NFRMPO
NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

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NFRMPO TECHNICAL ADVISORY COMMITTEE MEETING AGENDA

June 17, 2015
Windsor Community Recreation Center
250 N. 11th Street—Pine Room
Windsor, Colorado

1:00 to 4:00 p.m.

1. Public Comment
2. Approval of May 20, 2015 Meeting Minutes (Pg. 2)
3. Approval of May 27, 2015 Work Session Meeting Notes (Pg. 8)

CONSENT AGENDA:

No Items this Month.

ACTION ITEM:

4. FY 2016 UPWP Tasks Recommendation to Council (Pg. 11) — Blackmore

OUTSIDE PARTNERS REPORTS *(verbal)*:

5. NoCo Bike Ped Collaborative
6. Regional Transit Items
7. Senior Transportation

PRESENTATION:

8. CDOT NAVIGATE Presentation — Cathy Cole

DISCUSSION ITEMS:

9. 2015 Congestion Management Plan (Pg. 13) — Buckley
10. 2040 Regional Transit Element (Pg. 59) — Karasko
11. 2040 Regional Transportation Plan: (Pg. 194)
    Chapter 1: Introduction (Pg. 196)
    Chapter 12: Implementation (Pg. 211) — Karasko
12. Additional CMAQ Funding Allocation (Pg. 235) — Johnson

REPORTS:

Public Outreach — Gordon
TIP Administrative Modification Updates — Johnson
Roundtable — All

MEETING WRAP-UP:

Final Public Comment *(2 minutes each)*
Next Month's Agenda Topic Suggestions

TAC MEMBERS: If you are unable to attend this meeting, please contact Becky Karasko at (970) 416-2257 or RKarasko@nfrmpo.org. Thank you.

May 2015 TAC Meeting Minutes

MEETING MINUTES of the
TECHNICAL ADVISORY COMMITTEE (TAC)

North Front Range Transportation and Air Quality Planning Council
Windsor Recreation Center - Pine Room
250 North 11th Street
Windsor, CO

May 20, 2015
1:07– 4:18 p.m.

TAC MEMBERS PRESENT:
Dawn Anderson – Evans
Amanda Brimmer – RAQC
Stephanie Brothers – Berthoud
Eric Bracke, Chair – Greeley
Marissa Gaughan – CDOT Alternate
Seth Hyberger – Milliken
Will Jones – GET
David Klockeman – Loveland
Janet Lundquist – Weld County
Suzette Mallette, Vice-Chair – Larimer County
Kurt Ravenschlag – Transfort
Martina Wilkinson – Fort Collins

NFRMPO STAFF:
Terri Blackmore
Aaron Buckley
Alex Gordon
Angela Horn
Josh Johnson
Becky Karasko

TAC MEMBERS ABSENT:
Gary Carsten – Eaton
Aaron Bustow – FHWA
Jim DiLeo – CDPHE
John Franklin – Johnstown
Eric Fuhrman – Timnath
John Holdren – Severance
Jessica McKeown – LaSalle
Gary Thomas – SAINT
Dennis Wagner – Windsor

IN ATTENDANCE:
Andre Compton, FHWA
Jeffrey Boring, NoCo Bike & Ped Collaborative
Crystal Hedberg, NFRMPO
Merideth Kimsey, NFRMPO
Katrina Kloberdanz, CDOT
Steve Markovetz, CDOT
Jeff Purdy, FHWA
Jake Schuch, CDOT
Kathy Seelhoff, CDOT

CALL TO ORDER:

Chair Bracke called the meeting to order at 1:07 p.m.

PUBLIC COMMENT:

There was no public comment.

APPROVAL OF THE APRIL 15, 2015 TAC MINUTES:

Mallette made a motion to approve the April 15, 2015 TAC minutes. Hyberger seconded the motion and it passed unanimously.

CONSENT AGENDA:

There were no consent items this month.

ACTION ITEMS:

2040 Regional Transit Element Chapters 3-7 and Appendices B-C **Karasko**

Karasko discussed updates to Chapters 3-7 of the 2040 Regional Transit Element (RTE). Jones stated he would like to see the completed document before taking action, Ravenschlag supported this. Blackmore stated MPO staff is requesting preliminary approval of individual chapters and TAC will have the chance to approve the complete document. Wilkinson motioned to move forward with continued work on Chapters 3-7 and Appendices B & C with the general approach taken at the meeting. Mallette seconded the motion and it was approved unanimously.

OUTSIDE PARTNERS REPORTS (verbal):

NoCo Bike & Ped Collaborative – Boring reported the NoCo Bike & Ped Collaborative is continuing to plan for their conference in November. He also presented *Ride* magazine which featured local staff members discussing the collaboration on bicycle and pedestrian issues in the region and their work with TAC on the FY2016-2019 Call for Projects.

Regional Transit Items – Jones stated GET ridership has increased 313 percent among those eligible for the Ride Free with ID program. The program provided 47,000 rides during the 2014-2015 school year. The program will continue through the summer and will begin a marketing program.

Ravenschlag reported Fort Collins is studying West Elizabeth Street as the city's next enhanced travel corridor. Bracke requested an update about the Harmony Corridor study. Ravenschlag reported Transfort completed the study, but is awaiting funding for implementation. Bracke requested Transfort make a presentation to TAC about the West Elizabeth Street Enhanced Travel Corridor study at a future meeting.

Senior Transportation – There was no update.

PRESENTATIONS:

Super Circular Presentation **Compton/Markovetz**

Compton and Markovetz presented information about the new federal Super Circular, effective December 26, 2014. The Super Circular impacts all projects funded with federal grants by requiring end dates for each phase of a project. Mallette asked about project extensions. Compton responded extensions may be granted under certain circumstances. Markovetz stated CDOT will work with local agencies 90 days to six months ahead of the end date to ensure projects can be completed before the target end date. After the end date, local agencies have 90 days to submit all financial, performance, and other reports as required by the terms and conditions of the federal award.

Poudre River Trail Update **Boring**

Boring presented an update on trail construction and issues related to the Poudre River Trail. With the exception of a missing a connection between SH 392 and Harmony Road, the trail is complete through Larimer and Weld counties. Boring discussed possible ways to cross I-25 to connect the two trail segments. Klockeman asked if the trail planners are involved in the I-25 project coordination meetings, which are currently designing the segment of highway.

DISCUSSION ITEMS:

2040 Regional Transit Element Recommendation **Karasko**

Karasko presented the 2040 RTE Recommendation. Karasko stated NFRMPO staff and the three regional transit agencies met on April 30, 2015 to discuss the 2040 RTE Recommendation. She reported the recommendation will focus on connections between cities rather than on specific corridors. Doing so allows for further study of connections without locking in a specific route.

Ravenschlag stated he is uncomfortable with the specificity of the MAX recommendations. Jones suggested changing the recommendation to “transit investment in the US 287 Corridor” rather than listing MAX and FLEX separately. Blackmore stated Planning Council did not have any issues with the presented recommendations.

Lundquist suggested changing “actions” to “recommendations” or “possible actions”. Wilkinson suggested “potential improvements”. TAC requested the proposed recommendation be presented to Planning Council at their June meeting, prior to TAC making a final recommendation on the 2040 RTE. Blackmore stated MPO staff will present at the next Planning Council meeting and the transit agencies agreed to be in attendance to answer questions.

2040 Regional Transportation Plan Chapter 4 and 7 **Karasko/Horn**

Karasko presented the updates to Chapters 4 and 7 of the 2040 Regional Transportation Plan. Mallette asked for clarification whether Figure 7-1 includes the area outside of the MPO boundary. Horn stated she will provide clarification in the chapter. Mallette asked if there were any congested segments for the travel time index (TTI) chart. Blackmore stated TTI is calculated using free flow speed, but will be based on speed limits in the future. Horn noted Greenhouse Gas Emissions used a base year of 2015 because it was the first input year the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE) had in the emissions model.

Klockeman stated Tables 4-4, 4-6, and 4-8 do not have explanations for the column headers and totals do not add correctly. Horn stated she will update the tables. Klockeman asked if Volume/Capacity (V/C) would also be changed to TTI. Karasko informed TAC all references to V/C will be changed to TTI. Klockeman asked why the section refers to a no-build option. Blackmore responded that a no-build option is required. Horn stated she will include the build option for comparison.

Bracke asked how current travel trends compare to projected trip rates in 2040. Using current trip rates to project future travel trends will not match future rates because travel patterns are changing. He stated there are studies being completed to understand travel and commuting trends, including non-motorized transportation. Horn asked if TAC would like a paragraph added about possible future studies and shifts, which can be discussed in the next plan. Blackmore stated rates in the model cannot be updated until a new travel survey is completed. Mallette suggested discussion should be part of scenario planning for the next plan. Blackmore stated there should be a chapter incorporating municipal efforts and plans in the next RTP.

Purdy stated performance measures should change according to MAP-21 requirements, which are scheduled to be released by FHWA in FY 2016. There will be a shift from fatal crashes and crashes involving injury to fatalities and injuries. Pavement and bridge conditions on NHS routes will also need to be tracked. The 2040 RTP will not fall under these rules, but these will be required for the next plan.

2040 Regional Transportation Plan Chapter 10 **Karasko/Johnson**

Karasko and Johnson presented the updates to Chapter 10 of the 2040 RTP. Klockeman stated Figures 10-1 and 10-2 do not match Table 10-1 regarding local funds. Blackmore stated CDOT counts local funds as part of their total budget, while the MPO separates local and State funding. Wilkinson suggested combining the Local and State/Federal columns in Table 10-1. Johnson stated the columns were separated to show the different funding sources. Blackmore added the columns were separated to ensure there is enough local funding to match federal and State funding. Mallette recommended changing the table to separate State/Federal funds and Local funds. Purdy suggested using annual funding and to clarify the funding is over 25 years. Purdy stated the MPO region can assume a one percent increase in funding each year. Johnson specified staff used deflated funding, but can show inflated funds if needed. Blackmore stated the MPO wanted to ensure there is enough to cover operations, maintenance, and local match.

Blackmore explained the assumptions used to calculate local funding. MPO staff assumed existing sales taxes would be renewed. Bracke stated he expected the existing Greeley sales tax to be extended and expanded, while Fort Collins' Building on Basics was recently renewed and a greater percentage assigned to Transfort. Mallette asked if MPO staff assumed all or a percentage of the sales taxes would be used in calculating general funding. Johnson stated he used existing community comprehensive and transportation plans to determine the funding sources in Chapter 10. Blackmore stated a few private fees such as impact fees were also included in the calculations.

Purdy asked how the MPO accounts for CDOT On-System funding as CDOT controls some federal funding programs. Johnson stated CDOT On-System funding was not included, but that he will look at project distribution and talk to Karen Schneiders.

Blackmore and Johnson asked TAC if the categories used in Figure 10-3 and Table 10-2 make sense. Bracke asked if ITS falls under operations or congestion management. Purdy replied ITS falls under congestion management. Wilkinson asked how funding was determined for each category. Johnson stated the MPO used the previous two TIP cycles to determine future trends.

Mallette asked for clarification about the implications of Tables 10-1 and 10-2. She asked if projects can use funding outside the tables. Purdy responded they funding amounts listed in the tables are estimates and do not restrict future funding since programs may be updated between now and the out-year of this plan.

Mallette stated CDOT previously referred to their program distribution as resource allocation, which could make Figure 10-3 confusing moving forward. Klockeman requested charts be clarified when the amounts are in thousands.

Johnson stated he received feedback to remove the Project Prioritization section. Mallette stated the previous plan included a separate Call for Projects, making that section required.

TAC requested Chapter 10 be presented to the Planning Council at their June meeting prior to the full 2040 RTP being presented as a Discussion item in August.

REPORTS:

Public Outreach Updates

Gordon provided a calendar of summer outreach events for the 2040 RTP which MPO staff will attend. He requested event suggestions for Larimer County, Timnath, and Windsor. Bracke suggested the summer concert series in Windsor. The MPO will also be participating in the Ozone Aware program this summer and will be placing a banner throughout the region.

TIP Administrative Modification Updates

Johnson reported no TIP modifications were received for May. He reported modifications are due by June 1, 2015 for CDOT's end of fiscal year budget purposes.

Roundtable

Johnson reported he sent emails to TAC members requesting images for use in the 2040 RTP.

Bracke asked about the Statewide Transportation Improvement Program (STIP) amendment for the 65th Avenue project in Greeley. Schuch stated he will look into the project. Seelhoff stated CDOT projects are not locked until June.

Lundquist provided an update about the Transportation Summit in Weld County on June 15, 2015. Booths are available for $100 each. Governor Hickenlooper will be sending Shailen Bhatt as his representative to attend the event.

Mallette requested an update regarding MAP-21 reauthorization. Purdy reported the House passed a two-month extension through the end of July based on estimates the Highway Trust Fund will stay solvent. He stated it is anticipated Congress will create a plan before then.

Seelhoff reported the STIP will be going to the Colorado Transportation Commission for approval on May 21, 2015. She added June 24, 2015 is the last day for 2015 STIP amendments.

Brimmer reported RAQC will be begin strategy evaluations for the SIP through the formation of three subcommittees, which will meet at the RAQC offices beginning next week.

MEETING WRAP-UP:

Final Public Comment - There was no final public comment.

Next Month's Agenda Topic Suggestions –
Karasko reported there will be a presentation about the CDOT Navigate Tool and the CMP at the June TAC meeting.

Meeting adjourned at 4:18 p.m.

Meeting minutes submitted by:
Alex Gordon, NFRMPO Staff

A Work Session will be held at 1:00 p.m. on Wednesday, May 27, 2015. The next meeting will be held at 1:00 p.m. on Wednesday, June 17, 2015 at the Windsor Recreation Center, Pine Room.

May 27, 2015 TAC Work Session Notes

WORK SESSION NOTES of the
TECHNICAL ADVISORY COMMITTEE (TAC)

North Front Range Transportation and Air Quality Planning Council
Windsor Recreation Center - Pine Room
250 North 11th Street
Windsor, CO

May 27, 2015
1:06 – 2:24 p.m.

TAC MEMBERS PRESENT:
Eric Bracke, Chair – Greeley
Karen Schneiders – CDOT
Dawn Anderson – Evans
Martina Wilkinson – Fort Collins
David Klockeman – Loveland

NFRMPO STAFF:
Terri Blackmore
Becky Karasko
Aaron Buckley
Alex Gordon
Angela Horn
Josh Johnson

TAC MEMBERS ABSENT:
Suzette Mallette, Vice Chair – Larimer County
Stephanie Brothers – Berthoud
Jim Dileo – CDPHE
Christopher Barnes – COLT
Gary Carsten – Eaton
Aaron Bustow – FHWA
Will Jones – GET
John Franklin – Johnstown
Jessica McKeown – LaSalle
Seth Hyberger – Milliken
Amanda Brimmer – RAQC
Gary Thomas – SAINT
John Holdren – Severance
Eric Fuhrman – Timnath
Kurt Ravenschlag – Transfort
Janet Lundquist – Weld County
Dennis Wagner – Windsor

The Work Session began at **1:06 p.m**.

DISCUSSION ITEMS:

2040 Regional Transportation Plan: Chapter 6: Safety and Security
Karasko discussed changes made to Chapter 6. Staff has included Moving Ahead for Progress in the 21st Century Act (MAP-21) required changes as well information outlined in the Colorado Department of Transportation (CDOT) 2012 **I-25 Incident Management Plan** and **Colorado 2015 Integrated Safety Plan**. MAP-21 requires transit agencies complete a safety analysis; however, guidance from FTA has not been released.

Klockeman mentioned acronyms in the Regional Transportation Plan (RTP) should be reintroduced at the beginning of each chapter for clarification. Karasko stated a list of acronyms will be provided at the beginning of the document as well.

Wilkinson discussed congestion impacts on roadway safety and asked for clarification on the purposes of obtaining and implementing safety data to help reach a goal of zero fatalities. Bracke agreed discussions on crash data in the plan seemed brief and asked for clarification on how data could fit into the call for projects. Schneiders stated the plan could include documentation on local community safety and security initiatives rather than a regional plan for safety and security.

2040 Regional Transportation Plan: Chapter 9: Vision Plan
Karasko discussed changes made to the Vison Plan, including updated corridor visions for regionally significant corridors for vehicles, bicycles, and transit. Bicycle corridors were selected from the **2013 Regional Bicycle Plan**, and transit corridors were selected from the 2040 Regional Transit Element. Vision plans for corridors are being presented in the chapter individually, rather than placing them in tiers. There are 27 roadway corridors, 12 bicycle corridors, and nine transit corridors.

Klockeman requested staff look at references relative to the various corridors in the chapter. Wilkinson stated several studies have been completed on the different corridors not included in the chapter. TAC discussed looking at individual transportation plans for local communities and Weld and Larimer counties to include as references. Blackmore requested that TAC members assist staff with the studies completed since the last plan that are relevant to each corridor.

Wilkinson requested clarification on goals and objectives for each corridor. Karasko explained the goals and objectives were selected from the adopted Goals, Objectives, Performance Measures, and Targets (GOPMT) developed by TAC and Council. Wilkinson suggested removing individual goals and objectives for each corridor and to include the overall vision for the entire regionally significant system. Blackmore stated there must be a vision included for each corridor to have a corridor-based plan.

Wilkinson suggested adding a list of jurisdictions involved with each corridor. Klockeman suggested mapping the corridors on separate maps by direction (east-west corridors and north-south corridors). Schneiders suggested showing missing segments of the corridors as dashed lines, and color-coding the corridors by type (roadway, bicycle, and transit).

Karasko stated the aviation visions are based on plans and improvements for the two regional airports. The purpose of the freight vision plan is to begin to incorporate freight planning into the RTP. A freight plan task is included in the FY 2016 Unified Planning Work Program (UPWP).

2040 Regional Transportation Plan
Karasko discussed changes made to the Financial Plan based on the last TAC meeting, including updated funding allocation tables and charts. Bracke mentioned listing the Greeley Sales Tax separately with the two Fort Collins Tax Initiatives. TAC discussed combining all voter-approved tax initiatives into one category, with a separate explanation.

Johnson clarified all development impact fees have been included in local estimates.

The Work Session adjourned at **2:24 p.m**.

Meeting minutes submitted by:

Josh Johnson, NFRMPO Staff

The next meeting will be a work session held at 1:00 p.m. on Thursday, June 11, 2015 at the Windsor Recreation Center, Pine Room.

ACTION ITEM: FY 2016 UPWP Tasks
Recommendation to Council

NFRMPO
NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

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Memorandum

To: NFRMPO TAC

From: Terri Blackmore

Date: June 17, 2015

Re: FY 2016 Unified Planning Work Program

Background

The TAC reviewed and prioritized possible work tasks at the February TAC meeting. NFRMPO staff prepared the FY 2016 work program to reflect the prioritization identified by the TAC.

The FHWA, CDOT, and Planning Council have all agreed that the NFRMPO will approve only the FY 2016 UPWP at this time because the agency's lease is due for renewal in February 2017 and it is likely to significantly impact the budget for FY 2017. Please review the Tasks in Sections under Plan Monitoring, Plan Development, Planning Services, and Plan Implementation, as well as the FY 2014 activities section.

The Finance Committee will act on the FY 2016 UPWP budget at their June 17, 2015 meeting and will make a recommendation to Planning Council for approval at their July 9, 2015 meeting.

Action

It is requested that TAC recommend Council approve the FY 2016 Unified Planning Work Program tasks as presented.

DISCUSSION ITEM: 2015 Congestion Management Plan

AGENDA ITEM SUMMARY (AIS)

North Front Range Transportation & Air Quality Technical Advisory Committee (TAC)

Meeting Date	Agenda Item	Submitted By
June 17, 2015	2015 Congestion Management Process Update Review and Discussion	Aaron Buckley

Objective / Request Action

Staff is providing the draft of the 2015 Congestion Management Process (CMP) Update for TAC review and discussion.

- ☐ Report
- ☐ Work Session
- ☑ Discussion
- ☐ Action

Key Points

- Staff has drafted the 2015 CMP Update, an objectives driven, performance-based process to reduce regional transportation congestion.
- Annual CMP reporting will use three performance measures to track regional progress including: Travel Time Index, Vehicle Miles Traveled, and Transit Performance Measures (On Time Performance, Passengers per Hour per Direction, and Passengers per Mile per Gallon).

Committee Discussion

At the June 11, 2015 TAC Work Session, *Chapter 11: Congestion Management Process* of the 2040 Regional Transportation Plan (RTP) was discussed. All applicable revision suggestions will be incorporated in the 2015 CMP Update.

Supporting Information

- 2015 CMP Update adoption is required before 2040 RTP adoption.
- Annual CMP reporting is a required component of the 2040 RTP Report.
- The previous CMP was released in 2010 prior to adoption of the 2035 RTP.
- The 2015 CMP Report is a new Congestion Management Process.

Advantages

- The 2015 CMP Update fulfills the federal requirement for Urbanized Areas (UZA) over 200,000 or TMAs to maintain a CMP.
- The 2015 CMP Update provides the performance measures the annual report will use to quantify regional congestion.
- Congestion management reporting informs the RTP and TIP planning processes.

Disadvantages

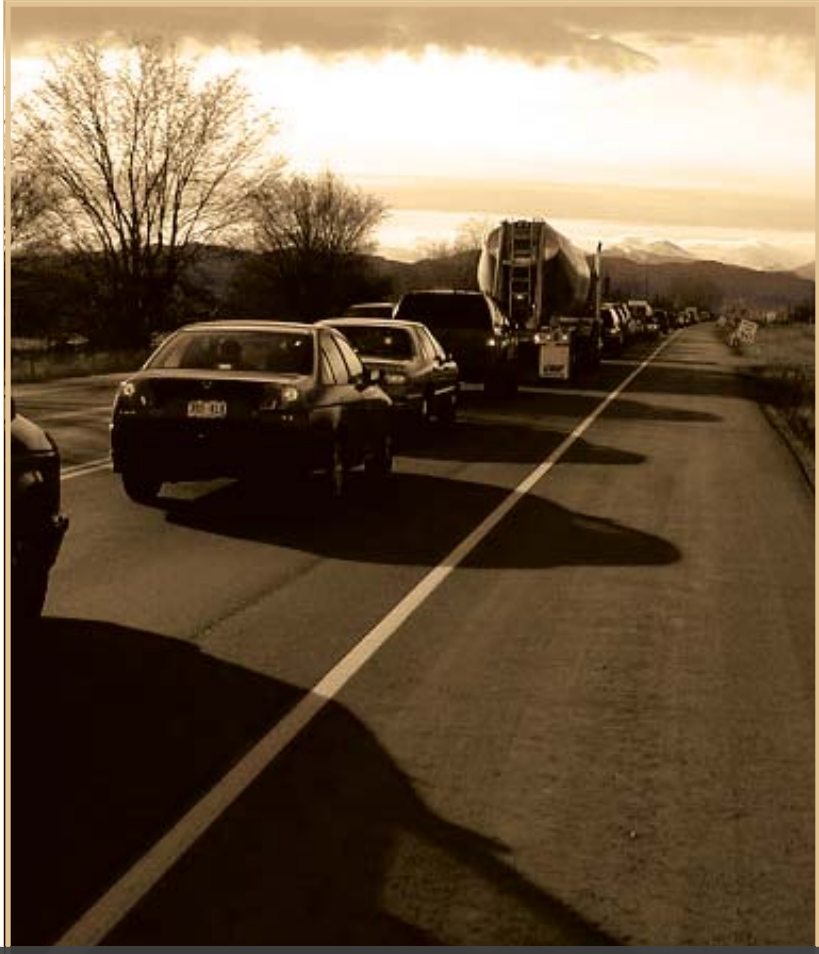
None noted.

