pueblo.



This map can be accessed at: http://frontierpathways.org/pueblolooptour.html

Figure 2.2 The Frontier Pathways National Scenic Byway in Pueblo County



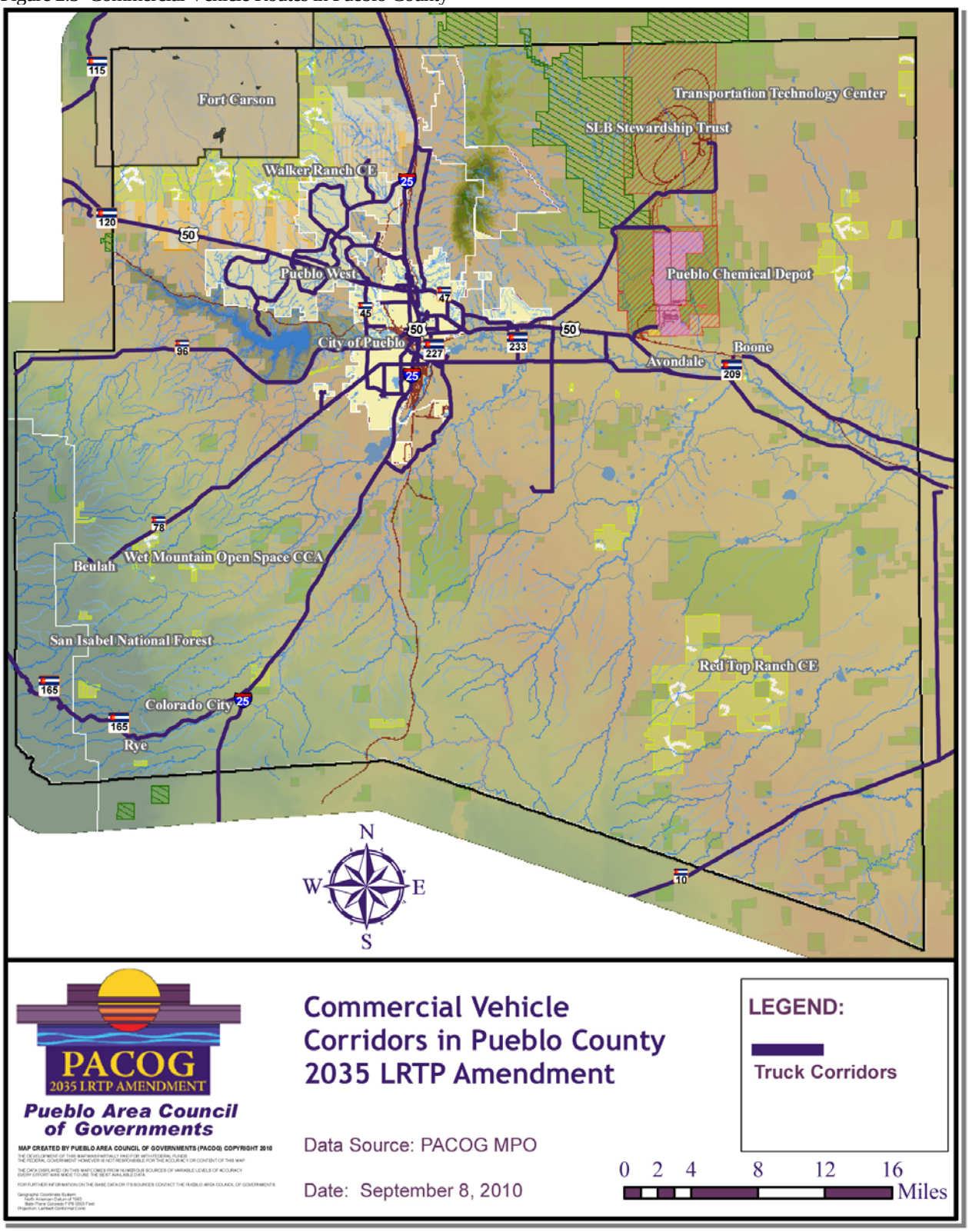
2.1.4 Commercial Vehicle Routes

The City and County of Pueblo do not designate *Truck Routes*, as roadways specifically designed and designated primarily for truck traffic. Commercial vehicles are found primarily on the local, State, and Interstate routes summarized in figure 2.3 below. The commercial vehicle routes are primarily the state highways in and out of the City of Pueblo, coupled with the principal arterials in Pueblo West and those that encircle the City. In addition, parts of Overton Road, the DOT Road to the Transportation Test Center, and 36th Lane south from U.S. Highway 50C serve as commercial corridors.
Primary locations served by commercial truck traffic include the Airport Industrial Park with the Target Distribution facility being the largest. Additional truck traffic through the AIP is servicing the Pueblo Chemical Agent-Destruction Pilot Plant at the northern portion of the Pueblo Chemical Depot. This facility has been under construction for a number of years and will be in operation through the next few years.

Truck traffic also originates from the Evraz Rocky Mountain Steel Mill on the south side of the City of Pueblo, primarily traffic loads directly onto the Interstate Highway at Indiana. Additional truck traffic is found serving the other industrial areas including those along Dillon/Platteville in the northwest portion of the community, the industrial areas surrounding the rail yards in the central Pueblo area, and the industrial parks scattered around the City of Pueblo.

One significant issue that has been discussed in the last few years is the lack of redundant roadways to serve commercial traffic if an incident occurs on Interstate 25. This condition exists throughout the MPO/TPR area. It is expected that significant portions of I-25 will be constructed in the next few years due to the structural issues with a number of the existing structures.

Figure 2.3 Commercial Vehicle Routes in Pueblo County



2.1.5 Hazardous Materials Routes

The Chief of the Colorado State Patrol is authorized by the provisions of §42-20-108 (1) and (2) and §§42-20- 403, 504 and 508 C.R.S., to promulgate rules and regulations for the permitting, routing, and safe transportation of hazardous and nuclear materials by motor vehicle within the State of Colorado, both in interstate and intrastate transportation. Pursuant to §42-20-108.5, C.R.S., the Chief is authorized to adopt rules and regulations that exempt agricultural products from the hazardous materials rules.

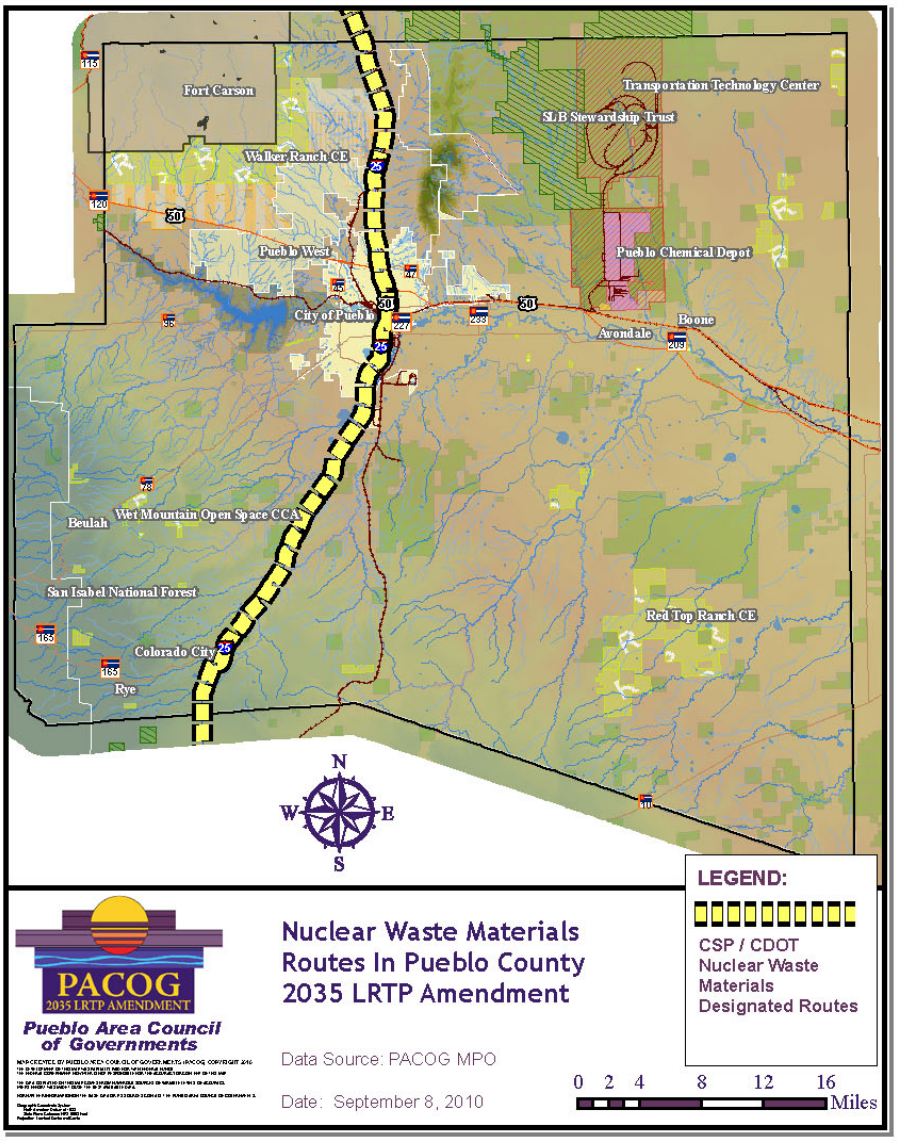
Department of Public Safety Division of State Patrol rules and regulations concerning the permitting, routing & transportation of hazardous and nuclear materials and the intrastate transportation of agricultural products in the State of Colorado can be found on the State Patrol website: http://csp.state.co.us/downloads/hmntrpFINAL.pdf

Figure 2.4 Hazardous Materials Routes in Pueblo County

2.1.6 Nuclear Materials Route

The transportation of nuclear materials by motor vehicle must comply with the provisions established by federal law and regulations from 49 CFR 107, 171, 172, 173, 177, 178, 180, 387, and 397. These are also enforced by the State Patrol pursuant to §42-20-108, C.R.S. The State Patrol provided additional information noting that the regulations do not apply to "*wastes from mining, milling, smelting, or similar processing of ores and mineral-bearing materia*l".

Figure 2.5 Nuclear Materials Routes in Pueblo County



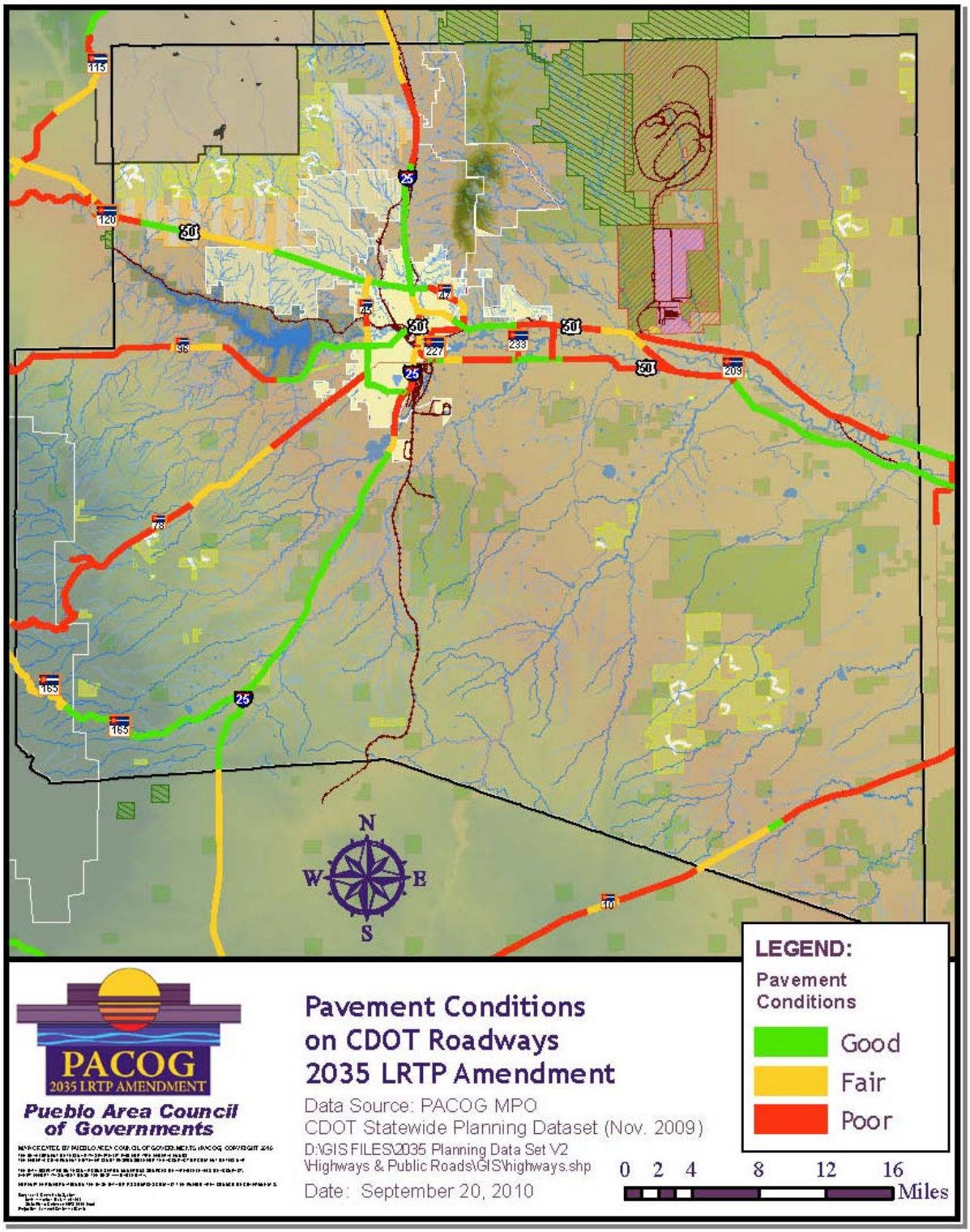
2.1.7 Pavement Condition

Table 2.2 and Figure 2.5 summarize the thirteen state highways within the Pueblo MPO/TPR along with their total lane miles of pavement and pavement condition from the CDOT DTD 2035 planning data set. 40.3 percent of the highway lane miles are considered "Good", 20.7 percent are rated "Fair", 39.20 percent are rated "Poor" and in need of repaving in the next six years. These numbers have improved slightly as of the end of 2009. Due to the funding through the ARRA Program, the figures at the end of 2010 should be significantly better.

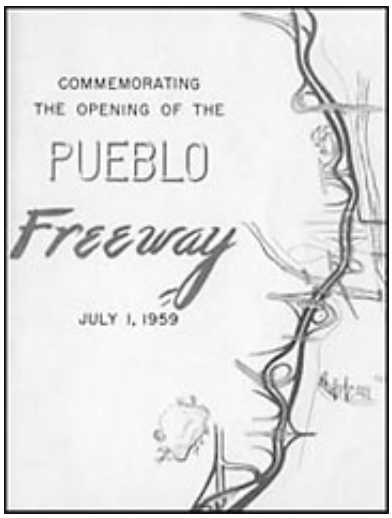
Table 2.2
State Highway Miles And Conditions Pueblo County

	Miles of	Lane	Condition (Lane Miles)			Ratio %
Highway	**Centerline**	**Miles**	**Good**	**Fair**	**Poor**	**Poor/LM**
Interstate 25	47.52	190.08	119.85	30.80	39.43	20.74%
US50A	18.36	74.17	47.20	20.06	6.91	9.31%
US50B	33.29	93.69	41.70	19.87	32.12	34.28%
US50C	17.04	52.83	14.56	4.25	34.03	64.41%
SH45	8.94	35.49	20.36	11.27	3.87	10.90%
SH47	3.63	14.34	5.20	2.09	9.15	63.80%
SH78	31.91	64.93	0.00	12.05	52.88	81.44%
SH96A	29.38	73.94	9.83	29.04	35.07	47.43%
SH96B	18.71	37.42	3.96	0.00	33.46	89.41%
SH165	18.19	36.38	25.61	10.27	0.00	0.00%
SH209	1.51	3.02	0.00	0.00	3.02	100%
SH227	2.05	6.02	0.00	0.00	6.02	100%
SH231	2.03	4.06	0.00	0.00	4.06	100%
SH233	2.09	4.17	0.00	0.00	4.17	100%
SH10	14.70	29.41	1.98	9.27	18.16	61.74%
Totals	**249.35**	**719.95**	**290.25**	**148.97**	**282.35**	
Percentage			**40.3%**	**20.7%**	**39.20%**	**39.20%**

Figure 2.6 State Highway Conditions in Pueblo County



2.1.8 Interstate 25 Through Pueblo



The New Pueblo Freeway (I-25) was completed in 1959. The highway was one of the first freeways constructed in Colorado and does not conform to current standards for geometric design and operations. This section of I-25 is currently proceeding through an Environmental Impact Statement that evaluates options for capacity, safety, and geometric improvements.

There are two "build" options being studied for I-25 through Pueblo. The first utilizes the existing alignment, and the second utilizes a modified alignment through the community.

A summary of the assumptions of the EIS include the following:

- I-25 will be six lanes, three in each direction from Eagleridge Blvd. south to Pueblo Blvd. South of Pueblo Blvd. the interstate will be four lanes, two in each direction.
- I-25 will be straightened through Downtown.
- In the Modified Alignment, the highway will be relocated to the east from Abriendo to Indiana and through Downtown. This realignment allows the extension of Santa Fe Ave south to Minnequa Ave. Standard shoulders and acceleration-deceleration lanes are provided along the corridor.
- Interchanges will be reconstructed and include:
  - ❖ A diamond interchange at SH 50B with one-way ramp connections to 29th St.
  - ❖ A split diamond interchange between 13th St and 1st St. Connections will be provided along extended ramps between 13th and 1st. Additional exit ramps will be provided in both directions near 6th St.
  - ❖ A split-diamond interchange between Abriendo Ave. and Northern Ave. with one-way ramp connections.
  - ❖ A single-point urban interchange at Indiana Ave.
  - ❖ A partial cloverleaf interchange at Pueblo Blvd.
- Local roadway improvements are included on Dillon Dr, Santa Fe Ave., Santa Fe Dr. and other locations to enhance mobility and offer local travelers options for north-south travel without driving on I-25.
- Non-motorized features include:

  - ❖ Sidewalks in many neighborhoods and on bridges crossing I-25, with connections to regional trails, parks and other features.
  - ❖ A pedestrian bridge over I-25 connecting Mineral Palace Park and the

Fountain Creek Trail.

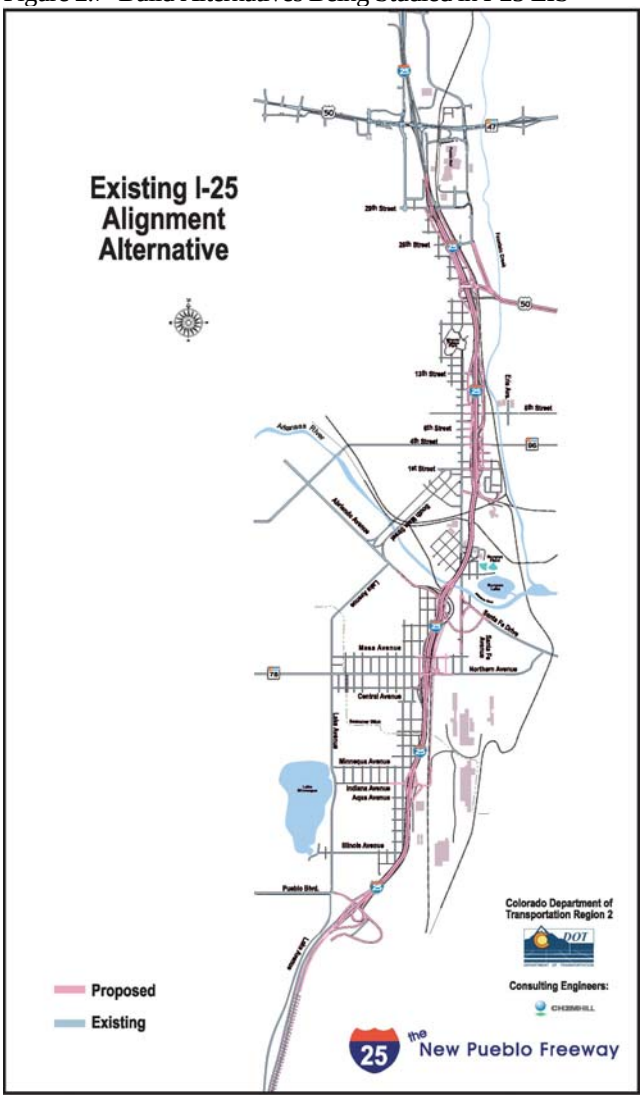
- Environmental mitigation and improvements include:

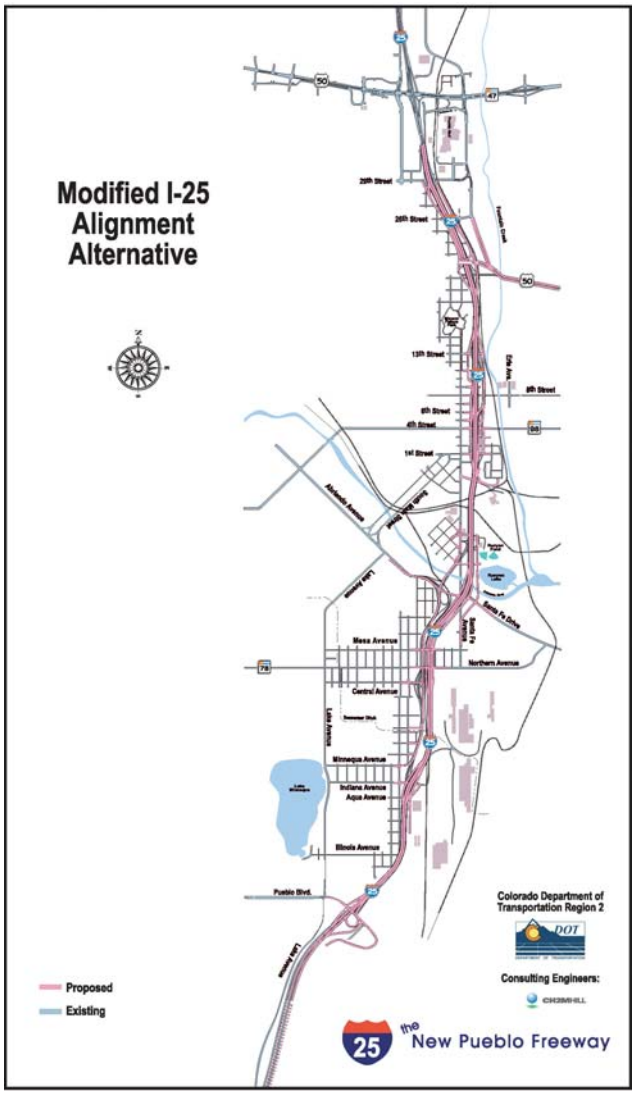
  - ❖ Restoring Mineral Palace Park.
  - ❖ Reconstructing Benedict Park.
  - ❖ Enhancing Runyon Field access and parking.
  - ❖ Noise abatement along segments of I-25.

During the Fall of 2007 a consultant team has been working to refine costs and look at options for the phasing of the improvements to I-25 through Pueblo. In both of the build options, there are segments that could be constructed independently. Depending on the evaluation of safety, mobility, and system quality, different segments may have different priorities. The most recent estimated cost of this project is in excess of $800 million (constant 2008) dollars. Details of the project and EIS can be found at www.I25Pueblo.com and in Appendix 2.

In 2010, the Project team is in process of writing the Draft EIS. Two build and one no build alternative will be described. The DEIS discloses the socio economic and environmental impacts for each alternative. Publication of the document is anticipated in early 2011 and will be followed by a public hearing and a public comment period. A Final EIS will then be prepared which will identify the preferred Alternative which is anticipated to be published late 2011/early 2012 and another public hearing will follow. FHWA and CDOT would then publish a Record of Decision document, which will select the preferred alternative.

Figure 2.7 Build Alternatives Being Studied in I-25 EIS





2.1.9 Safety

The Colorado Department of Transportation, Pueblo County, and the City of Pueblo maintain crash records for roadways throughout the Pueblo Area. The crash numbers are used to identify locations of high crash rates relative to the number of vehicles entering the intersection. Improvements to these intersections should lower the number of crashes and have the greatest benefit for overall system safety.

Table 2.5 lists the intersections with the highest number of crashes for 2005. While none of the accident rates for the Pueblo area are alarmingly high, concentrations of crashes along some corridors, such as US50A and SH45 suggest a need to improve safety at those locations. Figure 2.7 shows the location of each intersection.

In terms of other issues within the PACOG MPO/TPR area include having some of the highest probability of young drivers being involved in a vehicular crash. Six of the top 10 zip codes in the state are within Pueblo. These statistics are contained in the CDOT FY2010 Problem Identification Report.

RANK	CITY	ZIP CODE	ODDS OF CRASH
1	PUEBLO	81006	11.00%
2	PUEBLO	81005	10.40%
3	PUEBLO	81008	10.40%
4	HENDERSON	80640	9.90%
5	PUEBLO	81001	9.80%
6	PUEBLO	81007	9.70%
7	ARVADA	80005	9.30%
8	PUEBLO	81004	9.30%
9	ARVADA	80003	9.10%
10	ARVADA	80004	9.10%

Source: CDOT 2007-2008 Crash Model

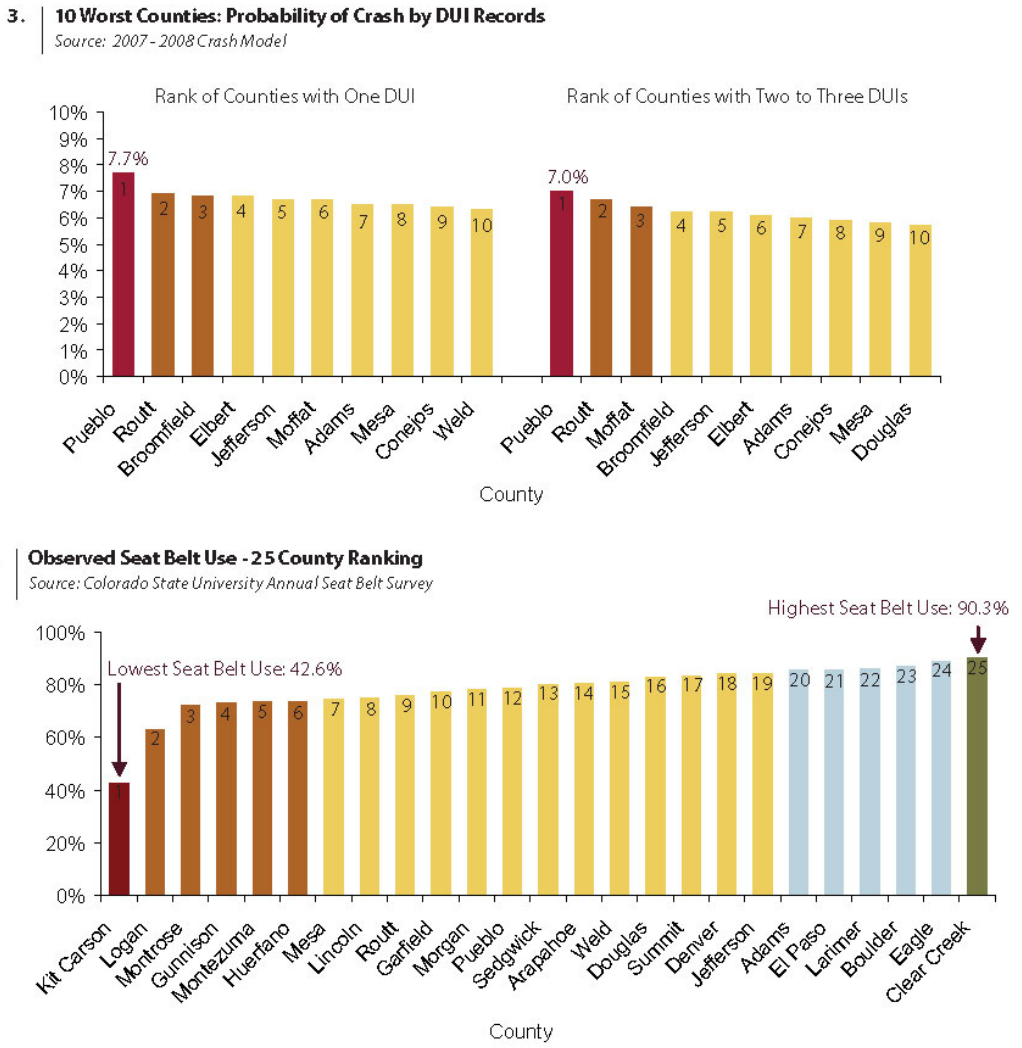
The CDOT report includes the following regarding Pueblo County:

> **Pueblo County.** Pueblo County has ongoing, deep, and persistent traffic safety problems that have been observed for years. Just as in past analyses, the 2007-2008 model demonstrated that Pueblo County and its resident drivers are among the most dangerous in the state. On nearly every measure, Pueblo ranks the worst. This includes measures of probability of crashing for young drivers, drivers with prior DUI records and drivers in general. The County's seat belt use rates are all low. In addition to supporting and reinforcing on-going community-based traffic safety programs, the study team strongly encourages that a concentrated law enforcement component be developed and funded. While DUI enforcement is important, it is apparent that rigorous enforcement of other risky driving behaviors such (e.g., speed) need to be enhanced to reinforce the on-going

behavioral projects. Pueblo needs to get tough (or tougher) on traffic enforcement.

Continuing from the same report, Pueblo ranks highest in the probability of crashing for those with previous DUI's.

Figure 2.8 Crash Probability and DUI History & Countywide Seatbelt Usage



Source: CDOT FY2010 Problem Identification Report.

