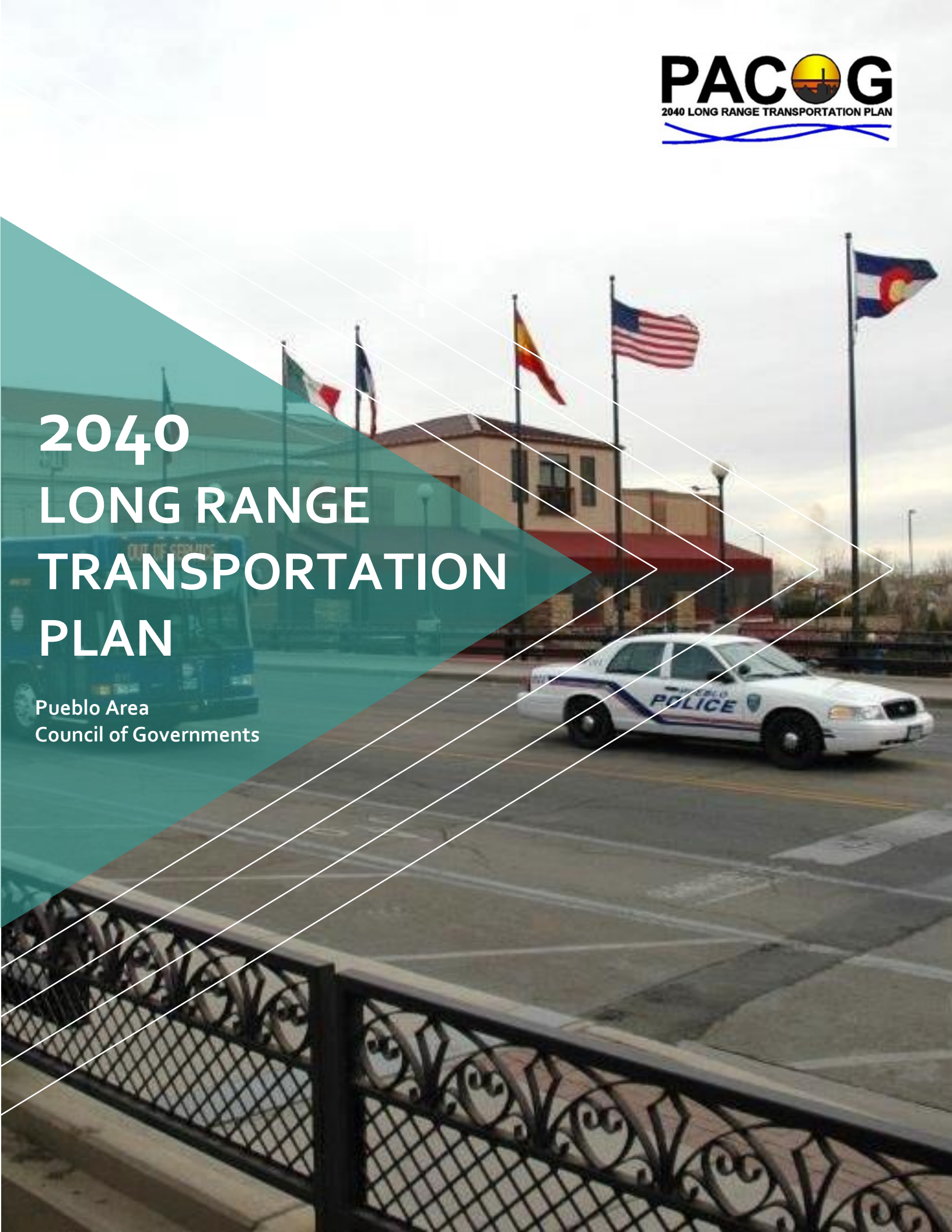


2040 LONG RANGE TRANSPORTATION PLAN

Pueblo Area
Council of Governments



BACK OF COVER

2040

LONG RANGE TRANSPORTATION PLAN

Pueblo Area Council of Governments

1.0 Overview	1
1.1 Introduction	1
1.2 MAP-21 Guidelines	2
1.2.1 MAP-21 Federal Guidelines	2
1.2.2 MAP-21 and the PACOG MPO	4
1.2.3 PACOG's Role in the Regional Transportation Plan Process	5
1.3 PACOG 2040 Regional Transportation Plan Goals	2
1.3.1 Planning Category #1: Safety	6
1.3.2 Planning Category #2: Infrastructure Condition	7
1.3.3 Planning Category #3: Congestion Relief	8
1.3.4 Planning Category #4: Freight Movement & Economic Vitality	10
1.3.5 Planning Category #5: System Reliability	11
1.3.6 Planning Category #6: Environmental Sustainability	11
1.3.7 Planning Category #7: Reduce Project Delivery Delays	12
1.3.8 Planning Category #8: Support Multi-Modal Transportation	13
1.4 Organization of this Document	14
2.0 Existing Transportation System	19
2.1 Roadway Element	19
2.1.1 Use of Roadways	19
2.1.2 Functional Classifications of Roadways	22
2.1.3 Scenic Byways	24
2.1.4 Commercial Vehicle Routes	26
2.1.5 Hazardous Materials Routes	26
2.1.6 Nuclear Materials Route	26
2.1.7 Pavement & Bridge Condition	29
2.2 Transit Element	32
2.2.1 City of Pueblo Bus System	32
2.2.2 Citi-Lift Program (ADA Services)	34
2.2.3 Amtrak Service	35
2.2.4 Rocky Mountain Rail Authority and High Speed Rail Corridor	36
2.2.5 Light Rail / Trolley	38
2.3 Non-Motorized Element	38
2.3.1 Introduction	38

2.3.3 Bicycle Mode	40
2.3.4 Non-Motorized Outreach	42
2.4 Aviation	44
2.5 Summary	44
3.0 Socioeconomic Profile	45
3.1 Regional Profile	45