Analysis /Recommendation

Staff requests TAC members review the 2015 Congestion Management Process Update and provide comments.

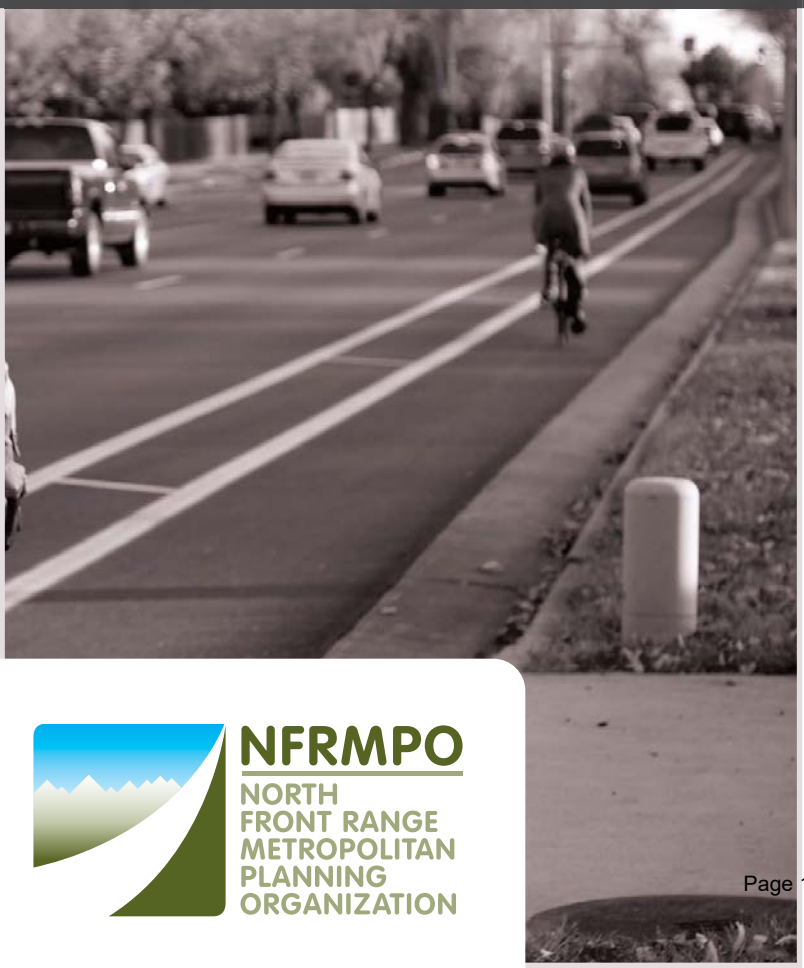
Attachment

- 2015 Congestion Management Process Update



2015 Congestion Management Process

Adopted ---------, ----



NFRMPO
NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

North Front Range
Metropolitan Planning Organization

2015 Congestion Management Process

Objectives driven, performance-based
Congestion Management Process

Adopted August __, 2015

Other Introductory Pages:

Staff Contacts

XXX List of NFRMPO staff with contact information XXX

MPO Membership

XXX List of NFRMPO Council and TAC members XXX

Resolution

XXX Resolution by NFRMPO members to accept/support the 2015 CMP XXX

Table of Contents

List of Tables

List of Figures

Transportation Planning Acronyms

A comprehensive list of transportation planning related acronyms referenced in this report are below.

Acronym	Definition
AADT	Annual Average Daily Traffic
ATRI	American Transportation Research Institute
BATS	Berthoud Area Transportation Services
BRT	Bus Rapid Transit
CDOT	Colorado Department of Transportation
CMP	Congestion Management Process
COLT	City of Loveland Transit
CSU	Colorado State University
DMS	Dynamic Message Signs
ETO	Emergency Transportation Operations
FHWA	Federal Highway Administration
FLEX	Fort Collins regional bus serving Loveland, Berthoud & Longmont operated by Transfort
FY	Fiscal Year
GET	Greeley Evans Transit
GOPMT	Goals, Objectives, Performance Measures, and Targets
GVWR	Gross Vehicle Weight Rating
HOT	High Occupancy Toll Lanes
HTFA	Highway and Transportation Funding Act of 2014
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation Systems
MAP-21	Moving Ahead for Progress in the 21st Century Act
NHS	National Highway System
NPMRDS	National Performance Measurement Research Data Set
PCMS	Portable Changeable Message Signs
RFID	Radio-Frequency Identification
RSCs	Regionally Significant Corridors

Continued on next page.

RTP	Regional Transportation Plan
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act - A Legacy for the Users
SOV	Single-Occupant Vehicle
TAC	North Front Range Metropolitan Planning Organization's Technical Advisory Committee
TDM	Travel Demand Management
TIM	Traffic Incident Management
TIP	Transportation Improvement Program
TMAs	Transportation Management Areas
Transfort	Fort Collins regional bus transit system, also operates FLEX
TTI	Travel Time Index
UNC	University of Northern Colorado
UZAs	Urbanized Areas
V/C	Volume to Capacity Ratio
VMS	Variable Message Signs

Executive Summary

The purpose of the 2015 Congestion Management Process (CMP) is to create an objectives driven, performance-based process to reduce regional transportation congestion. A series of congestion reduction goals, objectives, performance measures, and targets have been collected from the 2040 Regional Transportation Plan, other congestion management reports, or crafted specifically for this report.

Nationally, congestion wasted 5.5 Billion hours, 2.9 Billion gallons of fuel, and released 56 Billion pounds of carbon dioxide into the atmosphere costing travelers $121 Billion in 2011. The North Front Range Metropolitan Planning Organization will be focusing on reducing congestion on the Regionally Significant Corridors. Data will be collected regionally from counters by anonymously recording vehicle travel times using Bluetooth technology. Additional data sources include INRIX travel time and volume datasets and the Federal Highway Administration's national HERE travel time dataset. The MPO is currently working with Fort Collins, Loveland, Greeley, and CDOT to install Bluetooth counting equipment across the region along the regionally significant corridors at signalized intersections.

CMP reporting will use three performance measures to track regional progress including: Travel Time Index, Vehicle Miles Traveled, and Transit Performance Measures. In addition, Transportation Demand Management strategies and Intelligent Transportation System technologies will be used to reduce congestion.

In the future, the CMP Annual Report will begin to use the regionally collected travel time data, traffic counts, and other information to inform the performance measures outlined in this 2015 CMP Report. As current and future data collection equipment comes online future CMP reporting will increase in depth and application.

Chapter 1: Introduction

New residents are moving into the North Front Range region every day. Offering travelers' safe, convenient transportation alternatives can reduce vehicular congestion on the regional road system. The NFRMPO's 2015 Congestion Management Process Report creates an objectives driven, performance-based plan to reduce regional congestion.

Now, more than ever, residents of the North Front Range region are incorporating walking, bicycling, and transit in their daily commutes. Intelligent Transportation Systems (ITS) and Travel Demand Management (TDM) principles are reducing regional congestion by increasing efficiency and highlighting new mode choices.

In 2010, the total population of the North Front Range region was 488,513. It is expected to rise to 896,191 by 2040, a growth rate of 83.45 percent.[1] Currently, the MPO covers 675 square miles and contains 15 member governments, including: Berthoud, Eaton, Evans, Fort Collins, Garden City, Greeley, Johnstown, LaSalle, Loveland, Milliken, Severance, Timnath, Windsor, Larimer County, and Weld County. Regionally, the NFRMPO transportation network contains:

- 102 miles of the National Highway System (NHS)
- Seven miles of Scenic Byway, the Cache La Poudre – North Park (SH 14 and US 287)
- 773 miles of Regionally Significant Corridors (RSCs)
    - 427 miles of roadway corridors and 346 miles of bicycle corridors
- 294 miles of on-road bicycle lanes
- 91 miles of bicycle routes
- 208 miles of shared-use trails
- 2,434 miles of sidewalks
- 271 miles of bus routes
    - Greeley Evans Transit (GET): 45 miles
    - City of Loveland Transit (COLT): 40 miles
    - Fort Collins FLEX: 26 miles
    - Fort Collins Transfort: 160 miles
- 98 miles of railroad tracks

In the chapters that follow, a comprehensive process for alleviating transportation congestion is outlined. Consistent, ongoing data collection efforts will supply information for annual CMP reporting. The goal of CMP reporting is to create an objectives driven, performance-based CMP.

[1] Fisher, Steven, Ph.D., Resnick, Phyllis, Ph.D. 2040 Economic and Demographic Forecast. June 2013. North Front Range Metropolitan Planning Organization. 2012-2013.

Chapter 2: Background

2.1 Purpose of the 2015 CMP

The purpose of the 2015 CMP Report is to identify the process for collecting congestion data and develop performance measures to direct funding toward projects and strategies that most effectively address congestion. The Federal Highway Administration (FHWA) defines a CMP as "a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meets state and local needs."[2]

Federal requirements state regions with a population over 200,000 in urbanized areas (UZAs), also known as Transportation Management Areas (TMAs), must maintain a CMP and use it to make informed transportation planning decisions. The 2015 CMP Report identifies congested Regionally Significant Corridors (RSCs), develops strategies to mitigate the congestion, and provides a way to monitor the effectiveness of the strategies.

2.2 Requirements for a CMP

The current funding authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21) requires consideration first be given to strategies which reduce single-occupant vehicle (SOV) travel and improve the efficiency of the existing transportation system. All reasonable strategies must be analyzed before a capacity increasing improvement is proposed as a congestion management technique.

Federal regulations (23 CFR Part 450.320) specify an effective CMP should include:

- Methods to monitor and evaluate the performance of the multi-modal transportation system, identify the causes of recurring and nonrecurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;
- Defined objectives and performance measures to assess congestion and evaluate congestion reduction and mobility enhancement strategy effectiveness;
- Establish a data collection and system performance monitoring program that defines the extent and causes of congestion, determines the causes of congestion, and evaluates the efficiency and effectiveness of implemented actions;
- Identifies and evaluates the anticipated performance and benefits of both traditional and non-traditional congestion management strategies;
- Identifies an implementation schedule, responsibilities, and potential funding sources for each strategy; and
- Identifies a process for periodic assessment of the efficiency and effectiveness of implemented strategies.

MAP-21 legislation requires performance measures, targets, plans, and reporting. This performance and outcome-based program ensures states invest resources in projects that collectively make progress

[2] Congestion Management Process: A Guidebook. U.S. Department of Transportation, Federal Highway Administration. April 2011. Pg. 1.

toward the achievement of national goals. The legislation outlines seven national goal performance areas, highlighted in **Table 2-1**.

Table 2-1 MAP-21 Seven National Performance Areas

Goal Area	National Goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure Condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion Reduction	To achieve a significant reduction in congestion on the National Highway System
System Reliability	To improve the efficiency of the surface transportation system
Freight Movement and Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced Project Delivery Delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

Source: *FHWA MAP-21 Performance Management*[3]

Three of the national goals directly pertain to the CMP: Congestion Reduction, System Reliability, and Freight Movement and Economic Vitality. **Chapter 4** of this report discusses strategies to alleviate congestion.

2.3 History of the NFRMPO CMP

Originally, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) introduced the concept of Congestion Management Systems (CMS). The CMS was created to collect congestion data, enhance the tools for data management and modeling, expand the use of intelligent transportation systems, and encourage regional cooperation and coordination.

Subsequently, the Safe Accountable Flexible Efficient Transportation Equity Act - A Legacy for the Users (SAFETEA-LU) continued this effort by requiring the use of a Congestion Management Process in TMAs. The current federal transportation bill, MAP-21 maintains the CMP requirement, but requires enhanced monitoring, reporting of congestion, reliability, and formalized performance measures.

The NFRMPO was designated as a TMA in 2002, following the 2000 US Census. In 2004, FHWA accepted a Congestion Management Framework in lieu of a Congestion Management System, given the short timeframe between the NFRMPO's TMA designation and the publication of the 2030 Regional Transportation Plan (RTP). In 2007, the NFRMPO expanded the framework into a full CMP and integrated it with the 2035 RTP.

[3] US Department of Transportation. Federal Highway Administration. MAP-21 – Moving Ahead for Progress in the 21st Century. Performance Management. http://www.fhwa.dot.gov/map21/factsheets/pm.cfm Accessed 5/8/15.

During the development of the 2010 CMP and 2035 RTP in 2007, the NFRMPO Technical Advisory Committee (TAC) and Planning Council identified the Tier One RSCs to be the focus of the CMP in the North Front Range. Tier One corridors included I-25, US 34, US 287, and their parallel facilities although data was collected only on the main corridor. For the 2040 RTP, the MPO has moved away from tiers to individual corridors. All congested roadway RSCs are included in the 2015 CMP data collection and analysis. The RSCs can be found in **Table 3-1** in **Chapter 3, Section 3**.

The 2010 CMP concluded with two possible modifications to the CMP in the future, including:

- Update the identification of currently congested corridors based on actual data collected through the region-wide data collection program, rather than using travel demand model results.
- Reconsider the network for which the CMP applies; the CMP may not be as appropriate to rural portions of the Tier One corridors as the portions that are in urban areas.

Over last year, MPO members have begun collecting real-time travel data in the region (**Chapter 3, Section 4**). As the data accumulates, longitudinal studies will be possible. In the interim, the NFRMPO's Regional Travel Demand Model will be used to identify corridors to deploy data collection devices along with local expertise.

2.4 Vision, Goals, and Objectives of the Congestion Management Process

The vision statement for the 2015 CMP Report is:

The North Front Range Metropolitan Planning Organization strives to objectively reduce congestion on regionally significant corridors using TDM strategies.

The CMP Goals and Objectives to support this vision include:

Goal 1: Improve Efficiency

> Objective: Reduce congestion with cost-effective, non-roadway-widening solutions that use technology to the best advantage, such as traffic management, TDM, and ITS.

Goal 2: Increase Mobility

> Objective: Make non-SOV transportation modes (walking, bicycling, transit, carpooling, vanpooling) more available, convenient, safe, and attractive for everyone.

Goal 3: Improve Safety

> Objective: Reduce crashes for all modes, focusing especially on improving safety for pedestrians and bicyclists and on reducing the number of incident-related crashes.

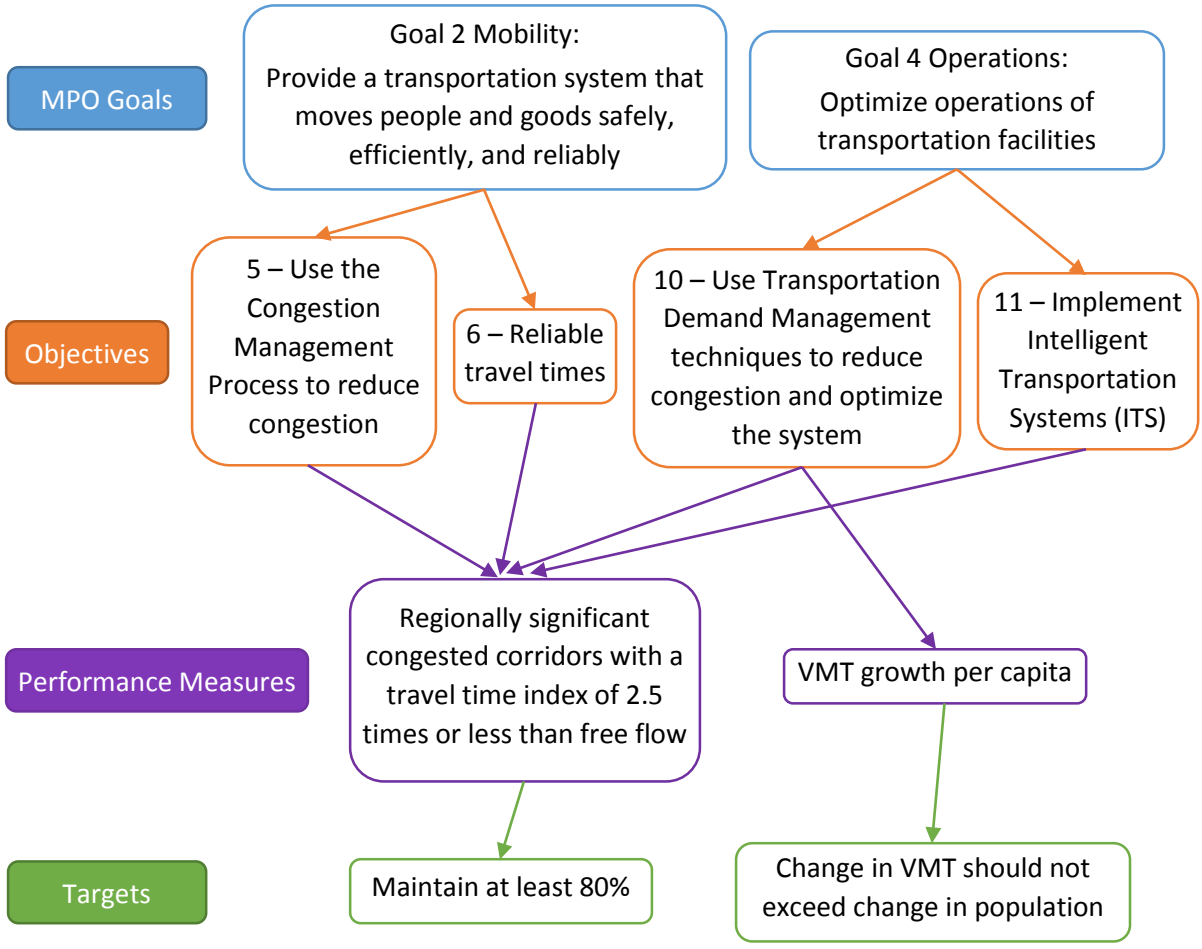
Goal 4: Increase Reliability

> Objective: Increase travel time reliability while reducing user exposure to traffic incidents, crashes, and work zones.[4]

[4] Boston Region MPO Congestion Management Process. 2013. Chapter 1. http://www.ctps.org/Drupal/cmp

From the 2040 RTP adopted Goals, Objectives, Performance Measures, and Targets (GOPMT) two performance measures are specific to the CMP, as shown in **Figure 2-1**.

Figure 2-1: 2040 RTP – CMP Specific Goals, Objectives, Performance Measures, and Targets



The performance measures in the 2040 RTP GOPMTs match the CMP objectives. To help complete the picture of regional congestion transit performance measures have been selected and are detailed in **Chapter 4**.

2.5 Integration in the Planning Process

The CMP has the potential to create an efficient transportation system, increase mobility, and maximize the utility of limited resources. It enables the MPO to measure system performance in a systematic manner. The CMP is tied to the federally required RTP and helps to inform the NFRMPO TIP.

While the RTP provides a vision for transportation planning in the North Front Range region, the TIP provides for the programming of funding for regional transportation projects. The CMP has the ability to offer data to craft a vision for the future and inform individual projects. Furthermore, corridor studies, transit efficiency, and non-motorized projects benefit from data collected through the CMP.

Chapter 3: Quantifying Congestion

3.1 Congestion

Often, sources of congestion occur together. Weather events can easily create unsafe driving situations resulting in crashes. Special events can cause drivers to avoid certain areas, resulting in congestion along a less traveled corridor. A lack of parallel facilities and a lack of transportation options for pedestrians, bicyclists, and transit users can result in high levels of unrestrained SOV demand.

According to FHWA:

> *Congestion results when traffic demand approaches or exceeds the available capacity of the system. While this is a simple concept, it is not constant. Traffic demands vary significantly depending on the season of the year, the day of the week, and even the time of day. Also, the capacity, often mistaken as constant, can change because of weather, work zones, traffic incidents, or other non-recurring events.*[5]

There are two types of congestion: recurring and non-recurring.

Recurring congestion includes:

- Ineffective management of capacity
  - Operations – Inefficient signal timing and progression and/or lack of auxiliary lanes.
  - A lack of TDM techniques such as carpool/vanpool programs or congestion pricing.
- Insufficient capacity
  - Lack of Parallel Facilities
  - Roadway Capacity
- Unrestrained demand
  - Lack of Other Modes
  - Land Use

Non-recurring congestion:

- Temporary events
  - Traffic Incidents - Crashes, traffic stops, or breakdowns
  - Weather Events
  - Special Events
  - Work Zones

Seven root causes of congestion:

1. *Physical bottlenecks*
2. *Traffic incidents*
3. *Work zones*
4. *Weather*
5. *Traffic control devices*
6. *Special events*
7. *Fluctuations in normal traffic*

[5] Focus on Congestion Relief. U.S. Department of Transportation, Federal Highway Administration. 7/30/2013. Accessed 5/20/15. http://www.fhwa.dot.gov/congestion/index.htm

- Emergencies[6]

Congestion management is the "application of strategies to improve transportation system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods."[7]

3.2 National Costs of Congestion

The Texas A&M Transportation Institute's 2012 Urban Mobility Report outlined the increasing costs of congestion. Nationally, in 2011, congestion wasted: 5.5 Billion hours, 2.9 Billion gallons of fuel, and released 56 Billion pounds of carbon dioxide into the atmosphere. Adjusted for 2011 dollars the cost of congestion to the average commuter increased from $342 in 1982, to $818 in 2011 (**Figure 3-1**).