In terms of occupant protection statewide, Pueblo County is listed as one of the worst for protection of Children, Juveniles, and Teens in the State of Colorado for both the use of Car Seats/Booster Seats, and Observed Front and Rear Seat Belt Use for Juveniles Ages 5-15. This is shown in the following graphics from the CDOT FY2010 Problem Identification Report.

Figure 2.9 Occupant Protection Children & Juveniles

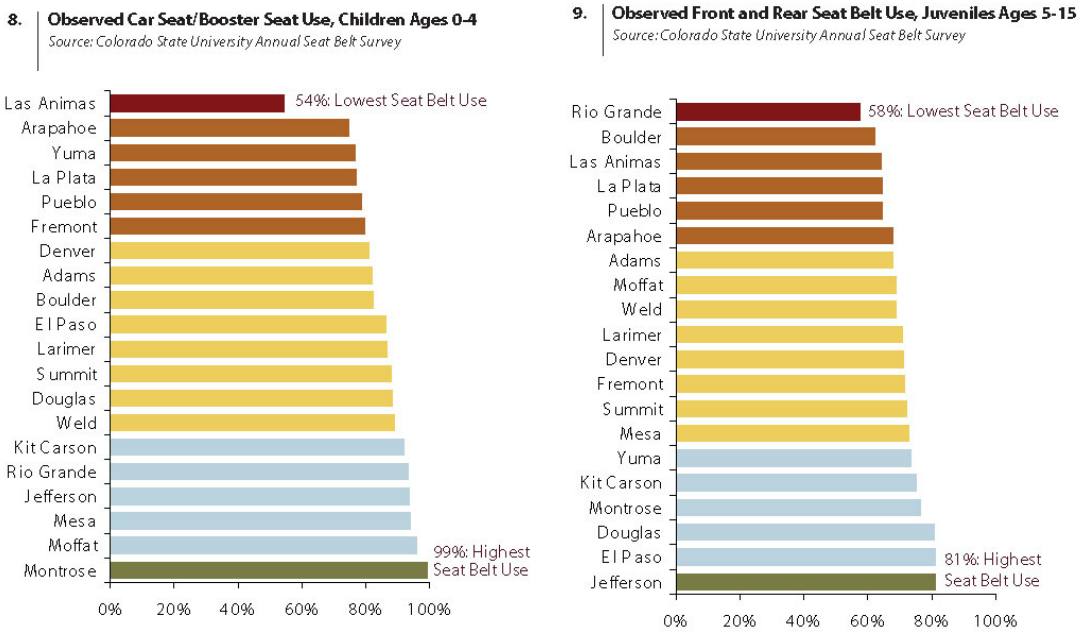
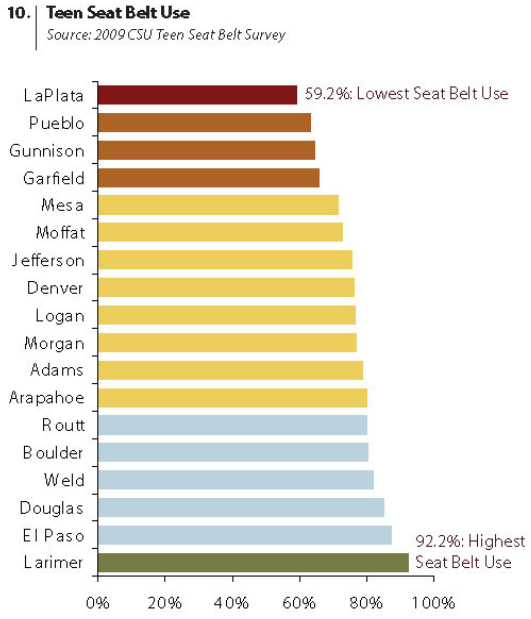
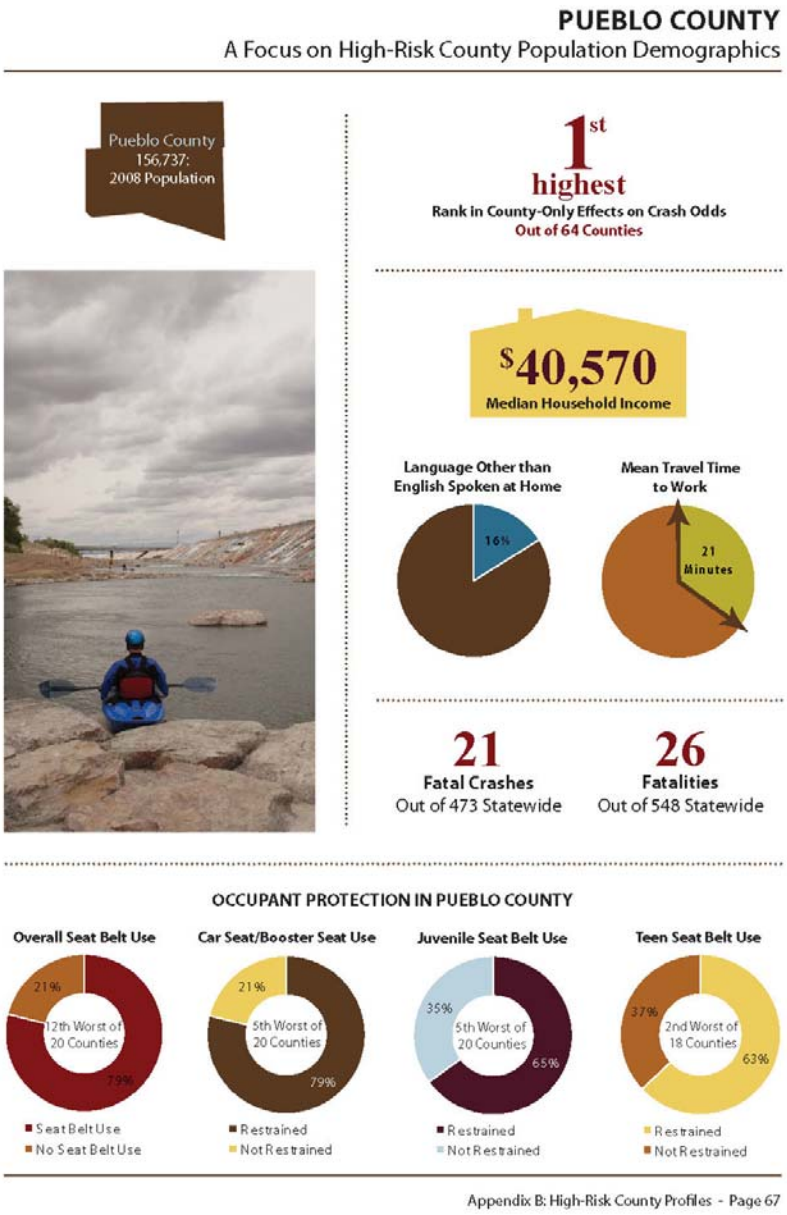


Figure 2.10 Occupant Protection Teens



The following is a summary of the conditions in terms of safety that are found within Pueblo County.



Source: CDOT FY2010 Problem Identification Report.

PUEBLO COUNTY

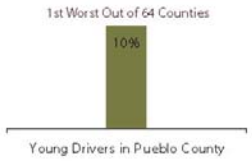
A Focus on High-Risk County Crash Trend Behavior

crash trend behavior

With **21 fatal crashes** out of 473 statewide; and **26 fatalities** out of 548 statewide, Pueblo County has a **6.42% probability of crash involvement** and is **ranked 1st** out of 64 counties. Pueblo County also ranks 1st highest out of 64 counties in county-only effects.

YOUNG DRIVERS IN PUEBLO COUNTY

Odds of Crash Involvement: Drivers Under Age 21 Residing in Pueblo County

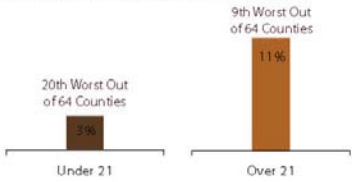


6 of the 20 Worst Zip Codes Where Young Drivers Had the Highest Odds of Crash Involvement

Zip Code	City
81001	Pueblo
81004	Pueblo
81005	Pueblo
81006	Pueblo
81007	Pueblo
81008	Pueblo

IMPAIRED DRIVERS IN PUEBLO COUNTY

Percentage of Drivers with 1+ DUIs on Record



Odds of Crash: Drivers with One DUI on Record

Odds of Crash: Drivers with a Max. BAC of .10 to .20

* 2007-2008 Crash Model, 2009 Seat Belt Surveys, 2008 FARS Data, 2008 County QuickFacts

Page 68 - Appendix B: High-Risk County Profiles

Source: CDOT FY2010 Problem Identification Report.

Figure 2.11 High-Crash intersection locations - 2006

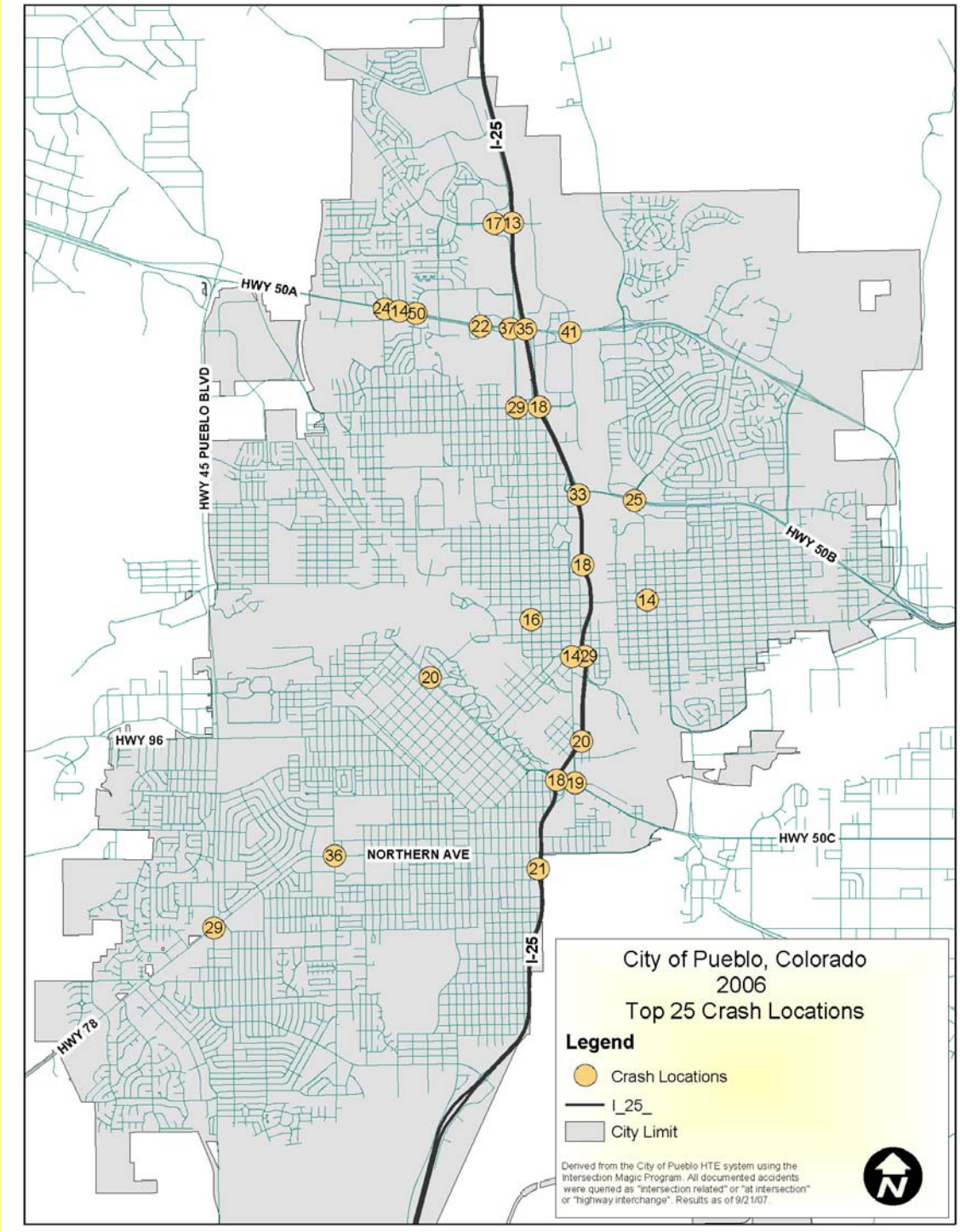


Table 2.3 High-Crash Intersection Locations 2003 – 2006

Annual Crash Location Comparison		2006 Numeric Rank	2006 # of Crashes	Change # Crashes From 2005	2005 Numeric Rank	2005 # of Crashes	Change # Crashes From 2004	2004 Numeric Rank	2004 # of Crashes	Change # Crashes From 2003	2003 Numeric Rank	2003 # of Crashes
US Highway 50	Morris Ave/ Fortino Blvd	1	50	7	2	43	21	6	22	-6	6	28
US Hwy 50 West	Elizabeth St	2	41	8	1	49	-1	1	50	-1	1	51
Colorado Highway 47	Dillion Dr	3	37	5	3	42	18	4	24	-2	7	26
Northern Ave	Prairie Ave	4	36	2	5	34	-4	2	38	-4	2	42
Interstate 25	US Highway 50	5	35	14	10	21	13	-	8	0	-	8
Interstate 25	US Highway 50 Bypass	6	33	33	-							
29th St	Elizabeth St	7	29	9	12	20	4	15	16	-2	11	18
Interstate 25	1st Street	8	29	21	-	8	-17	3	25	13	-	8
Pueblo Blvd / SH 45	Northern Ave	9	29	9	4	38	18	8	20	-13	3	33
US Hwy 50 Bypass	Bonforte Blvd/Hudson	10	25	3	7	28	14	20	14	6	-	8
US Hwy 50 West	Baltimore Ave	11	24	6	6	30	15	18	15	-16	4	31
US Hwy 50 West	Club Manor Dr	12	22	1	8	23	10	22	13	-5	10	18
Interstate 25	Central Ave	13	21	17	-	4	-14	11	18	-7	8	25
4thStreet / Lincoln	Abriendo	14	20	12	-	8	-8	14	16	5	25	9
Interstate 25	Ilex	15	20	12	-	8	5	-	3	-11	13	14
Santa Fe Ave	Santa Fe Dr	16	19	3	17	16	8	-	8	0	-	8
Interstate 25	13th Street	17	18	12	-	6	2	-	4	-21	9	25
Interstate 25	29th St	18	18	3	18	15	-4	9	19	1	12	18
Interstate 25	Abriendo	19	18	10	-	8	-9	13	17	-13	5	30
Elizabeth	Eagleridge Blvd	20	17	17	-							
6th Street	Greenwood St	21	16	16	-							
8th Street	Hudson Ave	22	14	2	16	16	7	26	9	1	-	8
Santa Fe Ave	1st Street	23	14	14	-							
US Hwy 50 West	Ridge Dr	24	14	14	-							
Interstate 25	Eagleridge Blvd	25	13	2	19	15	9	-	6	-1	-	7
Northern Ave	Evans Ave	26	12	12	-							
Pueblo Blvd / SH 45	St. Clair	27	12	7	-	5	-12	12	17	14	-	3
4th Street / SH 96	Main Street	28	11	7	-	4	-4	-	8	-2	23	10
4th Street / SH 96	Santa Fe Ave	29	11	7	14	18	3	17	15	4	19	11
Abriendo Ave.	Colorado / Union	30	11	6	-	5	3	-	2	-9	21	11
Northern Ave	Abriendo Ave	31	11	2	21	13	-2	16	15	6	24	9
Northern Ave	Lake Ave	32	11	3	-	8	-5	21	13	5	-	8
Pueblo Blvd / SH 45	Thatcher Ave / SH 96	33	11	11	9	22	2	7	20	7	15	13
4th Street / SH 96	Chester	34	10	2	-	8	-10	10	18	10	-	8
4th Street / SH 96	Midtown Cir	35	10	3	22	13	11	-	2	-3	-	5
Northern Ave	Moore / Cumbridge Ave	36	10	4	20	14	8	-	6	-1	-	7
US Hwy 50 Bypass	Norwood Ave	37	10	10	-							
29th St	Hart Rd	38	9	3	25	12	8	-	4	-4	-	8
Colorado Highway 47	Jerry Murphy Rd	39	9	11	13	20	-2	5	22	12	-	8
Northern Ave	Hollywood / Lehigh	40	9	9	-							
Pueblo Blvd / SH 45	Red Crk Sprgs / Rutgers	41	9	12	11	21	13	-	8	0	-	8
Thatcher Ave / SH 96	Prairie	42	8	0	-	8	-1	25	9	4	-	5
4th Street Bridge		43	7	1	-	8	-6	19	14	7	-	7
Pueblo Blvd / SH 45	Lehigh	44	7	2	-	5	-3	-	8	-4	17	12
Northern Ave	Orman Ave	45	6	7	23	13	9	-	4	-8	16	12
Prairie Ave.	Lakeview	46	6	2	-	8	0	-	8	-4	18	12
US Hwy 50 West	Wills Blvd	47	6	12	15	18	14	-	4	0	-	4
5th Street	Santa Fe Ave	48	5	0	-	5	1	-	4	-7	20	11
Pueblo Blvd / SH 45	Prairie Ave	49	5	4	-	1	-10	24	11	4	-	7
Abriendo Ave	Lake Ave / Penn St	50	4	8	24	12	8	-	4	-1	-	5
Bonforte	Jerry Murphy	51	0	4	-	4	-1	-	5	-6	22	11
Northern	Lehigh Ave./Hollywood	52	0	7	-	7	-1	-	8	-6	14	14
Norwood	Hwy 50 BYPASS	53	0	8	-	8	-3	23	11	4	-	7

BLUE - LOCATIONS CHANGING BY 5-9 PLACES IN ANNUAL RANKING

Red- Locations changing by >10 places in annual ranking

Note: Data may or may not include Colorado State Patrol, and Pueblo County Data.

2003 - 2006 crash data from City of Pueblo Department of Transportation..

Table 2.4 2006 Intersection Crash-Type Information

	Location	2006 CRASHES	BROADSIDE	REAREND	APPROACH	OTHER	PED	FATALITIES
1	HWY 50 & MORRIS/ FORTINO	50	3	24	19	4		1
2	HWY 47 AND DILLON DR	41	4	31	0	6		
3	HWY 50 AND ELIZABETH ST	37	4	27	1	4	1	
4	NORTHERN & PRAIRIE	36	5	18	6	7		
5	I-25 & HWY 50/47	35	2	25	1	7		
6	I-25 & EXIT 100A BELMONT/ HWY 50B	33	0	10	0	22	1	
7	HWY 45 PUEBLO BLVD & NORTHERN	29	5	14	4	6		1
8	29TH ST & ELIZABETH	29	3	14	11	1		
9	I-25 & 1ST STREET	29	0	18	1	9	1	
10	HWY 50 B & BONFORTE / HUDSON	25	1	18	1	5		
11	HWY 50A & BALTIMORE	24	2	16	3	3		
12	HWY 50 & CLUB MANOR	22	3	14	2	3		
13	I-25 & CENTRAL AVE	21	0	11	0	10		
14	I-25 & ILEX	20	0	7	0	13		
15	HWY 96 4TH STREET/LINCOLN & ABRIENDO AVENUE	20	1	14	1	3	1	
16	SANTA FE AVE & SANTA FE DR	19	2	4	3	10		
17	I-25 & 29TH ST	18	1	7	1	9		
18	I-25 & ABRIENDO AVE	18	0	3	0	15		
19	I-25 & 13TH STREET	18	0	12	0	6		
20	ELIZABETH ST & EAGLERIDGE BLVD	17	3	9	1	4		
21	6TH St & GREENWOOD ST	16	16	0	0	0		
22	8TH ST & HUDSON	14	9	1	3	1		
23	SANTA FE AVE & 1ST STREET	14	3	6	2	2	1	1
24	HWY 50A & RIDGE DR	14	3	7	4	0		
25	I-25 & EAGLERIDGE BLVD	13	0	8	0	5		

2.1.10 Fatal Crash Data for Pueblo County

The following is information regarding Fatal Crashes in Pueblo County for 2008, 2009, and through 10/05/2010 according to data from CDOT.

Table 2.5 Fatal Crash Information

YEAR	F	FN	A	AN
2008	22	28	4	5
2009	22	22	2	2
2010*	15	16	2	6

F = Fatal Accident
FN = Number of People Killed
A = Alcohol Involved
AN = Number of People Killed in Alcohol Related Accident
Source: CDOT Website Fatal Accident Statistics, Retrieved 10/06/2010

2.1.11 Bridge Conditions

On March 2, 2009, Governor Bill Ritter signed into law S.B. 09-108, Funding Enhancement for Surface Transportation and Economic Recovery, otherwise known as FASTER. The legislation was the first new dedicated and sustainable funding source for transportation in twenty years.

The new law increases revenues from various sources, originally expected to total nearly $250 million per year for transportation improvements at the state and local level. Included in the new law is funding designated specifically for Colorado's most deficient state bridges- those 128 bridges across the state highway system that are identified by the department as structurally deficient or functionally obsolete and rated by the department as "poor" as of January 1, 2009, or are subsequently identified and rated by the department. Revenues from the newly established Bridge Safety Surcharge are to be phased in over three years, and were estimated to total approximately $100 million in the third year, and each year thereafter. On June 18, 2009, the Bridge Enterprise Board of Directors officially approved the imposition of the bridge safety surcharge, as required by law.

To assist with this historic focus on Colorado's poor bridges, the legislature did several things. FASTER creates a new enterprise, the Bridge Enterprise (Enterprise), and appointed the Transportation Commission to serve as the Bridge Enterprise Board of Directors (Board). The business purpose of the Enterprise is to "finance, repair, reconstruct, and replace any designated bridge in the state." Because it was constituted as

a government-owned business, the Enterprise may issue revenue bonds to accelerate construction of Colorado's poor bridges. Bridge projects under the Enterprise may include the repair, replacement, or ongoing operation or maintenance, or any combination thereof, of a designated bridge.

2.1.12 Bridge Program

The Pueblo TPR contains 311 bridge structures, 116 of which are on the State Highway System. Bridges are inspected every two years and are given a sufficiency rating based on weight bearing capabilities and safety standards.

Bridge inspections include an examination of structural integrity (girders, abutments, deck, etc.), and safety considerations (alignment, width, approach guard rails, hydrology, and traffic volume). The resulting sufficiency rating will run from 100-to-1 with 100 being a new bridge with no deficiencies and 15 requiring a bridge closure. Ratings below 50 indicate a bridge that is eligible for replacement due to either structural deficiency or functional obsolescence. Ratings below 70 indicate a possible need for rehabilitation.

- **Structurally Deficient (SD)** - Structure is not capable of carrying established legal loads either due to inadequate original design, deterioration, or damage since construction.
- **Functionally Obsolete (FO)**- Capable of carrying legal loads but does not meet current safety standards due to factors such as narrow width, poor alignment, etc.

On-System Bridges

CDOT region 2 inspects all of the on-system bridges in Pueblo County and manages their replacement and/or rehabilitation based on the regional priority. Table 2.5 identifies the ten deficient bridges within the Pueblo TPR.

City of Pueblo Bridges

The City of Pueblo maintains 34 bridges within its jurisdiction. As of 2007, two of these bridges have been rated as deficient and in need of replacement or rehabilitation in the next 25 years. Table 2.6 lists the three bridges in order of priority, based on ADT and condition.

Pueblo County Bridge Replacement Program

Pueblo County's Bridge Maintenance Program is an intense preventive maintenance program designed to preserve the functional and structural integrity of the County's bridge system including all box culverts and culverts in excess of 47 inches in diameter.

The Program replaced 60+ deficient structures in the last 20 years and has prioritized the remaining deficient bridges based on several factors including the structure's sufficiency rating, eligibility for federal or state funding, local funding constraints, level of traffic served, and the availability of alternative access routes or detours. Table 2.7 shows the replacement schedule for the off-system bridge structures.

Figures 2.8 and 2.9 show the location of all the major bridge structures within the Pueblo TPR along an indication of their sufficiency rating.

Table 2.6 Pueblo County Bridge Ratings From FHWA NBI

PUCO 0.71-701B	710	OXFORD FARMERS DITCH	COUNTY ROAD 710	7.4 MI SE OF BOONE	2.00%
PUE11TH-0.2-ADE	011TH	DRY CREEK	11TH STREET	IN PUEBLO	13.70%
K-18-Z	0096A	RDWY, RR, ARKANSAS RVR	SH 96 ML	2.4 MI E OF JCT SH 45	26.30%
M-20-A	0010A	SAUNDERS ARROYO	SH 10 ML	1/2 BTWN WLSNBRG-LA JUNTA	29.30%
K-18-CL	0025A	NP RR,ILEX ST,BENNET ST	I 25 ML SBND	0.7 MI S OF JCT SH 96	36.40%
K-18-CK	0025A	NP RR,ILEX ST,BENNET ST	I 25 ML NBND	0.3 MI N OF JCT SH 50 E	37.60%
L-19-C	0050C	ST CHARLES RIVER	US 50 BUS. RT WBND	9.3 MI WEST OF JCT US 50	39.40%
L-18-M	0025A	INDIANA AVE	I 25 ML NBND	IN PUEBLO	45.30%
L-18-W	0025A	INDIANA AVE	I 25 ML SBND	IN PUEBLO	46.40%
K-18-R	0050C	ARKANSAS RIVER	US 50 BUS EBND	IN PUEBLO	47.30%
M-17-R	0025A	DRAW	I 25 ML	2 MI NO OF JCT SH 165	48.00%
PUEUNIN-0.0-COR	3101	D&RGW,AT&SFRR ,ARKANSAS R	UNION AVENUE	IN CITY OF PUEBLO	48.00%
L-19-G	0096B	BOB CREEK CANAL	SH 96 ML	BOONE	50.50%
PUCO 0.07-216A	273	GREENHORN CREEK	COUNTY ROAD 273	4.3 MI ENE OF RYE	51.30%
L-18-AQ	0	I 25 ML	NORTHERN AVE	IN PUEBLO	52.70%
K-18-CG	0025A	STEEL HOLLOW	I 25 ML NBND	7.2 MI N OF JCT US 50 W S	53.00%
L-18-R	0227A	ARKANSAS RIVER	SH 227 ML	IN PUEBLO/JOPLIN AVE	53.60%
K-18-AC	0050A	DRY CREEK	US 50 ML	0.6 MI E OF JCT SH 45	53.80%
PUCO 0.30-632A	SPKWY	GREENHORN CREEK	CO. RD. S. PARKWAY	AT COLORADO CITY	54.80%
K-19-U	0050B	CHICO CREEK	US 50 ML EBND	0.4 MI W OF JCT SH 96 E	56.00%
K-18-CI	0025A	SERVICE RD, BNSF RR	I 25 ML NBND	IN PUEBLO	58.10%
L-18-B	0025A	BURNT MILL ROAD	I 25 ML SBND	12 MI SO OF JCT US 50 PUE	58.10%
L-19-F	0050C	DRAW	US 50 BUS. RT	JUST E. OF AVONDALE	58.10%

Table 2.7 City Bridge Ratings

	BRIDGE / STATUS	SUFFICIENCY RATING
1.	UNION AVENUE BRIDGE: REQUIRES REPLACEMENT	48.4 *
2.	11TH STREET BRIDGE OVER WILDHORSE CREEK: REQUIRES REPLACEMENT OR REALIGNMENT. LOAD LIMIT – 19 TONS	13.4
3.	8TH STREET BRIDGE ACROSS DRY CREEK: REQUIRES REFURBISHMENT	68

Table 2.8 Pueblo County Bridge Replacements 2005-2010

	STRUCTURE	LOCATION	DESIGN	BUILD
1.	701B	HUCKLEBERRY RD ACROSS OXFORD DITCH	2007	2010
2.	213B	CROW CUT-OFF RD ACROSS MUDDY CREEK	2009	2012
3.	203D	RED CREEK RD ACROSS THE MINNEQUA CANAL	2009	2012
4.	302A	DOYLE RD ACROSS HUERFANO CUCHARES DITCH	2010	2013
5.	601A	BOONE RD ACROSS THE COLORADO CANAL	2010	2013
6.	216A	APACHE CITY RD ACROSS GREENHORN CREEK	2011	2014
7.	216B	APACHE CITY RD ACROSS GRANEROS CREEK	2011	2014
8.	407A	LANE 27 ACROSS THE ST. CHARLES RIVER*	TBD	
9.	407B	SOUTH RD ACROSS THE ST. CHARLES RIVER*	TBD	
10.	208D	PENNSYLVANIA AVE. ACROSS SQUIRREL CREEK*	TBD	
11.	208E	CURTIS RD. ACROSS SOUTH CREEK*	TBD	
12.	208B	SQUIRREL CREEK RD ACROSS SQUIRREL CREEK*	TBD	

*Note:

Figure 2.12: On-System Bridge Conditions Pueblo County

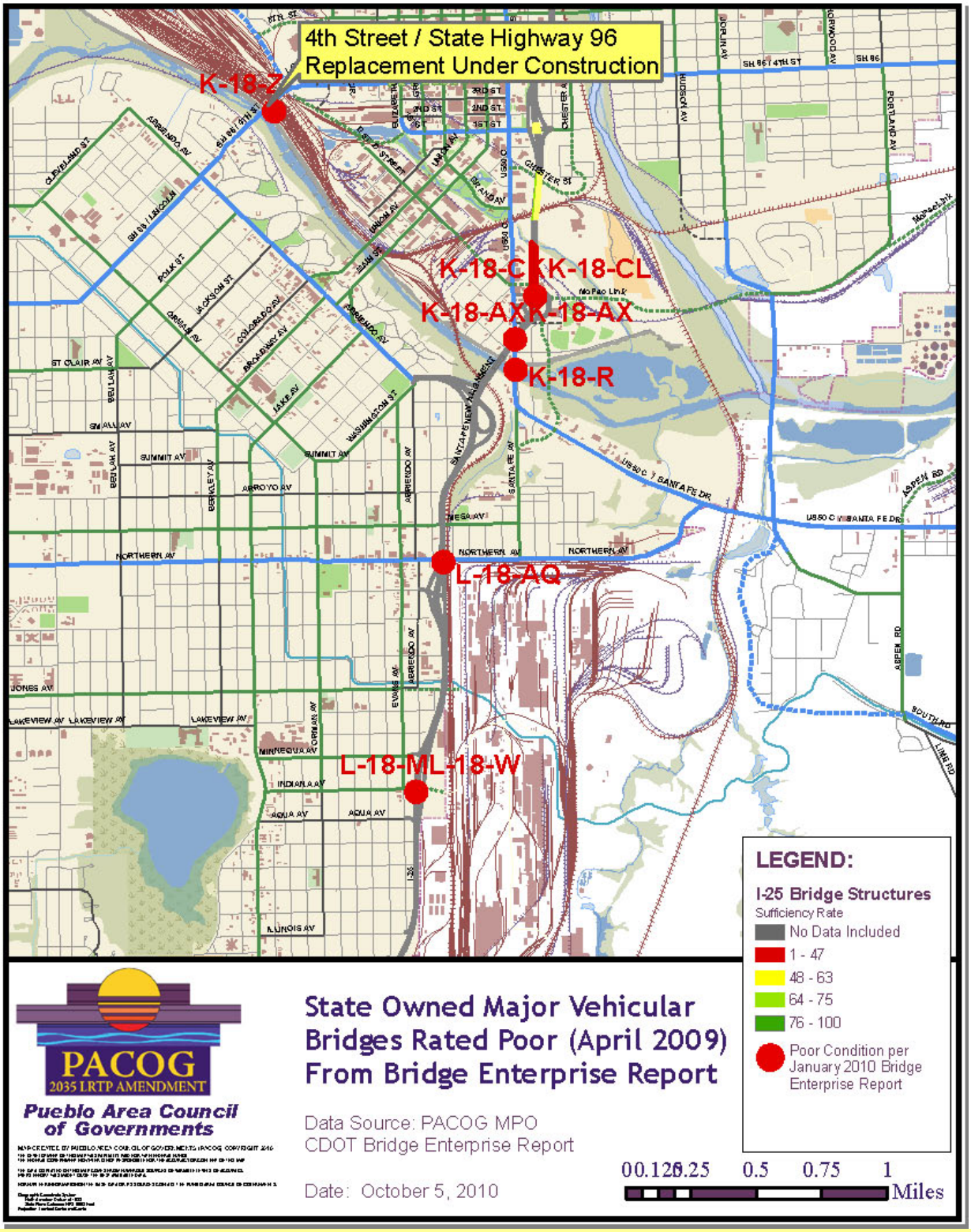
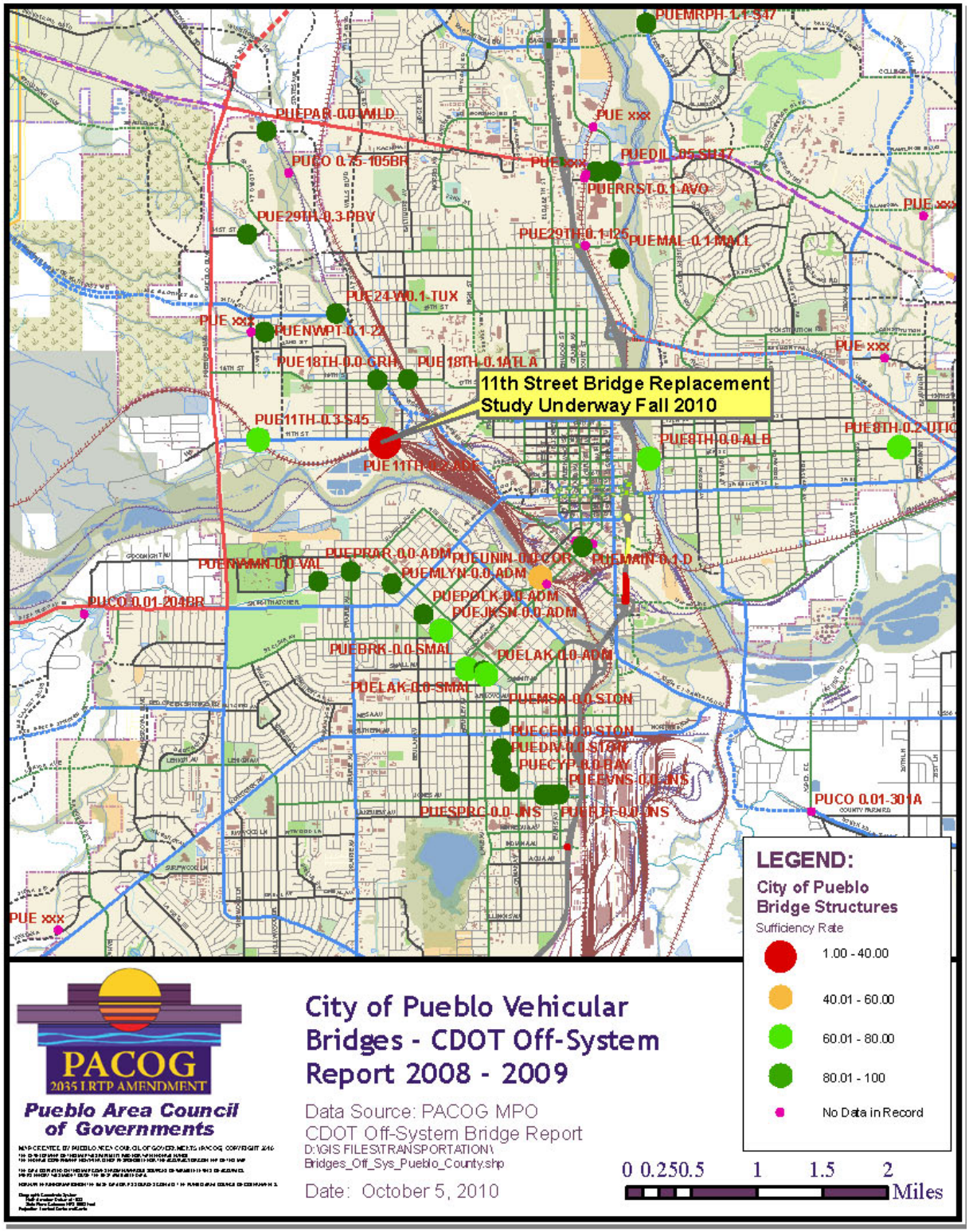


Figure 2.13: Bridge Conditions, City of Pueblo



2.1.13 Systems Operations

There are currently 184 traffic signals within Pueblo County's urban area, with the majority of the signals (160) in the City of Pueblo. The maintenance and operations of these traffic signals are split among various agencies, including CDOT, City of Pueblo, Pueblo County, and the Pueblo West Metro District.

Of the 184 signals 43 intersections are pre-timed (no vehicle-detection system). The intersections are predominantly located within the Central Business District of the City of Pueblo. Traffic volumes at these locations are consistent and heavy enough on each leg of the intersection throughout the day so vehicle detection would not be effective or improve efficiencies. Included in the total count of signalized intersections are 20 pedestrian actuated traffic signals. These signals are located within school zones or at locations where a high number of pedestrian crossing movements occur.

The remaining intersections all use vehicle detection systems to adjust the amount of green time given to the minor street or left turn phases based on the amount of traffic present at that specific time. These intersections also have pedestrian push buttons to activate the pedestrian crossing times when needed.

The predominant vehicle detection system is video detection. The system works in all weather and visibility conditions and can be installed without closing lanes or cutting the pavement thus avoiding costly failures during construction activities. This technology consists of cameras mounted on the vertical signal pole or horizontal mast arm and a processor that communicates directly to the traffic signal controller. Similar to embedded loops, the video detection system allows for the user to create virtual detection zones in which the changing of pixels alerts the controller that vehicles are present and that the signal timing should be modified accordingly. The video detection systems provide remote access capabilities allowing responsible personnel to monitor traffic flow from a remote location. The location can be viewed in a single frame or continuous frames, and operating personnel can reconfigure detection zones and perform a system diagnostic checks.

Communication between traffic signals is a key component to providing corridor progression and is now generally used to allow the personnel direct access to the signal operations without physically going to the intersection. The signal communication allows for a time pulse to be sent to all locations keeping clocks and timing plans in synchronized operation. The communications system also allows the intersection to be monitored for failures and provides real time viewing capabilities. Generally the traffic signal communication is through either fiber optics or radios.

Over the past five years the traffic signal indications throughout the urban area have also gone "green" environmentally. Both vehicular and pedestrian signals now use more energy efficient LEDs (Light Emitting Diodes) to save approximately 70% of the total

energy costs of the signal operation. These indications also have a safety component, as they are bright throughout the day.

Efforts have been made to increase pedestrian safety at signalized intersections using "countdown" pedestrian signals, upgrading curb ramps, and installing "bump-outs" to reduce the pedestrian crossing width across major streets.

Intersection safety is improved with the operation and efficiencies of protected left turn signals. CDOT was one of the first agencies in the United States to implement a new flashing yellow arrow left-turn signal at the intersection of US HWY50 & Fortino Blvd. A green arrow display provides a protected left turn while the flashing yellow arrow directs left turning traffic to yield to oncoming traffic. The flashing yellow is used only during the off-peak hours or nighttime operation. This operation has been so successful that the City and the State may extend the use to several other intersections where left turn accidents have steadily been increasing.

Traffic signal timing plans are generated based on both 24-hour and peak hour turn movement counts. It is common to have several different timing plans based on the time of day or year and respective traffic volumes. For example, currently Northern Avenue runs three different plans and US Hwy 50 runs four different plans. The various timing plans are used to increase traffic flow efficiencies and reduce delay for the side street traffic.

On a level-of-service (LOS) scale from A (unimpeded flow) to F (failure and severe congestion), the following intersections in the Pueblo area are now operating at a level of service D or worse during either the AM or PM peak hours:

Abriendo Avenue & Washington Street
Abriendo Avenue & State Highway 96
I-25 & 1st Street (NB)
I-25 & 29th Street (NB and SB)
Prairie Avenue & St. Clair Avenue
Prairie Avenue & State Highway 96
Pueblo Blvd & Red Creek Springs Road*
US Hwy 50 & Purcell Blvd
Morris Ave & Hwy 50 West (EB AM and WB PM)
Elizabeth Street & Hwy 50 and I-25 & US Hwy 50 (WB PM)
US Hwy 50 West& SH45 - NB and WB PM

*Capacity improvements for the intersection of Pueblo Blvd and Red Creek Springs Road are in process with construction scheduled for the summer of 2008

2.1.14 Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) is a term to describe the collection of advanced transportation technologies and applications of information processing techniques to improve transportation system efficiency, safety, and convenience.
ITS use in the Pueblo area includes:
Variable Message Signs (VMS) at the following four locations: I-25 north of Eagleridge; I-25 at Pueblo Boulevard; I-25 at Colorado City; US50 at Pueblo Boulevard. These messages can be changed to warn motorists of road hazards, crashes along the road, unsafe weather conditions, and to make many other announcements.
Video cameras at locations along I-25 and other roadways to monitor traffic flow and incident detection.

2.2 Freight and Rail Systems

2.2.1 Introduction

The Colorado Department of Transportation defines a major freight route as a roadway with more than 1 million tons of freight per year or a railroad with more than 5 million tons of freight a year.

Major freight routes in the Pueblo area include the entire I-25 corridor within Pueblo County and the US50 Corridor (including SH47 east of I-25). Major freight railroads include the shared Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) line north of the Arkansas River and the BNSF line extending along US50 east.

In 2002, CDOT completed the *Eastern Colorado Mobility Study* which had both freight rail and roadway components; and in 2005, the *Public Benefits and Costs Study* (of freight rail relocation). The Pueblo MPO actively participated as a member of the Advisory committee for both studies. The 2035 LRTP is updated with information from some sections of those reports relating to the Pueblo MPO/TPR. Both studies and their details are available on the CDOT website: www.dot.state.co.us.

Designated Truck Routes

The I-25 Corridor is of special national significance as it is part of the "El Camino" trade route between Canada and Mexico, as identified in the NAFTA agreements. Additionally, the area has access, via US 50, to the "Ports-to-Plains" Corridor (generally US 287) that runs through Eastern Colorado to Denver from Laredo, Texas. These two designated truck routes and truck traffic needs to be accommodated in long-range plans for the entire Southern Colorado community.

Major Rail Routes

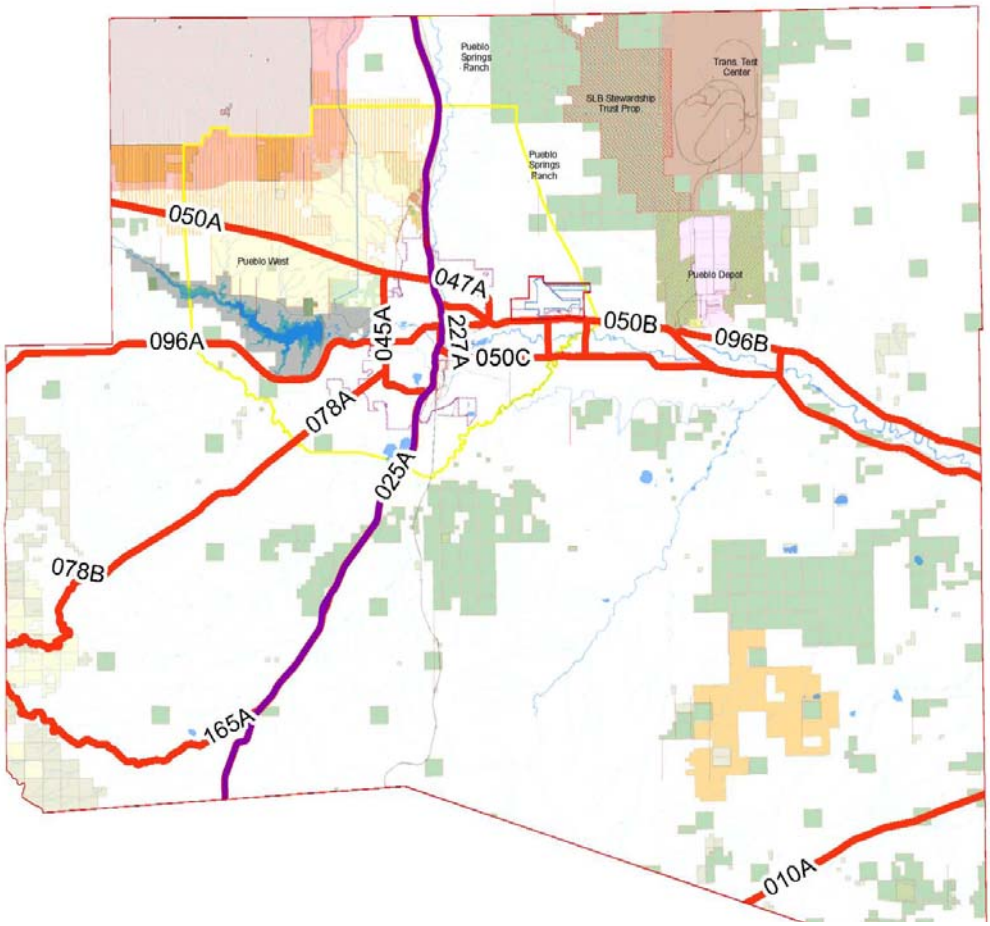
The Pueblo area has recognized the importance of rail since early in the development of the area when Pueblo community leaders put up $50,000 to lure the Denver & Rio Grande to town in 1872. The railroad not only transported cattle, but also delivered ore to local smelters that fashioned these raw materials into rails, spikes, and other forged or manufactured products. D&RG owner William Jackson Palmer founded the first Pueblo steel plant, which later evolved into Colorado Fuel and Iron—by 1900 among the world's largest steel producer.

Historically Pueblo has been served by numerous railroads: the Denver & Rio Grande Western (D&RGW); the Atchison, Topeka and Santa Fe (ATSF), Colorado & Southern (C&S - part of the Burlington Route), the Missouri Pacific (MP), Chicago Rock Island and Pacific (RI), the Denver & New Orleans (D&NO), and the Colorado & Wyoming (C&W). Major commodities carried by the rails to, through, and from Pueblo include coal, manufactured goods, and commodities. Rail traffic is expected to increase moderately through the Region unless and until the major freight rail corridor is moved farther east, away from the existing I-25 corridor.

2.2.2 Existing Conditions: Trucking

Figure 2.9 below illustrates the state highway routes in and through Pueblo County. The primary north-south freight route is I-25, while the primary east-west route is US Hwy 50.

Figure 2.14 Primary Freight Routes in Pueblo County

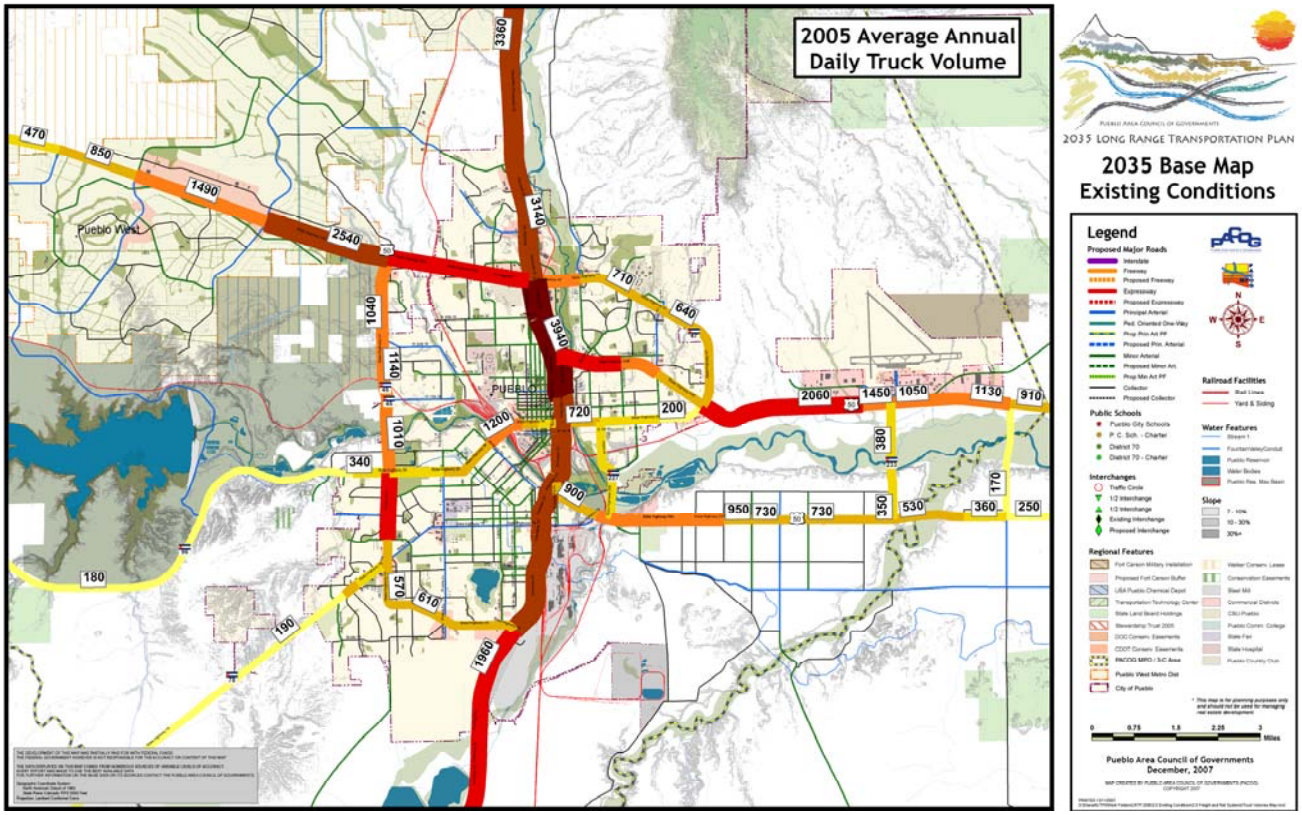


2.2.2.1 Existing Truck Volumes

I-25 and US 50 are primary freight routes with more truck traffic heading north towards Denver than in other directions. The highest truck volume is in the section of I-25 between SH 50/47 and Downtown. Other areas with significant truck traffic are: US 50/SH 96 between Pueblo and the Airport Industrial Park, US 50 West, and parts of Pueblo Blvd (SH 45).

The *Eastern Colorado Mobility Study* noted that there were sections of US 287 where the truck volume was between 30-50 percent of the total traffic on the road. More recent CDOT counts show that has grown to more than 60% in five years. While Pueblo County roads do not carry this large of a percentage of trucks, there are many destinations in the area where there are a large number of trucks daily. These include the Steel Mill and Airport Industrial Park. Roadways with high truck volumes need to be monitored for more rapid wear and deterioration.

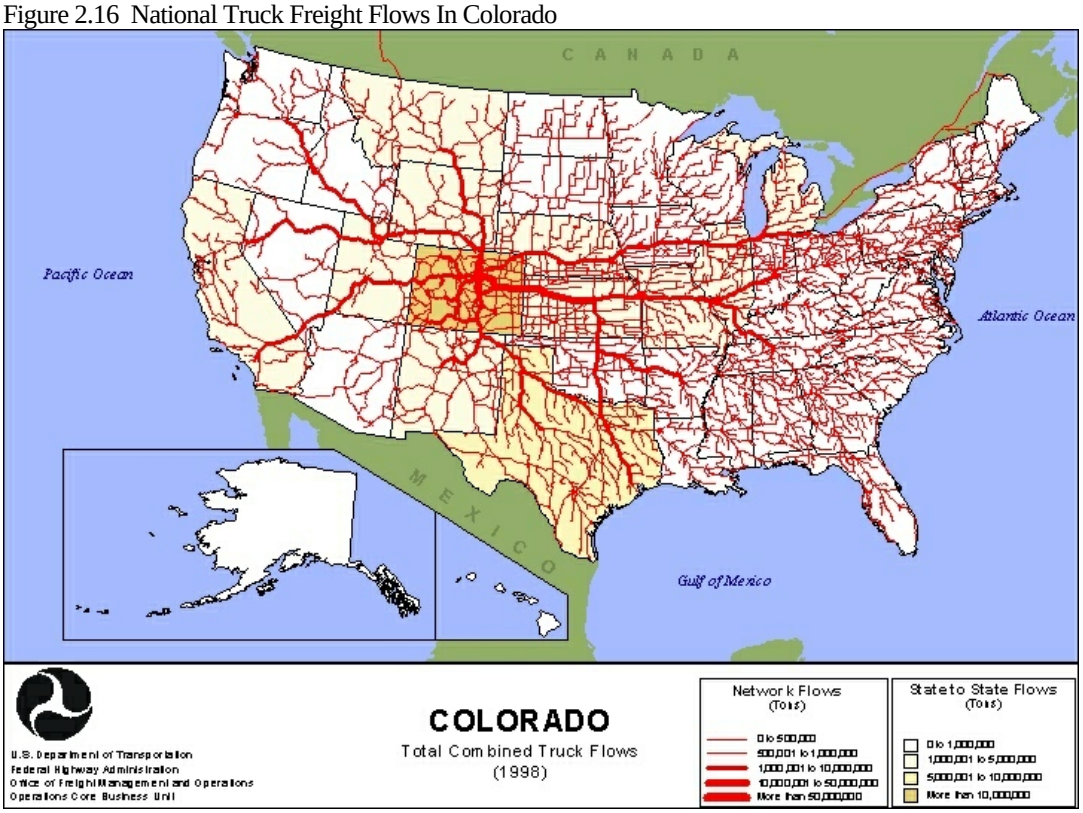
Figure 2.15 Existing Truck Volumes



Source: CDOT Planning Data Set 2005 Volumes

Figure 2.11, below, is derived from the US Bureau of the Census Commodity Flow Survey (CFS) which is updated approximately every five years. The data depicted was the latest available when the *Eastern Colorado Mobility Study* was conducted and shows Colorado in relation to the rest of the US.

Figure 2.16 National Truck Freight Flows In Colorado



Source: CDOT Eastern Colorado Mobility Study

2.2.3 Existing Conditions: Rail

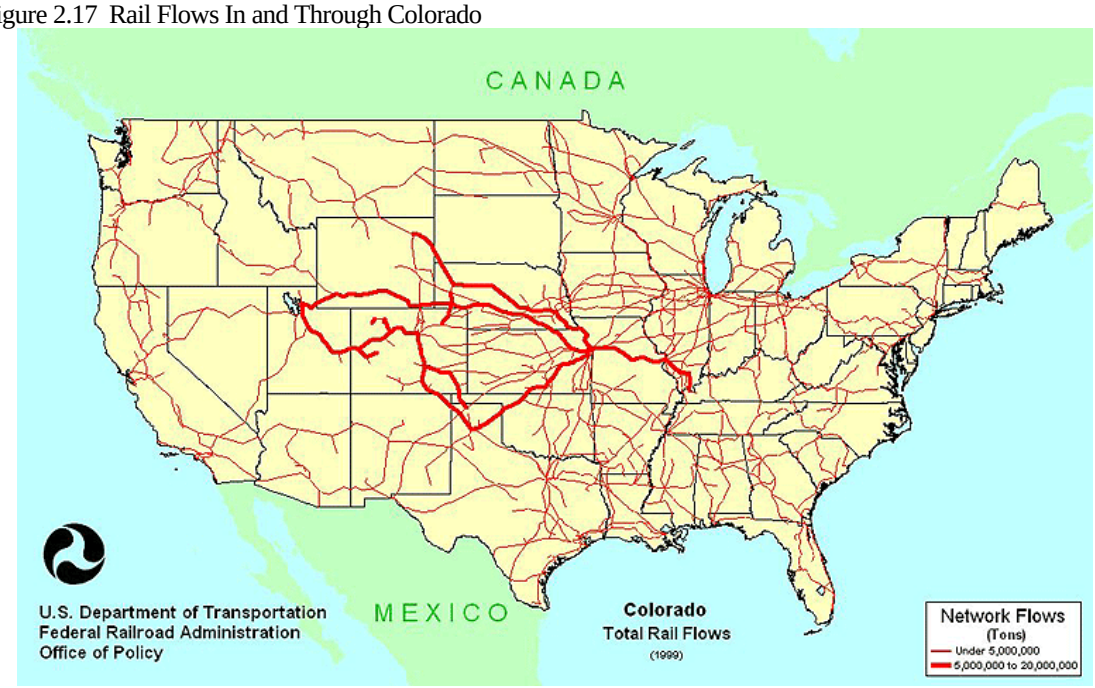
The current rail lines in operation are the Burlington Northern Santa Fe (BNSF), Union Pacific (UP), and the V&S Railway, Inc. In 2002, the BNSF and UP railroads participated in the development of a long-term plan to ease rail traffic congestion and improve freight mobility along the Front Range. The proposed project would consolidate certain freight lines and operations, relocate freight terminals and yards, and construct a freight bypass route in eastern Colorado to remove through-freight trains from the congested Front Range corridor, while still maintaining local freight service. The economic viability of the plan was examined in the *Public Benefits and Costs* study released in 2005. Some of the conclusions in that study led CDOT to initiate the *Rail Relocation Implementation Study* - now ongoing. As in previous Studies, the Pueblo area is represented with membership on the Advisory Committee for that study.

The Pueblo area is the origin of the former North Avondale – Towner Line that was acquired by CDOT in 1998. In 2006, CDOT selected the V&S Railway to purchase the line for $10.3 million. The purchase agreement requires V&S Railway to operate the line for six years, a "first right to repurchase" for CDOT if V&S Railway becomes unable to continue to operate the line, and an agreement to operate the line with adherence to State and Federal regulations.

In January 2006, the V&S (aka VST) began rehabilitation and improvements of the line that include track repair, track replacement, repair of active crossing equipment, and returning the track to Class II operating standards. The first grain train returning the line to service was dispatched in September 2006. Since then the line has remained operational and provided rail service to eastern Colorado agricultural producers and shippers.

Figure 2.12, below, shows total rail freight flows in and through Colorado compared to the rest of the US.

Figure 2.17 Rail Flows In and Through Colorado



Source: CDOT Eastern Colorado Mobility Study

2.2.3.1 Existing Rail Facilities

At present, there are no intermodal (direct freight transfer) facilities in Pueblo, but there are a number of areas where rail loading and unloading facilities exist and are provided with rail service. Figure 2.14, below, shows the active rail lines in the Pueblo County area and the existing locations of loading and unloading facilities.