3.1.1 Population	45
3.1.2 Housing	45
3.1.3 Income	45
3.1.4 Employment	51
3.1.5 The Communities of Pueblo County	52
3.1.6 Density of Population and Employment	55
3.2 Environmental Justice	52
3.2.1 Low-Income Population	52
3.2.2 Minority Status	54
3.2.3 Disabled Population and Households with No Vehicle	55
4.0 Environmental Profile	69
4.1 Introduction	69
4.2 Regulatory Framework for Environmental Considerations	69
4.2.1 The National Historic Preservation Act (1966)	69
4.2.2 The National Environmental Policy Act (NEPA, 1969)	70
4.2.3 The Clean Air Act (1970)	70
4.2.4 The Clean Water Act (1972)	70
4.2.5 The Endangered Species Act (1973)	70
4.2.6 The Emergency Wetlands Resources Act (1986)	71
4.2.7 Linking Planning and NEPA	71
4.2.8 Natural Resource Management Plans	71
4.3 Approach to Environmental Planning	71
4.3.1 Regional Overview	71
4.3.2 The PACOG “Corridor Vision” Strategy	72
4.4 Transportation & Land Use Planning	75
4.4.1 Overview	75
4.4.2 Framework for Land Use/Transportation Planning	76
4.4.3 Roadmap for the Future	78
4.5 Summary	79
5.0 Transportation Safety and Security	81
5.1 Safety and Security in the Context of the Long Range Plan	81
5.1.1 Introduction	81
5.1.2 Outline of this Section	81
5.2 Transportation System Safety	81
5.2.1 Introduction	81
5.2.2 Federal Guidance	82
5.2.3 Colorado Transportation Safety Statistics	82
5.2.4 Safety Statistics in the Pueblo Region	83
5.2.5 Summary	88
5.3 Security	88
5.3.1 Security Goals – National	89
5.3.2 Security Goals – State of Colorado	89
5.3.3 PACOG’s Role in Security and Emergency Management	91
5.3.4 PACOG’s Policy Goals for Security	91
5.3.5 Key PACOG Transportation Assets	92