Adjusted for 2011 dollars, the cost of extra time and fuel wasted in congestion for 498 urban areas has increased nationally from $24 Billion in 1982, to $94 Billion in 2000, and to $121 Billion in 2011 (**Figure 3-2**). The average commuter wasted eight gallons of fuel and 16 hours in 1982 which increased to 19 gallons and 38 hours in 2011 (**Figure 3-3**). In total, there was a congestion cost of $121 Billion due to delay and fuel costs in 2011. Of that, $27 Billion was the impact of congestion on the trucking industry, not including the value of the goods being transported.[8]

Figure 3-1 Commuter Cost

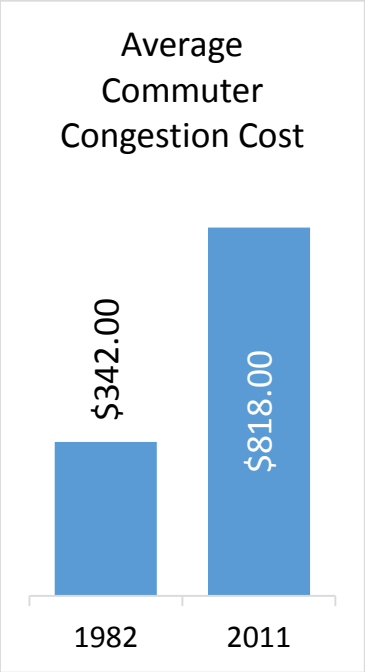


Figure 3-2 National Cost

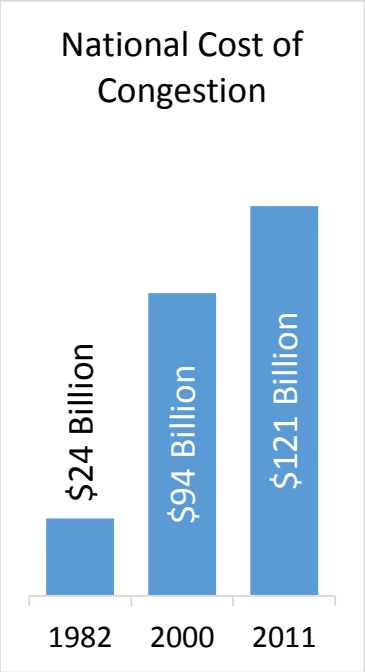
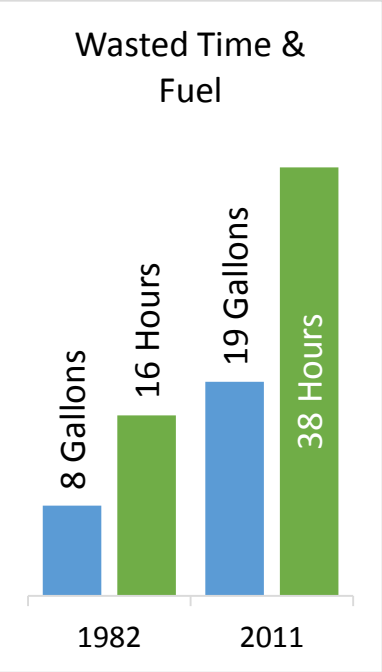


Figure 3-3 Time & Fuel Cost



[6] Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation. U.S. Department of Transportation, Federal Highway Administration Office of Operations. 12.4.2013. Accessed 3/24/15. http://www.ops.fhwa.dot.gov/congestion_report/executive_summary.htm

[7] Congestion Management Process: A Guidebook. U.S. Department of Transportation, Federal Highway Administration. April 2011. Pg. 1.

[8] Schrank, David. Eisele, Bill, and Lomax, Tim. TTI's 2012 Urban Mobility Report Powered by INRIX Traffic Data. Texas A&M Transportation Institute. December 2012. http://d2dtl5nnlpfr0r.cloudfront.net/tti.tamu.edu/documents/mobility-report-2012.pdf

3.3 Regional Transportation Network

3.3.1 Regionally Significant Corridors (RSCs)

Previously, the CMP only focused on the Tier 1 RSCs, but the scope has expanded to include all congested RSCs. The RSC designation allows the MPO to maximize the use of limited transportation funding. A RSC is defined as:

> *An important link in a multi-modal, regional network comprised of existing or new transportation corridors that connect communities and/or activity centers by facilitating the timely and safe movement of people, goods, information, and services.*

Three criteria were used to identify RSCs:

- Includes all State Highways
  - The Colorado Department of Transportation (CDOT) requires a corridor vision be developed for all state highways as part of the regional transportation plan. Since this is a CDOT requirement, and most state highways are regional in nature, this was established as the first criteria.
- Functional Classification
  - Roadways must have a functional classification of minor arterial or higher.
  - The higher the functional classification, the greater the likelihood trips are longer and the roadway connects more than one community.
- Connectivity
  - The corridor must go through, or plan to go through, more than one governmental jurisdiction and connect activity centers.

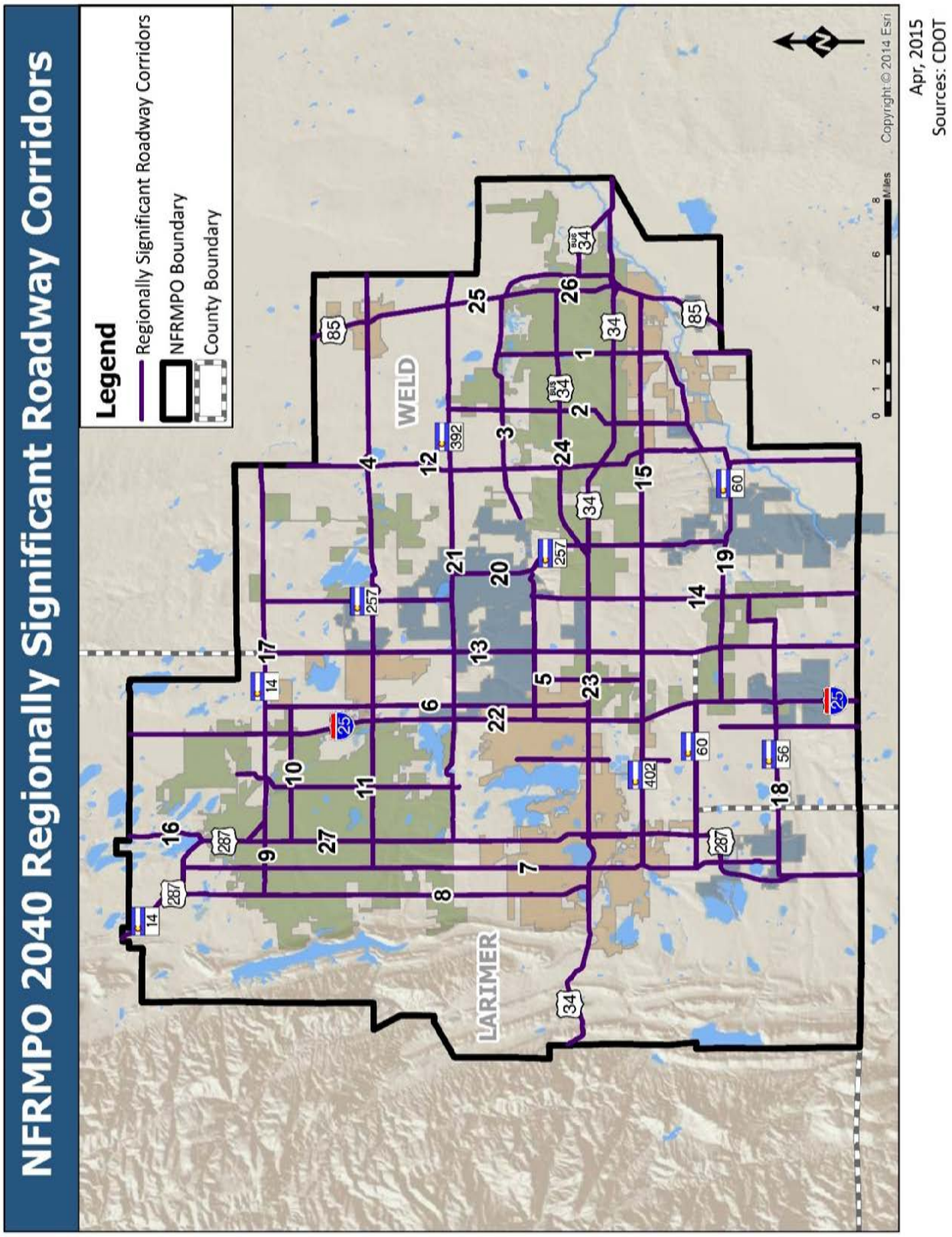
Table 3-1 lists the location of the 27 RSCs. **Figure 3-4** shows the locations of the RSC's.

Table 3-1: Regionally Significant Corridors

Corridor	Corridor Name/Component	Description
Corridor 1	35th Ave (Greeley)	US 85 on the south to O street on the north
Corridor 2	65th Ave (Greeley)	59th Street on the south to SH 392 on the north
Corridor 3	Crossroads/O Street	US 85 on the east to I-25 on the west
Corridor 4	Harmony Rd/WCR 74 (Fort Collins/Weld County)	LCR 17 to MPO Boundary east of Eaton
Corridor 5	LCR 3	Southern NFRMPO Boundary to Crossroads Boulevard on the north
Corridor 6	LCR 5	US 34 on the south to SH 14 on the north
Corridor 7	Shields Street / Taft Avenue / LCR 17	US 287 on the north to SH 56 on the south
Corridor 8	LCR 19	US 34 on the south to US 287 on the north
Corridor 9	Mulberry Street	Riverside Avenue (SH 14) to LCR 19

Corridor 10	Prospect Road (Fort Collins)	LCR 5 on the east to US 287 on the west
Corridor 11	Timberline/LCR 9/WCR 7	Southern NFRMPO boundary to Vine Drive on the north, follows WCR 7 to LCR 9E (road approximate) to Timberline Road
Corridor 12	Two Rivers Parkway/83rd Ave	Southern NFRMPO boundary to northern NFRMPO boundary, approximately WCR 27
Corridor 13	WCR 13	Southern NFRMPO boundary to SH 14 on the north
Corridor 14	WCR 17	Southern NFRMPO boundary to Crossroads extension on the north
Corridor 15	SH 392	US 85 on the east to LCR 17 on the west
Corridor 16	SH 1	US 287 on the south to the northern NFRMPO boundary
Corridor 17	SH 14	Eastern NFRMPO boundary to College Avenue (US 287)
Corridor 18	SH 56	WCR 17 on the east to US 287 on the west
Corridor 19	SH 60	Two Rivers Parkway on the east to LCR 17 on the west
Corridor 20	SH 257	SH 60 on the south to SH 14 on the north, includes offset in Windsor
Corridor 21	SH 392	US 85 on the east to US 287 on the west
Corridor 22	I-25	Southern NFRMPO boundary to northern NFRMPO boundary
Corridor 23	US 34	Eastern NFRMPO boundary to western NFRMPO boundary
Corridor 24	US 34 Business	Eastern NFRMPO boundary to US 34 on the west
Corridor 25	US 85	WCR 48 on the south to north of WCR 70
Corridor 26	US 85 Business	US 34 to US 85
Corridor 27	US 287	Southern NFRMPO boundary to northern NFRMPO boundary, includes Berthoud Bypass

Figure 3-4: Regionally Significant Roadway Corridors



3.4 Congestion Management Data Sources

3.4.1 Regional Travel Demand Model

The MPO and member jurisdictions use the 2040 NFRMPO Regional Travel Demand Model as a tool to forecast traffic and travel demand in communities throughout the model area. The primary purpose of the travel model is to support the RTP and air quality conformity analysis, but the information can be helpful for the CMP as well. The model can help to evaluate proposed roadway projects, potential impacts of proposed development projects, and various transportation studies of the region, subareas, and corridors.

The model helps identify which roadway links are currently congested and those with the potential to be congested by calculating free flow speed, travel time, and capacity. This information is then used to see if congestion management performance measures are being met. This helps project sponsors and stakeholders select projects that relieve congestion in the region. The model is regularly updated by the MPO to reflect current conditions using the most recent available data. Until the Bluetooth counters are operational, the Travel Demand Model will be used to generate maps to highlight congested areas in the region.

3.4.2 Travel Time Data Sources

FHWA National Performance Measurement Research Data Set

The FHWA National Performance Measurement Research Data Set (NPMRDS) is a historical archive of average travel times by calendar day, in five minute increments, covering the NHS. FHWA has purchased HERE North America, LLC (formerly Nokia/NAVTEQ) travel time data for DOT and MPO use. The regional NPMRDS coverage is highlighted in **Figure 3-5**.

Three categories of travel time data are collected: passenger vehicles, freight vehicles, and a category with both groups combined. No modeling or historical data is applied if probe data does not exist for a particular epoch and no record is provided. Some outliers are included in the dataset, but clearly invalid probe data are discarded. Invalid probe data includes zero-speed vehicles, off-road vehicles, and vehicle headings that do not correspond with existing corridors.

The data for personal vehicles is gathered from multiple sources including: mobile phones, vehicles, and personal navigation devices. Data for freight vehicles is gathered by the American Transportation Research Institute (ATRI) and is sourced from Class 7 and 8 trucks.

Class 7 trucks have a gross vehicle weight rating (GVWR) between 26,001 – 33,000 lbs.

Class 8 trucks 33,001 lbs. or above. Both Classes require a Class B license to operate in the US.

Archived datasets include only Interstates for the period of October 2011 to June 2013. Monthly datasets began in July 2013, in 5 minute increments for the entire NHS. Over half a billion travel time records are created each month.

The October 2011 to June 2013 archived dataset includes:

- The NHS with approximately 100,000 bidirectional miles
- All 50 states, Washington D.C., and Puerto Rico
- Border crossings with Canada and Mexico

The monthly dataset for the entire NHS from July 2013 to present includes:

- NHS with over 500,000 bidirectional miles
- All 50 states, Washington D.C., and Puerto Rico
- Border crossings with Canada and Mexico

The datasets are broken down by Transportation Management Center (TMC), an industry standard referencing system streets, segments, and roads typically from intersection to intersection.

INRIX Travel Time and Volume Data Set

In the near future the NFRMPO will have access to INRIX travel time and volume datasets in addition to the FHWA HERE dataset. INRIX travel time data is collected through GPS enabled devices including cell phones and connected cars, trucks, and fleet vehicles. Additional variables affecting traffic including weather conditions, special events, schools schedules, and road construction are factored into the traffic datasets. As the dataset becomes available MPO staff will analyze and incorporate useful data in the CMP.

Figure 3-5: 2015 Travel Time Data Sources

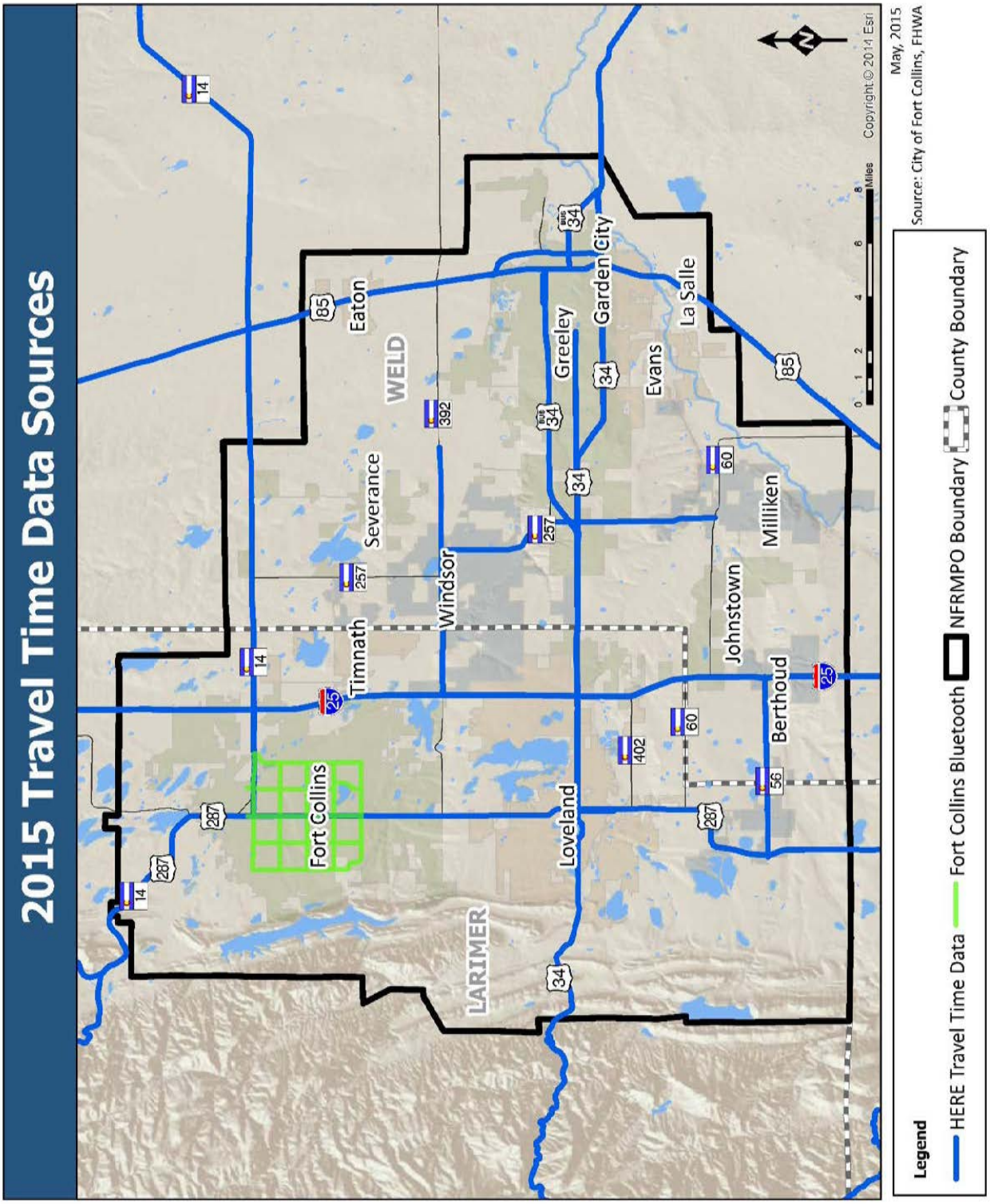
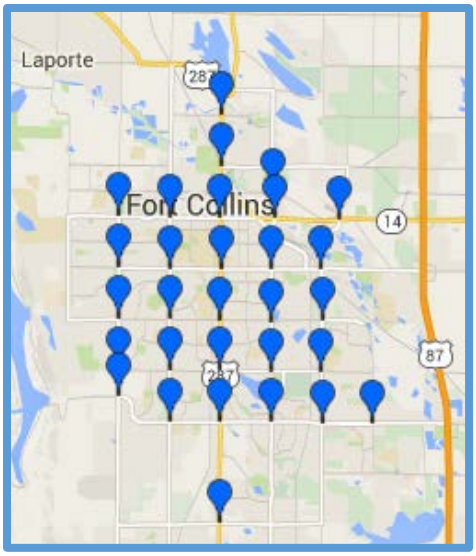


Figure 3-6: Fort Collins Bluetooth Counter Locations



Fort Collins Bluetooth Dataset

In June 2014, the City of Fort Collins, Division of Traffic Operations began installing a series of 30 Bluetooth traffic counters at major intersections across the City (**Figure 3-6**). The Fort Collins Bluetooth counters are also highlighted in **Figure 3-5** with the FHWA NPMRDS HERE travel time dataset.

Operational since October 2014, these counters wirelessly connect to cell phones, headsets, music players, and navigation systems using Media Access Control (MAC) protocols. Unique identifiers from these devices are not associated with any specific user or account, eliminating any ability to gather private information.

By counting Bluetooth-enabled devices as they pass by, speed and travel time data can be gathered. This allows for in-depth origin-destination studies, trip length analysis, TDM modeling, and signal timing optimization.

During special events, traffic incidents, or weather incidents the Bluetooth data can be used as a source of information to aid in signal timing adjustments. Over time, the data can be used to compare trends for roadway segments and intersections. Planning processes will rely on this travel time data to justify future projects.

City of Loveland, City of Greeley, and CDOT Bluetooth Counters

Currently, the City of Loveland, the City of Greeley, and CDOT are in the process of researching Bluetooth counters for intersections in their communities or region. To create a robust regional dataset the MPO will be assisting with the purchase of counters for CDOT and the cities of Fort Collins, Loveland, and Greeley. Counter purchasing should begin in summer 2015, with counters coming online by late 2015. A substantial portion of the regional transportation network is expected to be covered by 2017.

3.4.3 NFRMPO Congestion Survey

In 2014, the MPO conducted a regional congestion survey. The purpose of the survey was to better understand the community's perspective of transportation congestion. The 12 question survey had approximately 200 respondents from the 15 MPO member communities. The majority of respondents lived in Fort Collins (42 percent) and an even larger group worked in Fort Collins (71 percent). The two largest respondent groups were in the 30-44 or 55-64 age ranges. 42 percent of respondents had a household income above $100,000 a year. Additionally, they were highly educated with 38 percent holding a college degree and 43 percent with a post graduate degree.

Almost 86 percent of respondents drive alone as their primary commute method. However nearly nine percent chose a bicycle for transportation. Heavy traffic and congestion was primarily attributed to, 'too many people on the road' and 'Unorganized or ineffective traffic lights.' Split between three answers survey participants believed heavy traffic or congestion means '6-10 miles per hour less than the posted speed', '11-15 miles per hour less than the posted speed', and 'At a complete stop at a location other than a traffic light or stop sign.'

Heavy traffic and congestion was primarly reported to occur ‘Every day’ (43 percent) or ‘A few times a week’ (48 percent). The three most important factors in considering travel include ‘Minimize time spent in heavy traffic’, ‘Minimize travel time’, and ‘Reliability of travel time.’ On a multiple answer question the main methods used to avoid heavy traffic include taking a different route (56 percent) or changing driving time (30 percent) However, 37 percent said they were unable to avoid traffic. An overwhelming margin (95 percent) stated congestion had gotten worse when compared to congestion five years ago.

The complete list of survey questions can be found in **Appendix B**.

Chapter 4: Strategies to Alleviate Congestion

4.1 Congestion Performance Measures

The focus of the 2015 CMP is the effective movement of people and goods. Throughout a normal day, congestion can occur for all users and all modes in the region. **Table 4-1** outlines CMP performance measures the MPO will report in the Annual CMP Report.

Table 4-1: Implemented Congestion Performance Measures

CMP Performance Measures	Description
Travel Time Index*	Ratio of average peak travel time to an off-peak (free-flow) standard. A value of 1.25 indicates that the average peak travel time is 25% longer than off peak travel times.
Vehicle Miles Traveled (VMT)*	Measurement of miles traveled by vehicles in a specified region over a specified time period. Calculated per person for all trips or for specific destinations including home, work, commercial, etc. A reduction in VMT can be used to show environmental benefits. Modeling VMT requires estimates of trip generation and trip length. Land use planning principles such as infill development can help reduce VMT. Using VMT a fuel use measurement can be derived.
Transit Performance Measures	On Time Performance – Percentage of time a bus remains on published schedule. Passengers per Hour per Direction indicates travel patterns and system capacity. Passengers per Mile per Gallon is a measure of transit system use and fuel efficiency.