Figure 2.18 Active Rail Lines in Pueblo County

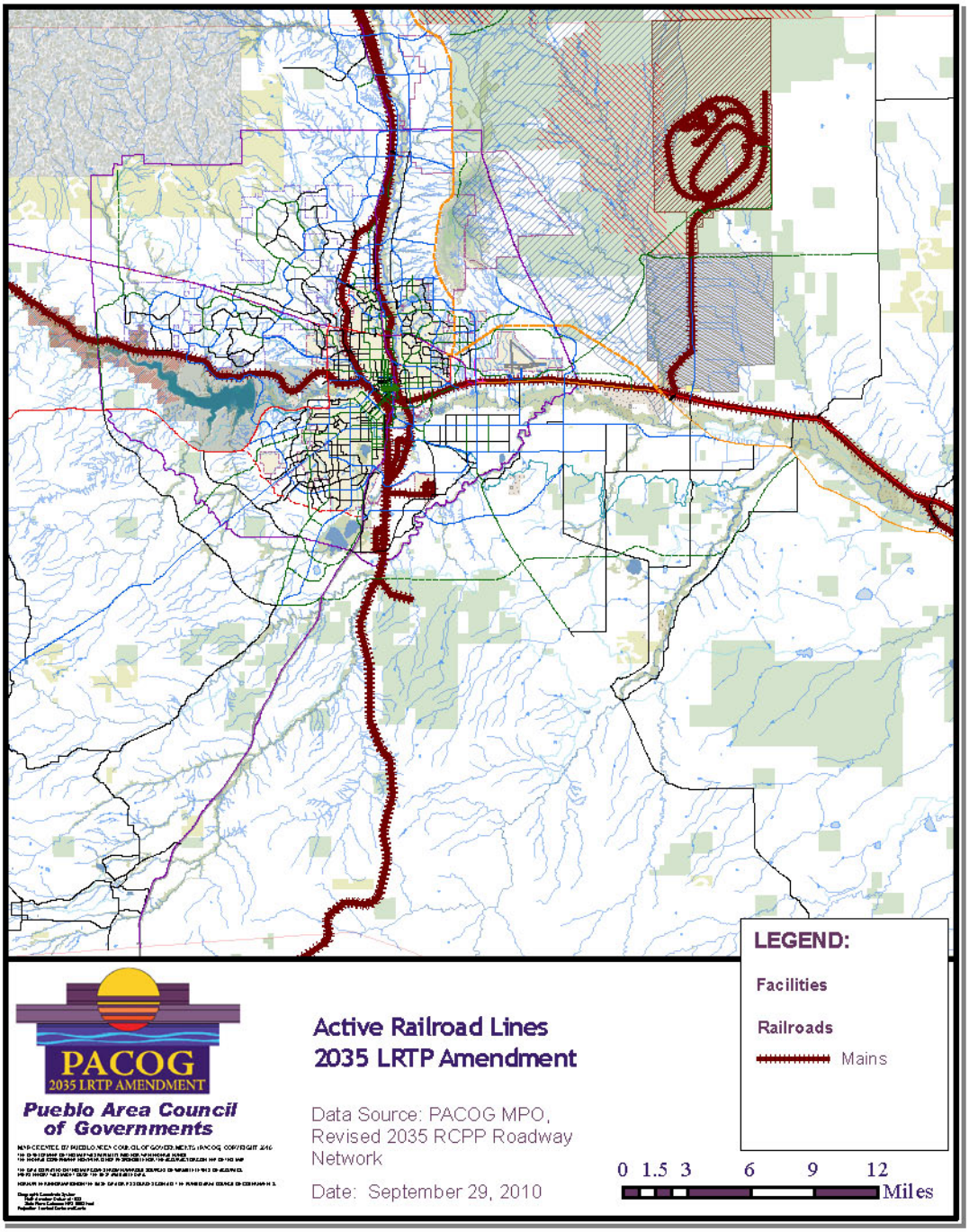


Figure 2.19 Rail Loading Facilities - Regional

Figure 2.20 Rail Loading Facilities - Regional

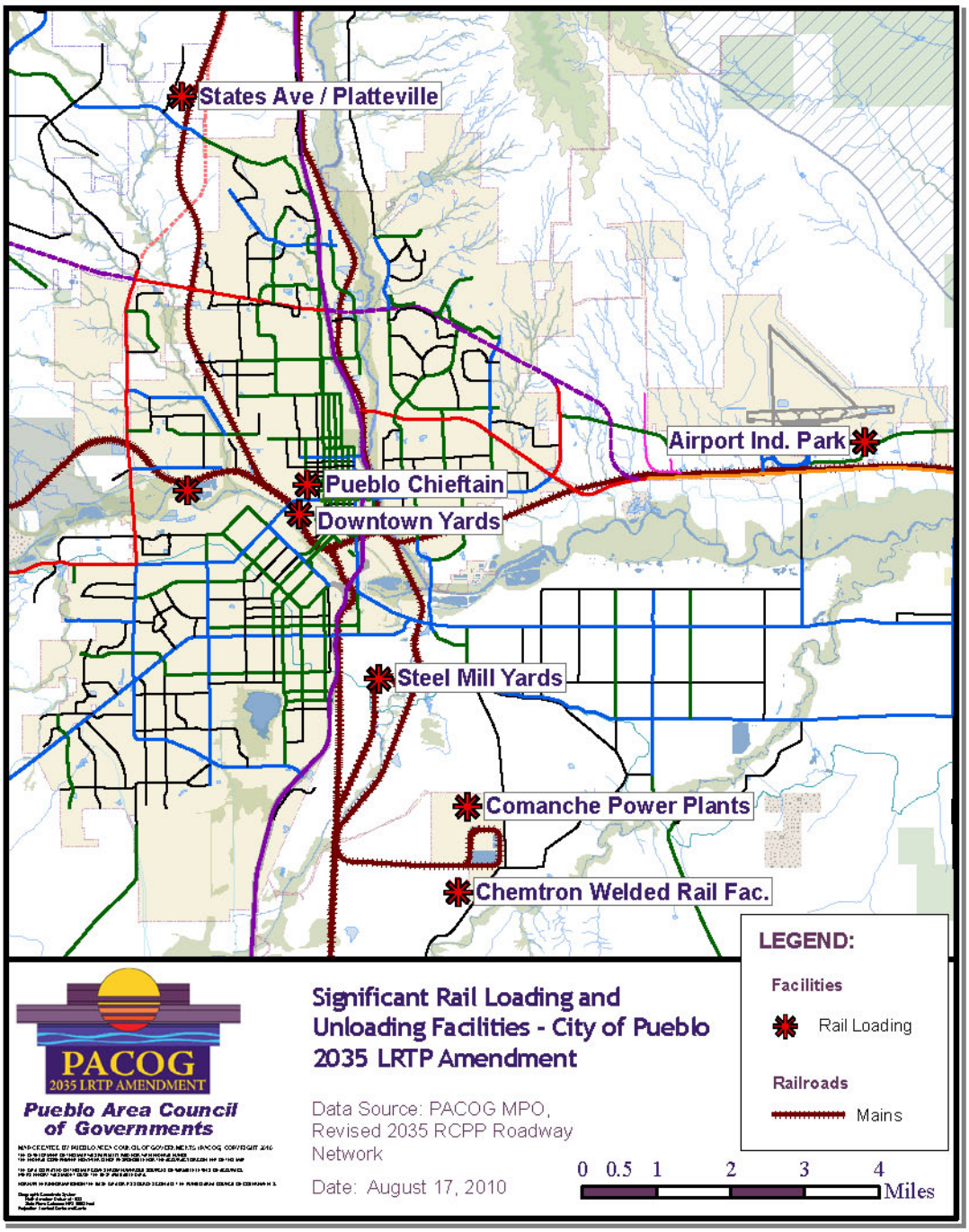


Figure 2.21 Rail Service Potential Development Areas

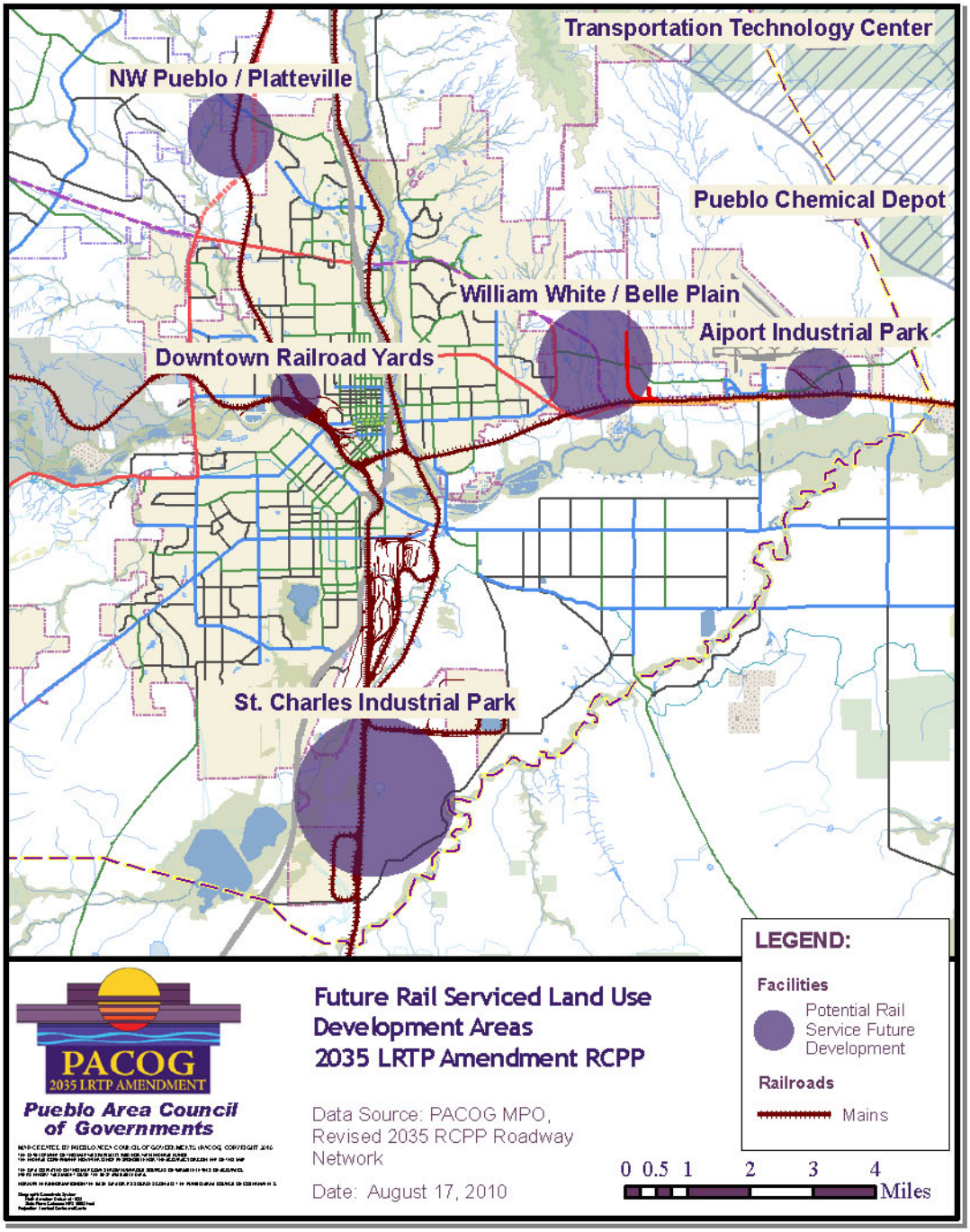
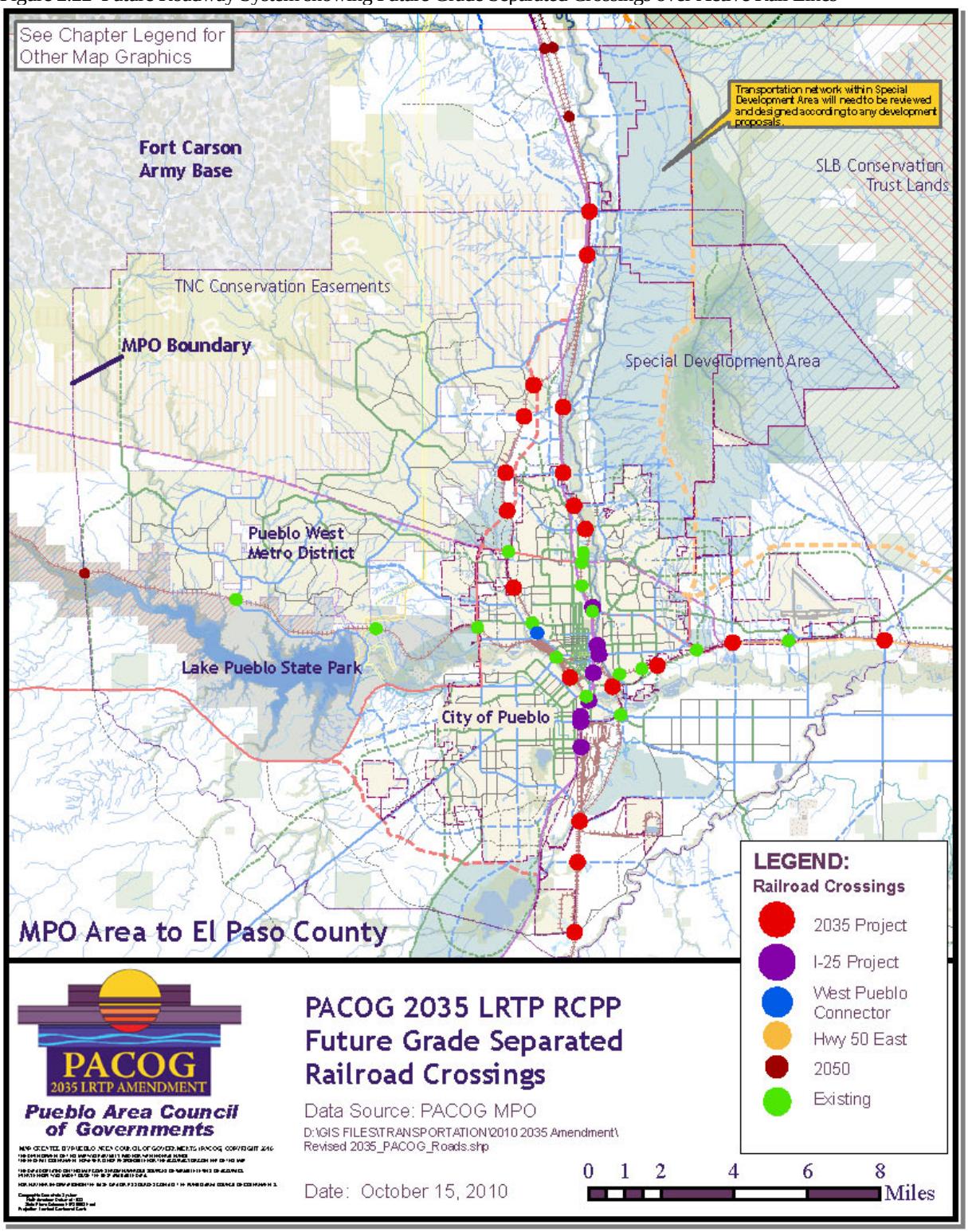


Figure 2.22 Future Roadway System showing Future Grade Separated Crossings over Active Rail Lines



2.2.3.2 Transportation Technology Center

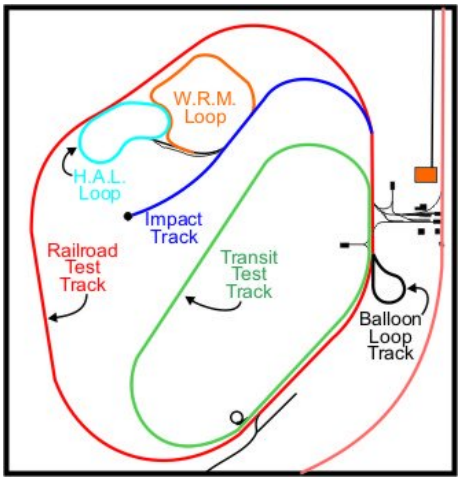
The Transportation Technology Center, Inc. (TTCI) is located in northeast Pueblo County. The Center is an internationally recognized facility offering a wide range of unique capabilities for research, development, testing, consulting, and training for railway-related technologies. The site, 21 miles northeast of Pueblo, Colorado, is owned by the US Department of Transportation, and is operated and maintained by the Transportation Technology Center, Inc., under a care, custody, and control contract with the Federal Railroad Administration and American Railroad Association. A 52 square mile facility, TTCI is isolated and secure with a vast array of specialized testing facilities and tracks for all types of freight and passenger rolling stock, powered vehicles, rails and track components, and rail safety devices.

Forty-eight miles of railroad track are available for testing locomotives, vehicles, track components, and signaling devices. TTCI's specialized tracks are used to evaluate vehicle stability, safety, endurance, reliability, and ride comfort. Using TTCI's tracks eliminates the interferences, delays, and safety issues encountered on an operating rail system.

Key infrastructure and equipment control centers, passenger stations, rail vehicles, track, yards, bridges, and tunnels are being hardened against potential terrorist threats. Methods for analysis, prevention, detection, and response to terrorism in the rail sector are rapidly evolving. TTCI is a leader in railroad technology, and is responding, by offering methods to North American railways for keeping people and cargoes safe and secure.

The TTCI facility is described in more detail in the Appendix to Chapter 2.

Figure 2.23 TTCI Rail Facilities



2.3 Freight Needs

2.3.1 Freight Needs - Truck

Past surveys of shipping companies identify improvements to I-25 as the major freight need within the region. Adequate access to the Central Business District off of I-25 and access to the Airport Industrial Park were identified as well. The second access to the Airport Industrial Park through the western William White Blvd extension will significantly improve the freight access to the Airport Industrial Park. Work on this access began as part of the Defense Access Road project in 2007.

2.3.2 Freight Needs - Rail

No specific needs for the additional railroad freight facilities have been identified. This potential will be examined in the CDOT *Rail Relocation Implementation Study*. The City of Pueblo recently made improvements at the Airport Industrial Park (AIP) to accommodate rail access to a facility very close to the airport. The improved access to rail at the AIP could prove beneficial since this area has multi-modal access via roads, rail, and aircraft. Some sections of the rail lines in the AIP are weight limited and will need to be upgraded to support business entities that may want to relocate to the AIP.
The Transportation Test Center will continue to emphasize and expand their facility. Planning for improved access to this facility will continue to be included in this and future long-range transportation plans.

It is uncertain what the long-term plans are for the Pueblo Chemical Depot with regard to rail service. Possibilities include utilization of the facility for the storage of military equipment as a result of the Ft. Carson and Pinon Canyon expansion proposals. Recent activities also include the expansion of the storage of rail cars on the site.

As part of the potential relocation of the mainline freight rail lines further east of Pueblo County, there may be opportunities for the redevelopment of the existing rail yards. Within Pueblo, and as part of the CDOT Study, consideration must be given to relocating freight rail traffic from the existing UP tracks adjacent to I-25 to joint tracks or operations using the BNSF route in western Pueblo. If rail facilities are relocated and the existing rail yards redeveloped, encouraging a transit-oriented design would improve the viability of a commuter rail service running along the front range of Colorado from Wyoming through the major front range urbanized areas including Pueblo to New Mexico.

2.3.3 Rail Corridor Preservation

In June 2000 the Colorado Transportation Commission approved a **Rail Corridor Preservation Policy** which states:

- Preserving rail corridors for future use may save money, since the cost to preserve a corridor for future transportation purposes is often far less than having to purchase an equivalent corridor in the future.

- Rail transportation may be needed in certain corridors to supplement the highway system and to provide adequate mobility and travel capacity.

- Rail transportation can be a cost-effective and environmentally preferable mode of transportation in certain situations.

- Preserving existing freight rail service by preventing a railroad from being abandoned can reduce the maintenance costs on state highways, since the transportation of displaced rail freight by trucks will increase deterioration of the state highway system.

- Freight rail service can serve as a lifeline to the economic health of a community when there are no other modes that adequately and economically serve the needs of the community.

The Rail Corridor Preservation Policy also identified the following criteria to be used to prioritize corridors for funding:

- Magnitude of negative impacts upon adjacent highways.

- Immediacy of the possible abandonment of the rail line.

- Immediacy of possible encroachment on an existing rail corridor that may jeopardize the implementation of passenger rail service in the corridor.

- Estimated cost to acquire the rail corridor.

- Opportunity for public-private partnerships.

In November 2000, CDOT identified a list of State Significant Rail Corridors, which was adopted by the Transportation Commission as part of the Statewide Transportation Plan. The criteria used to identify these state corridors included existing and potential future demand for passenger and freight services and local/regional support for the preservation of the corridor.

2.3.3.1 Abandonment Activity

CDOT reports no rail abandonment activities during the past five years. It should be noted, however, that BNSF might be considering the sale of its Albuquerque to La Junta route. The State of New Mexico has entered into preliminary negotiations for the section from Albuquerque to Trinidad. BNSF indicates that it is reviewing all of its options and "no decision has been made yet on the future of that part of our operations." This line, which goes through Trinidad on its way to La Junta, carries Amtrak's Southwest Chief service. BNSF may also include an evaluation of its line from Pueblo to Las Animas. Within the industry there has been speculation that the BNSF may attempt to sell this line sometime in the future. CDOT will continue to monitor these possibilities and may include additional analysis of options as part of the ongoing *Rail Relocation Implementation Study*.

Potential rail line abandonment and acquisition by the State of Colorado are discussed in more detail in the Appendix to Chapter 2.

2.4 Commuter Rail / Light Rail / Bus Rapid Transit

2.4.1 Introduction

Currently there is no passenger rail service in Pueblo County. Amtrak utilizes the TNM&O bus system to shuttle passengers from its trains at Union Station in Denver to its other service through Trinidad. Opportunity for passenger rail service in the Pueblo Area is probably limited until a time when service is provided throughout the front range.

The Denver area is currently expanding the passenger rail service via the FasTrax project. Additionally, with the implementation of the Front Range Express (FREX) bus service between Fountain, Colorado Springs, and Monument north to the Denver Metro area, it appears that an emerging market exists. Informal discussions suggest that some Pueblo citizens might like to see the FREX commuter service expanded into the Pueblo area, but at current FREX operating costs and deficits, it does not appear to be financially feasible.

2.4.2 Rocky Mountain Rail Authority

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 originally called for the designation of 11 high-speed rail corridors, though only 10 corridors have been designated at this time. Thus, there remains one corridor to be designated. Studies are now underway to determine the feasibility of having the 11th corridor designated from Casper, WY to Albuquerque, NM or El Paso, TX. In 2002 CDOT submitted a letter to the U.S. Department of Transportation expressing an interest in obtaining the designation as the 11th High Speed Rail Corridor.

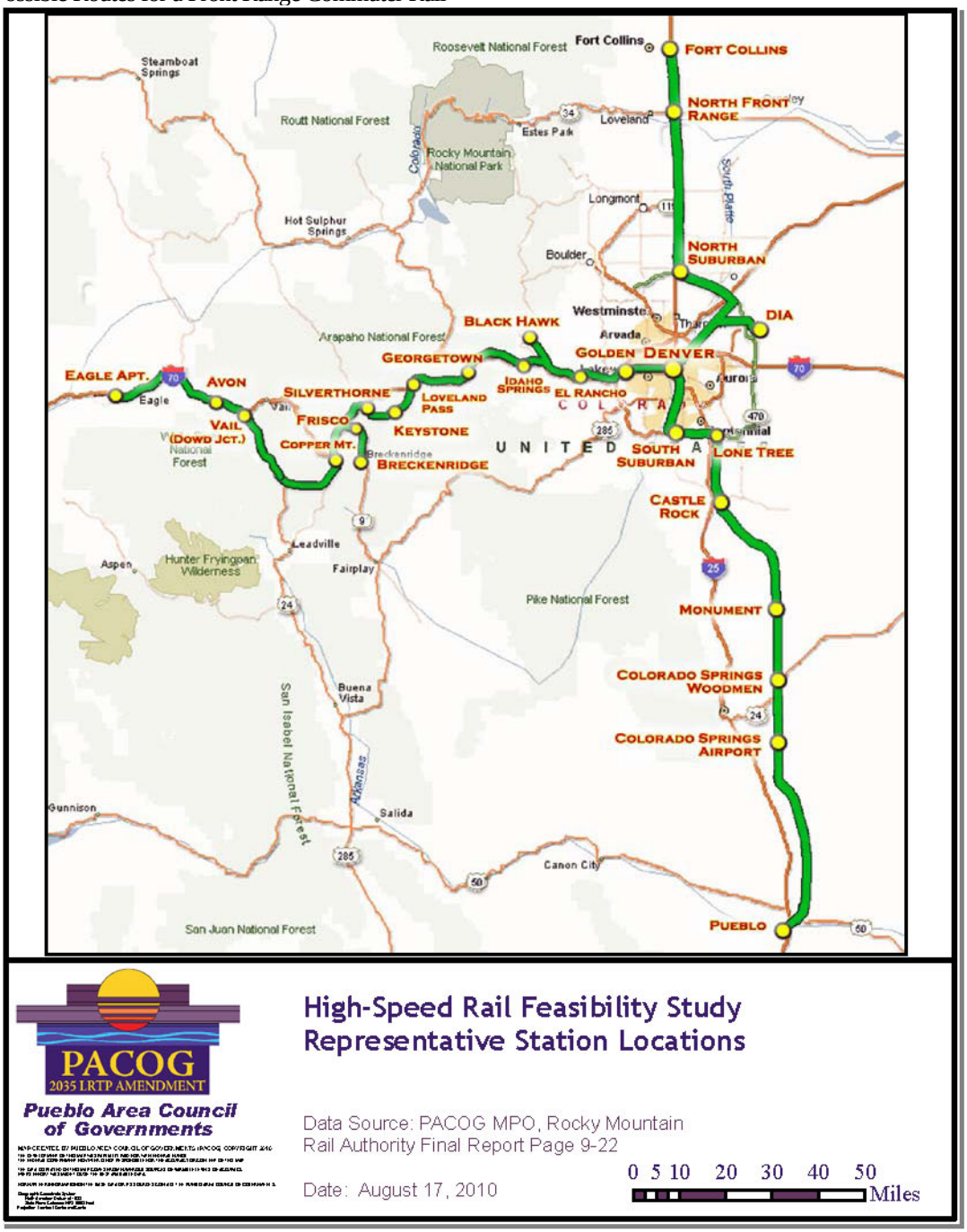
The Rocky Mountain Rail Authority (RMRA) is an organization authorized by new State laws and formed by Inter-Governmental Agreements between Colorado cities, town, counties and transportation districts. Both the City of Pueblo and Pueblo County are members and have seats on the RMRA Board of Directors. RMRA is contracting with CDOT to analyze the High Speed Corridor alternative as part of the Passenger Rail Feasibility study described next.

RMRA was awarded $1.2 million in strategic transit funds from SB97-001 (usually just SB-1) to conduct a Passenger Rail Feasibility Study in the I-25 and I-70 West corridors from the Wyoming state line to the New Mexico state line, and on the I-70 West corridor from DIA to the Utah border, respectively. The Colorado study is being coordinated with similar studies in the states of New Mexico and Wyoming. Depending on the outcome of the feasibility study, some federal funding for a complete technical evaluation may later be available.

The feasibility study is also being coordinated with the CDOT *Rail Relocation Implementation Study* of moving interstate coal shipments and other through freight trains from the existing tracks in the I-25 Corridor onto new tracks on the Eastern Plains. If implemented, the relocation might permit passenger service to operate on the existing tracks or the use of the right-of-way to construct separate tracks for passenger trains.

CDOT is also conducting a study to identify governance structure options for developing, planning, financing, and operating a regional or statewide passenger rail authority in Colorado and into other states. The study includes a legal review and analysis of existing Colorado law and, for some options, which laws would require amendment or development of new legislation. The Pueblo area is represented on the Advisory Committee for the governance study.

Figure 2.24 Possible Routes for a Front Range Commuter Rail



2.4.3 Light Rail / Trolley

Public transit has existed in the City of Pueblo since 1878, with a horse-drawn streetcar system connecting downtown to the Union Depot area. According to the *Colorado Cultural Resource Survey of Pueblo's North Side Neighborhood*, in 1890, Frank Julian Sprague contracted with the Richmond, Virginia, Union Passenger Railway to design and build an electrically powered public transportation system serving the entire city. The result was the first successful electrified streetcar system in the United States. Within a few years, cities across the country installed extensive electric streetcar systems to transport more passengers at higher speeds and with less pollution than horse-drawn or steam-powered conveyances. The trolley system in Pueblo existed until 1947 and much of the City of Pueblo had developed around the trolley lines.

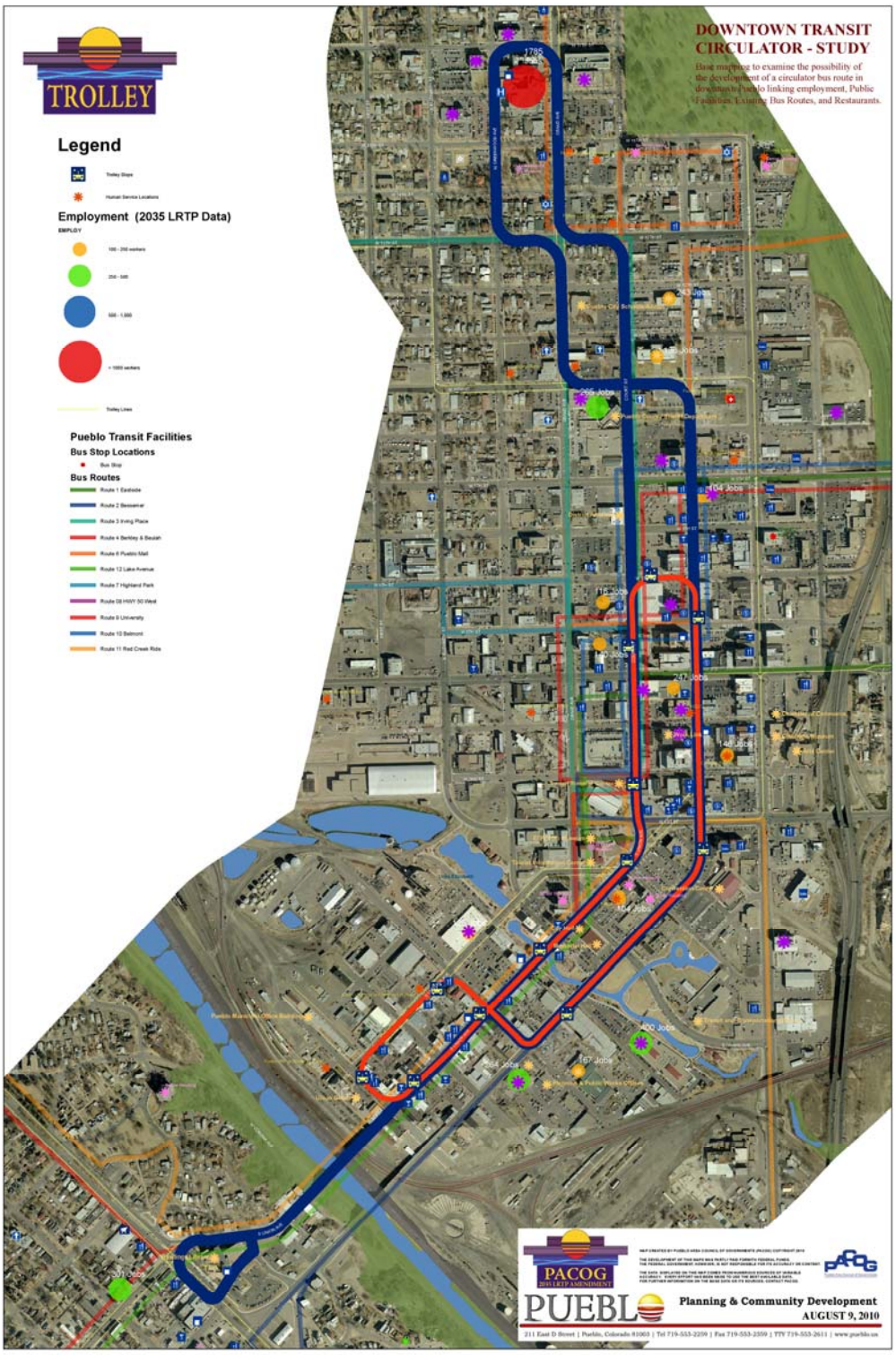
While the Pueblo area today is too small to consider development of a modern light rail system, rising gas prices are stimulating more public discussion of local transit needs in the Pueblo community. Corridor preservation for future transit development will become increasingly important as the Pueblo urbanized area continues to expand. Chapter 5 contains the assessment of transit needs and alternatives which may be needed to meet them.