5.3.6 Freight Security	92
5.3.7 Recommended Future Activities for PACOG	94
6.0 Mobility and Alternatives Analysis	95
6.1 Forecasting Methodologies	95
6.2 Roadway Analysis Approach	95
6.2.1 Roadway Capacity	96
6.3 Existing Roadway Congestion	97
6.4 Future Roadway Congestion	99
6.4.1 Future “No Build” Roadway Congestion	99
6.4.2 Future Vision (Preferred) Plan Roadway Congestion	100
6.4.3 Future Fiscally Constrained Plan Roadway Congestion	101
6.4.4 Future Congestion Summary of Findings	102
6.5 Addressing Roadway Congestion	103
6.6 Roadway Alternatives	103
6.6.1 Interstate-25	103
6.6.2 U.S. Highway 50	103
6.6.3 State Highway 96	104
6.6.4 State Highway 45	104
6.6.5 State Highway 47	104
6.6.6 Summary of Roadway Alternatives	104
7.0 Vision Plan	107
8.0 Fiscally Constrained Plan	113
9.0 Congestion Management Process	119
9.1 Introduction	119
9.2 Background on Congestion Management	119
9.2.1 Definition	119
9.2.2 Interface with NEPA, the Metropolitan Transportation Plan and the TIP	119
9.2.3 Objectives for Operations	120
9.2.4 Congestion Management Process	120
9.3 Definition of Congestion	121
9.3.1 Levels of Service (Road Capacity)	121
9.3.2 Levels of Service (Intersection)	122
9.4 CMP Goals and Strategies	124
9.4.1 CMP Data Collection	124
9.4.2 Strategies and Solutions	126
9.5 PACOG Congestion Management Program	127
9.5.1 CMP Data Collection	129
9.5.2 CMP Corridor Plan	131
9.6 Summary	135
10.0 Freight and Commodity Flows	137
10.1 Freight in the Context of the Long Range Plan	137
10.1.1 Federal Guidance	137
10.1.2 Colorado Department of Transportation (CDOT) Goals for Freight Planning	138
10.1.3 PACOG Goals for Freight Planning	138
10.2 Freight Modal Profile	139
10.2.1 State Profile	139
10.2.2 Existing Conditions – Truck Freight in Pueblo County	139
10.2.3 Pueblo County – Rail Freight Existing Conditions	139

10.2.4 Pueblo County – Air Freight Existing Conditions	139
10.3 Commodity Flows by Freight Mode	139
10.3.1 Data Sources	139
10.3.2 National Freight Commodity Flows	139
10.3.3 State of Colorado Freight Commodity Flows	139
10.3.4 Pueblo County Trends	139
10.4 Freight Needs	140
10.4.1 Freight Needs – Truck	140
10.4.2 Freight Needs – Rail	140
10.4.3 Rail Corridor Preservation	140
10.5 Summary	141
11.0 Financial Plan	153
11.1 Introduction	153
11.2 Requirements for a Financial Plan	154
11.3 Regional Transportation Investments	154
11.4 Transportation Finance and Funding	153
11.5 2040 Transportation Revenue Forecasts	153
11.6 Future Transit Funding	153
11.7 Revenue Projections	153
11.8 Summary	Error! Bookmark not defined.
12.0 Implementation Plan	155
12.1 Introduction	155
12.2 The 10–Year CIP and Transportation Improvement Program (TIP)	155
12.3 State/Federally Funded Projects	155
12.4 Locally Funded Projects	155
12.5 Developer Driven Projects	155

List of Figures

- Figure 1.1: PACOG Planning Area
- Figure 1.2: PACOG Regional Transportation Planning Process
- Figure 2.1: Mode Share by Year (2009 – 2013)
- Figure 2.2: Pueblo County Commuter Flows
- Figure 2.3: Roadways by Functional Classification
- Figure 2.4: Frontier Pathways National Scenic and Historic Byway
- Figure 2.5: Hazardous Materials Routes in Pueblo County
- Figure 2.6: Nuclear Waste Routes in Pueblo County
- Figure 2.7: Pueblo State Highways by Primary Drivability Life Class
- Figure 2.8: Pueblo Transit System Route Map
- Figure 2.9: Amtrak Passenger Rail Service near Pueblo in 2015
- Figure 2.10: Front Range Commuter Rail South Risk Analysis Routes
- Figure 2.11: Pueblo Bicycle and Trails Map
- Figure 3.1: Pueblo County Age Distribution
- Figure 3.2: Housing Growth Trends
- Figure 3.3: Home Ownership
- Figure 3.4: Median Home Value
- Figure 3.5: Median Household Income of Select Colorado Metro Areas
- Figure 3.6: Families below Poverty Level
- Figure 3.7: Job Growth (Percent Increase Over Prior Year)
- Figure 3.8: Comparative Unemployment Rate Trends
- Figure 3.9: Pueblo County Communities Summary Demographics
- Figure 3.10: Communities in Pueblo County
- Figure 3.11: Population Density (2010 Population per Acre)
- Figure 3.12: Population Density (2040 Population per Acre)
- Figure 3.13: Employees per Acre, 2010
- Figure 3.14: Employees per Acre, 2040
- Figure 3.15: Low-Moderate Income Block Groups
- Figure 3.16: Minority Population Block Groups
- Figure 3.17: Percent Disabled Aged 16-64 Years by Block Groups
- Figure 3.18: Percent with No Vehicle Available by Block Groups
- Figure 3.19: Census Block Groups Meeting EJ Criteria