**These performance measures are from the NFRMPO 2040 RTP GOPMT. The transit performance measures are specific to the 2015 CMP Report.*

The Travel Time Index and Transit Performance Measures are explained in greater detail in the following sections.

4.1.1 Travel Time Index

Currently, the MPO is transitioning from volume over capacity (V/C) congestion measurements (2010 CMP) to Travel Time Index (TTI) as a primary measure of regional congestion. The MPO estimated TTI information using the NFRMPO's Regional Travel Demand Model.[9] TTI is defined as:

> *The ratio of the travel time during the peak period to the time required to make the same trip at free-flow speeds. A value of 1.3, for example, indicates a 20-minute free-flow trip requires 26 minutes during the peak period.*[10]

Figure 4-1 highlights the regional TTI for 2012 and **Figure 4-2** the regional TTI for 2040. In 2012, the TTI indicates much of the network experiences free-flow or near free-flow conditions. Conversely, the 2040 TTI shows much of the network congesting or congested. Additionally, the 2040 network includes all planned transportation improvements.

[9] North Front Range 2012 Base Year Regional Travel Model Technical Documentation. 2015. http://nfrmpo.org/ResourcesDocuments/2040RTP.aspx

[10] Glossary of Mobility-Related Terms. Texas A&M Transportation Institute. Urban Mobility Information. Accessed 5/21/15. http://mobility.tamu.edu/ums/media-information/glossary/

Over the next two years, the MPO will transition to the collection and use of TTI information from the FHWA HERE dataset, INRIX dataset, and Bluetooth counters discussed in **Chapter 3**. In the future, posted speed limits will be used as the baseline for free-flow travel time.

Figure 4-1: Travel Time Index for 2012

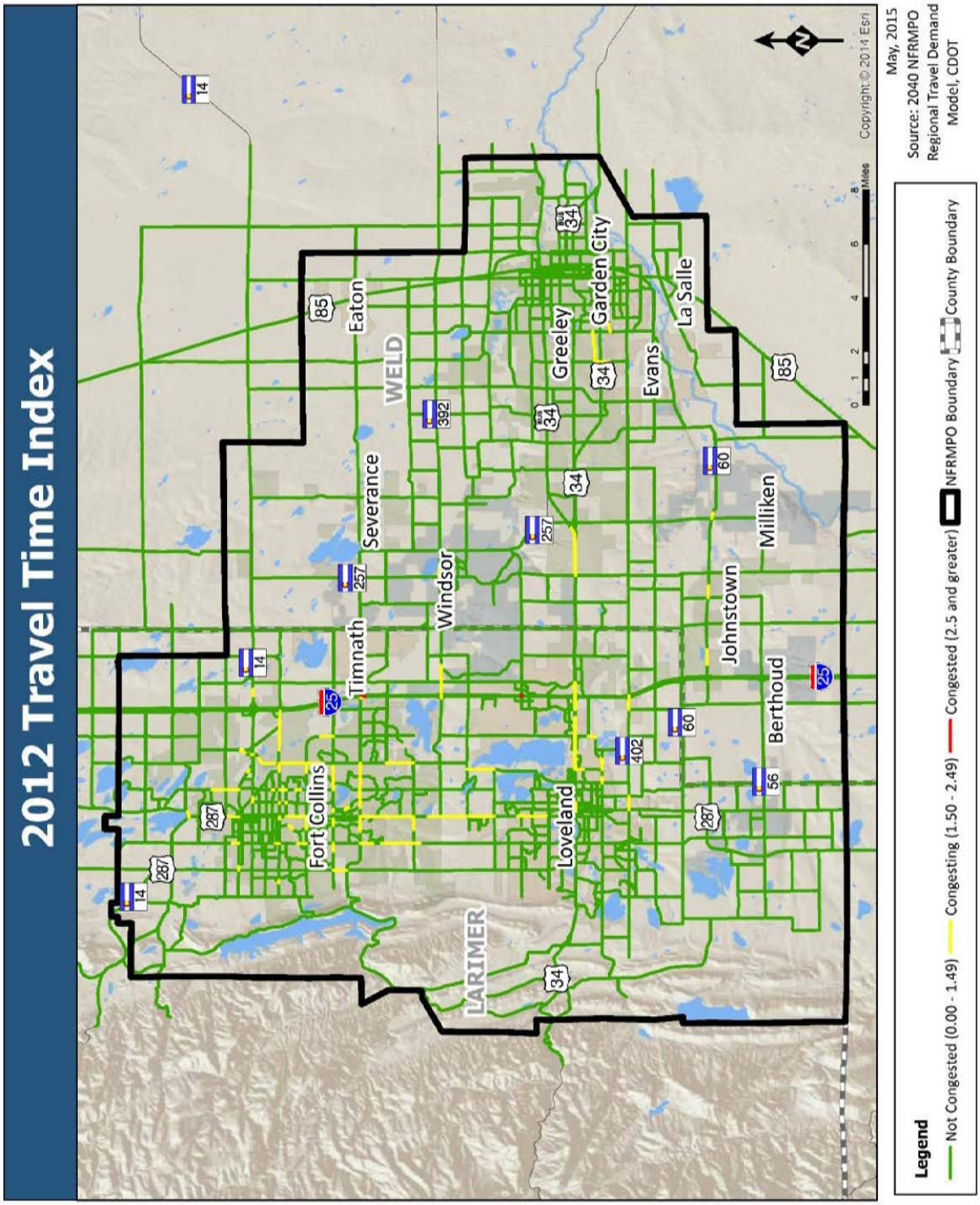
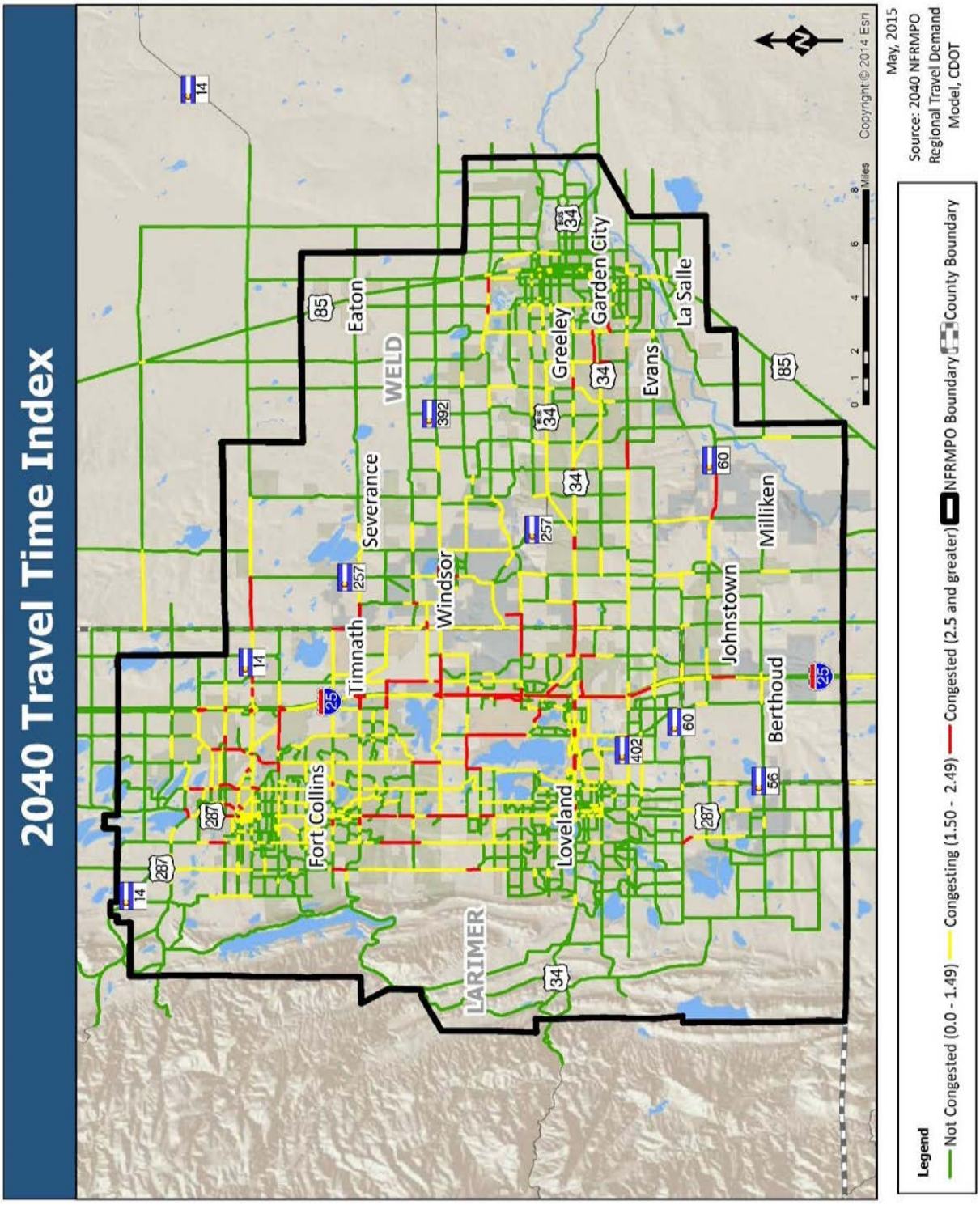


Figure 4-2: Travel Time Index for 2040



4.1.2 Transit Performance Measures

Future CMP reporting will use three performance measures for transit including:

- On Time Performance: The percentage of time a bus remains on its published schedule. This performance metric indicates the ability for the traveling public to rely on posted times.
- Passengers per Mile per Gallon: Requires the calculation of a Passengers per Mile metric and a vehicle mile per gallon figure. Subsequently, the number of Passengers per Mile is multiplied by the vehicle's mile per gallon figure resulting in a figure that can be compared to other vehicles.
- Passengers per Hour per Direction: Requires the number of Passengers per Hour multiplied by a directional coefficient, unless it is collected immediately with the passenger boarding/exiting. The resulting figure is useful when examining travel patterns.

4.3 Transportation Demand Management (TDM)

The NFRMPO completed the Long Range Transportation Demand Management Plan in December 2010. TDM are actions that improve the efficiency of the transportation system by altering transportation system demand rather than embarking on roadway capacity expansion projects. TDM is about increasing transportation system carrying capacity through operational efficiencies or reducing demand.

4.2.1 Intent and Methods of Transportation Demand Management

Federal regulations specify all reasonable congestion management strategies must be evaluated and deemed ineffective or infeasible prior to the consideration of a roadway capacity increase as a congestion management approach. A common misconception of TDM is that it is focused strictly on "getting people out of their cars." Rather there are many ways to improve the efficiency of the existing transportation network.

Methods for achieving a more efficient transportation system include:

- Shrink Trip Time or Length (less time congesting roadway)
  - Intelligent Transportation Systems (ITS)
  - Commuter-Oriented Development
- Encourage Off-Peak Travel (travel during less congested periods)
  - Alternative Work Schedules
  - Congestion Pricing
  - High-Occupancy Toll (HOT) Lanes
- Reducing Single Occupancy Vehicles (less vehicles during congestion)
  - Ridesharing Transit
  - Telecommuting[11]

[11] Long Range Transportation Demand Management Plan. North Front Range Metropolitan Planning Organization. December 2010.

4.2.2 Transportation Demand Management Strategies

TDM strategies can use voluntary or mandatory mechanisms to reduce demand. Eight common TDM strategies include:

- **Road Pricing:** Programs which charge drivers based on their usage of the roadway. Congestion pricing includes price variations based on time of day and level of congestion.
- **Parking Management and Parking Pricing:** Parking Management includes time of day restrictions such as before 10 am or allows the price for parking to fluctuate to ensure a certain percentage of parking spaces are vacant. Parking Pricing is the price associated with the use of a parking space.
- **Car Sharing:** Participants pay to rent vehicles on a per-trip basis allowing the costs of operating a vehicle to be spread among many users.
- **Pay-as-You-Drive Insurance:** Vehicle insurance premiums vary according to the number of miles driven. This gives drivers who drive less an opportunity to pay a lower variable cost rather than a higher, fixed cost insurance.
- **Ridesharing and HOV Lanes:** Ridesharing is two or more people traveling in a vehicle to their destination. HOV lanes incentivize ridesharing by offering travelers who rideshare a less congested travel lane, preferred parking, etc.
- **Transit Incentives:** Businesses or other organizations can offer reduced or free fares to incentivize the use of transit for employees.
- **Transit Improvements:** Improving the availability, efficiency, reliability, convenience, and comfort of transit incentivizes traveler's use of the network.
- **Telework:** Working from home reduces the frequency of employees needing to commute to an employment location.[12]

Additional TDM measures were recommended by the MPO in the Long Range Transportation Demand Management Plan, including:

- **TDM Workshops:** Targeted to employees, a workshop would highlight TDM practices an employer could use to encourage healthy, safe, effective transportation practices.
- **Guaranteed Ride Home:** Used to supplement an employee's mode choice, the Guaranteed Ride Home service provides a free or inexpensive taxi for emergencies for those employees who rideshare.
- **Employer Transportation Assessment Program:** The NFRMPO staff assist local businesses in the creation of a TDM policy for employees.
- **ITS Improvements:** Covered in **Chapter 4, Section 4** of this report.

4.2.3 Transportation Demand Management in Northern Colorado

VanGo™ is a division of the NFRMPO with the goal of helping residents in the region travel as often as possible by means other than driving alone in a car. The program has a website called SMARTTRIPS™ that encourages regional transportation users to choose bicycling, transit, carpooling, vanpooling, and

[12] Reference Sourcebook for Reducing Greenhouse Gas Emissions from Transportation Sources. Chapter 5 Transportation Demand Management Strategies. U.S. Department of Transportation, Federal Highway Administration. Updated 3/24/15. http://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/reference_sourcebook/page05.cfm#s1

walking to reach their destination. Two of the main SmartTrips™ options on the website are VanGo™ a vanpool service which operates 70 vans, and CarGo™, an online ride-matching service allowing users to create their own carpools. Two NFRMPO employees run the program with administrative support from the MPO. The program benefits residents in the region by saving them time and money while reducing regional congestion, emissions, and fuel use.

In 2010, the **Household Travel Survey** was conducted to capture a snapshot of the MPO region's residents travel behavior. Some characteristics of the communities in the region include:

- Greeley/Evans: Households in the Greeley/Evans area were the most unique from the other four areas. Comprised of more retirees and minorities than other areas, these households tend to be smaller, with fewer vehicles, fewer students, fewer workers, lower incomes, and the highest disability rates. This area had higher rental rates and respondents were more likely to hold a transit pass than other areas of the region with the exception of Fort Collins.
- Loveland: Loveland households generally tend towards average characteristics for the region. They reported somewhat lower household sizes and workers per household, but higher-than average renters and above average transit usage.
- Fort Collins: Fort Collins households reported smaller household sizes than average as well as fewer vehicles. These households reported the highest levels of non-motorized travel in a typical week and the highest levels of holding a transit pass. Household members had higher than average education levels and more students per household than the other areas.
- Larimer County: Household size in unincorporated Larimer County was smaller than average, but reported the highest number of vehicles per household. They had the highest licensure rate, lowest levels of disability, above average workers per household, and the highest reported income levels in the area.
- Weld County: Respondents in Weld County were similar to those in Larimer County, except that they had lower education rates and more Hispanic households than the regional average. They were younger, had more students, and reported the largest household size.

Local governments and CDOT participate in regional TDM efforts. The following list describes efforts to implement TDM.

- Fort Collins:
    - Transfort offers bus transit service Monday through Saturday. To increase multi-modal transportation opportunities, all buses are equipped with bicycle racks. Colorado State University (CSU) students ride Transfort for free, after paying tuition and associated fees. Transfort offers Passfort, an employer-based bus pass program which allows the bulk purchase of bus passes. FLEX is a regional bus service operated by Transfort and offers service to Loveland, Berthoud, and Longmont (this service will be extended to Boulder beginning in 2016). MAX is a bus rapid transit (BRT) service operated by Transfort offering north/south service along the Mason Street corridor which parallels College Avenue/US 287.

- FCTrip is a web-based application that provides real-time information to travelers in Fort Collins. This information is supplied through a network of closed-circuit television cameras, video detectors, and pavement sensors.
- Traffic Signal Timing adjustments offer travelers decreased travel delay and increased fuel savings while providing increased pedestrian clearance intervals.
- Fort Collins Bike Library offers community members, students, and visitors a free bicycle to ride if it is returned at the same location, during business hours, on the same day. Each additional day is a nominal fee. The City of Fort Collins sponsors an annual Bike to Work Day event which challenges both employees and local businesses to promote bicycling as transportation for employees.
- Climatewise is a free, voluntary City of Fort Collins program that assists local businesses and the environment through the promotion of waste reduction, energy savings, alternative transportation, water conservation, and practicing pollution prevention.
- CSU incorporates TDM practices by offering, a Fort Collins Bicycle Library location on campus, and free Transfort transit passes.

❖ City of Loveland:

- COLT provides fixed-route bus transit Monday through Saturday, with connections to the FLEX service.
- The City of Loveland sponsors an annual Bike to Work Day event which challenges both employees and local businesses to promote bicycling as transportation for employees.
- The City of Loveland's Engineering Department has partnered with the Thompson School District to promote a Safe Routes to School Program.

❖ City of Greeley:

- The City of Greeley operates GET which provides local transit service in Greeley, Garden City, and Evans.
- Students at the University of Northern Colorado (UNC) ride GET free of charge with student ID cards. Greeley elementary and secondary students also ride free with a pass.
- UNC operates the Boomerang Shuttle (Bear Bus) for students, faculty, and staff to move around campus. Riders with UNC identification ride free of charge.

❖ City of Berthoud:

- The City of Berthoud operates the Berthoud Area Transportation Services (BATS) demand-response transit service Monday through Friday, 8:00 am – 4:00 pm.
- The system operates five vehicles and offers service within Berthoud, to Loveland, and to Longmont.

❖ CDOT:

- Sponsors Bustang which is an interregional express bus service for long distance commutes to Denver along the I-25 and I-70 corridors. Bustang will initiate service on July 13, 2015.
- Connects commuters to the north in Fort Collins and Loveland and to the south in Monument, Woodmen, Colorado Springs and Tejon using I-25.
- Connects commuters to the east in Glenwood, Eagle, Vail, Frisco, and the Denver Federal Center using I-70.

4.4 Intelligent Transportation System

An Intelligent Transportation System (ITS) improves transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Encompassing a broad range of wireless and wire-line communications, an ITS enriches existing roadway system operations in a cost effective manner. [13]

4.4.1 ITS Technologies and Applications

ITS can apply to all forms of transportation, it has the capacity to improve safety, reduce vehicle wear, shrink delay, and lessen fuel consumption. ITS technology includes both intelligent transportation technologies and intelligent transportation applications which are outlined below.

- Intelligent transportation technologies
  - Wireless communications – A number of short and long range radio communications are used to transmit and receive data about the transportation system condition.
  - Computational technologies – Vehicles are trending towards using fewer, but more powerful computer processors to assist with transportation.
  - Floating car data/floating cellular data – A low cost method of collecting travel time and speed data which references mobile phones or GPS systems two-way method of use.
  - Sensing technologies – Allows for the communication of computers embedded in vehicles-to-vehicles and vehicles-to-infrastructure includes pneumatic road tubes, inductive loops, over-roadway sensors, in vehicle speed sensors, impact sensors, vehicle-to-vehicle scanning sensors, etc.[14]
  - Inductive loop detection – Placed in a roadbed, charged loops detect vehicles as they pass through the generated magnetic field.
  - Video vehicle detection – Uses a computer system with video cameras to observe the changing characteristics of recorded imagery to indicate if a lane is occupied (i.e. a car waiting at a traffic signal).

[13] About ITS. US Department of Transportation, Office of the Assistant Secretary for Research and Technology Intelligent Transportation Systems Joint Program Office. Accessed 5/7/15. http://www.its.dot.gov/faqs.htm
[14] A Summary of Vehicle Detection and Surveillance Technologies use in Intelligent Transportation Systems. Chapter 3 – Overview of Vehicle Detection and Surveillance Technologies. Policy Information, Highway Finance Data & Information. U.S. Department of Transportation, Federal Highway Administration. Accessed 5/15/2015. http://www.fhwa.dot.gov/policyinformation/pubs/vdstits2007/03.cfm

- Bluetooth detection – Uses transmitted MAC addresses that are generated by devices such as cell phones, laptops, and GPS units to detect and record travel times, travel direction, and origin/destination.

❖ Intelligent transportation applications

- Electronic toll collection – Uses a camera to record vehicle license plate numbers and subsequently mail a bill or an in-vehicle radio-frequency identification (RFID) sensor to charge a toll.
- Emergency vehicle notification systems – An in-vehicle system drivers can activate to contact emergency personnel while automatically sending incident time, location, and direction with vehicle identification.
- Cordon zones with congestion pricing – Specific areas where drivers are charged a fee for the use of a transportation corridor during a specific time period.
- Automatic road enforcement – A mounted camera used to record license plate numbers for travelers who disobey a speed limit or other legal road requirement and subsequently mail a ticket.
- Variable speed limits – Typically used to reduce traffic speed limits in poor conditions portable changeable message signs (PCMS) can potentially smooth traffic flow, saving traveler's time while reducing accidents.[15]
- Collision avoidance systems – Either in-vehicle systems to automatically stop the vehicle when a potential collision is detected or infrastructure to announce slowed traffic to motorists with Dynamic Message Signs (DMS).
- Dynamic Traffic Light Sequence – A system using RFID sensors embedded in a traveler's electronics to signal vehicle queuing to adjust traffic signal timing.
- Ramp Metering – Uses a traffic signal to control the rate at which vehicles enter the freeway.[16]

4.4.2 Intelligent Transportation Systems in Northern Colorado

In the NFRMPO region a number of ITS strategies are currently in place to help travelers, including:

❖ Automatic Traffic Recording Devices - Tube Counters, Inductive Loop Detection, Bluetooth, Wi-Fi, Video Vehicle Detection

❖ Backup Traffic Signal Control Cabinets

❖ Closed Circuit TV

❖ Fiber Optic Communications

[15] ITS ePrimer Module 3. Office of the Assistant Secretary for Research and Technology, United States Department of Transportation. Intelligent Transportation Systems Joint Program Office. Accessed 5/12/2015. http://www.pcb.its.dot.gov/ePrimer.aspx

[16] Jacobson, L., J. Stribiak, L. Nelson, and D. Sallman. Ramp Management and Control Handbook. Report No. FHWA-HOP-06-001, produced for FHWA by PB Farradyne, Washington, DC, January 2006.