In the future, some residents may choose to live in communities that are not automobile dependent. Such areas are typically more densely developed to support a more efficient transit system. As both land uses and networks evolve, a transit system may begin as a fixed route bus system then later include regional Bus Rapid Transit lines in reserved Rights-of-Ways, and eventually to the development of light rail or trolley systems in the most heavily traveled corridors. Early planning for such an evolution will result in substantially more efficient transitions at different stages of future system development.

The City of Pueblo in cooperation with Pueblo Transit has been working on establishing a downtown trolley (wheel based). The planning committee has developed many options and has narrowed them down to a single option that we think best serves Pueblo. The attached map shows the proposed routes, stops, employment centers, and commercial establishments.

This project is two fold. First, the idea is to provide a route geared toward tourists. This route, shown in red on the map, is shorter with 10 to 15 minute headways, hits HARP, El Pueblo Museum, convention center and the commercial areas of downtown (Main Street / Union Avenue). The second route, as seen in blue, is designed with 30-minute headways and reaches 10 of the 25 largest employers in Pueblo and three existing neighborhoods. This route links these generators to the commercial amenities downtown Pueblo has to offer.

Figure 2.25 Possible Routes for Downtown Circulator Trolley



2.5 Non-Motorized Transportation Plan

2.5.1 Introduction

The Pueblo area has a relatively mild climate and gentle topography that make travel by non-motorized modes an enjoyable experience for participants. During the past twenty years, the City of Pueblo, Pueblo County, and other local and state agencies have continued to construct and improve sidewalk and trail facilities to enhance non-motorized travel throughout the region. Further enhancements to the non-motorized transportation system will play an ever-increasing role in accommodating the non-motorized travel needs of Pueblo residents and visitors to the area.

In order for bicycling and walking to become comfortable and convenient transportation options, these modes must be fully integrated into everyday decisions: such as where new schools will be located, how residential communities will be designed, and how each roadway will be built, among many other decisions. It is far more cost effective to provide for bicycle and pedestrian mobility from the start, rather than to retrofit later.

The need for a PACOG Non-Motorized Transportation Plan as an implementation tool for the Transportation Goals in the Pueblo Comprehensive Plan from 2002, and the Pueblo Area Council of Governments 2035 Long Range Transportation Plan has been identified. The plans clearly foresaw the need to identify key trail corridors to establish a framework for a future citywide network of trails, greenbelts, and recreational amenities linking major activity centers, parks, and other features of Pueblo. Within this document, the concept of the creation and development of Greenways and their use as non-motorized transportation corridors is introduced. Greenways provide places for recreation and help maintain the scenic qualities of landscapes. Greenways function by providing linear open spaces that connect between places where people want to go – neighborhoods, business centers, shopping areas, schools and parks – and can serve as community and neighborhood parks. Greenways can provide areas for specialized recreational activities. Finally, greenways create space for natural stormwater management and contiguous areas for wildlife.

2.5.2 Purpose & Scope

The purpose of this is to provide for the orderly, safe, and healthful construction of sidewalks, trails, and other non-motorized facilities within the PACOG MPO/TPR, and to promote the health, safety, and general welfare of the community.

There are many reasons to plan for nonmotorized transportation. Walking, cycling, and jogging are increasingly popular for transport and recreation. As the population ages, people shift from one form

of recreation to another. It is expected that many people will take up bicycling in lieu of skiing, or running as they develop knee injuries. The Pueblo region has not historically had a large number of bicyclists, runners, or walkers, but the demographics of the community are changing. Safe and convenient non-motorized travel provides many benefits, including reduced traffic congestion, user savings, road and parking facility savings, economic development, a better environment, and health benefits to the community by encouraging regular physical activity.

The ultimate goal of transportation system is to provide access to goods, services and activities. In general, the more transportation options available, the better the access. Nonmotorized modes are important transport choices, for trips made entirely by walking or cycling, and to support public transport. In urban areas, walking and cycling are often the fastest and most efficient way to perform short trips. A built environment that is hostile to non-motorized transport reduces everybody's travel choices. The result of this "automobile dependency" is increased traffic congestion, higher road, and parking facility costs, increased consumer costs, and greater environmental degradation. Adequate pedestrian and cycling conditions are essential to guarantee everybody a minimal level of mobility ("basic mobility"). As stated in one of the primary roadway design guides,

Pedestrians are a part of every roadway environment, and attention must be paid to their presence in rural as well as urban areas…Because of the demands of vehicular traffic in congested urban areas, it is often difficult to make adequate provisions for pedestrians. Yet this must be done, because pedestrians are the lifeblood of our urban areas, especially in the downtown and other retail areas. In general, the most successful shopping areas are those that provide the most comfort and pleasure for pedestrians.

Non-motorized travel can contribute to the local economy by supporting tourism and quality development by providing suitable pedestrian and cycling facilities to tourist attractions. This can be accomplished by creating trail connections to specific tourist attractions and by providing public transit access to these trails and other tourist attractions. Pedestrian-friendly conditions improve the commercial and cultural vibrancy of communities. Increased pedestrian traffic helps create a safer and more pleasant environment. Once visitors arrive in a community they often explore it by walking, cycling and skating. A good walking environment can enhance visitors' experience. Some trail networks are themselves destination tourist attractions, bringing hundreds or thousands of visitors, and thousands or millions of dollars annually to a community.

SAFETEA-LU Planning Factors relating to Non-Motorized Systems are the following 6 or the overall 8 planning factors.

1. Increase the safety of the transportation system for motorized and nonmotorized users;
2. Increase the security of the transportation system for motorized and nonmotorized users;
3. Increase the accessibility and mobility of people and freight;
4. 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;
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

2.5.3 Mobility-Friendly Policies and Practices

Mobility friendly design describes a broad set of design solutions for maximizing the opportunities of all people to move within and between communities independently and safely. As a result, people with varied ability levels including children, the elderly, the disabled, individuals with low income, and others, can move freely without facing barriers resulting from transportation facilities and services.

Changing long-standing policies and practices, however, is no small task. In the past, bicycling and walking were often not included in the "mix" during land use and transportation planning and design. Policy changes will require more awareness of walking and bicycling issues on the part of elected officials, planning and code enforcement staff, developers, roadway designers, comprehensive planners, and many others.

Trip distance is central to the decision to walk or use a bicycle for any given trip. Bicycling and walking are therefore greatly impacted by local land use patterns. Segregated land uses increase the distance between origin and destination points, while mixed uses shorten distances and encourage walking. Similarly, the planning and design of large and small developments can either encourage walking by providing good pedestrian circulation and minimizing conflicts between pedestrians and motor vehicles, or send the message that cars are the preferred mode to access the site.

Land use planning and site plan review are the responsibility of county and local governments in the Pueblo region. This section discusses how land use and site design can impact walking and bicycling and provides policies and procedures that result in better designs.

One of the most critical problems is that existing codes usually give insufficient guidance to developers, designers and engineers as to how to accommodate bicycles and pedestrians. As a result, even quite recent developments in prime locations have not included adequate facilities for pedestrians or bicyclists.

In the design of transportation facilities, emphasis needs to be placed on the joined use of transportation corridors by motorists, pedestrians, cyclists, and transit vehicles. Pedestrians' needs include well-designed neighborhood alleys, properly placed sidewalks and crosswalks, and streets that control excessive speeding and provide shade, benches, and street lamps. Bicyclists needs include bikeways, bike trails, bicycle parking facilities, and other community amenities. These design elements should be combined to create an ideal environment that encourages walking, bicycling.

2.5.4 Goals

The Goals and Objectives for the Non-Motorized Element focus on five aspects of the trail network. These are:

- Promote public health by facilitating walking and bicycling. Encourage

healthy youth through physical activity by facilitating walking or bicycling to school;

- Promote community livability, transportation efficiency, and walkability;
- Promote neighborhoods, developments, and communities that are connected to each other;
- To promote bicycling and transportation efficiency;
- Reduce vehicle trips, miles traveled, and support walking as a transportation choice;
- Promote community interaction and engagement;
- Provide direct and safe connections, for pedestrians and bicyclists as well as drivers, to local destinations and neighborhood centers;
- Provide appealing and comfortable pedestrian street environments in order to promote pedestrian activity;
- Maintain and preserve the existing trail system;
- Design non-motorized facilities to accommodate a broad mix of users including, commuters, cyclists, pedestrians, and equestrians.

2.5.5 Objectives

- Improve and ensure neighborhood connectivity to existing trails system to connecting neighborhood centers and other public facilities;
- Require neighborhoods, subdivisions, and commercial developments, to be connected to each other;
- Maintain and preserve the existing trail system by implementing maintenance schedules for existing trails, looking for low cost options for repair and maintenance activities;
- Maintain and preserve existing and new sidewalks and walking paths;
- Construct and maintain the non-motorized system according to ADA standards and/or Universal Design;
- Develop bicycle connectivity within each transportation mode;
- Add the appropriate bicycle and pedestrian elements for consideration in the development review process;

- Encourage and support schools applying for "Safe Routes to School" Grant Programs that desire them;

- Trail, Pedestrian, and Bicycle Standards – Establish and follow appropriate and consistent standards and guidelines for non-motorized facilities;

- As part of the long-range transportation planning process, continue to develop a "Trails Master Plan" that includes the identification and prioritization of new facilities, addresses the "5-E"s (Engineering, Enforcement, Education, Evaluation, and Encouragement), and develops improved access, including adequate parking, at trailheads.

2.5.6 Pedestrian Facilities

The City improves and maintains pedestrian facilities to achieve full compliance with the Americans with Disabilities Act (ADA). Sidewalks are being upgraded in many low/moderate income neighborhoods. The City's curb-ramp installation program installs about 70 curb ramps a year to address the needs of the disabled community. At present, the Public Works Dept reports that there is a back-log of requests for curb ramps by disabled citizens. Funding for the program has come largely from Community Development Block Grant (CDBG) funds and requests for curb ramps are included in neighborhood requests for annual selection of CDBG projects. The tables below show the linear feet of sidewalk installed and the number of curb ramps.

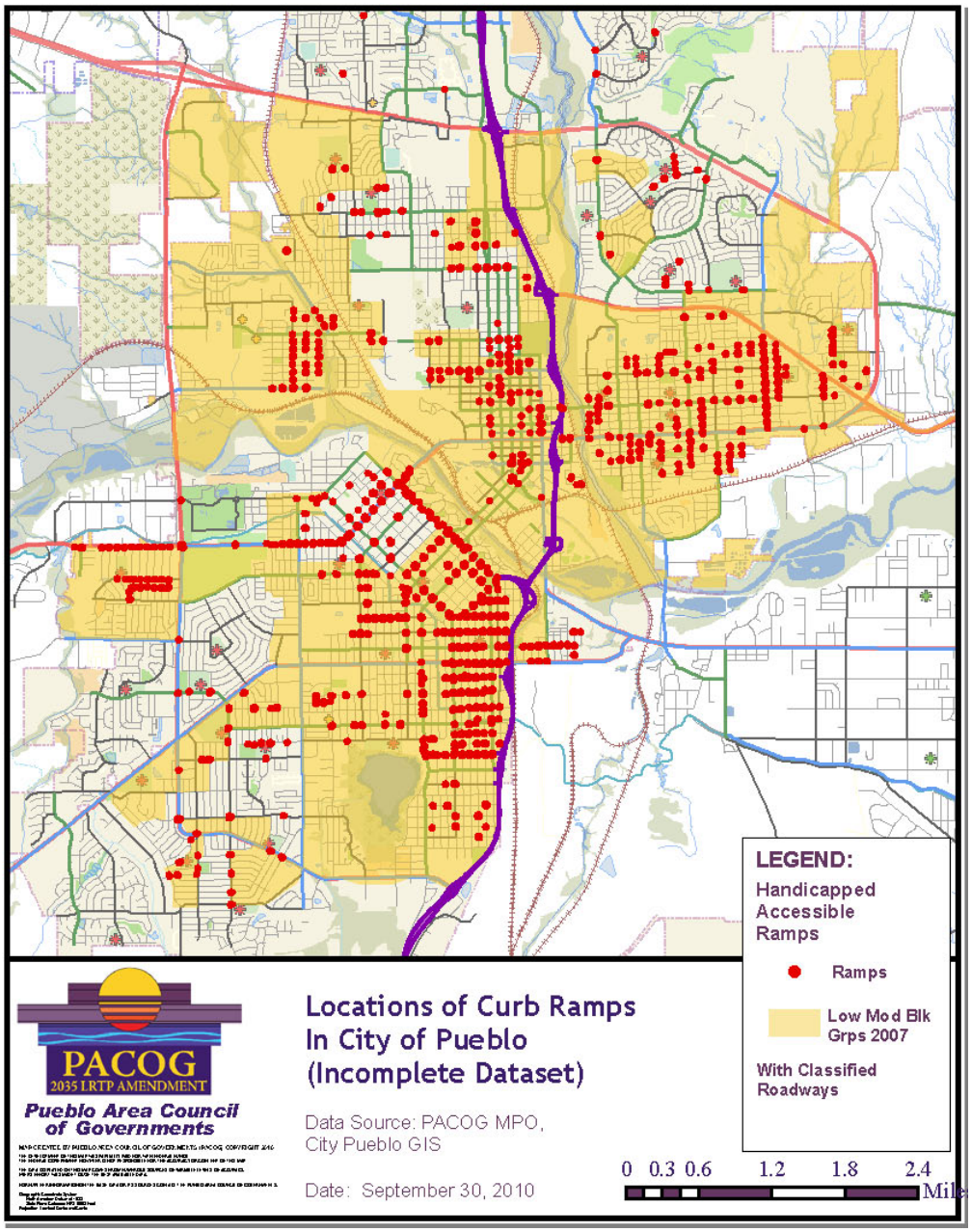
Table 2.9 City of Pueblo Sidewalk Installation, 2004-2006

Year	Sidewalks in New Development	New Sidewalks in Existing Areas
2004	37,738 linear feet	25,061 linear feet
2005	31,590 linear feet	4,520 linear feet
2006	43,194 linear feet	35,867 linear feet

Table 2.10 City of Pueblo Curb Ramp Installation, 1993 - 2007

Year	# Ramps Installed	Total Cost
1993	37	$46,663
1994	37	$74,615
1995	22	$42,838
1996	26	$51,221
1997	27	$49,564
1998	47	$72,000
1999	62	$108,000
2000	54	$138,105
2001	50	$199,867
2002	110	$194,487
2003	49	$165,000
2004	57	N/A
2005	122**	$118,460***
2006	272**	$381,883***
2007	75 +	$400,000***

Based on the following map, which depicts the current handicapped accessible curb ramps, large portions of the City of Pueblo do not have accessible sidewalks. It would be recommended that a complete inventory of the City of Pueblo sidewalk system be completed in the near future. This inventory should include: if sidewalks exist, condition, location (attached or detached), width, the type of driveway cuts that exist, locations of curb ramps and if they meet current design criteria.



Source: City of Pueblo, Public Works, 10/07
** Total count of curb ramps includes CDBG projects + City-wide replacement program
*** Budgeted Amount not including CDBG projects

2.5.6.1 Pedestrian Safety

As the awareness grows within the community, further emphasis on pedestrian safety will grow. The efforts to establish a pedestrian friendly community are not strongly organized and planned. It is

imagined that within the next few years, there will be a very strong effort to improve the sidewalks and pedestrian routes within the community. At this time, it is suggested that a classification of High Pedestrian Routes (HPR) be created within the community. These HPR's would connect community facilities such as schools, libraries, retail shopping and provide access from a neighborhood to the various multi-modal transportation system networks. This network would provide a foundation for residents to be able to get from their front door to most facilities within the community. This would not focus on every street, but would allow someone to travel approximately .25 miles to a route that would be universally accessible.

2.5.7 Bicycle Facilities

The Pueblo Region completed its first *Bikeway System Plan* in 1979. The plan was updated in 190 and again in 1999 when supplemental efforts for the St. Charles Mesa, Pueblo West and Pueblo County were incorporated.

Since the 1999 updates the City of Pueblo has made cognizant effort to expand and promote multiple forms of transportation and have incorporated the planning efforts into the 2030 and 2035 Long Range Transportation Plans. Over the past several years there have been significant strides in developing the bikeway network, including multi-use paths and primary use routes. In order to provide a bikeway system that attracts both resident and visitor bicyclists and enhances opportunities for bicycling in Pueblo, the City has pursued development of a comprehensive bikeway network that provides a high level of service and seamless travel for the bicyclist.

Pueblo Active Community Environments (PACE) is a grass-roots community group that has come together to promote walkability and bikeability in the Pueblo area. This group has played a significant role in the development and progression of this plan. The group recognizes that bikeways provide enormous benefits to both the cycling and non-cycling public. Bikeways attract more bicyclists, resulting in cleaner air, less noise pollution, and overall quality of life benefits. Bikeways use public dollars efficiently by reducing road maintenance costs and enhancing economic development.

Bikeways increase the carrying capacity of the transportation system by decreasing the demand for motor vehicle capacity. Well-designed bicycle facilities improve safety for all users; bicyclists feel they have a secure space on the road and motorists are aware of bicyclists' presence and the right of the bicyclist to be on the road.

This plan focuses on engineering, education, enforcement, encouragement, economy and the environment to promote the continued usage and development of the City's Bikeway Network.

2.5.7.1 Glossary

Bike Lane — Portions of the roadway designated for bicyclist use.

Bike Route — Specially designated shared roadways that are preferred for bicycle travel for certain recreation or transportation purposes.

Bikeway — A generic term for any road, street, path, or way which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Multi-Use Trail (path) — A concrete or asphalt path physically separated from motor vehicle traffic, except at road crossings. It accommodates a variety of users (including bicyclists and pedestrians) for both recreation and transportation purposes.

Local Service Bikeway - A local circulation routes for bicyclists, any neighborhood street not classified as a Primary Route.

Primary Route – Generally an on-street route.

2.5.7.2 Planning and Engineering

The Pueblo Transportation, Planning, and Parks Departments work together with citizen groups, such as Pueblo Active Community Environments (PACE) and the City / County Health Department to plan and develop a bike plan for the community. Existing and future multi-use paths and on-street routes are identified in the Long Range Transportation Plan adopted by the Pueblo Area Council of Governments (PACOG). The recent development and publication of the *Pueblo Bicycle and Trails Maps* in the Summer of 2010 allowed significant community input into the City's bikeway system. The general principals identified for continued development of the bikeway network include:

- Connect bicyclists to desired destinations such as employment centers, commercial districts, transit stations and bus routes, institutions, and recreational destinations;
- Provide the most direct and convenient routes possible;
- Provide an alternative route for less experienced bicyclists;
- Fill-in existing gaps in the bikeway network;
- Target locations with the potential for implementation in the next ten years;
- Lead a bicyclist to safe street crossings;
- Accomodate bicyclists and pedestrians on any new or improved bridges

The creation of the Bicycle and Trails Map took a different approach than in years past. This map categorizes the bike routes using the same nomenclature as one would see associated with downhill skiing. The reviewing group assigned routes as green for all riders, blue for intermediate riders and black for experience riders. The assignments were based on roadway character, adjacent land use, roadway width, traffic volume and traffic speed. The new map also emphasizes safety, providing bicyclist with information on riding in traffic, left turn options, trail courtesy, hand signals, advice on riding in darkness, communication techniques, theft prevention, as well as several other tips.


Welcome
Share the Road.
Legend: Bike Map
Types of Bikeways
Bike Lanes
Marked Shared Lanes
Bike Routes
Multi-use Trails
Description of Bikeways and Trails
Regulatory & Legal Stuff
Transportation Technology Center - 23 Miles From Hwy 47 (Dead End Roadway)
Canon City - 34 Miles From Pueblo Blvd
Lake Pueblo State Park
Wetmore - 26 Miles From Pueblo Blvd
Boone - 21 Miles From Bandera Parkway
Stem Beach - 4 Miles From Pueblo Blvd
Mountain Bike Trails
On Street and Off Street Routes
Multi-User Trails
PUEBLO BICYCLE & TRAILS MAP
Pueblo Bike & Trails Map
Produced With The Partnership Of:
SPRING 2010
Sun Glare Warning!

The planning and implementation of these design treatments can be relatively simple and inexpensive, particularly if it occurs when the City restripes a roadway with bicycle lanes during routine resurfacing. Design treatments can also be very complicated and costly, as with bikeways that require complete reconstruction, widening of the roadway or providing grade-separated crossings.

Whenever streets are reconstructed or constructed, appropriate bikeway facilities are considered to accommodate bicyclists' needs. The City's Roadway Classification and Design Standards currently require newly constructed arterials to provide sufficient width for the striping of a bike lane. All streets except high-speed freeways should be accessible by bicycle.

The standards ensure that the bikeway network and conditions for bicyclists continue to improve with community growth and development. A full copy of the Roadway Classification and Design Standards can be found at the following web address:

http://pueblo.us/documents/Transportation/RoadwayClassificationDesignStandardsPoliciesNov2004.pdf

When neither the appropriate design treatment nor an acceptable alternative can be constructed under reasonable conditions, bikeway facilities should be constructed on a nearby (within a quarter mile) parallel roadway or Multi-Use Path. When a street or intersection is constructed or reconstructed, standard design elements are incorporated into project design and construction whenever possible. This includes evaluation of bicycle use on all roadways and intersections, including roundabouts. When constraints exist and all standard design treatments cannot be accommodated, decisions are made on a project basis through an interdepartmental review, with local bicycle advocacy liaisons, where all policies and perspectives are considered to ensure bicycle access and safety.

The three categories of bikeways are summarized below, followed by details of engineering design features, including examples within the existing bicycle network shown in Figure 1.

The existing bikeway network, including Local-Service Bikeways, Priority Bikeways, and Multi-Use Paths is designed to provide a high level of service for bicyclists and encourage bicycle use. However, it has been requested by the public, business community, and local officials that improvements be made to further improve the bikeway network, both locally and regionally.

Local Service Bikeway

Local-Service Bikeways are intended to serve as local circulation routes for bicyclists and provide access to adjacent properties and neighborhood centers. With the exception of controlled access roadways and State Highways, all City streets not classified as Bike Routes or Multi-Use Paths, are considered Local-Service Bikeways.

Local-Service Bikeways are shared roadways and are operated and maintained consistently across the city.

Primary Bikeway

Primary Bikeways are on-street routes designed to establish direct and convenient access to significant destinations within the City. Areas that are served by Primary Bikeways are employment centers, commercial districts, transit stations, institutions, recreational destinations, and local/regional centers.

Design treatments designating Primary Bikeways in the City of Pueblo are categorized and defined as follows:

- Design treatments that should be considered for Primary Bikeways are bike route signage, bicycle lanes, shared roadways, extra-wide curb lanes, wide shoulders, bicycle boulevards, and way-finding signs for local street connections.

- On-street motor vehicle parking may be removed on Bike Routes to provide bicycle lanes, except where it is essential to serve adjacent land uses.

- All destinations along a Bike Routes should have sufficient end-of-trip facilities (i.e. bicycle parking) to meet and support bicyclists' needs.

- Some Primary Bikeways are more heavily used as commuter routes and should be maintained to minimize all surface hazards including but not limited to: grates, potholes, manholes, trash, loose sand or gravel, broken glass, other debris, and snow. Sweeping shoulder or bike lanes on these routes is important for minimizing debris hazards.

There are two general categories of Primary Bikeways: a bicycle route and bike lanes.

Bike Routes: Signed bike routes are used primarily on local, low-volume streets where bicycle lanes are not needed and should ideally be delineated by guide signs. Some streets that are already signed as bicycle routes can be upgraded with bike lanes or with way-finding aids that provide directional information about destinations and connecting bikeways. Alternative methods, when bicycle lanes are not possible, may include but are not limited to wider outside lanes, wider sidewalks, shared roadways, and multi-use paths.

Currently the City has approximately X miles of signed bike routes. A 2010 signing project installed approximately 350 bike route signs through the City. The routes chosen for the signage generally provide access to commercial centers, parks, and schools.

Bike Lanes: A bike lane is a portion of the roadway designated by roadway striping and bicycle pavement markings for the exclusive or preferential use of bicycles. Examples in Pueblo include the lanes on Union Avenue, Jerry Murphy Blvd. and Bonforte Blvd.

Bike lanes are a minimum of 5' in width and can be implemented by 1) narrowing existing vehicular travel lanes, 2) removing travel lanes, 3) removing parking, except where it is essential to serve adjacent land uses, and 4) shoulder widening. Bicycle lanes may be implemented through stand-alone bikeway projects, through reconstruction or construction of roadways, and through routine resurfacing of roadways.

Each mile of bike lanes costs approximately $7,000 to install; this cost includes signage and pavement markings (paint) and an additional $850 every year for maintenance costs. Because of the maintenances costs associated with bike lanes, the installation location should be considered on routes with heavier traffic volume, with sufficient road width, connectivity to other routes or destinations and in areas needing traffic calming measures. Blue bike routes on the Bike Map are routes with sufficient traffic volume or speed and will be considered for bike lanes in overlay projects.

In addition to the on-street bicycle routes, the Pueblo Area has a network of multi-use trails that carry bicyclists, pedestrians, and equestrians along open space areas, major rivers, and stream corridors. It is estimated that over 250,000 persons use this system annually. Expanding the trail network and creating connections between areas will increase usage and allow access to a greater portion of Pueblo residents and visitors.

Emerging Innovative On-Street Bicycle Traffic Solutions

Improving the ease and efficiency of bicycling, as well as the safety of the bicyclist are high engineering priorities. The following innovative recommendations are a good start to accomplishing these goals. However, it is imperative that the City continue to be progressive and aware of all potential opportunities to improve the transportation network for bicyclists.

Sharrows

A Sharrow is a specific pavement marking used to communicate to bicyclists the lateral positioning of their travel path in a vehicle travel lane that is too narrow for a motor vehicle and a bicycle to travel side by side. The marking can also be used to help establish the lateral positioning of the bicycle in order to avoid the door zone, to alert motor vehicle users of the likely presence of bicycles and to reduce the occurrence of wrong way bicycling.

The sharrow marking should not be used on roadways with speed limits above 35mph and should be used in conjunction with adjoining bike lanes. Below is a picture of the sharrow marking on Bonforte Blvd.

Bicycle Boulevards

A bicycle boulevard is a shared roadway that has been optimized for bicycle traffic. In contrast with other shared roadways, bicycle boulevards discourage cut-through motor vehicle traffic, but typically allow local motor vehicle traffic, and are designed to give priority to bicyclists.

Bicycle boulevards are designed to offer the advantages of cycling on shared arterials roadways that experienced bicyclists typically value, combined with the advantages of bicycle paths that appeal to inexperienced or young riders. Experienced bicyclists can enjoy lower traffic volumes without significant increases in trip time. For less experienced bicyclists, bicycle boulevards can serve as "stepping stone" facilities that help them move from bicycle paths and trails onto shared roadways.

Bicycle boulevards use a variety of traffic-calming elements to achieve a safer environment. For instance, diverters with bicycle cut-outs at mid-block allow motorists to enter the roadway in order to park or otherwise access a property while allowing bicyclists to continue to the next block, but do not allow motorists to continue through. Typically, these modifications are thought to calm traffic, improve pedestrian safety, and encourage bicycling. The purpose of a bicycle boulevard is to improve bicycle safety and circulation by having or creating one or more of the following conditions:

- Low-traffic volumes (or bike lanes where there are medium-traffic volumes).
- Discouragement of non-local motor vehicle traffic.
- Free-flow travel for bikes by assigning the right-of-way to the bicycle boulevard at intersections wherever possible.
- Traffic control to help bicycles cross major arterial roads.
- A distinctive look and/or ambiance to encourage bicyclists and make motorists aware that the roadway is a priority route for bicyclists.

Multi-Use Paths

Multi-use paths are designed to establish efficient, convenient, and comfortable routes for bicycling, walking, and other non-motorized uses.