List of Tables

Table 1.1: PACOG Goals Outline	
Table 1.2: PACOG Performance Measures – Final Targets	
Table 2.1: 5-Year Commute Mode Share	
Table 2.2: Commute Patterns in Pueblo County, 2011	
Table 2.3: State Highway Centerline Miles and Conditions in Pueblo County	
Table 2.4: Bridge Conditions for CDOT Facilities in Pueblo County	
Table 2.5: Bridge Conditions in Pueblo County	
Table 2.6: Pueblo Transit System Route Profiles	
Table 2.7: Pueblo Transit System Ridership 2013 and 2014	
Table 2.8: Pueblo Transit Fixed Route Fleet Roster: 2014	
Table 2.9: Pueblo Transit System Fares 2015	
Table 2.10 Sidewalks Installed 2009-2013	
Table 2.11 Curb Ramp Installs 1993–2013	
Table 3.1: Pueblo Area Population Trends 1970 – 2040	
Table 3.2: Population by Race and Hispanic Origin	
Table 3.3: Place of Work for Pueblo Residents (2000 and 2010)	

Appendixes

Appendix A. Strategic Action Plan	A-1
Appendix B. Public Involvement	B-1
Appendix C. Demographic Forecast Methodology	C-1
Appendix D. Coordinated Human Services Transportation Plan	D-1

LIST OF ACRONYMS

List of Acronyms

AADT	Average Annual Daily Traffic
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
ADA	Americans with Disabilities Act
AIP	Airport Industrial Park
BNSF	Burlington Northern Santa Fe
BPR	Bureau of Public Roads
BTS	Bureau of Transportation Statistics
CAAA	Clean Air Act Amendments
CAC	Citizens Advisory Committee
CBD	Central Business District
CDBG	Community Development Block Grant
CDOH	Colorado Department of Highways
CDOT	Colorado Department of Transportation
CNG	Compressed Natural Gas
DRT	Division of Transit & Rail
EDC	Every Day Counts
EIS	Environmental Impact Statement
EJ	Environmental Justice
FAA	Federal Aviation Administration
FASTER	Funding Advancement for Surface Transportation and Economic Recovery
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FREX	Front Range Express Bus
FTA	Federal Transit Administration
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIS	Geographic Information System
HARP	Historic Arkansas River Project
HCM	Highway Capacity Manual
HHTS	Household Travel Survey
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation Systems
LNG	Liquefied Natural Gas
LODES	Longitudinal Employer-Household Dynamics
LOS	Level of Service
L RTP	Long Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBP	Best Management Practices
MPO	Metropolitan Planning Organization
NAFTA	North American Free Trade Agreement
NEPA	National Environmental Policy Act
NGV	Natural Gas Vehicles
NHS	National Highway System

LIST OF ACRONYMS

OTIS	Online Traffic Information System
PACE	Pueblo Active Community Environments
PACOG	Pueblo Area Council of Governments
PDLC	Primary Drivability Life Class
PDO	Property Damage Only
PEDCO	Pueblo Economic Development Corporation
PEL	Planning and Environmental Linkages
RMRA	Rocky Mountain Rail Authority
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act
SH	State Highway
SOV	Single Occupancy Vehicle
SRDA	Senior Resource Development Agency
STIP	Statewide Transportation Improvement Program
SWP	Statewide Transportation Plan
TAC	Transportation Advisory Commission
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Plan
TNM&O	Texas, New Mexico and Oklahoma
TPR	Transportation Planning Region
TSM	Transportation System Management
TTC	Transportation Technical Committee
TTCI	Transportation Technology Center, Inc.
UP	Union Pacific
USDOT	United States Department of Transportation
UTPD	Urban Transportation Planning Division