- In-Pavement Traffic Sensor - Inductive Loop Detection
- Lane Control Signage
- Pavement Condition Detection
- Dynamic Message Signage
- Weather Stations – Provide precipitation detection, visibility measurements, wind speed, surface condition, etc.

In 2011, CDOT, the NFRMPO, and local jurisdictions developed the CDOT Region 4 Intelligent Transportation Systems Strategic Implementation Plan.[17] The plan serves as the guiding document for ITS projects to 2021, and identifies the funding needs, recommended deployment time frames, and potential funding sources. **Figure 4-3** shows the funded ITS projects in the 2012-2017 Transportation Improvement Program (TIP). Many of the projects were city-wide, including improvements to traffic control centers and traffic signal upgrades. In these cases, the point shows the location of the traffic control center rather than a specific project location. **Table 4-2** shows the location and funding sources for each of the ITS projects.

[17] CDOT Region 4 Intelligent Transportation Systems Strategic Implementation Plan. Colorado Department of Transportation. June 2011. http://www.cotrip.org/content/itsplans/CDOTRegion%204%20ITS%20Strategic%20Implementation%20Plan_06-30-11.pdf

Figure 4-3: 2012-2017 TIP Funded ITS Projects

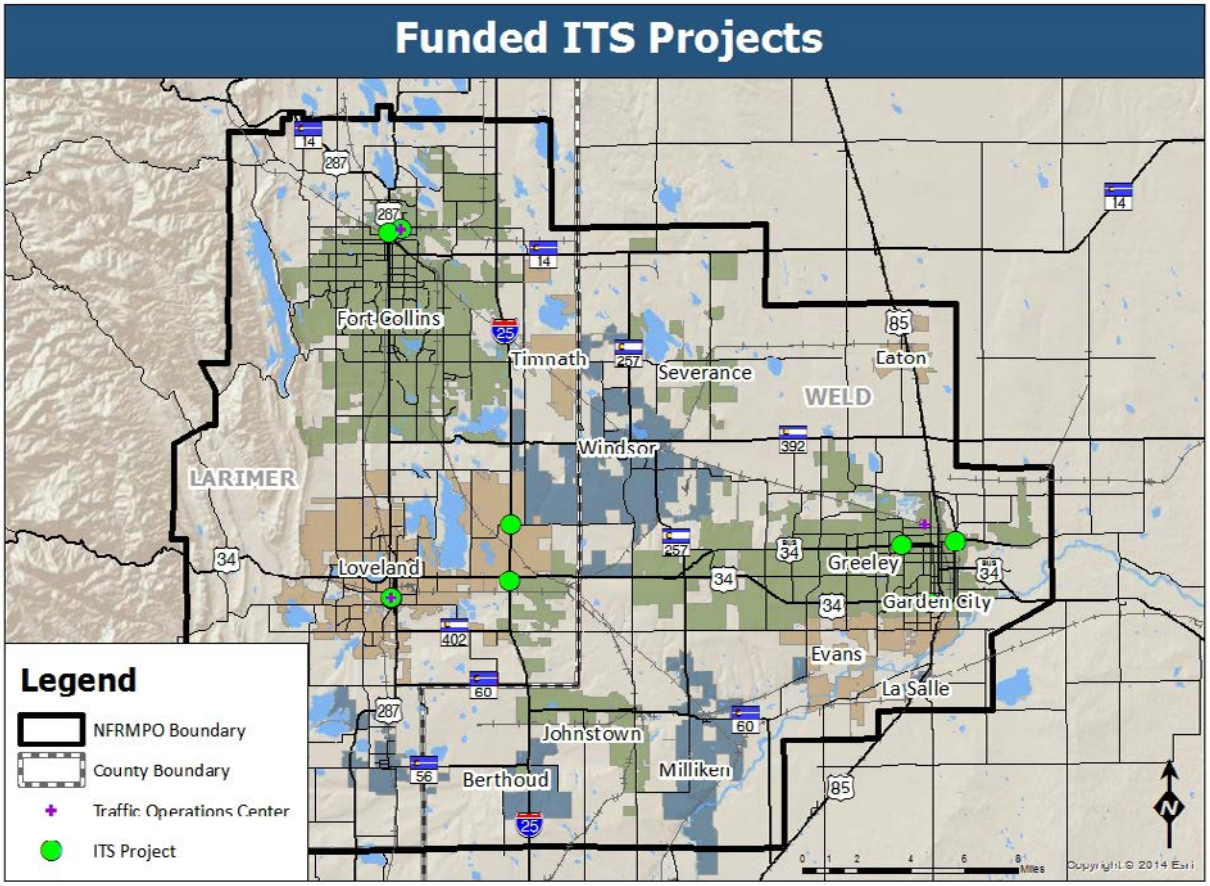


Table 4-2: NFRMPO ITS Projects from FY2012-2017 TIP

ITS Project	Funding Source	Location
Northern Fort Collins Rail Crossing Signals	CMAQ	Fort Collins
Greeley Fiber Optic Communication	CMAQ	Greeley
Loveland Traffic Signals Controllers	CMAQ	Loveland
Loveland I-25/US 34/Crossroads VMS	CMAQ	Loveland
Loveland Traffic Operations Center	STP-Metro	Loveland
Greeley Fiber Optic Communication	STP-Metro	Greeley
Implementation of Network Management System	FASTER	Fort Collins
Adaptive Signal Control US 85 (Greeley)	RAMP	Greeley
US 34 Bypass (Greeley) Adaptive Signals	RAMP	Greeley
US 34 from I-25 to West Yard Fiber Installation	RAMP	Greeley

Source: NFRMPO FY2012-2017 TIP

4.5 Transit Congestion Management Strategies

The Texas Transportation Institute's 2010 Urban Mobility Report outlines public transportation's national congestion reduction benefit.

> "If public transportation service had been discontinued and the riders traveled in private vehicles in 2009, the 439 urban areas would have suffered an additional 785 million hours of delay and consumed 640 million more gallons of fuel. The value of the additional travel delay and fuel that would have been consumed if there were no public transportation service would be an additional $18.8 billion, a 16% increase over current congestion costs in the 439 urban areas."[18]

Transit plays an important role in creating a holistic transportation system. A number of transit related congestion reduction benefits are outlined in the sections that follow.

4.5.1 Congestion Pricing

According to Transit and Congestion Pricing, A Primer, congestion pricing uses the power of the market to reduce waste associated with traffic congestion. Travelers who choose to use the transportation system during peak periods are charged an additional usage fee. Depending on size of the fee, drivers have an incentive to shift their travel time, mode, or route. Effective transit service is essential for the successful implementation of congestion pricing. The mode shift encouraged by congestion pricing requires a robust transit system to absorb the additional ridership. With a reduction in vehicles the system is able to flow more smoothly. Public concerns about instituting an additional fee is offset by an increase in reliable travel times for all users.[19]

There are five main types of pricing strategies:

1. Variably priced lanes: Variable tolls on separated lanes within a highway, such as express-toll lanes or High Occupancy Toll (HOT) lanes.
2. Variable tolls on entire roadways: Both on toll roads and bridges, as well as on existing toll-free facilities during rush hours.
3. Zone-based (area or cordon) charges: Either variable or fixed charges to drive within or into a congested area within a city.
4. Area-wide charges: Per-mile charges on all roads within an area that may vary by level of congestion.
5. Pricing that does not involve tolls: This includes innovative parking-pricing strategies (e.g., surcharges for entering or exiting a parking facility during or near peak periods) and a range of parking cash-out policies, in which cash is offered to employees in lieu of subsidized parking.

Revenue generated by congestion pricing can be used to enhance the transportation network for other modes, install new infrastructure, and implement TDM and ITS improvements. While the benefits of congestion pricing are numerous, some include: transit travel times are improved with the reduction in traffic; reducing the breakdown of traffic flow maximizes the public investment in transportation facilities; and emergency personnel response time is improved, and increased travel time reliability is provided for users.

[18] Lomax, Tim. et al. Real-Timing the 2010 Urban Mobility Report. Final Report. Texas Transportation Institute. February 2011. http://utcm.tamu.edu/publications/final_reports/Lomax_10-65-55.pdf

[19] Transit and Congestion Pricing, A Primer. U.S. Department of Transportation. Federal Highway Administration. June 2009. Accessed 5/13/15. http://ops.fhwa.dot.gov/publications/fhwahop09015/fhwahop09015.pdf

4.5.2 Bus Rapid Transit

Bus Rapid Transit (BRT) is "an integrated system of facilities, equipment, services, and amenities that improves the speed, reliability, and identity of bus transit."[20] BRT can be thought of as an above ground subway or a rubber-tired light rail system with the added benefit of having greater operating flexibility and lower costs. This high-frequency service offers not only congestion mitigation benefits, but community development benefits as well. The constant availability of a bus is attractive to travelers, residents, and business owners.

A number of facilities augment the capacity and usefulness of BRT. To eliminate conflicts with slower vehicles BRT can use dedicated right-of-way lanes in the median. Station platforms level will the bus floor accelerate passenger boarding time and allow wheelchairs and strollers to easily roll on or off the bus. Off-board fare collection systems allow passengers to pre-pay before using the BRT. To decrease intersection wait times BRT is sometimes prioritized in the signal queue. Emergency vehicles also benefit from BRT by having an additional travel lane.

4.5.3 Operational Transit Congestion Management Measures

A number factors can be incorporated in transit service strategies which can be implemented to further enhance the effectiveness of transit. The factors include:

- Pricing Factors
  - Reduction or elimination of fares
- Service Quantity Factors
  - Increasing service hours including Sunday service
  - Reducing the time between transit vehicles
  - Reducing transfer time
  - Prioritizing transit vehicles at traffic signals
  - Focusing routes on high density corridors or locations
- Service Quality Factors
  - Transit stop amenities
  - Off-board fare collection
  - Bus scheduling information
  - Station and in-route safety
  - Customer service
  - Cleanliness[21]

[20] TCRP Report 118. Bus Rapid Transit Practitioner's Guide. Transportation Research Board. 2007. Washington, D.C. http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_118.pdf

[21] Taylor, Brian D. & Fink, Camille N.Y. The Factors Influencing Transit Ridership: A Review and Analysis of the Ridership Literature. UCLA Department of Urban Planning Working Paper. 9/4/2013. Los Angeles, CA. http://www.uctc.net/papers/681.pdf

Reducing or eliminating fares can play a large role in increasing transit ridership. Currently, free transit passes for CSU, UNC, and some K-12 students incentivize use of the transit network. During the 2014-2015 school year GET ridership numbers increased 313 percent among elementary, middle, and high school students with identification for the Ride Free with ID program, which totaled approximately 47,000 rides.

Adjacent land use practices compound the usefulness of transit; for college students transit connects residential facilities with campus; business along transit routes is encouraged by the accessibility transit offers; and employers are incentivized to locate near transit to offer transportation options for employees.

In Fort Collins, a Transit-Oriented Development (TOD) Overlay Zone was developed to focus growth around the MAX BRT system along the Mason Street corridor. Running north-south through Fort Collins the Mason Street corridor connects residents to a mix of housing, office, and retail opportunities. The MAX BRT system along Mason Street increases economic opportunity, active lifestyle choices, and access to employment options while reducing vehicular congestion. This concentration of accessible development reduces resident's transportation costs while increasing property values near the BRT system.

In 2009, Transfort adopted their Transit Strategic Operating Plan which focuses on creating a productive transit system rather than a system with complete citywide coverage. Similarly, GET is reconfiguring transit routes in 2016 to increase productivity by reducing coverage. A bus service offering frequent service ensures maximum ridership by encouraging potential riders to make a mode shift. Offering weekend and Sunday service further increases the utility of transit. Service quality is an important factor in continued ridership and permanent mode shift. Riders are willing to continue using transit when safe, clean, and convenient transit travel is offered.

4.6 Traffic Incident Management

A traffic incident is any occurrence that impedes the normal flow of traffic on a highway, including crashes, vehicle breakdowns, and spilled loads. According to FHWA:

> *Traffic Incident Management (TIM) consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims and emergency responders.*[22]

The Traffic Incident Management (TIM) program is part of the FHWA's Emergency Transportation Operations (ETO) and plays a critical role in ensuring consistent traffic flow in the NFRMPO region. TIM activities are typically categorized into five overlapping functional areas:

- Detection and Verification
  - Detection: the determination that an incident of some type has occurred.
  - Verification: the determination of the precise location and nature of the incident.

[22] Traffic Incident Management. U.S. Department of Transportation. Federal Highway Administration. Emergency Transportation Operations. http://ops.fhwa.dot.gov/eto_tim_pse/about/tim.htm Accessed 6/2/15.

- Traveler Information
  - The communication of incident related information to motorists who are at the scene of the incident, approaching the scene of the incident, or not yet departed from work, home, or other location.
- Response
  - The activation of a "planned" strategy for the safe and rapid deployment of the most appropriate personnel and resources to the incident scene.
- Scene Management and Traffic Control
  - Scene Management: the coordination and management of resources and activities at or near the incident scene, including personnel, equipment, and communication links.
  - Traffic Control: the process of managing vehicular traffic around the scene of the incident.
- Quick Clearance and Recovery[23]
  - Clearance: the safe and timely removal of a vehicle, wreckage, debris, or spilled material from the roadway.
  - Recovery: the restoration of the roadway to its full capacity.

These functional areas incorporate a number of operational agencies to assist in traffic incident recovery. Typically, the agencies responsible for incident recovery include: CDOT, state and local law enforcement, Fire/EMS, local jurisdictions, coroners, courtesy patrols, and towing/recovery agencies.

4.6.1 Traffic Incident Management in Northern Colorado

Between 2001 and 2011, the I-25 corridor between SH 7 and the Wyoming border experienced a 2.4 percent annual growth rate in Annual Average Daily Traffic (AADT) and a 27 percent increase in traffic demand. Between 2006 and 2010, there were 545 crashes resulting in injuries or fatalities (an average of 103 per year).[24]

In June 2012, CDOT released the I-25 Traffic Incident Management Plan or TIMP. The plan covers the entire length of I-25 in the NFRMPO region. The purpose of the TIMP is to, "provide a planned, coordinated, and cooperative approach to detecting and removing incidents and restoring traffic capacity as quickly and safely as possible."[25]

The I-25 Traffic Incident Management Plan offers a number of recommendations to improve incident response, including: consistent, compatible communication technology between responding agencies for an informed emergency response; creation of specific detour plans and procedures in advance to accelerate opening travel corridors; increasing the visual coverage of transportation corridors with cameras and other ITS solutions to accelerate knowledge of the

[23] Best Practices in Traffic Incident Management. U.S. Department of Transportation. Federal Highway Administration. Emergency Transportation Operations. September 2010. http://ops.fhwa.dot.gov/publications/fhwahop10050/ch2.htm Accessed 6/2/15.
[24] Traffic Incident Management. U.S. Department of Transportation. Federal Highway Administration. Emergency Transportation Operations. http://ops.fhwa.dot.gov/eto_tim_pse/about/tim.htm Accessed 6/2/15.
[25] I-25 Traffic Incident Management Plan, SH 7 to Wyoming State Line. Colorado Department of Transportation. June 2012.

scene; installing additional variable message signs (VMS) to help motorists make informed decisions about entering or leaving a corridor; unifying the command system dispatch agencies use to communicate; and establishing a standing project management team to evaluate the performance of incident plans.

Chapter 5: Next Steps

5.1 Future Congestion Data Collection

5.1.1 Travel Time Datasets

In addition to the NPMRDS, INRIX, and the City of Fort Collins Bluetooth Dataset, the MPO will be assisting the cities of Greeley, Loveland, and CDOT purchase and install Bluetooth counters. These counters will be placed at signalized intersections along regionally significant congested corridors near each of the communities. In the future, these four datasets will be used to inform the Annual CMP Report. The datasets will increase in value as a collection of longitudinal information is created. Using overlapping locations the three community datasets will be used to validate each other.

5.1.2 NFRMPO Travel Demand Model Update

The NFRMPO Travel Demand Model is updated prior to the RTP approximately every four years. This is done to accurately reflect the transportation infrastructure network and refine the criteria the model uses to forecast future conditions. As the travel time datasets become more robust they will supply the model with accurate information to ensure validity. In the interim years, the NFRMPO staff will be updating the model to add the speed limit data to all of the links in the model to allow the TTI to be calculated using the speed limit.

5.2 Annual CMP Performance Measure Reports

The NFRMPO releases an annual CMP Performance Measure Report each winter/spring. Using data collected throughout the year based on the criteria listed in **Chapter 4**, the region's demographic data, congestion trends and transportation system performance is quantified for analysis. This analysis used to inform regional priorities in the RTP and project selection for the TIP.

The NFRMPO CMP will use the performance measures listed in **Chapter 4**:

- Travel Time Index
- Vehicle Miles Traveled
- Transit Performance Measures

Additionally, the NFRMPO will include information on:

- Historical Transportation Trends
- Crashes (Passenger Vehicles, Trucks, Bicycle, Pedestrian)
- Transit Ridership
- VanGo™ Ridership
- Transportation Demand Management Practices
- Programmed and Implemented Projects
    - CMP's Role in Project Selection
    - Selected Projects
    - Implemented Projects
- External Influences on the Transportation Network

- Gas Prices
- Population and Unemployment Statistics
- Transportation Funding and Gas Tax

Appendix

A. FHWA CMP Ruling

Title 23 Sec. 450.320 Congestion management process in transportation management areas.

Statewide Transportation Planning; Metropolitan Transportation Planning;

Final Rule, February 14, 2007.

(a) The transportation planning process in a TMA shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction and operational management strategies.

(b) The development of a congestion management process should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the TIP. The level of system performance deemed acceptable by State and local transportation officials may vary by type of transportation facility, geographic location (metropolitan area or subarea), and/or time of day. In addition, consideration should be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity and safety of those lanes.

(c) The congestion management process shall be developed, established, and implemented as part of the metropolitan transportation planning process that includes coordination with transportation system management and operations activities. The congestion management process shall include:

(1) Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions;

(2) Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures should be tailored to the specific needs of the area and established cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;

(3) Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area;

(4) Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, are some examples of what should be appropriately considered for each area:

(i) Demand management measures, including growth management and congestion pricing;

(ii) Traffic operational improvements;

(iii) Public transportation improvements;

(iv) ITS technologies as related to the regional ITS architecture; and

(v) Where necessary, additional system capacity;

(5) Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and

(6) Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decision makers and the public to provide guidance on selection of effective strategies for future implementation.

(d) In a TMA designated as nonattainment area for ozone or carbon monoxide pursuant to the Clean Air Act, Federal funds may not be programmed for any project that will result in a significant increase in the carrying capacity for SOVs (i.e., a new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks), unless the project is addressed through a congestion management process meeting the requirements of this section.

(e) In TMAs designated as nonattainment for ozone or carbon monoxide, the congestion management process shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs (as described in paragraph (d) of this section) is proposed to be advanced with Federal funds. If the analysis demonstrates that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor and additional SOV capacity is warranted, then the congestion management process shall identify all reasonable strategies to manage the SOV facility safely and effectively (or to facilitate its management in the future). Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself, shall also be identified through the congestion management process. All identified reasonable travel demand reduction and operational management strategies shall be incorporated into the SOV project or committed to by the State and MPO for implementation.

(f) State laws, rules, or regulations pertaining to congestion management systems or programs may constitute the congestion management process, if the FHWA and the FTA find that the State laws, rules, or regulations are consistent with, and fulfill the intent of, the purposes of 23 U.S.C. 134 and 49 U.S.C. 5303.

B. North Front Range MPO 2014 Congestion Survey

In 2014, the NFRMPO completed the 2014 Congestion Survey. In total 226 participants answered at least one question and 93 answered all 12 questions. The included survey questions are below:

1. Where do you live?
2. Where do you work/volunteer?
3. What is your primary commute method?
4. What do you think causes heavy traffic and congestion?
5. Heavy traffic/congestion means I am:
6. How often do you experience heavy traffic/congestion?
7. Please select up to 3 factors you consider important when making travel decisions (route choice, travel method, departure time) for your commute trip.
8. How do you avoid heavy traffic?
9. Compared to five years ago, would you say traffice congestion has:
10. Which category below includes your age?
11. What is your household income category?
12. What is the highest level of education you have completed?

DISCUSSION ITEM: 2040 Regional Transit Element

AGENDA ITEM SUMMARY (AIS)

North Front Range Transportation & Air Quality Technical Advisory Committee (TAC)

Meeting Date	Agenda Item	Submitted By
June 17, 2015	2040 Regional Transit Element	Becky Karasko

Objective / Request Action

Staff is providing the final draft of the 2040 Regional Transit Element (RTE) document. This document has been developed with input from the local transit agencies, the public, and TAC members. This document will be going to Council for discussion at their July 9, 2015 meeting. TAC will be expected to make a recommendation for Planning Council approval at their July 15 meeting.

- ☐ Report
- ☐ Work Session
- ☑ Discussion
- ☐ Action

Key Points

- MPO staff is updating the RTE ahead of the 2040 RTP
- Although the RTE was originally anticipated to be an update, there have been too many significant changes in transit services
- The 2040 RTE evaluates nine corridors for transit service in the North Front Range region, as identified in Supporting Information
- Transit corridors were evaluated in the transportation model to determine potential demand for transit service in key regional corridors
- On April 30, 2015 staff met with the three local transit agencies to discuss a recommendation for the 2040 RTE

Committee Discussion

At their March 18, 2015 meeting, TAC discussed Chapters 1-3 and Appendices A & B of the 2040 RTE. At their April 15, 2015 meeting TAC approved Chapters 1 & 2 and Appendix A. Also at their April 15, 2015 meeting, TAC discussed Chapters 4-8 and Appendices C & D. Staff made the requested changes to all of the chapters and appendices of the 2040 RTE.

The MPO Executive Committee met on April 23, 2015 and requested TAC provide a recommendation for the 2040 RTE. In response, NFRMPO staff met with the local transit agencies on April 30, 2015 and developed a recommendation. At their May 20, 2015 meeting, TAC discussed and provided feedback on this recommendation. Staff presented the recommendation to Council at their June 4, 2015. NFRMPO Planning Council provided no comments on the Transit Recommendation.