Multi-use paths are often appropriate in corridors not well served by the street system to create short cuts that link urban destinations and origins along continuous greenbelts such as rivers, parks and open space.

Given specific location constraints, multi-use paths often take creativity to implement the most effective transportation system; however, general guidelines are summarized below:

- Multi-Use Paths should be designed as separate facilities that can be shared with pedestrians and other non-motorized users.
- Multi-Use Paths should be protected or grade-separated at railroad crossings, rivers, and intersections with major roadways.

- Multi-use paths should be continous and seamless connecting to on-road routes and other multi-use paths
- Multi-Use Paths should be identified through appropriately placed signage.

A multi-use path is a bikeway that is at least 8-feet in width and usually separated from motorized vehicular traffic by an open space or barrier. It can be located either within the roadway right-of-way or within an independent right-of-way or easement. Multi-use paths are intended to provide adequate and convenient routes for bicycling, walking, and other non-motorized uses.

Multi-use paths may be implemented in corridors not well served by the on-street bikeway network. Good examples in Pueblo include the Arkansas River Trail and the Fountain Creek Trail. Some multi-use paths are attached sidewalks along busier roads such as Pueblo Blvd, Dillon Drive and Highway 50. Signage indicating bicycles are allowed along these sidewalks could improve utilization of these routes while not encouraging sidewalk riding in general throughout the city.

The Pueblo Transportation, Planning, and Parks Departments work together to plan and develop multi-use paths linking origins and destinations along continuous greenbelts such as rivers and arroyos, and through public open space and parks. Existing and future multi-use paths are identified in the Long Range Transportation Plan. The recent development and publication of the *Pueblo Bicycle and Trails Maps* in the Summer of 2010 allowed significant community input into the City's bikeway system. The general principals identified for continued development of the bikeway network include:

- Connect bicyclists to desired destinations such as employment centers, commercial districts, transit stations and bus routes, institutions, and recreational destinations.
- Provide the most direct and convenient routes possible.
- Provide an alternative route where a Priority Bikeway may not be available.
- Provide an alternative route for less experienced bicyclists.
- Fill-in existing gaps in the bikeway network.
- Target locations with the potential for implementation in the next ten years.
- Lead a bicyclist to safe street crossings.

This section of the guide examines combined planning issues, particularly the development of multi-use trails. Multi-use trails (trails that accommodate a variety of uses, including walking, bicycling, skating, skiing, and sometimes horses) are popular and an important part of many community's nonmotorized transportation system.

Multi-use trails must be adequately designed, built, and maintained if they are to make a useful contribution to non-motorized transport. Trails must be more than just an extra wide sidewalk; they should make connections and go where roads do not, and provide an extra safe and pleasant environment. Designs should meet standards established by professional organizations, such as AASHTO, ADAAG, CDOT, UFAS, and ANSI.

A trail system should be integrated with other pedestrian and bicycle facilities, and connected to popular destinations, including parks, schools, colleges, employment centers and commercial centers.

Connections with the street system should be carefully designed, and signed to indicate street name and path destination. A high-quality multi-use trail, such as converted railroad rights-of-way, can become the core of a regional trail system that will expand in the future.

A multi-use path is not a substitute for adequate on-street facilities. All roadways should be safe for cycling to accommodate cyclists who ride too fast for trails or have destinations not served by the path. Similarly, sidewalks may

Throughout the United States, trails continue to be one of the most popular recreation features provided by communities.

Trails are popular because they offer something for everyone, from the very young, to the very active, to the elderly simply seeking a tranquil place to walk and enjoy being outside. Trails provide an opportunity to see the beautiful natural parts of the city, and especially those areas that are not readily visible as one travels around Pueblo.

Through the acquisition of corridors for greenways, trails help to preserve key greenbelt areas. Trails provide a healthy lifestyle, by providing opportunities to engage in exercise in a fun setting, whether by simply walking or through more strenuous activities such as cycling or roller-blading. Trails preserve the history and culture of the city by preserving key historical features and areas, as well as the landscape context around those areas.

Share use paths within greenways and parks can accommodate local and regional off-road travel for bicyclists and pedestrians. The paths should be a minimum of 10-12 feet wide and have a firm surface. Porous paving or crashed gravel should be considered for the surface since these materials can mitigate environmental impacts and help with groundwater recharge.

Trails support economic development by creating attractive greenbelts that can revitalize areas, provide tourism opportunities and make Pueblo an attractive place to relocate.

Trails can provide transportation benefits by providing alternative ways to get to work, to retail areas or to key city destinations such as libraries, parks, recreation centers, pools or even city hall. Finally, and most importantly, a citywide trail system clearly speaks to the commitment to establishing a very high quality of life standard for its citizens. In turn, that commitment to quality of life promotes the business and economic growth of the city, since it says that Pueblo will always seek to be a premier place to live and to do business be needed along roadways for pedestrian access to certain destinations, even if a path is nearby.

Design and Safety

Design and safety considerations also affect non-motorized route selection. These include the following:

1. Pueblo's River Trail System is designed to provide for safe bicycle/pedestrian experiences that avoid road and driveway intersections. Where possible, especially on main trails, provide or use existing grade crossings at major roadways.
2. Where possible, trails and on-street routes should be located to link schools, parks, public facilities, and retail centers.
3. Trails should comply with the CDOT or locally approved design standards that specify surfacing, trail width, drainage, cross-slope and curve standards.
4. Trail alignments should be spaced far enough from roads and highways to substantially reduce vehicular hazards.
5. Dense vegetation that interferes with safe usage should be removed to create ample sight distance (approx. 50') and to reduce potentially dangerous hiding areas.

Alignments should provide access points for emergency response and maintenance vehicles.

Recommended Regional Trail Design Guides

Bikeway & Trail Standards: All off road trails shall have a minimum roadway separation of three (3) feet measured from the back of the curb to the trail edge. If the trail must be adjacent to the curb, then an additional 3 feet of hard material shall be added to the minimum trail width. It is suggested that this 3-foot strip be colored a contrasting color. Trail gradient shall be limited to a maximum of twelve percent (12%) for all trail types. In addition all trail types shall incorporate a maximum cross slope of one to two percent (1-2%) to promote drainage and prevent water from collecting on the trail pathway.

Urban Regional Multi-Use Trails:

Location- Corridors designated by PACOG Non-Motorized Plan or the local planning agency. Typically these are located along roadways with a future roadway classification of Minor Arterial and greater as shown on the City of Pueblo Roadway Development Plan or other primary recreation corridors such as rivers, creeks, streams or other designated Parks and Open Space, or to provide access to regional trails from the residential areas.

Surface- Hard, such as concrete or asphalt with a minimum of two-and-a-half (2.5) inches over a four (4) inch ABC compacted base. Improved areas adjacent to hard surface. Improved, which consists of a four (4) inch aggregate surface, compacted to ninety-five percent (95%) over a six (6) inch thick dirty cinder/ native sub-grade compacted to ninety percent (90%).

Width- Ten (10) feet.

Clearance- Ten (10) feet.

Traffic Level- High.

User Type- Pedestrians, bicyclist, in-line skaters, and wheel chair users.

Rural Multi-Use Trails

Location- Along collector roads or as otherwise corridors designated by PACOG Non-Motorized Plan or the local planning agency

Surface- Hard, such as concrete or asphalt with a minimum of two-and-a-half (2.5) inches over a four (4) inch ABC compacted base. Improved areas adjacent to hard surface. Improved, which consists of a four (4) inch aggregate surface, compacted to ninety-five percent (95%) over a six (6) inch thick dirty cinder/ native sub-grade compacted to ninety percent (90%).

Width- Ten (10) feet.

Clearance- Ten (10) feet.

Traffic Level- High.

User Type- Pedestrians, bicyclist, in-line skaters, and wheel chair users.

City Trails

Location- Segments which are not located along collector roads or other primary recreation corridors such as rivers, creeks, streams or other designated Parks and Open Space or the local planning agency

Surface- Improved, which consists of a four (4) inch aggregate surface, compacted to ninety-five percent (95%) over a six (6) inch thick dirty cinder/ native sub-grade compacted to ninety percent (90%).

Width- Five to Six (5-6) feet.

Clearance- Eight (8) feet.

Traffic Level- Moderate.

User Type- Pedestrians and bicyclists. (Equestrian use prohibited)

Neighborhood Trials

Location- Segments that connect a neighborhood to the larger trail system.

Surface- Natural, delineated from the surrounding landscape, consisting of highly compacted native materials.

Width- Four to five (4-5) feet.

Clearance- Eight (8) feet.

Traffic Level- Low.

User Type- Pedestrians and bicyclists. (Equestrian use prohibited)

Bike Lane

Location- Along local roadways in accordance with the City of Pueblo Non-Motorized Transportation Plan or as directed by the City of Pueblo Traffic Engineer.

Surface- Hard, indicated by signs, and delineated with a solid six (6) inch white stripe, in accordance with MUTCD standards.

Width- Four to six (4-6) feet.

Clearance- Eight to ten (8-10) feet.

Traffic Level- High

User Type- Bicyclists Only

Bike Route

Location- Along local roads in accordance with the City of Pueblo Non-Motorized Transportation Plan or as directed by the City of Pueblo Traffic Engineer.

Surface- Hard, indicated by signs, in accordance with MUTCD standards.

Width- Three to five (3-5) feet.

Clearance- Eight (8) feet

Traffic Level- Moderate

User Type- Bicyclists Only

Mountain Bike Route

Location- Specially designated areas and routes

Surface- Natural, delineated from the surrounding landscape, consisting of highly compacted native materials.

Width- 2 to five (5-5) feet.

Clearance- Eight (8) feet.

Traffic Level- Low.

User Type- Mountain bicyclists. (Equestrian use prohibited)

Equestrian Trail

Location- Located in remote areas, in accordance with the City of Pueblo Non-Motorized Transportation Plan.

Surface- Natural, delineated from the surrounding landscape, consisting of highly compacted native materials.

Width- Four to five (4-5) feet.

Clearance- Twelve (12) feet.

Traffic Level- Moderate.

User Type- Equestrians only

Design Standards Table.

Type	Width	Surface[1]	Clearance	User Traffic	Location	User Type
Bicycle Lane Roadway Types	4'-6'	Hard[2]	8'-10'	High	Along State Highways or other classified roadways, or in accordance with the PACOG Non-motorized Plan	Bicyclists only
Bicycle Route Roadway Types	3'-5'	Hard[2]	8'	Moderate	Along local roads in accordance with the PACOG Non-motorized Plan	Bicyclists only Local Road
Shared Bike/Parking Lane Roadway Types	7' - 8'	Hard[2]	8'-10'	Low to Moderate	Streets with low parking occupancy Local Road	Bicyclists only

Urban Regional Multi-Use Trail Roadway Types	10'	Hard[2] Improved	10'	High	Along collector and higher classification roadways .	Pedestrians, bicyclists, in-line skaters, wheel chair users
Urban Open Space Multi-Use Trail	10'	Improved	10'	High	Not adjacent to Roadways .	Pedestrians, bicyclists, wheel chair users – **Universal Design**
Rural Regional Multi-Use Trail	8' 4'	Hard[2] Improved	10'	High	Not adjacent to Roadways .	Pedestrians, bicyclists, in-line skaters, wheel chair users
Rural Open Space Multi-Use Trail Roadway Types	10'	Improved	10'	High	Along collector and higher classification roadways .	Pedestrians, bicyclists, wheel chair users – **Universal Design**
Community Trail Roadway Types	5'-6'	Improved	8' Local Road	Moderate	Not located along collector roads .	Pedestrians & bicyclists
Neighborhood Trail	4'-5'	Natural	8'	Low	Connects a neighborhood to the larger trail system.	Pedestrians & bicyclists
Equestrian Trail	4'-5'	Natural	12'	Moderate	In remote areas, in accordance with the PACOG Non-motorized Plan.	Equestrians only
Pedestrian Corridor Roadway Types	8' – 12'	Hard	8'	Varies	Provides accessible connection through a neighborhood to Public Facilities and shopping	Pedestrians, bicyclists, wheel chair users – **Universal Design**

[1]Minimum surface requirement may be upgraded.

[2]Hard Surface- Concrete minimum of 4 inch or asphalt material minimum of 2.5 inches over a 4 inch ABC compacted base.

Natural Surface- Delineated Surface consisting of highly compacted native materials.

Improved Surface- 4 inch thick aggregate surface compacted to 95% over a 6 inch thick dirty cinder/native sub-grade compacted to 90%.

Collector Road- Any road indicated as a collector by the Pueblo Roadway Development Plan or as determined by the city.

Existing Bikeway Inventory

The following data was extracted from the 2010 Bike and Trails map and 2035 Long Range Transportation Plan:

	City	Pueblo West	County	State Parks	Total
All Riders -	106 miles	49 miles	31 miles	6 miles	192 miles
Intermediate Riders	74 miles	57 miles	164 miles	13 miles	238 miles
Experienced Riders	27 miles	25 miles	85 miles	0	137 miles
Proposed	157 miles	3 miles	213 miles	0	373 miles
Multi-Use Trials	26 miles	7 miles	37 miles	0	

As discussed in more detail later in this Chapter, the Pueblo West Municipal District (PWMD) has developed a separate plan to continue its trail system expansion.

	Existing	**Proposed**
PWMD Master Plan	6.71 Miles *	53 Miles
Non-PWMD Plans	36.90 Miles	440 Miles

* Includes Funded McCulloch Trail Phase II

Other trails within the Pueblo region include separate unconnected recreational facilities within the San Isabel National Forest, Pueblo Mountain Park in Beulah, and the Rye Mountain Park.

Existing Trail Corridors

Overall within the PACOG MPO/TPR there are 56.69 miles of existing off-street trails classified in this plan. There are many sections that exist that are not connected, and thus are not listed below.

- **Arkansas River Trail:** A 9-mile trail connecting the Runyon Lake Loop with Lake Pueblo State Park. Destinations along the trail include the; Pueblo Greenway and Nature Center, Runyon Sports Complex and Runyon Lake.

- **Fountain Creek Trail:** This 4.89-mile trail connects Runyon Lake with Colorado State University (Pueblo) and is eventually planned to extend 15 miles north into El Paso County as part of the Colorado Front Range Trail, and 5.5 miles south to St. Charles Creek to provide a critical link in the American Discovery Trail.

- **Runyon Lake Loop**
  This 1.2 mile trail loop connects to the HARP, Arkansas River, and Fountain Creek Trails

- **HARP Trail**
  This 1.52 mile trail connects the Runyon Lake Loop Trail

- **Wild Horse Creek Trail:** This .89-mile trail extends north from the Arkansas River Trail; Wildhorse Creek provides access to the trail system for the fast-growing community around Hyde Park and for the residential areas along Tuxedo Boulevard. Approximately 1 mile of this trail is complete with an additional 5 miles planned to extend north across US 50 to the multi-use path along Pueblo Boulevard.

- **Pueblo Blvd Trail**
  2.44 miles of trail along Pueblo Blvd.

- **College Trail:**
  This 1.71-mile trail extends from the northern point of the Fountain Creek River Trail and runs east through the University Park neighborhood to the Colorado State University-Pueblo Campus.

- **Lake Minnequa Trail Network**
  This trail has recently been constructed as part of the Lake Minnequa Open Space project. Overall, there are approximately XX miles of trails established with a portion of that being a XX mile loop around the lake.

- **Lake Pueblo State Park** total 9.1 miles including
  North Marina Trail 1.14 miles
  South Marina Trail 1.97 miles
  Arkansas River to Pueblo West 4.73 miles

- **Pueblo West Trails (other):**


College Trail
US 50 West Trails
River Trail
Fountain Creek
Wildhorse Creek
Trail
HARP Trail
Arkansas River Trail
Pueblo Blvd
Trail
Runyon Lake Loop Trail
Northern Ave Trails
Lake Minnequa
Trails
LEGEND:
Trails
Existing Funded
& Improved Trails
PACOG
2035 LRTP AMENDMENT
Pueblo Area Council
of Governments
Existing Trail Corridors
(Off-Street) City of Pueblo
Data Source: PACOG MPO
Date: October 6, 2010
0 0.250.5 1 1.5 2
Miles

Pueblo West Metropolitan District

The Pueblo West Metro district applied for and received a 2006 CDOT Transportation Enhancement Grant for an additional portion of the following project.

- **The McCulloch Trail:** A 9-mile long trail in Pueblo West to connect with the State Park trail network and the Colorado Front Range Trail. A 6.7 mile segment of trail is currently complete or under construction. Completion of an additional 2-mile connection from McCulloch Blvd will link the trail to the Lake Pueblo State Park.

- **Cattail Crossing 0.33 mile loop**

- **Pike's Camp Trail .72Cat**

In November 2005, the Pueblo West Metropolitan District adopted a Parks and Recreation Master Plan for the district. Within the plan, recommended trail classifications and standards for PWMD are defined. These classifications are:

- **Primary Multi-Purpose, Off-Street Trails** – Paved multi-purpose, off-street trails will form the two major spines through the District: one running north-south and one running east-west. They should accommodate a variety of trail users, including walkers, joggers, recreational and commuter cyclists within the same trail corridor.

- **Secondary Multi-Purpose, Off-Street Trails** – Secondary trail links will be provided through development areas to the primary trail system, as well as to parks and open space areas that are not on the primary system. These multi-purpose, off-street trails would ideally be paved where practicable and may be provided by project developers as well as being an integral part of the circulation and open space system.

Statewide and National Bikeways and Trails Systems

The Pueblo area is the junction of two of the largest planned trail systems in the Country: the Colorado Front Range Trail and the American Discovery Trail. Additionally, Pueblo is along three major cross-country bicycle routes that are promoted by the Adventure Cycling Association www.Adventurecycling.org. Adventure Cycling Association's nonprofit mission is to inspire people of all ages to travel by bicycle for fitness, fun, and self-discovery. Founded in 1974 as Bikecentennial, Adventure Cycling is the premier bicycle travel organization in North America with 44,500 members nationwide. We research and produce cycling maps for our Adventure Cycling Route Network, one of the largest route networks in the world at 40,633 miles (and growing). We publish *Adventure Cyclist* magazine for our membership, lead bike tours, work on bicycle advocacy projects such as the U.S. Bicycle Route System, sell bike travel gear, and provide trip planning resources for bicycle travelers.

The routes are the TransAmerica Trail, The Western Express, The Great Parks Route. Pueblo is an important location along or even the end/beginning of the route in the case of The Western Express.

The **TransAmerica Trail** was established for Adventure Cycling's celebration of the U.S. bicentennial in 1976. At that time, the organization was called Bikecentennial, a name many old-timers still associate with the TransAm Trail. This is still the greatest and most used route crossing America. This classic ride offers everything you would expect from a transcontinental crossing.

The **Western Express Bicycle Route** connects San Francisco, California, on the West Coast to the TransAmerica Bicycle Trail in Pueblo, Colorado. It provides a shorter mileage option (476 miles less when compared to the TransAmerica) on a central cross-country route but challenges the rider with extreme weather and riding conditions, as well as logistical obstacles. One's efforts are rewarded, however, by experiencing some of the least visited and most magnificent areas of the American West

The **Great Parks Bicycle Route** is divided into two smaller routes, plus sections 4, 5, and 6 of the TransAmerica Bicycle Trail. Below, you'll find details on both the North and the South sections.

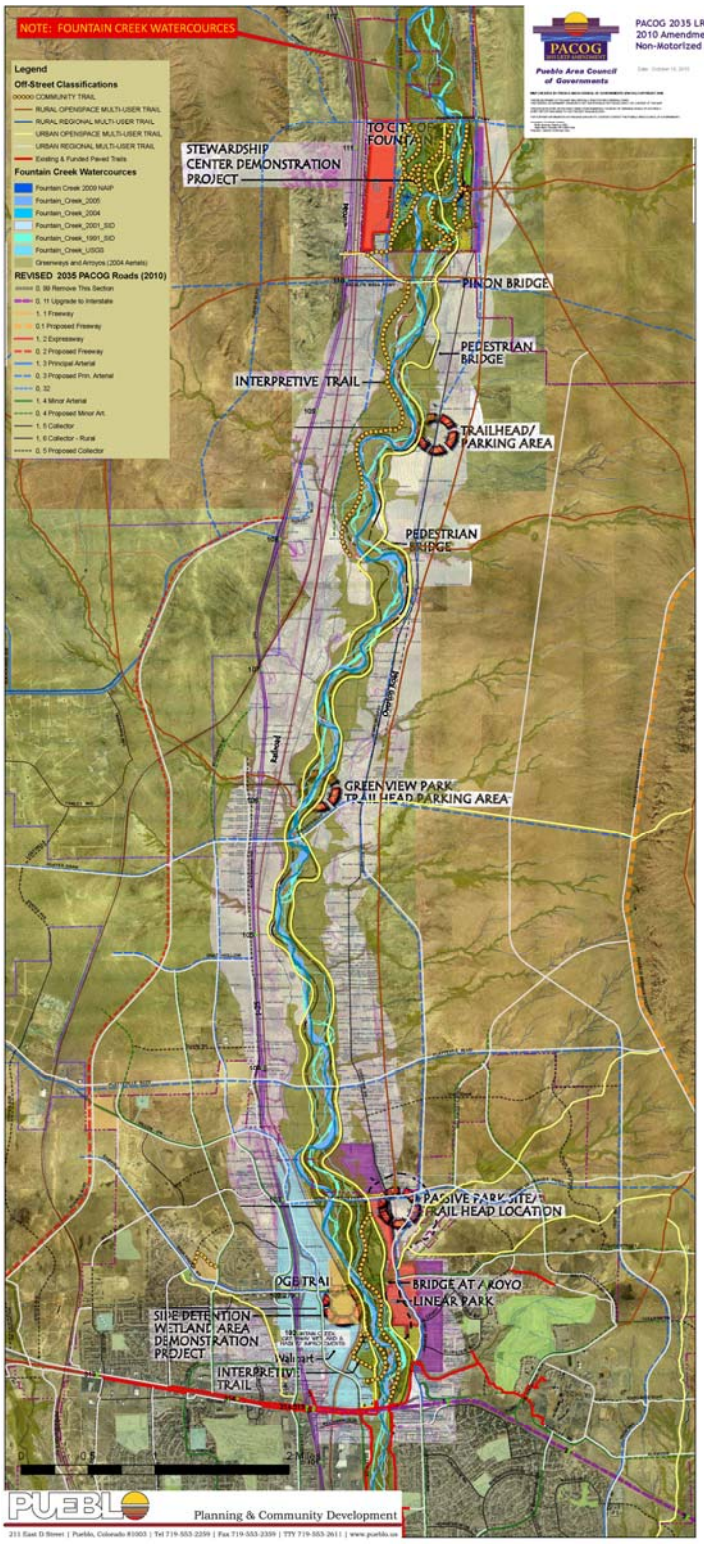
Great Parks North
Following the spine of the northern Rocky Mountains, this route ambles through some of the most sublime (and accessible) mountain scenery found in the continental United States and Canada.

Great Parks South
This route, entirely in the Colorado Rocky Mountains, offers challenging mountain biking, including riding on Trail Ridge Road, the highest paved road in the continental United States, located in Rocky Mountain National Park.

The American Discovery Trail (ADT) is the nation's first coast-to-coast, non-motorized trail stretching 6,800 miles from Delaware to California. The ADT connects five national scenic trails, 10 national historic trails, and 23 national recreational trails. It passes through urban centers like Cincinnati and San Francisco, leads to 14 national parks and 16 national forests, and visits 10,000 sites of historic, cultural, and natural significance.
Several trails in the Pueblo region are part of the ADT including sections of the Arkansas River Trail, the St. Charles Creek Trail, and the McCulloch Boulevard Trail.

The Colorado Front Range Trail (CFRT) is a planned trail alignment that will create a continuous trail from New Mexico to Wyoming. Colorado State Parks hopes to complete Phase 1 of the Trail, from Trinidad to Fort Collins, by 2009, including two routes through the Pueblo Region. The Foothills Loop runs along SH96 through Lake Pueblo State Park to the Arkansas River Trail, then north along the Fountain Creek Trail and Overton Road up to El Paso County. The Plains Loop runs north from Colorado City up along CR778 (Burnt Mill Road) and the

Goodnight Arroyo Trail to the Arkansas River Trail. Below is the proposed alignment for the extension of the CFRT.


NOTE: FOUNTAIN CREEK WATERCOURCES
PACOG 2035 LRTP
2010 Amendment
Non-Motorized Plan
Pueblo Area Council of Governments
Legend
Off-Street Classifications
Fountain Creek Watercourses
REVISED 2035 PACOG Roads (2010)
STEWARDSHIP CENTER DEMONSTRATION PROJECT
TO CITY FOUNT
PINON BRIDGE
PEDESTRIAN BRIDGE
INTERPRETIVE TRAIL
TRAILHEAD/ PARKING AREA
PEDESTRIAN BRIDGE
GREENVIEW PARK TRAIL HEAD PARKING AREA
PASSIVE PARK SITE/ TRAIL HEAD LOCATION
BRIDGE AT ARROYO LINEAR PARK
SWMP DETENTION WETLAND AREA DEMONSTRATION PROJECT
INTERPRETIVE TRAIL
Planning & Community Development

The Pueblo region considers access to these national trail designations when planning and prioritizing trail projects. For the CFRT designated trails, the standards are in Table 2.10 and the State Parks Department recommends that local jurisdictions follow four steps to trail development, at the end of which the trail can be "branded" with the CFRT designation. These are:

- Signage
- Trailhead maps
- Directional signs
- Distance signs

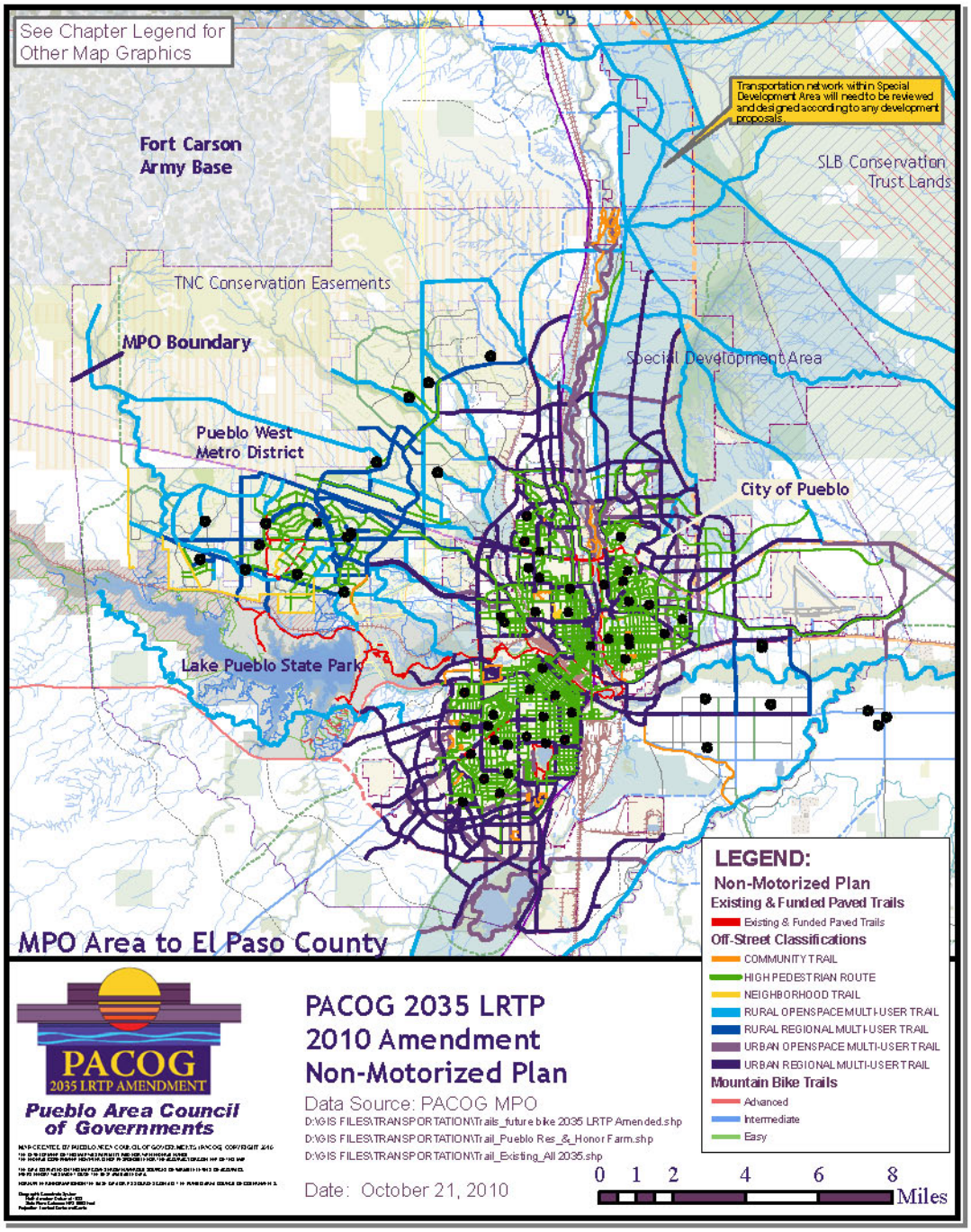
Table 2.11 Colorado Front Range Trail Recommended Trail Development Standards