Supporting Information

The 2040 RTE evaluated nine corridors for potential future transit services within the region:

- Evans-to-Milliken-to-Berthoud along SH 60 and SH 56
- Greeley-to-Denver along US 85
- Greeley-to-Windsor-to-Fort Collins along SH 257 and SH 14
- Greeley-to-Longmont along US 85, SH 66, and SH 119
- Greeley-to-Loveland along US 34
- Fort Collins-to-Bustang (Express Route)
- Greeley-to-Bustang (Express Route)
- Loveland-to-Bustang (Express Route)

The proposed North I-25 Commuter Rail line from Fort Collins-to-Longmont, while not being evaluated in this RTE, is discussed in the RTE as an important future corridor.

The 2040 RTE recommendation includes:

- Further analysis of the transit connections between:
  - Fort Collins and Greeley/Evans area;
  - Greeley/Evans area and Loveland and

        - Greeley/Evans area and Denver.

- Additional service and investment along the US 287 corridor

Advantages

Having TAC review the full 2040 RTE Draft Report document prior to Council discussion allows TAC to maximize their time and input for review prior to final 2040 RTE Draft Report recommendation at the July 15, 2015 TAC meeting for Council approval at their August 6, 2015 meeting.

Disadvantages

None noted.

Analysis /Recommendation

Staff requests TAC members review the portions of the full 2040 RTE document that are applicable to their jurisdictions/entities for accuracy and content.

Attachment

- 2040 RTE document

2040 Regional Transit Element

Adopted ---------, ----

NFRMPO
NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

ADA – Americans with Disability Acts

BATS – Berthoud Area Transportation Services
BRT – Bus Rapid Transit

CDOT – Colorado Department of Transportation
CMAQ – Congestion Mitigation and Air Quality
CNG – Compressed Natural Gas
COLT – City of Loveland Transit
CR – County Road
CSU – Colorado State University

DRCOG – Denver Regional Council of Governments
DIA – Denver International Airport
DR – Direct Recipients

EIS – Environmental Impact Statement
EJ – Environmental Justice
EPA – Environmental Protection Agency

FASTER – Funding Advancements for Surface Transportation and Economic Recovery Act
FEIS – Final Environmental Impact Statement
FHWA – Federal Highway Administration
FLEX – Fort Collins-Longmont Express
FRA – Federal Railway Administration
FTA – Federal Transit Administration

GET – Greeley-Evans Transit

HBRRP – Highway and Bridge Replacement and Rehabilitation
HSIP – Highway Safety Improvement Program
HUTF – Highway Users Trust Fund

IGA – Inter-governmental Agreement

LCMC – Larimer County Mobility Council
LEHD – Longitudinal Employer-Household Dynamics
LODES – LEHD Origin-Destination Employment Statistics

MAP-21 – Moving Ahead for Progress in the 21st Century of 2012?
MAX – Mason Express Bus Rapid Transit

MPO – Metropolitan Planning Organization

NCLA – Northern Colorado Legislative Alliance
NEMT– Non-Emergency Medical Transportation
NFRMPO – North Front Range Metropolitan Planning Organization
NHS – National Highway System

PNR – Park-n-Ride
PRIIA – Passenger Rail Investment and Improvement Act of 2008
PSD – Poudre School District

RAFT – Rural Alternative for Transportation
ROD – Record of Decision
RTA – Regional Transit Authority
RTD – Regional Transportation District
RTE – Regional Transit Element
RTP – Regional Transportation Plan
RSA – Regional Service Agreement

SAINT – Senior Alternatives In Transportation
SH – State Highway
SRS – Senior Resource Services
STP-Metro – Surface Transportation Program for metropolitan areas

TAB – Transportation Advisory Board
TAC – Technical Advisory Committee
TAZ – Transportation Analysis Zone
TDM – Transportation Demand Management
TMA – Transportation Management Area
TPR – Transportation Planning Region

UNC – University of Northern Colorado
US – United States Highway
UZA – Urbanized Area

VMT – Vehicle Miles Traveled

WCMC – Weld County Mobility Council

EXECUTIVE SUMMARY

This 2040 Regional Transit Element (RTE) provides a long-range vision for regional transit services; however, the focus of the recommended actions is for the short-term. The region has had success in working together on transit, as shown by the FLEX route and the partnerships funding GET. It is through cooperative action and many small steps that a regional transit vision will become a reality. The 2040 RTE recommendation includes:

- Further study into the transit connections between:
  - Fort Collins and Greeley/Evans area;
  - Greeley/Evans area and Loveland; and
  - Greeley/Evans area and Denver.
- Additional service and investment along the US 287 corridor.

The entire North Front Range region will see significant population growth, with 84 percent more people in 2040 than in 2010. The I-25 sub-region will have the highest growth rates resulting in a population 183 percent higher in 2040 than in 2010.

- Fort Collins will remain the largest community, but will have the smallest rate of growth, adding 52 percent more people.
- Greeley will become larger than Fort Collins is today.
- Loveland will become larger than Greeley is today.

The population in the modeling area will nearly double over the next 25 years. Population and employment growth are occurring fastest within the I-25 sub-region. The I-25 sub-region will also have the highest levels of employment growth. The more developed and built out the city, the less population and employment growth is projected to occur.

- The percentage of residents age 65+ will increase from 18 percent of the population in 2010, to 26 percent of the population by 2040.
- The current population growth rate in the region outpaces the growth rate of jobs, this imbalance will cause even more residents to commute outside the region for employment.

Ult5imately, the best transit service plan will balance technical feasibility, social need, and political support. The region should:

- Assist smaller communities within the region with senior transit services between communities and to transit centers is a recommended priority for essentials, such as medical and grocery store trips;
- Develop service standards for each corridor; and
- Continue work set out in the previously completed feasibility studies.

CHAPTER 1: INTRODUCTION

PURPOSE

The 2040 Regional Transit Element (RTE) replaces the 2035 RTE and will become a part of the 2040 North Front Range Regional Transportation Plan (RTP). The purpose of the 2040 RTE is to guide development of transit in the region, which encompasses the Fort Collins Transportation Management Area (TMA) and Greeley urbanized areas (UZA).

The 2035 RTE defined a vision for regional transit services by providing a framework to understand the types of regional transit services that may be needed in the future. Since its publication in 2011, the North I-25 Environmental Impact Statement (EIS), has provided a guide for how transit could be implemented along the I-25 corridor. Addressing transit service needs along the major corridors in the region is a necessary step to connect the region to the transit elements identified in the North I-25 EIS.

The 2040 RTE focuses on the steps necessary to translate a long-term regional transit vision into reality. It provides alternatives ranging from maintaining the status quo to rapid progress towards the service levels envisioned in the North I-25 EIS. This planning effort reflects a different approach and a more detailed level of analysis than has been done in the past. The 2040 RTE Alternatives:

- ≠ Define service levels to move a corridor from no service to a well-developed transit mode and illustrates the potential for service development in the region's primary corridors.
- ≠ Provides factual information on what is necessary to provide regional transit, at a variety of service levels.
- ≠ Broadly identifies the funding and governance challenges needing to be addressed prior to implementing transit services.
- ≠ Provides strategies and tools for developing regional transit services.

PROJECT GUIDANCE

The North Front Range Metropolitan Planning Organization (NFRMPO) developed the 2040 RTE with input and guidance from the Technical Advisory Committee (TAC), the three regional transit providers, and the Larimer and Weld County Mobility Councils. The Planning Council guided the development of the report and adopted the plan at their (add date once adopted) meeting as part of the regional planning process.

Key concepts of this plan include:

- ≠ How to connect communities in the region with each other and with activity centers outside the region;
- ≠ Practical and implementable results; and

≠ Strong public involvement.

The 2040 RTE builds on local planning efforts and other planning studies in the region. ***Appendix A*** contains a listing of relevant planning reports, including corridor plans, mode-specific plans, and local transit plans. Since the completion of the 2035 RTE in 2011, eight planning reports and plans have been completed, necessitating a full update of the 2040 RTE. These plans include:

≠ CDOT Statewide Transit Plan *(2015)*

≠ Interregional Connectivity Study *(2014)*

≠ 2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO) *(2013)*

≠ NFRMPO Coordinated Public Transit/Human Services Transportation Plan *(2013)*

≠ North Front Range Transit Vision Feasibility Study *(2013)*

≠ Colorado State Freight and Passenger Rail Plan *(2012)*

≠ Greeley Transportation Master Plan Update *(2011)*

≠ North I-25 Final Environmental Impact Statement *(2011)*

This study considers local transit plans, but does not address specific local transit services or schedules. All decisions about local levels of transit service remain with local entities. The regional services addressed in this plan are public, fixed-route services.

PLANNING PROCESS

The development of the 2040 RTE has proceeded in two major phases. The first phase documents regional characteristics; existing and planned transit services; analysis of demand for transit; and the development of alternatives for regional transit services. The second phase involves an action plan to move the region forward in the development of regional transit services.

The planning activities for this 2040 RTE began with the solicitation of comments from the Mobility Councils and residents in Larimer and Weld counties. The public involvement continued with public meetings in each County to solicit comments on the 2040 RTE corridors. In addition, it included a series of meetings with the jurisdictions in the region to solicit their views on the alternatives for developing regional transit services.

PLANNING ISSUES

Within the region, local governments have developed transit services primarily to meet the local travel needs of residents within their communities. As the region has grown there has been an increasing need for transit services between communities and to major activity and employment centers.

The NFRMPO region is growing rapidly, with the population projected to increase by 78 percent from 488,513 in 2010 to 896,191 by 2040. Much of the future development in the region is anticipated to occur within the center of the region and in unincorporated areas where transit services may not exist or are not as well developed as in the urbanized areas.

The region's rapid development also taxes the transportation network. Travel forecasts project regional congestion levels will require significant investment in the transportation infrastructure for all modes. This raises the issue of transit's role in the future regional transportation network. Transit services could provide an effective alternative during peak period travel times as a feeder service to regional transit corridors.

Many questions still must be answered. What transit services are needed in the future? How will they be delivered? How will they be funded? A significant amount of planning work has gone into addressing the question of what services are needed within and between communities. The preferred alternative developed in the North I-25 EIS includes significant regional transit services. The outstanding issues are how the services will be developed, funded, and delivered.

The funding of transit services is a perennial challenge and the development of regional transit services requires stable funding across and between communities. Currently, each community is responsible for determining how they fund their local transit services and any connections to other communities through regional services.

While it is widely recognized that regional transit services are important to Northern Colorado's future, an implementation plan does not exist for developing such services. There are two possible approaches: 1) extend out from existing services or 2) establish new routes in corridors where conditions are conducive to establishing transit services. Pilot route services have been started, but permanent financing for successful services are still needed.

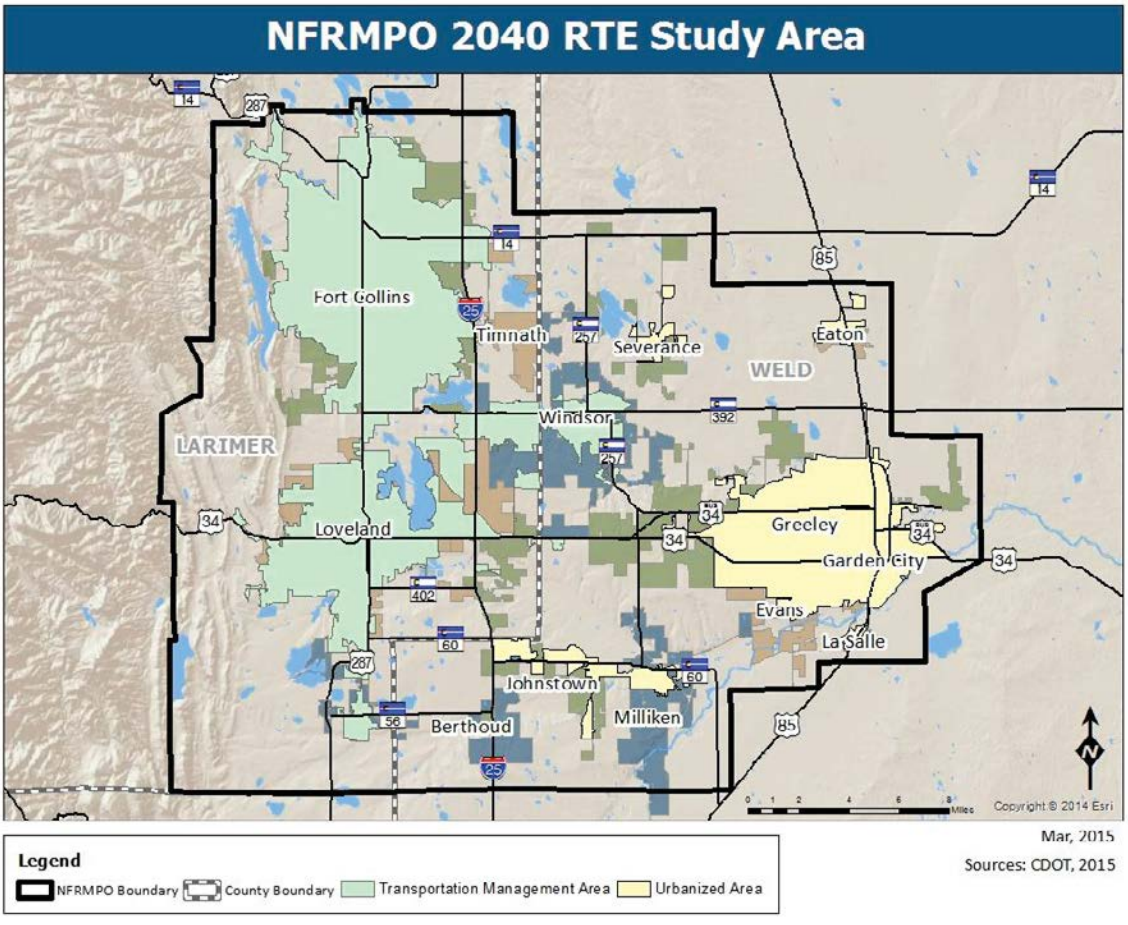
Recognizing these issues and challenges, this 2040 RTE will focus on the practicalities of identifying how to move forward in the development of transit services for the region.

CHAPTER 2: SOCIO-ECONOMIC PROFILE
STUDY AREA

The study area for this 2040 RTE is the NFRMPO region, also designated by the Colorado Department of Transportation (CDOT) as the North Front Range Transportation Planning Region. The NFRMPO boundaries lie within Larimer and Weld counties. The largest communities within the region are Fort Collins, Greeley, and Loveland, but the area includes many smaller municipalities. These MPO communities are within commuting distance to Boulder, Denver, Longmont, and Cheyenne, Wyoming.

The NFRMPO includes the Fort Collins-Loveland TMA, a large urbanized area; the Greeley-Evans small-urbanized area; and the small urban and rural areas outside these boundaries. ***Figure 2-1*** illustrates the study area within the Metropolitan Planning Organization (MPO) boundary.

Figure 2-1 NFRMPO 2040 RTE Study Area



Source: *NFRMPO Staff, 2014*

POPULATION

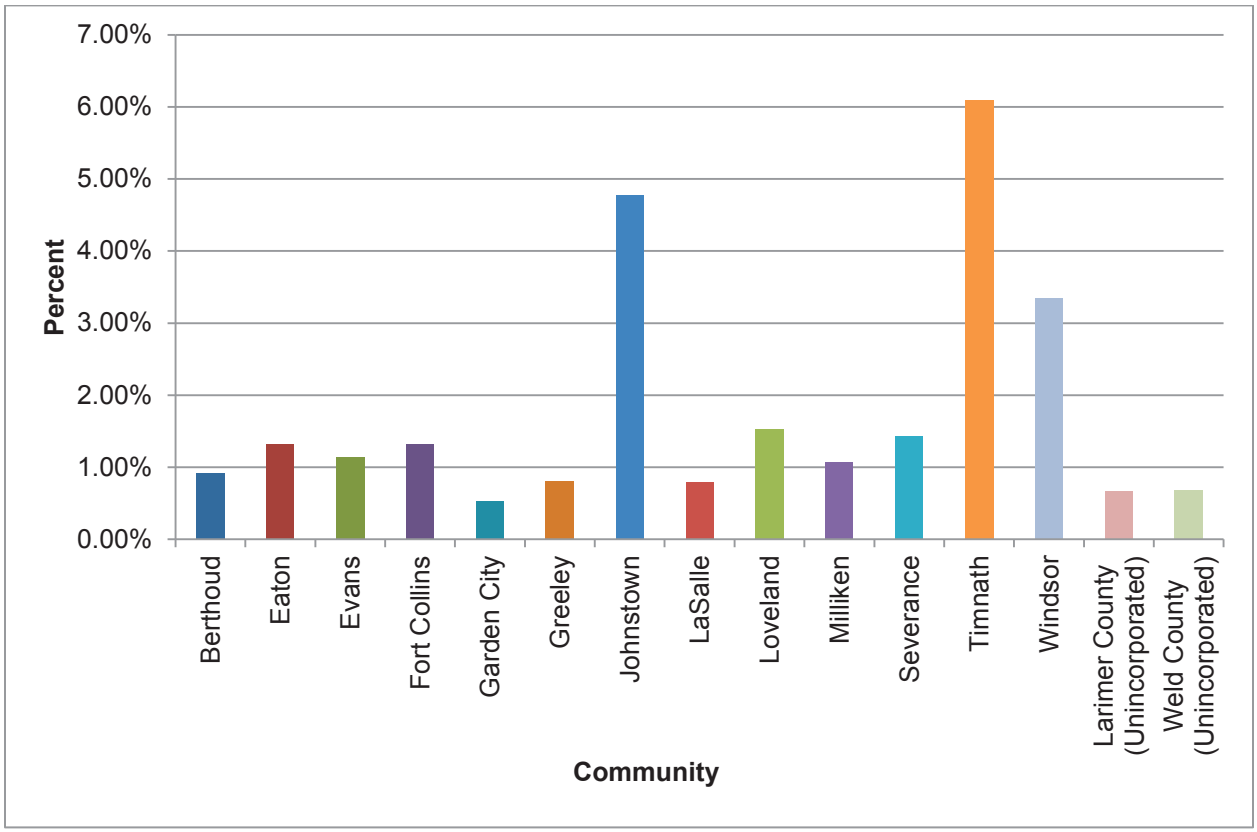
The three largest cities within the MPO boundary, Fort Collins, Greeley, and Loveland, had a 2013 population of 152,205 residents, 96,306 residents, and 71,224 residents, respectively. The communities of Berthoud, Eaton, Evans, Garden City, Johnstown, LaSalle, Milliken, Severance, Timnath, and Windsor are also members of the MPO. The population within these communities range from 240 to 21,407 residents, as shown in ***Table 2-1***. The balance of the population in the region resides in unincorporated portions of Larimer and Weld counties. According to the Colorado State Demography Office, the population in the North Front Range modeling area was approximately 434,492 in 2010, 8.6 percent of the State of Colorado's total population.

Table 2-1 NFRMPO Region Population Estimates, 2010-2013

Community	2010	2011	2012	2013	Average Annual Growth Rate
Berthoud	5,123	5,156	5,203	5,313	0.91%
Eaton	4,385	4,441	4,525	4,622	1.32%
Evans	18,649	18,931	19,315	19,508	1.13%
Fort Collins	144,416	145,809	149,110	152,205	1.32%
Garden City	235	235	238	240	0.53%
Greeley	93,253	94,189	95,212	96,306	0.81%
Johnstown	9,988	10,411	11,042	12,034	4.77%
LaSalle	1,962	1,979	2,003	2,025	0.79%
Loveland	67,046	69,150	70,191	71,224	1.52%
Milliken	5,634	5,695	5,775	5,879	1.07%
Severance	3,204	3,272	3,332	3,392	1.44%
Timnath	626	784	791	793	6.09%
Windsor	18,769	19,238	20,094	21,407	3.34%
Larimer County (Unincorporated)	48,884	49,324	49,768	50,215	0.67%
Weld County (Unincorporated)	12,318	12,429	12,541	12,654	0.68%
TOTAL	**434,492**	**441,043**	**449,140**	**457,817**	1.32%

Source: *Colorado State Demography Office, http://www.colorado.gov/cs/Satellite/DOLA-Main/CBON/1251593300013*

Figure 2-2 Average Annual Growth Rate, 2010-2013



Source: *Colorado State Demography Office, 2015*

The average annual growth rate among all the jurisdictions in the region is approximately two percent. When taken individually, the average annual growth rate varies significantly by jurisdiction. As ***Figure 2-2*** shows, the average annual growth rate is highest in Timnath, where the population increased from 626 in 2010 to 793 in 2013, an average annual rate of 6.09 percent. Other communities with high growth rates include Johnstown and Windsor with 4.77 percent and 3.34 percent respectively.

FORECASTS

In May 2012, Steven Fisher, Ph.D. and Phyllis Resnick, Ph.D. were contracted by the NFRMPO to develop a regional forecast for the North Front Range. The goal of the forecast was to predict population, households, and employment in five-year increments from 2010 to 2040. These socio-economic data have been added to the NFRMPO land use and travel demand models, which allocates the growth by traffic analysis zone and projects the number of vehicle trips. The output from these models is used for air quality modeling and conformity.

The modeling area in Fisher and Resnick's report **2040 Economic and Demographic Forecast**, is divided into seven regions and do not exactly correspond with the MPO or municipal boundaries, ***Figure 2-3***. The sub-region referred to as Surrounding Area or Wellington

includes unincorporated portions of Larimer and Weld counties as well as Ault, Eaton, LaSalle, Pierce, and Severance. The I-25 sub-region includes Johnstown, Milliken, Timnath, and Windsor. The Loveland sub-region includes Berthoud and Loveland. The Greeley sub-region includes Evans, Garden City, and Greeley. The Fort Collins sub-region only contains Fort Collins.

By 2040, the region's population is estimated to reach 896,191.[1] The forecasts from the report were adopted by the MPO Planning Council in June 2013 and are the basis for the Land Use and the travel models, providing consistency for both the population and travel forecasts.

Population growth will not be uniform throughout the region. ***Table 2-2*** provides the population forecasts for the seven sub-regions during the 30-year period between 2010 and 2040, in five-year increments. The Greeley/Evans, I-25 Corridor, and Loveland sub-regions are expected to grow at a faster rate than the Fort Collins and the Surrounding Area sub-regions. ***Figure 2-4*** shows the average annual growth rate per sub-region between 2010 and 2040. Overall, the average population increase for all sub-regions between 2010 and 2040 is 85 percent.

Figure 2-5 illustrates the relative population levels of each of the five sub-areas used in the model. Fort Collins will continue to decrease its percentage of the overall population from 34.6 percent of the total population in 2010 to 28.5 percent by 2040. Greeley/Evans will increase its share of the total population to 24.7 percent by 2040, only four percent less than Fort Collins. The I-25 sub-region will see the greatest increase, from 8.9 percent of the total population in 2010 to 13.6 percent by 2040.

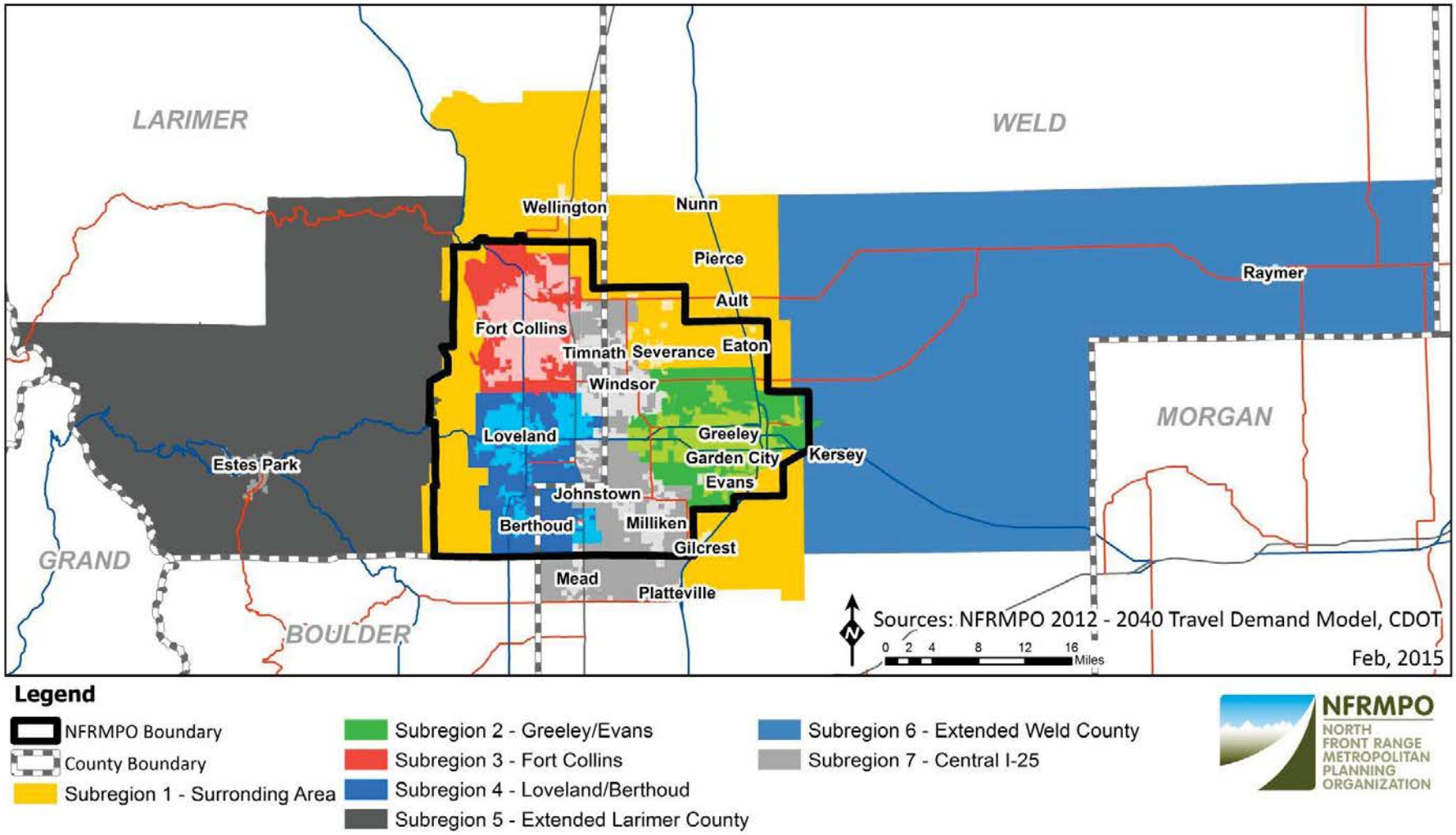
Table 2-2 Population by Sub-Region, 2010-2040

	Sub-Region	2010	2015	2020	2025	2030	2035	2040	Average Annual Growth Rate
1	Surrounding Area	50,762	53,518	63,796	68,312	75,874	82,312	89,518	1.91%
2	Greeley/Evans	111,301	122,195	137,435	160,366	178,119	199,694	217,182	2.25%
3	Fort Collins	164,594	178,509	192,277	200,389	222,570	230,290	250,450	1.41%
4	Loveland	77,962	88,605	99,654	112,695	125,172	136,966	148,958	2.18%
5	Estes	20,963	21,467	25,590	28,415	31,561	36,176	39,345	2.12%
6	Weld	7,736	8,389	9,438	10,486	11,648	13,352	14,520	2.12%
7	I-25	42,305	51,213	61,049	83,128	92,328	110,262	119,918	3.53%
Total		**475,624**	**523,989**	**589,239**	**663,790**	**737,273**	**809,051**	**879,891**	**2.07%**

Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

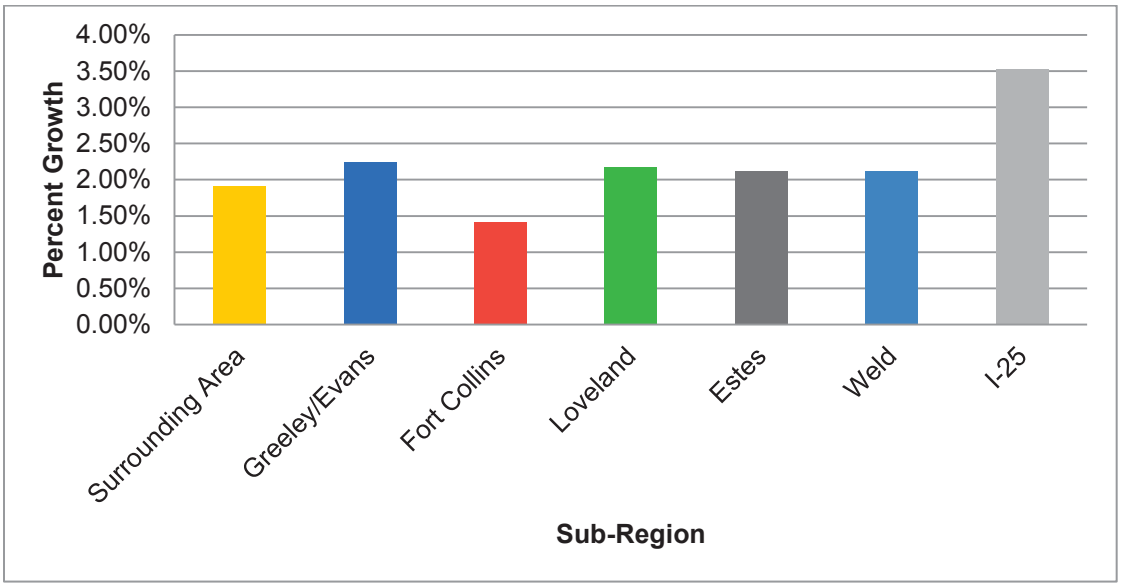
[1] *"2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO) 2012-2013"*, is available in its entirety at http://nfrmpo.org/ResourcesDocuments.aspx

Figure 2-3 NFR Modeling Area and Sub-Regions



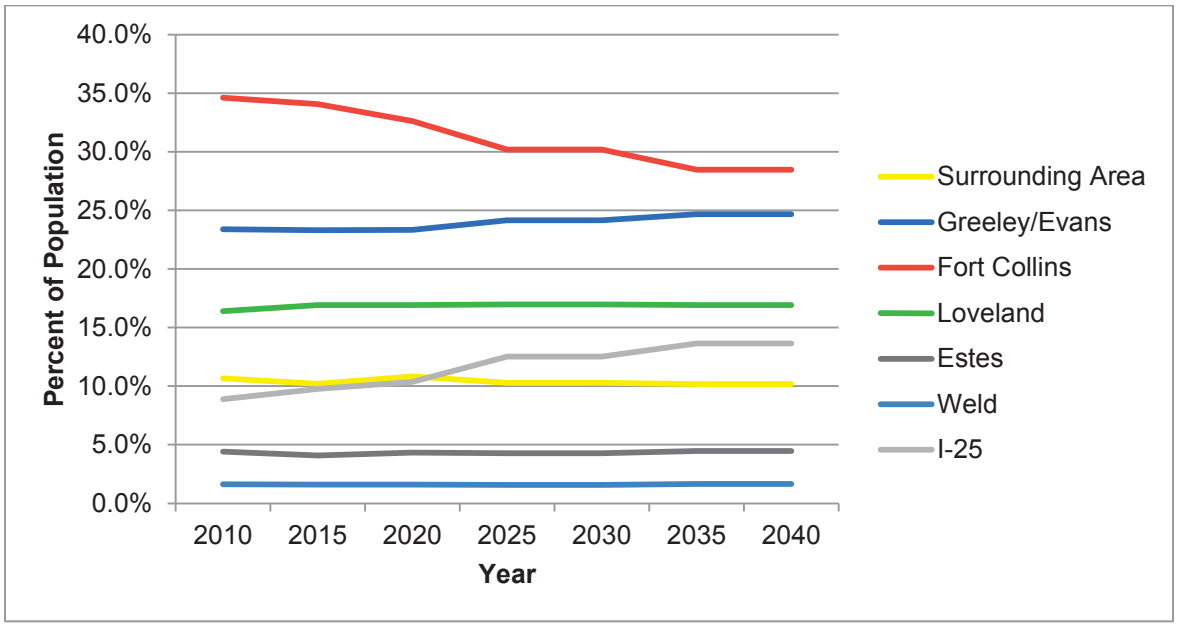
Source: *NFRMPO 2012-2040 Travel Demand Model, 2015*

Figure 2-4 Average Annual Growth Rate by Sub-Region, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

Figure 2-5 Percentage of Total Population by Sub-Region, 2010-2040

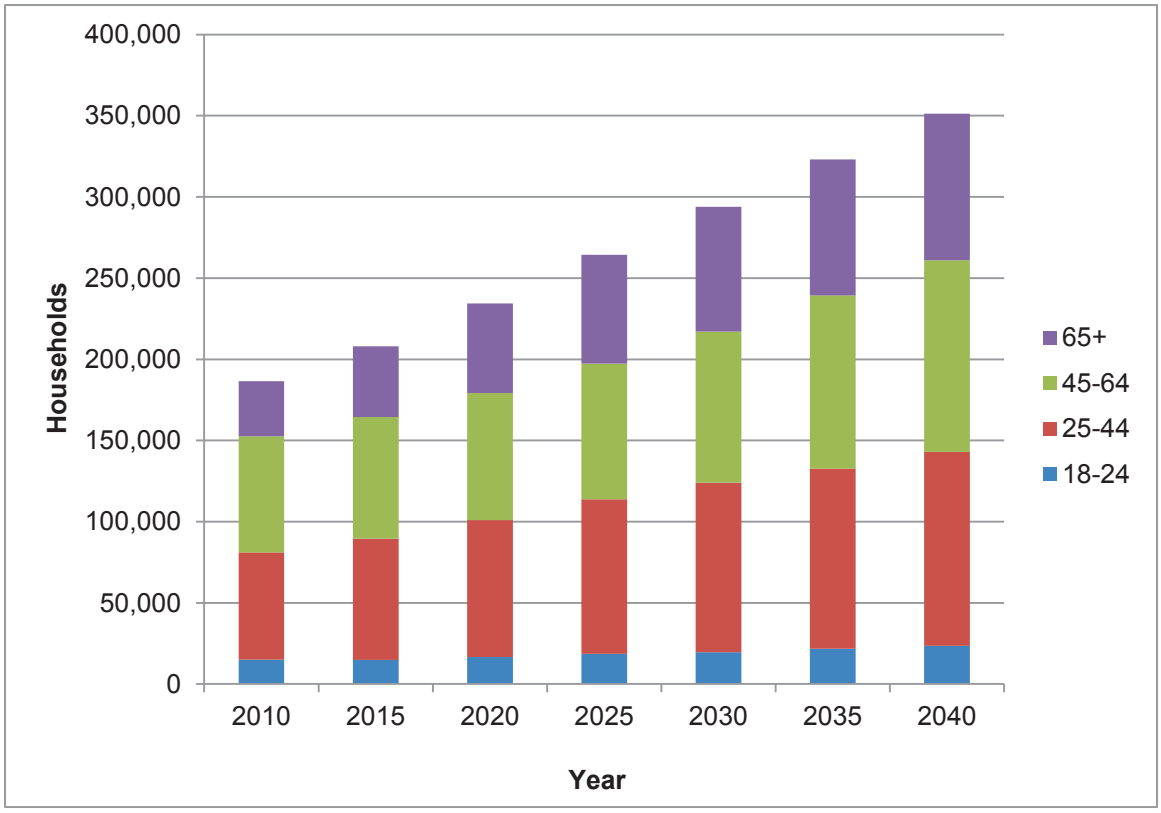


Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

The population in the North Front Range region will grow in all age cohorts (***Figure 2-6***); however, households headed by the oldest cohort, those aged 65 years and older, will grow the fastest. This cohort will grow from 18 percent of the population in 2010 to 26 percent of the population by 2040. This equates to a growth rate of over 166 percent, from 33,000 in 2010 to over 90,000 in 2040. Additionally, this cohort will increase on average more than three percent every year through 2040. This is over twice the growth rate for the group with the smallest gains, the 18-24 cohort. The average annual growth rate for all segments is shown in ***Figure 2-7***.

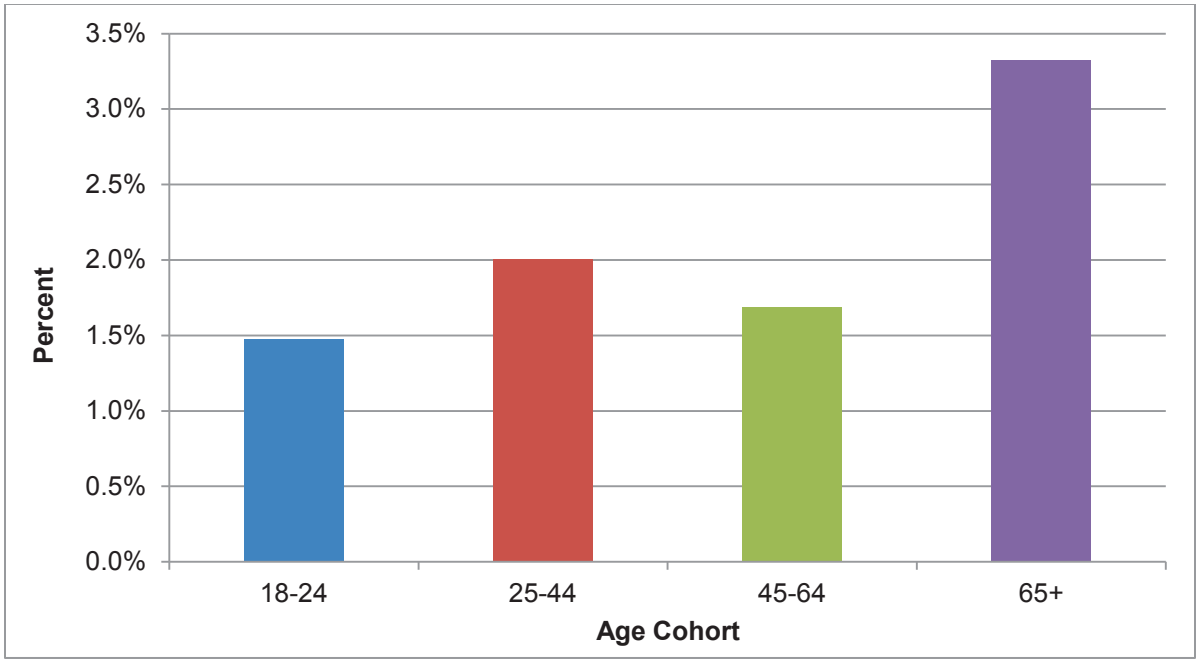
Knowing the age cohort growth projection rates is important for transportation as it allows time to plan to better meet the needs of the age groups needing additional or specialized transit services. Based on this projection, providing more transportation options for the aging population should be a priority in the region over the next 25 years.

Figure 2-6 Household Growth by Head of Household Age Group, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

Figure 2-7 Average Annual Household Growth Rate by Age Group, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

EMPLOYMENT AND TRAVEL PATTERNS

The current and projected employment levels were also provided by the **2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO) 2012-2013**.

Total jobs in the North Front Range Forecast Area are estimated at 230,000 in 2010 and projected to grow to 415,000 by 2040. The growth varies by area with the most rapid growth projected to occur in the I-25 sub-region (3.71 percent annual average) and the smallest growth projected to occur in the Fort Collins area (1.24 percent annual average). The Loveland, Greeley/Evans area, and the Surrounding Area are projected to have 2.2 percent, 2.29 percent, and 1.93 percent growth, respectively. ***Table 2-3*** and ***Figure 2.8*** illustrate projected job growth by sub-region.

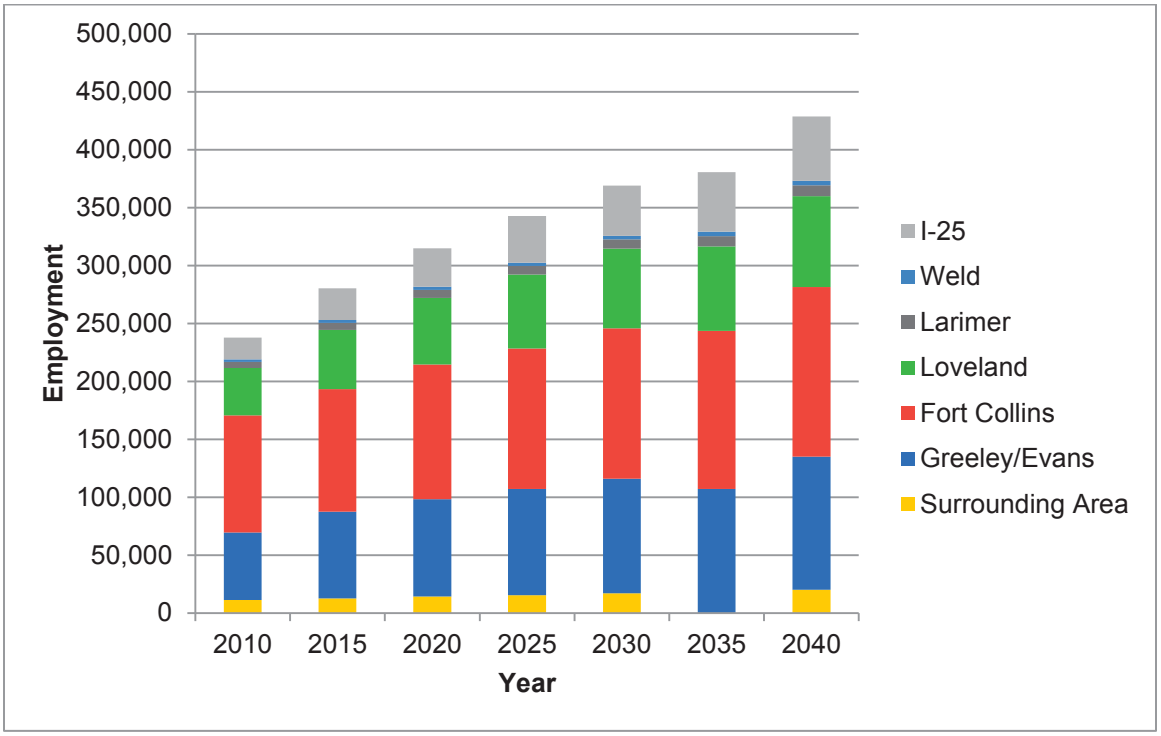
Fort Collins, Greeley/Evans, and Loveland are still projected to contain the majority of the region's employment by 2040.