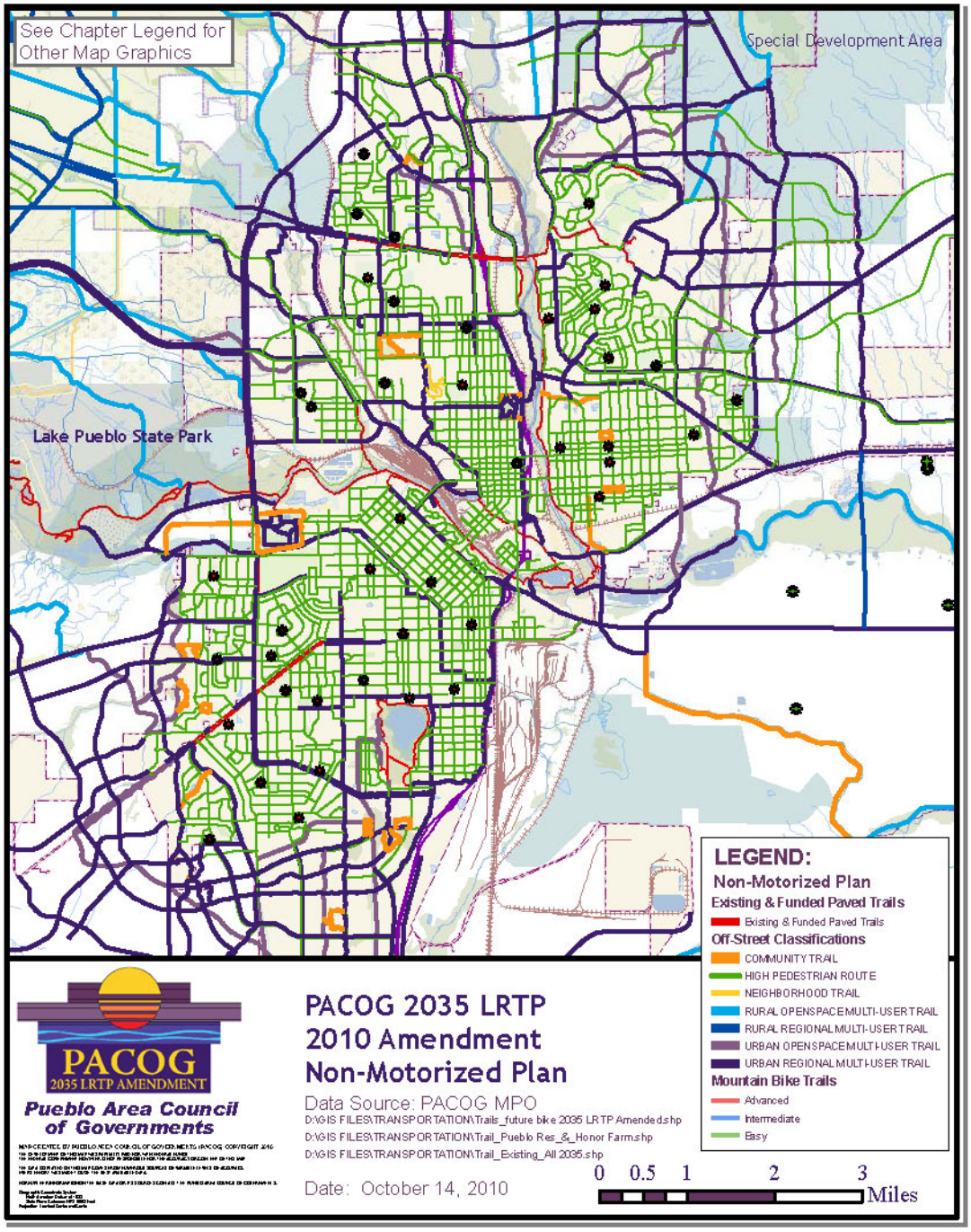
	Urban	Sub-Urban	Rural*
Width	10-12 feet	8 feet	6 feet
Maximum Grade	5 %	5 %	8 %
Maximum Cross-Slope	2 %	8 %	8 %
Maximum Tread Obstacles	2 inch	3 inch	N/A

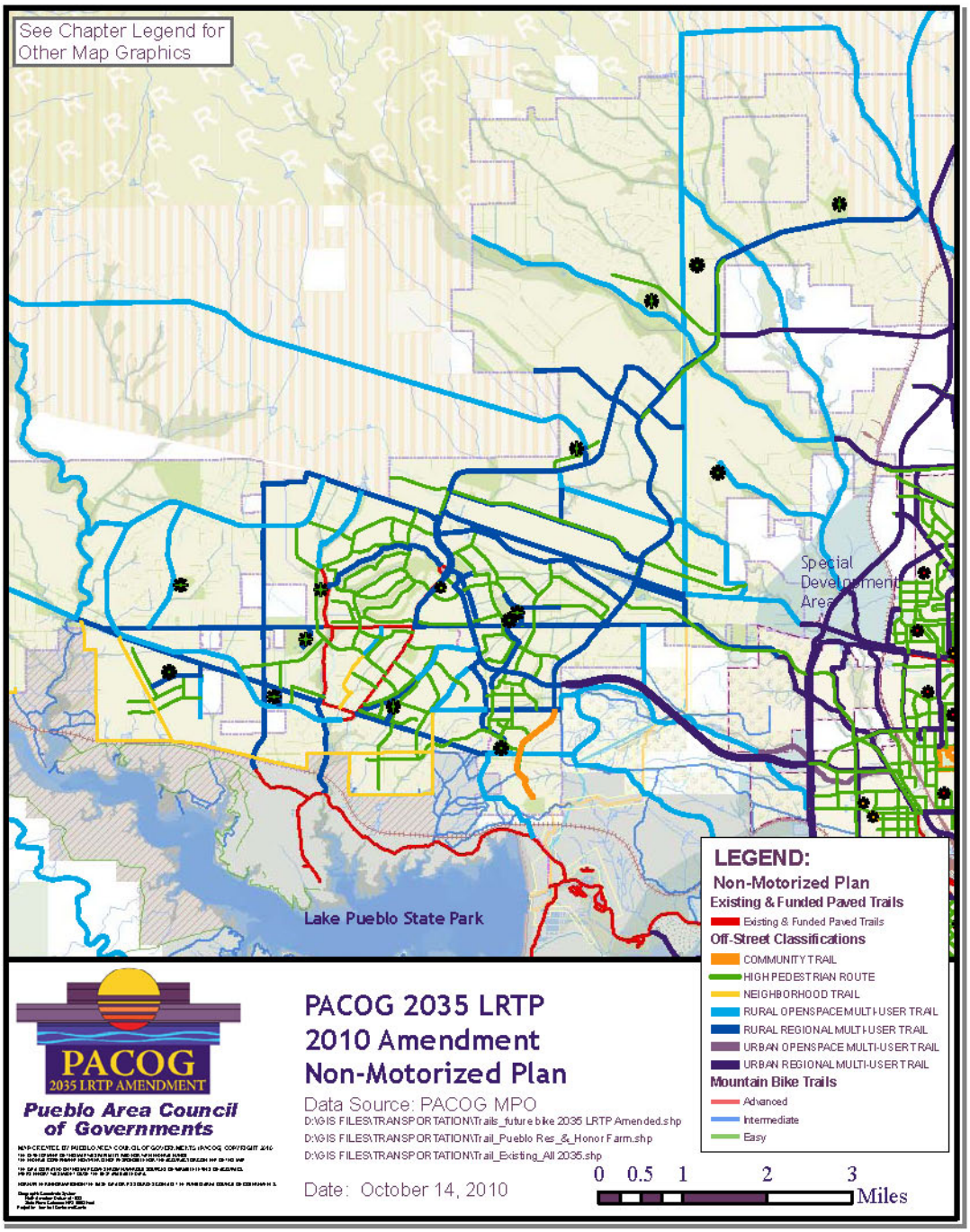
Source: Colorado Front Range Trails Guidelines, 4/03
* Rural standards do not meet ADA accessibility standards.

Proposed Trails Corridors

The figures below indicated the future non-motorized off-street transportation system. These maps are prepared in conjunction with the City, County and Pueblo West.


See Chapter Legend for Other Map Graphics
Transportation network within Special Development Area will need to be reviewed and designed according to any development proposals.
Fort Carson Army Base
SLB Conservation Trust Lands
TNC Conservation Easements
MPO Boundary
Special Development Area
Pueblo West Metro District
City of Pueblo
Lake Pueblo State Park
MPO Area to El Paso County
LEGEND:
Non-Motorized Plan
Existing & Funded Paved Trails
Existing & Funded Paved Trails
Off-Street Classifications
COMMUNITY TRAIL
HIGH PEDESTRIAN ROUTE
NEIGHBORHOOD TRAIL
RURAL OPENSPACE MULTI-USER TRAIL
RURAL REGIONAL MULTI-USER TRAIL
URBAN OPENSPACE MULTI-USER TRAIL
URBAN REGIONAL MULTI-USER TRAIL
Mountain Bike Trails
Advanced
Intermediate
Easy
PACOG
2035 LRTP AMENDMENT
Pueblo Area Council of Governments
PACOG 2035 LRTP
2010 Amendment
Non-Motorized Plan
Data Source: PACOG MPO
D:\GIS FILES\TRANSPORTATION\Trails_future bike 2035 LRTP Amended.shp
D:\GIS FILES\TRANSPORTATION\Trail_Pueblo Res_&_Honor Farm.shp
D:\GIS FILES\TRANSPORTATION\Trail_Existing_All 2035.shp
Date: October 21, 2010
0 1 2 4 6 8
Miles


See Chapter Legend for Other Map Graphics
Special Development Area
Lake Pueblo State Park
LEGEND:
Non-Motorized Plan
Existing & Funded Paved Trails
Existing & Funded Paved Trails
Off-Street Classifications
COMMUNITY TRAIL
HIGH PEDESTRIAN ROUTE
NEIGHBORHOOD TRAIL
RURAL OPENSPACE MULTI-USER TRAIL
RURAL REGIONAL MULTI-USER TRAIL
URBAN OPENSPACE MULTI-USER TRAIL
URBAN REGIONAL MULTI-USER TRAIL
Mountain Bike Trails
Advanced
Intermediate
Easy
PACOG
2035 LRTP AMENDMENT
Pueblo Area Council of Governments
PACOG 2035 LRTP
2010 Amendment
Non-Motorized Plan
Data Source: PACOG MPO
D:\GIS FILES\TRANSPORTATION\Trails_future bike 2035 LRTP Amended.shp
D:\GIS FILES\TRANSPORTATION\Trail_Pueblo Res_&_Honor Farms.shp
D:\GIS FILES\TRANSPORTATION\Trail_Existing_All 2035.shp
Date: October 14, 2010
0 0.5 1 2 3
Miles



- **St Charles Mesa Trail:** A proposed 10-mile trail running along St Charles Creek from 36th Lane to Lime Road. A proposed 18-mile extension to the town of Rye and a 2-mile link to the Aspen Road Trailhead will complete this regional trail

- **Arkansas River Trail:** A planned expansion of the trail from Runyon Lake 9 miles east to 36th Lane will provide a continuous off-street east-west spine trail through the region.

The table below summarized the above maps.

Table 2.12 Overall Future Off-Street Non-Motorized Facilities

	City	PWMD	County	Total
Neighborhood Trail	1.23	10.46	2.92	**14.61**
Community Trail	15.48	1.31	12.19	**28.99**
Urban Open Space Multi-User Trail	59.50	0.00	21.51	**81.01**
Urban Regional Multi-User Trail	242.37	6.55	22.36	**271.28**
Rural Open Space Multi-User Trail	12.86	43.43	207.32	**263.61**
Rural Regional Multi-User Trail	1.14	55.69	4.37	**61.20**
High Pedestrian Route	449.41	68.25	4	**521.66**
Total Classified Mileage	**782.00**	**185.69**	**274.67**	

2.5.7.3 Encouragement

Special events are an important means to encourage bicycling and increase ridership locally for youth and adults alike. Through participation in a local, citizen run organization, Pueblo Active Community Environments (PACE), the City actively supports special events.

Various events are planned each year with a specific goal to include attracting new bicyclists; celebrating our local bike plan and infrastructure and focusing on safe bicycling practices. The Walk N' Roll campaign was initiated to promote various bicycling, walking and active living events throughout the community for fun, fitness and transportation. Below is a listing of bicycling events:

- Bike to Work days
- Downtown Bike Tour with police escort on bike to work day
- Bike Commuter Cup Challenge
- Bike / Walk to School Day
- National Trails Day
- Costume cruiser rides
- Arkansas Point Mountain Bike race
- Angelo's Criterion de Pueblo Bike Race
- Dog Track Road Rides
- Red Gate Mountain Bike Rides
- Transportation Technology Center Road Rides
- Minnequa Lake Mountain Bike Rides

In addition to the Walk N' Roll campaign, PACE also actively supports a Facebook account www.facebook.com/PuebloPACE and a website, www.activepueblo.net, to promote events through a community calendar, give ideas on where to bike, provide electronic access to the bike maps, promote Safe Routes to School programs and provide tips and videos on bicycle safety.

Another factor that may encourage more cycling is improving the availability of adequate bicycle parking. While there are some downtown locations, parks and employers that provide bike racks, overall bike parking is limited in Pueblo. In 2009, the City adopted an ordinance through the Pueblo Municipal Code requiring new construction or rennovations that provide over 40 vehicle parking spaces must also provide bicycle parking. In 2009, several bike racks were installed throughout the downtown area by the Pueblo Downtown Association with more racks planned to be added by the Urban Renewal Authority in 2011. PACE has produced a brochure on tips for selecting and installing bike racks for theft prevention and improved utilization. The PACE website encourages businesses to install bike racks, sponsor a bike rack elsewhere and lists local vendors that will build bike racks. A partnership has also been developed with the local community college welding students to build low cost, high quality bike racks for schools and local businesses.

PACE volunteers collaborate each year and work with officials and students at Colorado State University-Pueblo to help create a more bicycle-friendly and active campus and to create a more seamless non-motorized transportation system between the city and the university campus.

2.5.7.4 Enforcement

A local League Cycling Instructor (LCI) and bicycle advocate started providing a 2 hour block of instruction on bike law and bike safety for all law enforcement officers with the Pueblo Police Department annual training in 2010. The training is also available to the Pueblo County Sheriffs Department. As a result of this training the traffic laws contained with the Pueblo Municipal Code are being updated to reflect statewide consistency.

Enforcement measures should complement the other facets of the bike plan, specifically, the Education component. Education initiatives combined with enforcement measures to ensure the success of many programs. It is recommended that the implementation of enforcement measures not be done in isolation; rather, designed in a comprehensive approach.

As we continue to promote bicycling as another form of transportation there are significant steps that need to be taken relative to enforcement. Further recommendations include:

- Disseminate current and appropriate bicycling information to and from local enforcement agencies. This is an important aspect in order to maintain consistent City messaging regarding local ordinances and to bridge the gap of understanding between bicyclists and police officers.
- Evaluate bicycle-vehicle crashes for any infrastructure improvements or targeted community education campaigns needed.

- Continue to work closely with local enforcement agencies to create innovative, pro-active education campaigns including enforcement that fosters the safety of bicyclists, pedestrians, and motorists. Pueblo County Sheriff was involved in filming the Bike Safety video series. In 2010 Pueblo Police Officers were involved in filming a series of video public service announcements to discourage wrong way riding and encourage cyclists to stop at traffic control devices.

- Continue to encourage and coordinate official trainings for local enforcement agencies to ensure all City personnel are knowledgeable of current local, regional, and national bicycle policies and ordinances.

- Review and potentially update enforcement techniques for handling special events such as critical masses and other protests to further bridge the communication gap between bicyclists and local enforcement agencies.

- Promote a constructive process to determine what types of behavior require enforcement agency involvement.

- Explore the creation of a community-wide bicycle safety program with law enforcement and community education groups for not only youth riders but adult riders and motorists. The program(s) could target certain grade level students, community organizations such as homeless shelters, work release inmates, parolled individuals dependent on a bicycle for transportation, or for first-time law violators, whether driving, bicycling, or walking, to educate on specific laws related to bicycle and pedestrian safety.

2.5.8.5 Education

Education is an important element in increasing bicycling while also improving safety. People often assume that as cycling increases, so will the number of crashes. This need not be the case as has been demonstrated in other cities. The word “education” has many facets when it comes to bicycling. This section will address several educational components.

- Developing safe cycling skills in children and adults.
- Teaching youth and adult bicyclists their rights and responsibilities.
- Teaching motorists how to more effectively share the road with bicyclists.

A local League Certified Instructor (LCI) and PACE volunteer created a series of bike and pedestrian safety videos through a Safe Routes to School grant. The video series covers skills and information appropriate for all ages plus a special section on sharing the road for older cyclists and drivers of motor vehicles. The video series attempts to provide a consistent message on safe cycling while demonstrating proper cycling on local roadways and paths. The videos are available to all local schools on DVD, available on Youtube through www.activepueblo.net and play routinely on the City and County Public Access Televison channels. The video series has been shown to all Pueblo Police officers as part of their annual training, and used in local bicycle safety programs including work release

inmate cycling classes, Bike Commuter classes and Traffic Skills 101 classes. The following messages are included in the video series:

- Wear a helmet.
- Obey all traffic laws.
- Look both ways before crossing streets.
- Always ride with the flow of traffic.
- Be predictable.
- Always signal your intentions.
- Be visible. Wear light colored, bright, or reflective clothing and always use a front light and rear reflector at night.
- Use the bike map. Look for a route that is suitable to your comfort and skill level.

Youth Bicyclists

School children are most effectively reached when an action-oriented teaching approach and repetitive practice process are coupled with awards and incentives. Awards and incentives can consist of certificates of completion or bicycle/pedestrian licenses, free or reduced cost bicycle helmets and other accessories (such as bicycle lights or bells), or discount coupons from area bicycle shops.

The City has been awarded three *Safe Routes to School* grants; Heaton Middle School, Hellbeck Elementary School and Corwin International Magnet School. The program focuses on five E's – Education, Encouragement, Engineering, Enforcement and Evaluation – the *Safe Routes to School* program works collaboratively with the schools to provide programming and capital improvements throughout the city.

Safe Routes provides education to local youths and their families through in-class education, social marketing and events. Encouragement programs include a Bike to School Days, fall participation in International Walk (and Bike) to School Day. Participation in these events has been limited due to delays in infrastructure improvements but the city hopes to improve walk/bike to school events in the spring of 2011.

The Colorado Safe Routes to School Network contracted with a consultant in 2010 to develop a state-wide bike and pedestrian safety curriculum Colorado Department of Transportation will provide to all schools in fall 2011 to comply with HB 1147. Efforts to create a community-wide, standardized program for reaching more students across the city is a goal for 2011-2012 when more information is available on this curriculum. Both hospitals have injury prevention specialists that provide some classroom instruction on bike safety and periodic bike rodeo events in the community.

Adult Bicyclists

Adult bicyclists fall into several different categories of riders. Some adults are comfortable riding on busy streets and mixing with traffic while others prefer quieter streets or multi-use paths. There are adults who ride a bicycle only a few times a year and those who ride often, both for transportation and/or recreation.

Each type of adult bicyclist has his/her own concerns and philosophy about how bicycles fit into the transportation system. Education and encouragement efforts must recognize this fact and tailor messages to each group.

It is also important to reach as wide a range of bicyclists as possible. Since adults do not often group together as a captive audience (as school children often do) and many adults, especially experienced cyclists, do not feel they need bike safety training, volunteers through PACE have provided a wide range of opportunities through bike to work events, Bike Commuter Classes, bike maintenance classes, casual bike rides and periodic Facebook posts to promote more awareness and improve their knowledge and skills as they relate to bicycling. The following messages have been provided consistently throughout all activities:

- Be alert. Watch for other users and sudden behavior changes. Pay careful attention to potential road hazards such as potholes and gravel. Adjust speed to maintain control of the bicycle.
- Obey all traffic laws.
- Always ride with the flow of traffic. Ride where motorists and others expect bicyclists, and never ride against traffic.
- Be predictable. Signal your turns, do not weave in and out of traffic, and stay as far to the right as possible, except when:
    - Traveling the same speed as traffic
    - Avoiding hazardous conditions
    - Preparing to make a left turn, passing another vehicle or using a one-way street (in which case riding along the left curb is permitted)
    - The roadway is too narrow for a bicycle and a motor vehicle to travel safely side-by-side
    - Riding alongside another bicyclist in a manner that does not impede the normal flow of traffic
- Be visible. Wear light-colored, bright, or reflective clothing and always use front and rear lights. Rear reflectors are also advised when cycling at night.
- Wear a helmet.
- Use the bike map. Look for a route that is suited to your comfort and skill levels.
- Stay off sidewalks whenever possible. In Colorado, bicycles are legally classified as vehicles and should behave as such. Unless specifically signed for shared use, as on bridge sidewalks or multi-use paths, sidewalks are primarily intended for pedestrians. In some cases it is appropriate for young or less experienced bicyclists to ride on the sidewalk although bicyclists must always be watchful of pedestrians on the sidewalk. When using sidewalks, bicyclists are required to warn pedestrians audibly when passing (verbally or by bell), yield the right-of-way in conflict situations, and travel at a walking speed at driveways and intersections when a motor vehicle is approaching. Remember, that motorists are not expecting bicyclists to approach them at driveways or approaches.
- Do not drink alcohol and ride.

Motorists

The main goal in educating motorists is to foster a broad range and general public awareness/respect for bicycling. This is a challenge in Pueblo as the common form of transportation is

by automobile. What would amount to a minor fender bender between two motor vehicles could result in serious injury in a bicyclist/motor vehicle crash.

The regular showing of the locally produced bike safety video series on the community public access channels is reaching a much larger audience than originally intended. Not only are cyclists learning skills, so are motorists viewing the video series learning how to more safely drive near cyclists. More targeted materials for motorists should be developed and provided to driving instructors throughout the community including those for youth and senior citizen drivers. Information and education for motorists on good driving behavior with the primary safety messages as follows:

- Be alert. Watch for other users and sudden behavior changes, especially at intersections.
- Obey all traffic laws. Driving the speed limit and coming to a full stop at red lights creates a safer environment for all.
- Be predictable. Signal your turns well before an intersection. The law requires use of turn signals in advance of intersections and bicyclists depend on turn signals to judge where to be.
- Be patient. Passing bicyclists just before a stop sign or signal creates an atmosphere of unnecessary hostility.
- Do not honk unless necessary. Bicyclists can see and hear motor vehicles; honking may cause unnecessary alarm.
- Give room. Bicyclists have to react to hazards that a motorist may not see (e.g., glass, storm grates, dogs, car doors). Follow and pass at a safe distance.

2.5.7.5 Economy

Various communities in Colorado have captured the economic benefits of bicycling in their community. Now more than ever, Pueblo is beginning to understand the economic benefits of promoting bicycling within the community. Infrastructure, sporting events, recreational biking, bicycling facilities, and a desired way of life lead to a greater promotion and understanding of how the bicycle can complement our City's economic considerations. Pueblo has a unique opportunity to enhance the bicycle culture and appeal to its residents, future residents, employers, and visitors.

Pueblo has not had a cycling club or team in many years. But a local cycling club has been fostered and is forming thanks to efforts by PACE volunteers and the Bike to Work events. A new youth Triathlon club through the YMCA is promoting cycling to local area youth 5-15 years old. Through bike clubs and special-event promotions, visitors come to Pueblo to enjoy our world-class mountain biking, then stay in hotels, shop, and dine out.

Pueblo lies along three (or 4') national bike routes with cyclists passing through Pueblo on their coast-to-coast rides. Pueblo should work with the business community in fostering a more bicycle-friendly atmosphere for these visitors to encourage them to spend an extra day in Pueblo, stay in hotels, shops and dine here to discover the rich historical, architectural and recreational aspects of the city. National programs offering discounts could be implemented by local businesses to display their support for cycling and welcome these visitors.

Pueblo is actively promoted by the Pueblo Economic Development Corporation (PEDCO) as a city in which to relocate or start a business. Many employers and their employees want to live and work in a place where a bicycling culture is prevalent. They want to live in a city where it is possible to bike to work, the store, the library, and to school. There is a growing population of Americans who want to live in a community where they have transportation alternatives with which to enjoy local amenities and services. Pueblo lends itself to this type of bicycle culture and promotes a vibrant lifestyle for both employers and employees.

It is recommended that appropriate city departments, PACE, bike clubs and community organizations, individually and collectively, continue to support and encourage infrastructure development, bicycle sporting events, recreational biking, and bicycle facilities. This does not necessarily mean financial assistance, but is intended to encompass support through coordination efforts, promotion, and education.

The City should continue to embrace and support the local bicycle culture and use it as a tool to attract employers, business, and visitors. The bicycle friendly nature of Pueblo will complement other quality-of-life characteristics such as renewable energy efforts, open space, and recreation.

2.5.8 Funding of the Non-Motorized Transportation System

The Transportation Enhancement Program, funded as part of the Surface Transportation Program by FHWA and administered by CDOT, continues to be a valuable source of revenue to support the construction of new non-motorized facilities including sidewalks and off-street trail systems. The program provides up to 80% of the project costs with the remaining 20% as the local matching share.

2.5.3 Public Participation

Figure 2.26 Classified Bicycle Routes in City of Pueblo

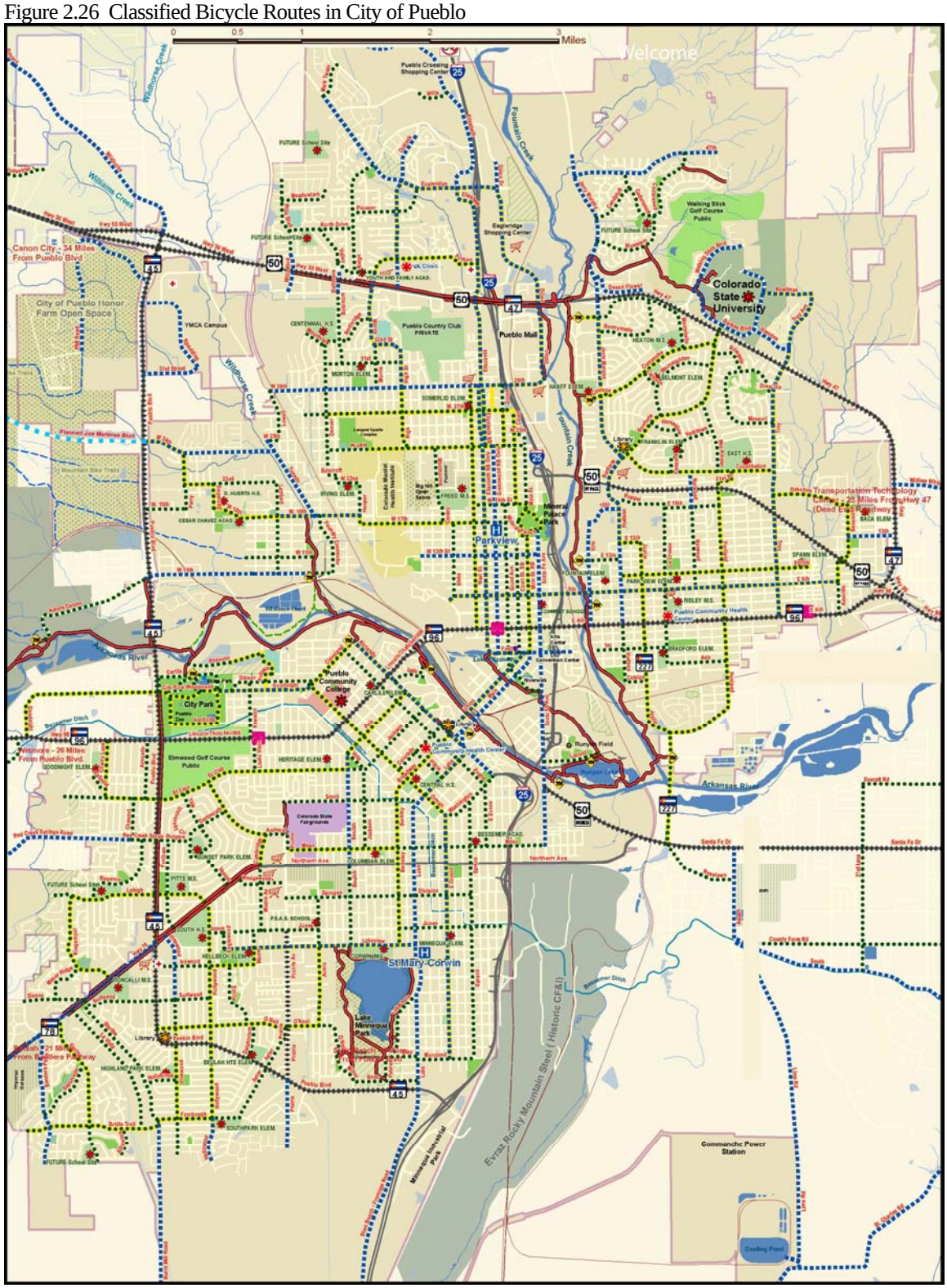
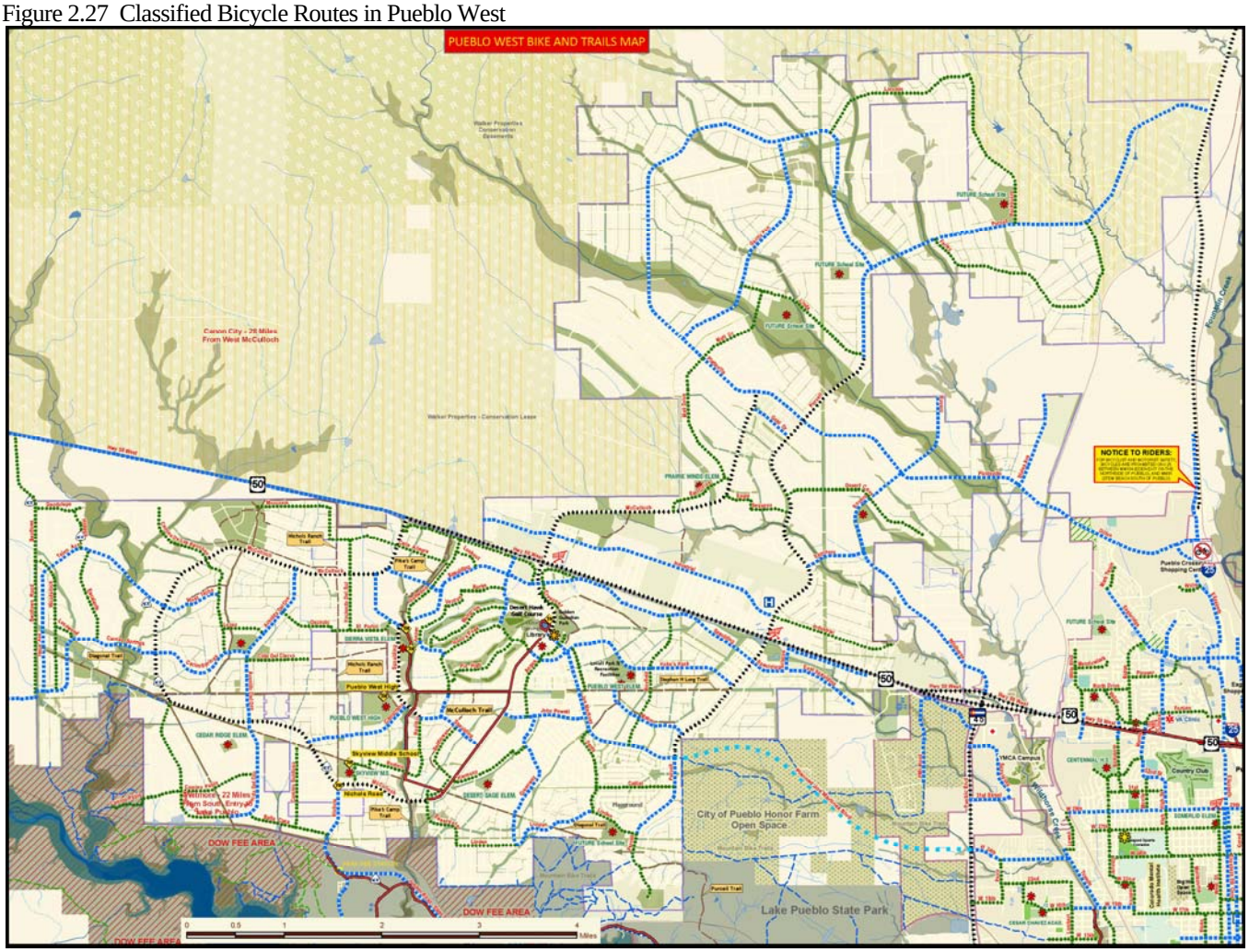


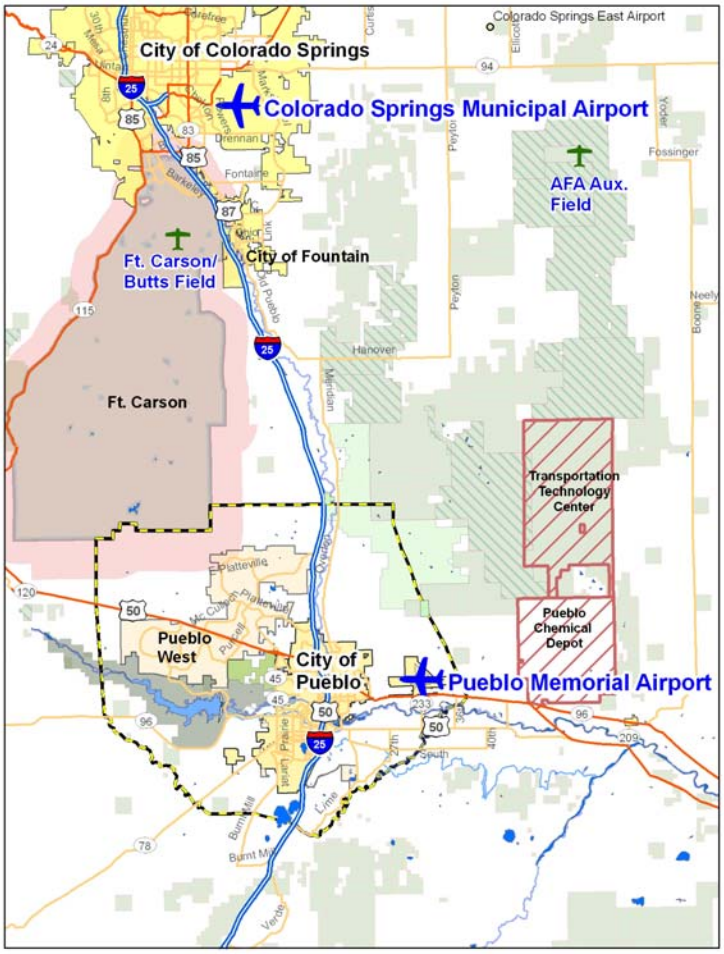
Figure 2.27 Classified Bicycle Routes in Pueblo West



2.6 Aviation

Two airports classified by the CDOT Division of Aeronautics as Commercial Service serve the Pueblo region: Pueblo Memorial and Colorado Springs Municipal (see Figure 2-17 below). The Division also classifies General Aviation airports (non-Commercial Service) as either intermediate or minor. In areas near Pueblo, Fremont County, La Junta Municipal, and Meadow Lake are classified as intermediate. Airports with the classification of minor are: Calhan, Colorado Springs East, and Las Animas City & County airports. There are also three military airfields in the area: Air Force Academy Field, AFA Auxiliary Field (Bullseye), and Fort Carson Butts Field.

Figure 2.28 Airports in the Pueblo Region



The Pueblo Memorial Airport (Airport Code PUB) is one of 17 Commercial Service airports in Colorado and is the only airport in Pueblo County. The airport handles over 90,000 take-offs and landings a year and serves air carriers, air taxis, general

aviation and military aircraft. The Pueblo airport occupies 2,308 acres of land for aeronautical purposes.

The airport is owned and operated by the City of Pueblo and offers aviation services through private companies who lease space from the airport. Some of these aviation services are commercial flights, hangar facilities, flight training, aircraft repair, fueling facilities and a restaurant.

In addition to the airport property, the adjacent Airport Industrial Park consists of approximately 1,476 acres divided into 75 parcels. The City originally held the land for the park and sells or leases parcels to prospective businesses. The industrial park is actively marketed by the Pueblo Economic Development Corporation (PEDCO), with current tenants including the following companies and government agencies:

- Adams Aircraft
- Air Products & Chemicals
- Atlas Pacific Engineering
- Benshaw, Inc.
- BF Goodrich Aerospace
- Chemical Marketing Concepts
- Deneen & Company
- Doane Products
- Flexible Foam Products
- Glenn Company
- Haddonstone
- Hartung Agalite Glass
- Innotrac
- Jones Tones
- Kurt Manufacturing
- Loaf N' Jug
- National Weather Service
- OK Tooling Company
- Trinity Packaging
- Pueblo County Department of Public Works
- Refractories West
- Southeastern Water Conservancy District
- Stonecraft Industries
- Steel, Inc. (McCallin Diversified/Timberline Steel)
- Takeshiba Technologies
- Target Distribution
- TR Toppers
- TRANE

- Triple G Construction
- US Government Printing Office, and
- U.S. Immigration and Customs Enforcement (ICE).

Pueblo Memorial Airport plays an important role in the community, both as a transportation hub and as a center of economic activity. A study by the CDOT Aeronautics Division in 2003 assessed the local economic impact of airports to their communities. According to the study, the airport was directly responsible for 727 jobs with total wages of $19,103,000. The total annual economic activity attributed to the airport, which includes direct, indirect, and induced impacts, totaled $45,683,000. CDOT estimates that the airport brings 1,682 visitors and $486,704 in visitor spending annually to the Pueblo area.

Generally, there are two planning documents utilized by airports. The first is an Airport Master Plan (AMP), which is normally updated every ten years. The second planning document is the Airport Layout Plan (ALP), updated five years after the AMP. The City of Pueblo prepared the *Pueblo Memorial Airport Master Plan* in 1992 to identify long range planning for the airport. ALPs were completed and adopted in 2000 and 2007. The 2007 ALP serves as a basis for this element of the 2035 Plan.

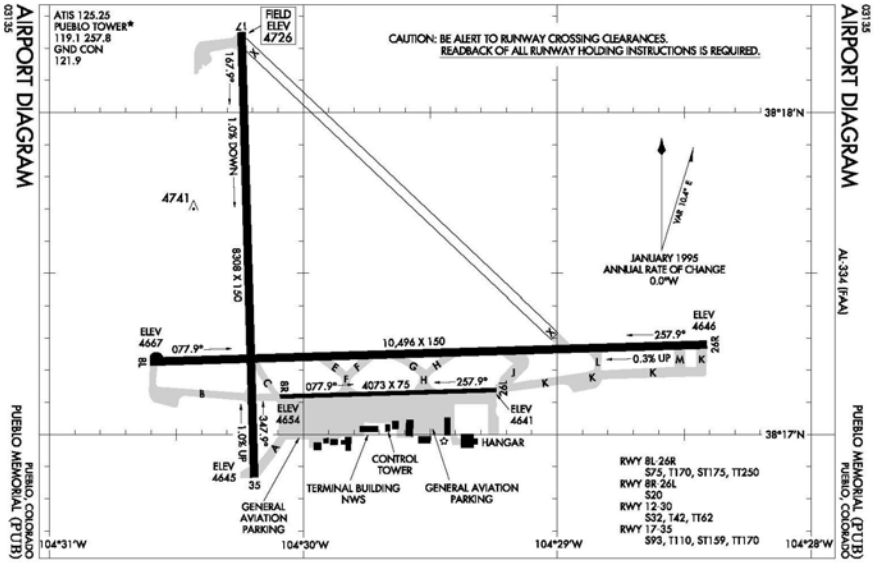
2.6.1 The Airport Layout Plan

2.6.1.1 Airport Location and Access

The Airport is located on the north side of US 50, approximately 7 miles east of I-25. Access to the airport is currently limited to the Paul Harvey Boulevard Interchange with US 50. This access also connects to United Avenue and the USDOT Road that leads to the Army Chemical Depot and USDOT transportation test facility. A second access will become available when the Defense Access Road project is completed along William White Blvd west to SH 47. In the future, Constitution Street may be extended east to create a single full movement intersection with the new access road at SH 47.

The BNSF railroad runs just south of the airport with a spur line serving the industrial park. In 2007, the City spent $115,000 for rail improvements in the Airport Industrial Park. These improvements bring rail service very close to the Airport and specifically to the new Commercial Hanger Development area.

Figure 2.29 Pueblo Memorial Airport Runways



The airport has a tower, terminal building, and three runways. The two main runways run east-west and include a 4,073-foot runway for general aviation aircraft and a longer 10,500 foot runway that can accommodate up to a 747 aircraft. A third runway runs north-south and serves as a crosswind facility. The airport is home to an ASR radar site and has precision approach capabilities on its main east-west runway. Technical details for the runways can be found in the Appendix to this Chapter.

2.6.1.2 Taxiways and Aprons

By using the mid-field apron as a taxiway, the airport has a full-length taxiway for the primary east-west runway (8L/26R) and the secondary (8R/26L). The taxiway is offset from the primary runway by 500 feet at the closest point to 925 feet on the apron taxiway. This separation of 500 feet meets design standards for approach categories C&D group V aircraft. There are ten exit connector taxiways from the primary runway. The north-south runway (17/35) has a taxiway to its south end, but aircraft departing to the south or landing to the north must "back-taxi" on the runway and turn-around at the north end at the Runway 17 threshold where there is a taxiway "stub" to allow aircraft to remain clear of the runway after performing their back-taxi operation. There are also taxi lanes for access the individual hangars located in the hangar areas.

The current apron area consists of the commercial apron in front of the terminal building, a tie-down area west of the terminal primarily used by Flower Aviation for transient aircraft and an apron east of the terminal area near Silver State Aviation that is used by based aircraft, as well as transient aircraft, which includes the U.S. Forest Service, Colorado Department of Corrections and the U.S. Marshal Service.

2.6.1.3 Airport Operations

Pueblo Memorial Airport handles over 90,000 take-offs and landings a year. However, once the new US Air Force Initial Flight Screening school reaches full-scale operations, the overall operations are expected to triple. These operations consist primarily of general aviation and military operations, but include some limited air carrier and air taxi service as well. Current operations are summarized below in Table 2-11 and 2-12 and depicted in Figure 2.20.

Table 2.13 Pueblo Memorial Airport Operations for 2004 and 2006

Annual Aircraft Operations	# Operations*	% of Operations**
Transient General Aviation	32197	34%
Local General Aviation	26755	28%
Air Taxi	5617	6%
Commercial	230	<1%
Military	29376	32%
Average Per Day (all):	258	243
TOTAL Annual Operations:	94,175	

*2004 Operations **2006 Daily Percentages

Table 2.14 Pueblo Memorial Airport Operations (Adjusted for Doss Operations)

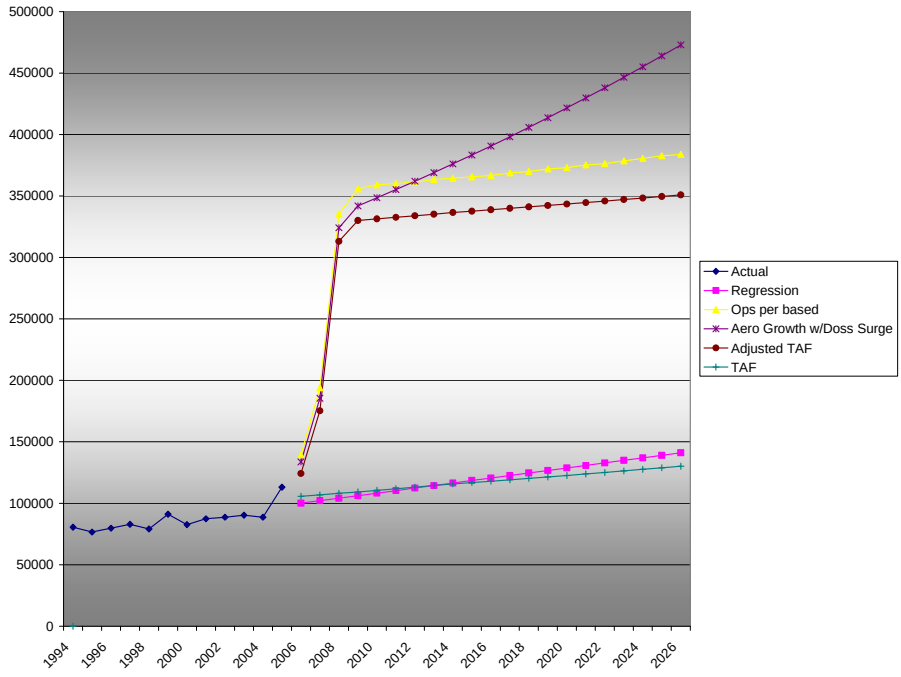
Yellow Highlights Are Estimates and Forecasts

Source: Pueblo Memorial Airport Layout Plan, 2007

Year	Air Carrier	Air Taxi	GA (Itin.)	Mil (Itin.)	GA (local)	Mil (local)	Total
1990	3,521	5,343	29,754	5,681	20,571	14,976	79,846
1991	2,822	8,395	28,682	4,866	18,949	14,095	77,809
1992	762	9,808	24,843	5,737	23,367	19,586	84,103
1993	258	10,675	22,108	5,300	24,377	19,668	82,386
1994	143	9,013	23,639	4,847	25,105	17,806	80,553
1995	248	6,247	23,045	5,045	23,052	18,906	76,543
1996	429	5,895	24,507	5,010	24,229	19,694	79,764
1997	261	6,066	25,683	5,230	26,300	19,349	82,889
1998	302	4,798	29,618	6,248	21,922	16,208	79,096
1999	226	6,278	31,605	5,147	30,150	17,764	91,170
2000	216	4,919	31,698	5,560	25,362	14,856	82,611
2001	354	5,011	31,512	6,563	25,570	18,421	87,431
2002	358	4,955	33,541	7,252	25,830	16,704	88,640
2003	209	4,977	31,365	8,903	23,856	21,021	90,331
2004	299	5,669	29,808	8,081	24,870	19,988	88,715
2005	239	5,194	30,719	7,689	52,137	17,079	113,057
2006	245	5,334	31,333	7,743	71,800	17,199	133,654
2007	252	5,478	31,960	7,797	122,643	17,319	185,450
2008	259	5,626	32,599	7,852	260,328	17,440	324,104
2009	266	5,778	33,251	7,907	277,215	17,562	341,979
2010	273	5,934	33,916	7,962	282,759	17,685	348,530
2011	280	6,094	34,595	8,018	288,414	17,809	355,210
2012	288	6,259	35,286	8,074	294,183	17,934	362,023
2013	296	6,428	35,992	8,130	300,066	18,059	368,971
2014	304	6,601	36,712	8,187	306,068	18,186	376,058
2015	312	6,780	37,446	8,245	312,189	18,313	383,284
2016	320	6,963	38,195	8,302	318,433	18,441	390,65

							4
2017	329	7,151	38,959	8,360	324,801	18,570	398,171
2018	338	7,344	39,738	8,419	331,297	18,700	405,836
2019	347	7,542	40,533	8,478	337,923	18,831	413,654
2020	356	7,746	41,344	8,537	344,682	18,963	421,628
2021	366	7,955	42,171	8,597	351,575	19,096	429,759
2022	376	8,170	43,014	8,657	358,607	19,229	438,053
2023	386	8,390	43,874	8,718	365,779	19,364	446,511
2024	396	8,617	44,752	8,779	373,095	19,499	455,138
2025	407	8,849	45,647	8,840	380,556	19,636	463,936
2026	418	9,088	46,560	8,902	388,168	19,773	472,909
Growth Rates '08 – '26	**2.70%**	**2.70%**	**2.00%**	**0.70%**	**2.00%**	**0.70%**	**2.12%**

Figure 2.30 Airport Operations
(1994 - 2005 Actual, 2006 –2026 Forecast)



2.6.1.4 Air Carrier & Air Taxi Services

Pueblo lost the majority of its air carrier service in 1991, precipitating a general decline in passenger service that has held steady at less than 10 percent of 1990 levels. In 2007, a single-carrier offers two scheduled flights a day to Denver. This service is maintained by federal Essential Air Service (EAS) funds that are awarded to airlines to sustain passenger service into small urban communities. There have been recent changes to schedules for travel for normal business hours and increased advertising programs to encourage people in the Pueblo region to utilize the commercial air service from the Pueblo Memorial Airport. The airport maintains air taxi/charter services that fly once or twice a month, primarily to out-of-state vacation destinations, and a charter service offers flights to gaming destinations. Additional information is shown in the Appendix to this Chapter.

2.6.1.5 General Aviation

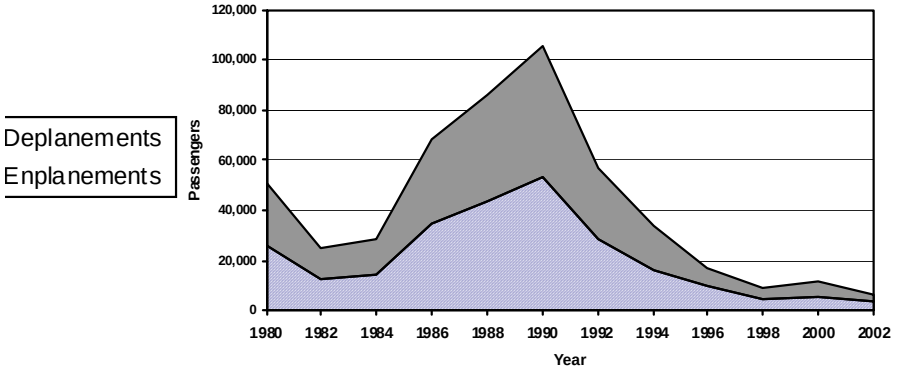
The majority of operations at the airport are General Aviation aircraft. Commercial operations available at the airport include charter services, air ambulance services, helicopter flight training, parking, vehicle rentals, and a full service restaurant. The City of Pueblo Fire Department has a facility at the airport for fire operations.

At present, as shown in Table 2.13, the Pueblo airport is home to nearly 100 aircraft housed in both commercial and private hangars. Fixed-base aviation services such as hangar services, maintenance and repair facilities, fueling stations, aircraft rental, and flight instruction are run by six private companies which lease land or space from the airport and pay user fees for the leases. The user fees are typically assessed at 1% of total revenue received from services rendered.

Table 2.15 Pueblo Based Aircraft

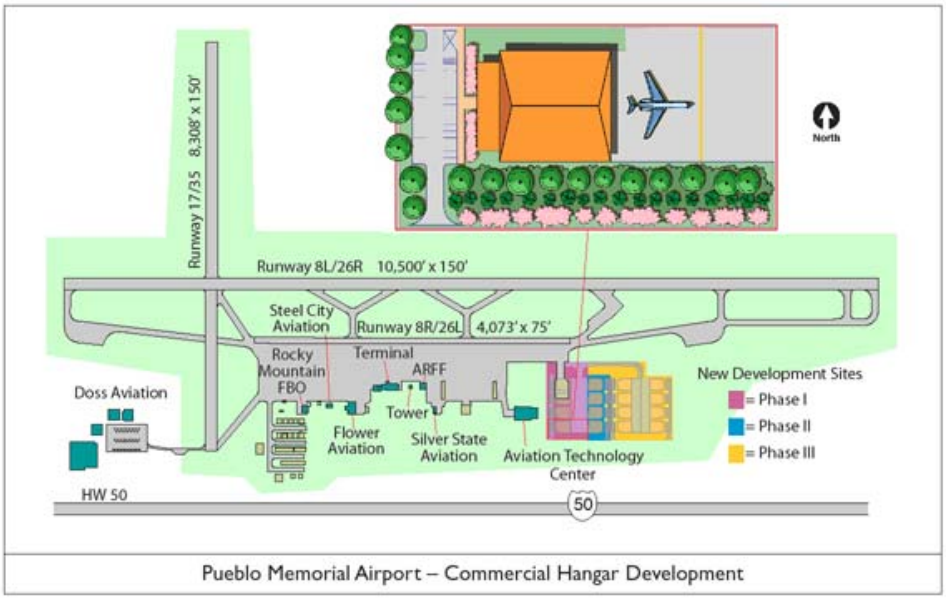
Year	Single Engine	Multi Engine	Jet	Helicopters	Gliders	Military	Ultra Light	Total
1995	50	11	0	0	0	0	0	61
1996	44	7	1	0	0	0	0	52
1997	44	8	1	0	0	0	0	53
1998	42	8	3	1	1	0	0	55
1999	44	7	3	1	1	0	0	56
2000	42	8	3	1	1	0	0	55
2001	47	8	4	0	1	0	0	60
2002	47	8	4	0	1	0	0	60
2003	51	8	2	0	1	0	0	62
2004	54	9	6	4	1	0	0	74
2005	57	10	6	5	1	0	0	79
2006*	71	13	6	6	1	0	0	97

Figure 2.31 Historical Air Passenger Service, 1980 - 2002



2.6.2 Commercial Hangar Development

Pueblo Memorial Airport has completed development of a new commercial hangar and 16 custom sites to be built out in three phases. Phase 1 development includes new ramp space and taxi-lanes as well as all utilities for the first 150 X 150 foot hangar with almost 4000 sq ft of office space. This shell hangar is ready for immediate occupancy. With 40 acres available for this development and ample expansion opportunities beyond, Pueblo Airport is able to offer tenants custom design for their commercial facilities. The general layout of these new and proposed facilities is shown below.



Pueblo Memorial Airport – Commercial Hangar Development

2.6.3 Military Aviation

The US Air Force and the Colorado Air National Guard use Pueblo Memorial for touch-and-go practice operations, night landing training, and other training purposes. These operations have minimal disruption to airport operations, but do cause wear on the runway surfaces. The military does not currently pay landing fees or user fees for the use of the airport, but consideration has been given to some support for fire operations at the facility.

In 2007, the US Air Force opened an Initial Flight Screening Program to prepare potential flyers for military aviation. This concession is operated by DOSS Aviation out of a 200,000 square foot facility adjacent to the Airport. Eventually, the facility will train up to 1,700 potential military fliers annually during the 40-day program, which includes 25 hours of flight time in basic aviation trainer aircraft. Once in full operation, the facility will provide the sole source of flight screening for all Reserve Officer Training Corps and Officer Training School aviation candidates.

If Pueblo Memorial Airport were utilized by military transport activities, additional security would be provided by the U.S. Army Arrival/Departure Airfield Control Group.

2.6.4 Air Freight

Air-based freight service out of Pueblo has declined along with the reduction in scheduled passenger service. The only present all-cargo operation at Pueblo Memorial is UPS (Key Lime Air) with five operations per week on SA-226 and SA-227 aircraft. Approximately 95% of total cargo volume is express documents/parcels and 5% is belly cargo or mail. Table 2.21 below presents historical air cargo activity volume at the airport, in pounds. (The following tables and text from the 2006 Airport Layout Plan Narrative Report.)

Table 2.16 Annual Cargo (Pounds)

Year	Inbound Pounds	Outbound Pounds	Total Pounds	Comments
1999	905	5,387	6,292	Passenger Flights Only
2000	626	3,702	4,328	Passenger Flights Only
2001	15,356	11,999	27,355	Passenger and UPS Service
2002	85,953	41,385	127,338	Passenger and UPS Service
2003	424,516	192,655	617,171	Passenger and UPS Service
2004	384,293	384,330	768,623	Passenger and UPS Service
2005	237,734	224,227	461,963	UPS Service Only

Source: Airport Records

Due to inconsistencies in the type of cargo carrier, it is difficult to project future

cargo levels from the historical data. According to Air Cargo World magazine, independent forecasts show that intra-North America air cargo is forecasted to increase at an average of 2.1 percent per year between 2004 and 2009. Since this forecast is for all air cargo activity, including cargo carried between major cities, it is assumed that the cargo growth at Pueblo Memorial will be more conservative and will more likely follow the population growth projections, which represents a 1.3% annual growth. The corresponding total cargo volume is shown below in Table 2.15.

Table 2.17 Forecast Annual Cargo (Total Pounds)

2005	461,963
2006	467,969
2007	474,052
2008	480,215
2009	486,458
2010	492,782
2011	499,188
2012	505,677
2013	512,251
2014	518,910
2015	525,656
2016	532,490
2017	539,412
2018	546,424
2019	553,528
2020	560,724
2021	568,013
2022	575,397
2023	582,877
2024	590,455
2025	598,131
2026	605,906

Due to the location of the airport on major highways and rail networks, it would be an ideal location for an intermodal cargo facility. *(Emphasis added for this 2035 Plan.)* If a cargo carrier could see the benefits of opening a sorting operation at Pueblo Memorial Airport, the amount of cargo traveling through the airport would change dramatically. This type of operation has not been considered in the forecasts, but if in the future the airport is able to attract this type of operation, the air cargo forecasts should be modified to account for the new activity.

2.6.5 Operating Revenue

Revenue for airport operations is obtained through three sources. User-fees comprise approximately 56 percent of revenue and consist of per-passenger fees for air carriers, ground lease fees for hangar facilities, commissions on commercial aviation activities, and fuel flowage fees. Local funding includes approximately $800,000 annually out of the City's general fund and $150,000 in Federal operating funds.

2.6.6 Aviation Needs

Table 2.16 below shows projected capital improvement and airport planning needs for the Pueblo Memorial Airport over a 20-year time frame. Each project includes projected timeframe and cost estimates. Total capital needs for the 20-year planning horizon are $59,473,463.

The Capital Improvement Plan for the Airport was adopted in June 2006 and identifies projects over a 6-year time frame. The plan focuses primarily on pavement rehabilitation and scheduled replacement. Additional projects listed under the National Plan of Integrated Airport Systems (2007-2011) bring a total development cost of $13,435,585.

Table 2.18 Pueblo Memorial Airport Capital Needs 2007-2025

Prominent Projects (Not all)	Year	FAA/CDOT/ Local Funding
R/W 17/35 Parallel Taxiway-Phase 1 & Helicopter Training A	2007	$3,259,515
Runway 8L/26R Rehabilitation	2008	8,978,948
Training Runway; R/W 17/35 Parallel Taxiway – Phase 2	2009	8,340,000
Ramp Edge T/W Realignment/Reconstruction; Taxiway J Realignment	2010	7,280,000
R/W 17/35 Parallel Taxiway – Phase 3; Airport Master Plan	2011	5,200,000
Runway 17/35 Rehabilitation; Terminal Development	2012	5,710,000
Ramp Rehabilitation – Phase 3	2013	4,625,000
Perimeter Fence	2014	2,250,000
GA & Commercial Hangar Area Seal Coat	2015	80,000
Update Airport Master Plan	2016	200,000
Runway 26 MASLR/Runway 17/35 & Taxiway Seal Coat	2017	900,000
Runway 8L/26R & Taxiway Seal Coat	2018	450,000
Ramp Seal Coat	2019	275,000
Commercial Hangar Development – Phase 3	2020	2,325,000
Airport Master Plan	2021	300,000
Runway 17/35 & Taxiway Seal Coat	2022	400,000
Runway 8L26R & Taxiway Rehabilitation; Ramp Seal Coat	2023	5,575,000
	2024	0
Runway 17/35 & Taxiway Rehabilitation; GA & Commercial Hangar Area Seal Coat	2025	3,525,000
Total Funding Need		**$59,473,463**

Airport Layout Plan Narrative Report, *Pueblo Memorial Airport* SEH No. A-Pueblo 0503.00. February, 2007.
source: CDOT Aeronautics Division

Table 2.19 City of Pueblo Airport Capital Improvement Program

Year	Project	Total Cost
2007	**T/way and R/way safety areas**	**157,894.00**
	Pavement maintenance	**Cost estimates pending**
2008	**Rehab R/way 26R**	**368,420.00**
	Ramp Rehab - Phase 1	**67,106.00**
2009	**GA Taxilane**	**18,750.00**
2010	**Ramp rehab**	**90,000.00**