Table 2-3 Number of Jobs by Sub-Region, 2010-2040

Sub-Region		2010	2015	2020	2025	2030	2035	2040	Average Annual Growth Rate
1	Surrounding Area	11,288	12,608	14,211	15,239	16,937	18,04	20,007	1.93%
2	Greeley/Evans	58,263	74,862	84,111	91,957	98,991	107,112	115,059	2.29%
3	Fort Collins	101,158	105,794	116,102	121,177	129,915	136,565	146,459	1.24%
4	Loveland	40,763	51,130	57,447	63,732	68,607	72,862	78,267	2.20%
5	Larimer	5,397	6,178	6,941	7,419	7,986	8,911	9,572	1.93%
6	Weld	2,173	2,487	2,795	2,989	3,218	3,593	3,860	1.93%
7	I-25	18,574	27,147	33,219	40,305	43,388	51,550	55,374	3.71%
Total		**237,615**	**280,207**	**314,827**	**342,818**	**369,042**	**398,996**	**428,599**	1.99%

Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

Figure 2-8 Employment Growth by Sub-Region, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

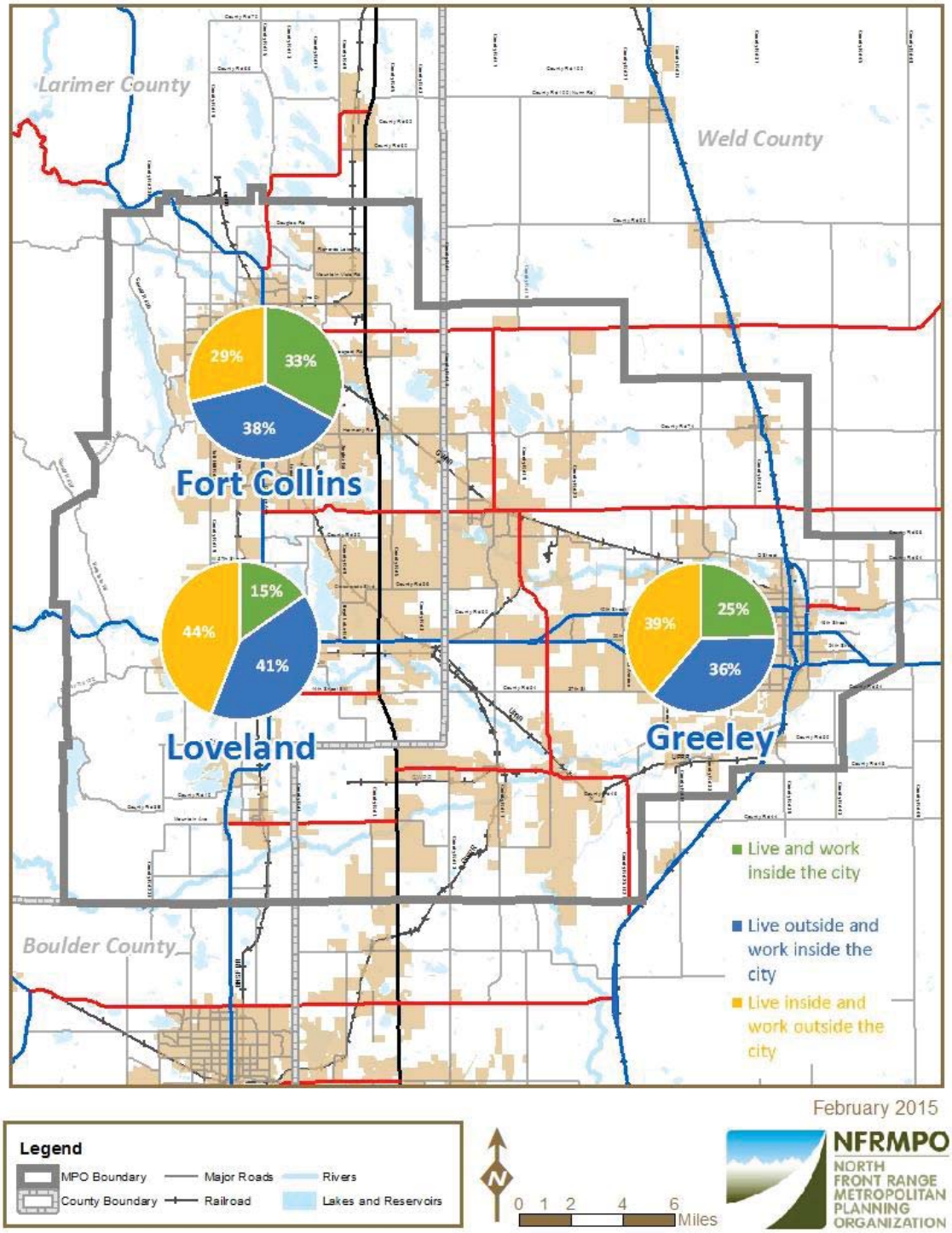
TRAVEL PATTERNS

Travel patterns for commute trips are another important element in this analysis. There is a high level of commuting into and out of the North Front Range modelling region. Data from the Census Department's OnTheMap Version 6 was analyzed for the three largest cities in the North Front Range: Fort Collins, Greeley, and Loveland. OnTheMap is an online mapping and reporting tool depicting where workers are employed and where they live using a variety of data sources, including Longitudinal Employer-Household Dynamics (LEHD) Origin Destination Employment Statistics (LODES) and US Census data.[2]

The percentage of persons who live and work in the same jurisdiction for Fort Collins, Greeley, and Loveland changed from 2002-2011. Over that 10 year period, Greeley and Loveland saw a steady decrease in the number of residents who live and work in the same community. In 2011, only a quarter of Loveland's residents worked in the City of Loveland, the lowest of the three largest cities. Approximately 40 percent of Greeley's residents lived and worked in Greeley in 2011. Unlike Loveland and Greeley, the number of residents living and working in Fort Collins has stayed relatively steady over same 10 year period, between 50 and 55 percent. The 10 remaining communities in the North Front Range region have very low percentages of residents living and working in the same community, from one to 10 percent. These patterns are shown in ***Figure 2-9***.

[2] OnTheMap website, http://lehd.ces.census.gov/applications/help/onthemap.html#!what_is_onthemap.

Figure 2-9 Regional Travel Patterns



Source: *OnTheMap, 2015*

In 2011, 74 percent of Loveland's workforce commuted to Loveland from another community; this percentage increased steadily over the last 10 years, starting at 62 percent in 2002. Greeley

and Fort Collins have experienced similar growth in the percentage of workers commuting into their jurisdiction, though these percentages are lower than Loveland's.

Loveland also has the highest percentage of its total workforce leaving the community to work elsewhere at 76 percent in 2011. Greeley and Fort Collins are slightly lower at 60 percent and 56 percent, respectively. All three cities have seen an increase in the percentage of their total workforce leaving the community to work elsewhere over the last 10 years.

The **Front Range Travel Counts: NFRMPO Household Survey**, published in 2010, showed trips from rural Larimer County are strongly oriented to Fort Collins and Loveland. The trips from rural Weld County are oriented towards the nearest urban center. Although Greeley captures most of these trips, trips from the western and central portions of the county generally end in Loveland. Trips from the southern part of the county are generally oriented to Broomfield, Denver, or Longmont.

Three important things to note from these forecast and commuter trends:

1. The population in the modeling area will nearly double over the next 30 years. Population and employment growth are occurring fastest within the I-25 sub-region.
2. The population is aging; growth is fastest among those aged 65 and older.
3. Greater numbers of people are commuting to other jurisdictions for work.

These three important trends indicate the area will experience population and socio-economic changes that will likely increase the need for travel in general and transit in particular.

LAND USE

Early development throughout the region was relatively compact, with downtown core areas surrounded by residential development followed by grid-pattern development. As communities expanded, employment and activity centers followed residential development further out from these early urban cores. Today the region contains three core cities, Fort Collins, Greeley, and Loveland, with growth occurring along the I-25 corridor and between the three core cities. Fort Collins, Greeley, and Loveland have all expanded towards I-25. The communities of Berthoud, Johnstown, Timnath, and Windsor are anticipated to absorb much of the growth along this corridor in future years. The area surrounding the intersection of I-25 and US 34 has become a hub for medical and commercial services.

In general, outside the older communities' cores, the region has developed in a largely suburban pattern, with relatively low-density development and employment and activity centers located throughout the region. This land use pattern, where residential and employment centers are widely dispersed is difficult to serve effectively and efficiently with transit.

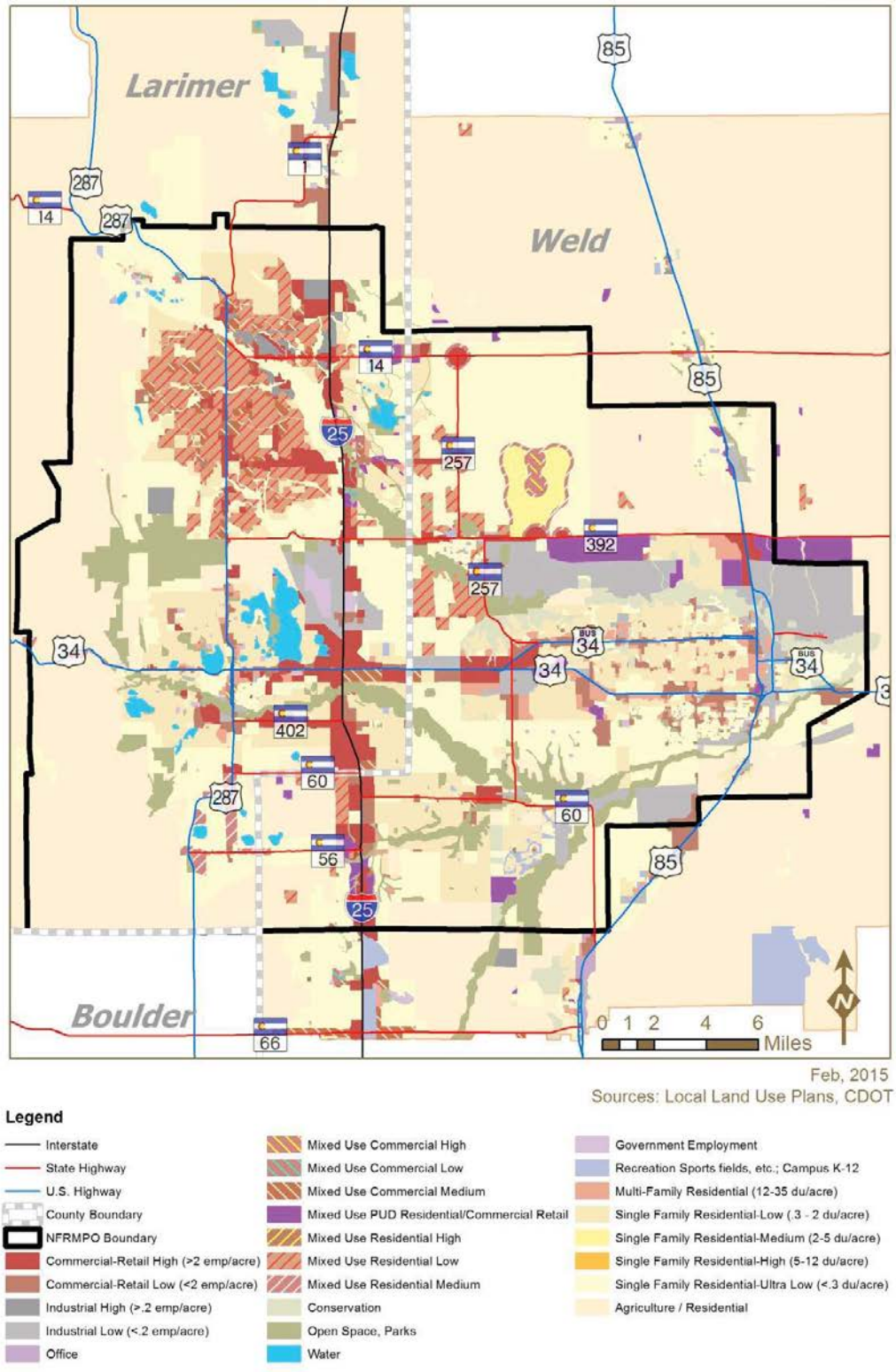
The region's future land use pattern, ***Figure 2-10***, shows most of the region's anticipated growth is expected to occur between the existing urban areas.

CHAPTER SUMMARY

Summary points from the analysis of the land use, demographic, and employment data which will figure prominently in the development of the transit network are listed below.

- ≠ The entire North Front Range region will see significant population growth, with 84 percent more people in 2040 than in 2010. The I-25 sub-region will have the highest growth rates resulting in a population 183 percent higher in 2040 than in 2010.
  - o Fort Collins will remain the largest community, but will have the smallest rate of growth, adding 52 percent more people.
  - o Greeley will become larger than Fort Collins is today.
  - o Loveland will become larger than Greeley is today.
- ≠ The population in the modeling area will nearly double over the next 30 years. Population and employment growth are occurring fastest within the I-25 sub-region. The I-25 sub-region will also have the highest levels of employment growth. The more developed and built out the city, the less population and employment growth is projected to occur.
- ≠ The percentage of residents age 65 and over will increase from 18 percent of the population in 2010 to 26 percent of the population by 2040.
- ≠ The current population growth rate in the region outpaces the growth rate of jobs, this imbalance will cause even more residents to commute outside the region for employment.

Figure 2-10 North Front Range Future Regional Land Use



Source: *NFRMPO 2012-2040 Land Use Allocation Model, 2015*

CHAPTER 3: EXISTING AND PLANNED TRANSIT SERVICES

PUBLIC TRANSPORTATION PROVIDERS

Current public transportation systems in the North Front Range include those operated by the cities of Fort Collins, Greeley, and Loveland, and the Town of Berthoud. Other transportation services active in the region include services provided by volunteers, such as Senior Alternatives In Transportation (SAINT), Senior Resource Services (SRS), and Rural Alternative for Transportation (RAFT), several commercial transportation providers, and the NFRMPO VanGo subscription vanpool program.

Public transportation in the North Front Range region has evolved primarily as a local governmental function. SAINT and the Berthoud Area Transportation Services (BATS) evolved to meet the needs of seniors, while the transit services in Fort Collins, Greeley, and Loveland operate fixed-routes and paratransit services which serve broad markets.

TRANSFORT – THE CITY OF FORT COLLINS

The Transfort system is owned and operated by the City of Fort Collins. Transfort provides fixed-route bus service, service along a specific route following a specific schedule, and contracts paratransit service, or Dial-a-Ride, door-to-door, wheelchair accessible service provided when requested, through a contract with Veolia Transportation.

Transfort's fixed-routes are illustrated in ***Figure 3-1***. Transfort operates 20 local routes, one bus rapid transit (BRT) route, and one regional route. Routes generally run from 6:30 a.m. until 6:30 p.m., Monday through Saturday, but there is considerable variation with some routes to the Colorado State University (CSU) campus operating until 10:00 p.m.

Transfort also operates the FLEX regional service between Fort Collins and Longmont, through a partnership with the cities of Fort Collins, Longmont, and Loveland, the Town of Berthoud, and Boulder County.

There is no service on major holidays, and Transfort adjusts its schedule depending on whether or not CSU and the Poudre School District (PSD) are in session. CSU is in session approximately 150 days per year, while PSD operates roughly 183 days per year.

Transfort charges a single ride fare of $1.25, discounted to $0.60 for seniors (60+) and disabled or Medicare passengers. There is no fare for transfers, youths (17 and under), and full-time CSU students, faculty, and staff with a valid RamCard.

Service Characteristics

In 2012, Transfort carried more than 2.29 million passengers on the fixed-route system, which increased from 1.9 million passengers in 2009. The Transfort system productivity is 29.2 riders per hour, ***Table 3-1***. Routes 2, 3, and 11 serve the CSU market and are some of the most productive in the system. These three routes carry a combined average of 73 passengers per

hour. Similarly, routes 91 and 92 serve PSD students and operate limited hours with high productivity. The remaining routes average 22.9 riders per hour.

As required by the federal government, Transfort operates a Dial-a-Ride service within ¾-mile of regular fixed-routes. In 2013, the system provided 19,429 hours of service and carried 37,747 riders. Transfort provides travel training on the third Thursday of every month from 12:00-1:00 p.m. for users who are interested in learning to use the fixed-route buses for some or all of their trips.

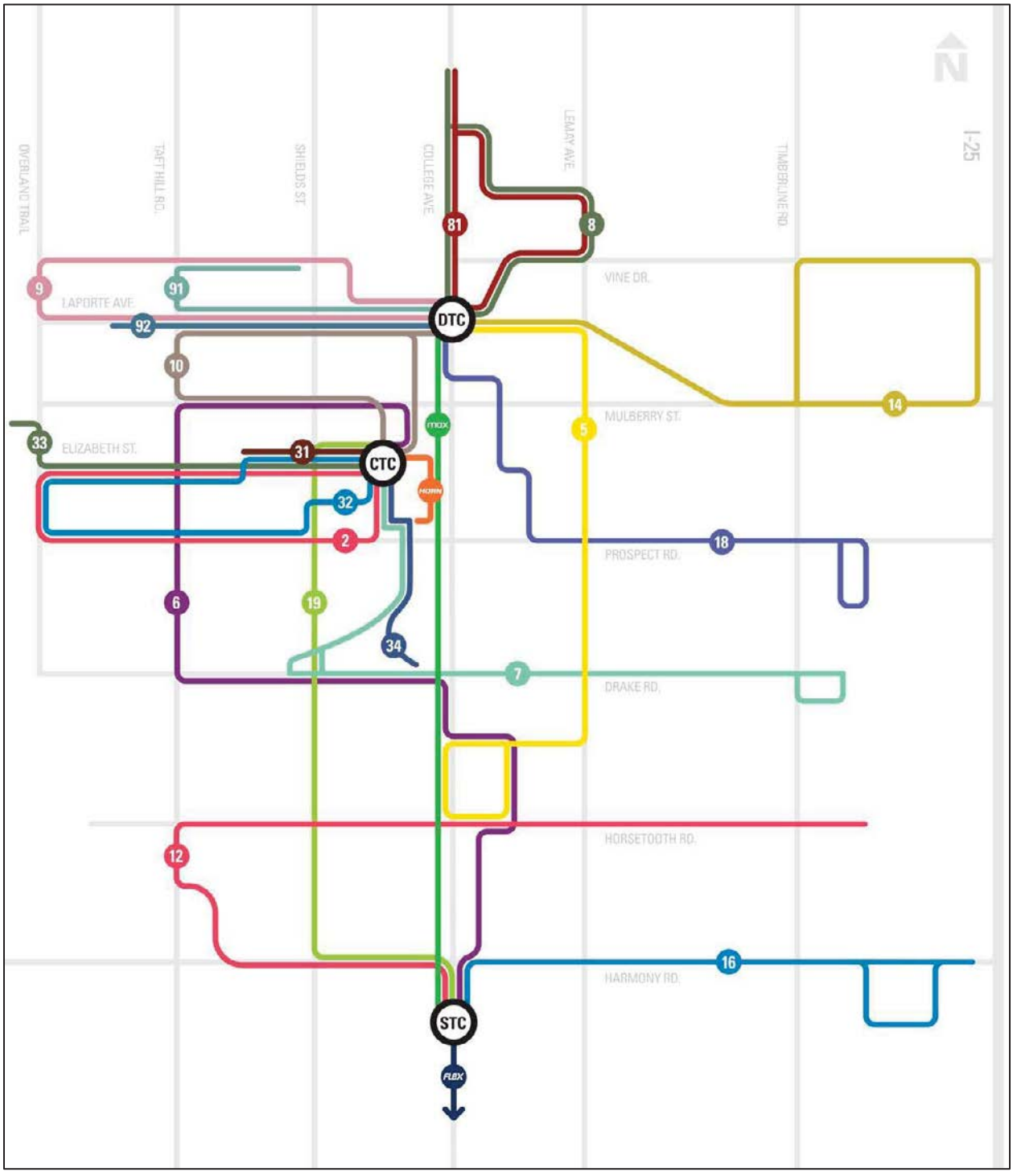
Table 3-4 Transfort Route Characteristics, 2013

Route	Annual Number of Passengers	Annual Service Hours	Average Passengers per Hour
1	341,681	15,365	22.2
2	209,674	4,035	52.0
3	207,978	3,203	64.9
5	97,023	3,955	24.5
6	130,743	4,548	28.8
7	91,370	3,929	23.3
8	123,850	3,776	32.8
9	53,411	2,143	24.9
11	283,804	2,351	120.7
14	64,537	2,599	24.8
15	112,073	4,318	26.0
16	84,124	3,709	22.7
17	45,925	2,747	16.7
18	86,155	3,858	22.3
19	94,442	4,112	23.0
81	65,992	3,143	21.0
91	2,155	90	23.9
92	5,183	54	96.0
Green & Gold	21,105	1,640	12.9
FLEX	169,205	9,161	18.5
Specials	6,081	---	---
TOTAL	**2,296,511**	**78,736**	**29.2**

Source: *City of Fort Collins – Transfort, 2015*

Figure 3-1 shows Transfort's system map based on current routes in 2015. A major restructuring occurred in 2014 following the introduction of the Mason Express (MAX). The routes in ***Table 3-1*** do not match the routes shown in ***Figure 3-1***. These changes are discussed in more detail in the *Bus Rapid Transit* section of this chapter.

Figure 3-1 Transfort System Map



Source: *City of Fort Collins – Transfort, 2015*

Vehicles

Transfort operates a fleet of 43 vehicles, ranging in age from two to 18 years old, with an average vehicle age of 7.6 years. All vehicles are Americans with Disabilities Act (ADA) accessible. The entire fleet is expected to be fueled by Compressed Natural Gas (CNG) within the next 2 years. Veolia Transportation leases six vehicles from Transfort to operate all paratransit service within the Transfort service area. Additional information on the Transfort fleet can be found in **Appendix B**.

System Characteristics

Table 3-2 shows the system-wide characteristics over the seven year period of 2007 to 2013. All categories show a steady increase, with a 38.4 percent increase in ridership and 44.7 percent increase in service hours from 2007 to 2013.[3] There was a 49.2 percent increase in costs and a 74.2 percent increase in fare revenues during the same period. During this period, costs and fare revenues increased faster than ridership and service hours.

The City of Fort Collins funds Transfort with a combination of Federal Transit Administration (FTA) urbanized area funds, City general funds, operating revenues, and contract revenue from CSU and PSD students. ***Table 3-3*** illustrates system-wide performance measures for Transfort.

Table 3-5 Transfort Trends, 2007-2013

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Cost	Annual Fares
2007	1,641,407	774,466	66,675	$5,857,751	$663,213
2008	1,884,197	798,952	68,368	$6,288,216	$699,681
2009	1,904,229	791,627	69,984	$6,001,968	$790,883
2010	2,034,195	913,682	75,563	$6,267,239	$869,409
2011	2,156,791	995,858	77,355	$7,121,053	$951,141
2012	2,271,732	1,028,405	78,551	$7,303,399	$955,073
2013	2,270,148	1,188,513	96,512	$8,739,326	$1,155,348

Source: *City of Fort Collins – Transfort, 2014*

Table 3-6 Transfort System-wide Performance Measures, 2013

Performance Measure	Total
Cost per Operating Hour	$90.55
Passengers per Operating Hour	23.52
Cost per Passenger Trip	$3.85
Subsidy per Passenger Trip	$3.34
Farebox Recovery	13.2%
Ridership per Capita	14.93
Cost per Capita	$57.47

Source: *City of Fort Collins – Transfort, 2014*

[3] Population assumption of 148,167 in 2012, provided by Colorado's DOLA.

Bus Rapid Transit (BRT)

Transfort's services changed substantially starting on May 12, 2014 with the opening of the Front Range's first BRT service, MAX. This service follows the north-south spine of the Transfort transit network, operating every 10 minutes during peak hours. In coordination with the MAX service, Transfort operates a new east-west service on the main arterials in the community, as well as operating six routes until 10:30 p.m. These new services, the new east-west line and the additional operating hours, also expanded the Dial-A-Ride service boundaries and time frames. This expansion did result in the loss of three routes: Routes 1 and 15 were replaced with the MAX service and Route 17, serving Timberline Road, was removed following several years of poor ridership. In all, Transfort increased service hours by 33 percent, from 78,742 service hours in 2013 to approximately 103,232 hours in 2014, although these hours only reflect a partial year of full service. The projected revenue hours for 2015 are 107,295.

Figure 3-2 MAX BRT Service Route

Source: *Transfort, 2013*

Mason Express (MAX) service

While construction began on the MAX in summer of 2012, work on the Mason Corridor concept began in the mid-1990's and cost $87M including planning, construction, and implementation. The FTA provided $69.5M to the project, 80 percent of the project's cost. The service provides a bus service at 10-minute intervals during peak hours, a trip that takes 22 minutes from the Downtown Transit Center to the South Transit Center along the Mason corridor; ***Figure 3-2*** shows the MAX route.

The MAX runs along the Mason corridor and serves major activity and employment centers throughout the community, including Midtown, CSU, and Downtown. The MAX links with other Transfort bus routes, Park-n-Rides, the City's bicycle/pedestrian trail system, and other local and regional transit routes, providing seamless service for passengers.

The development expected along the Mason corridor includes infill and redevelopment of parcels. CSU anticipates $700M in improvements along their portion of the corridor between 2015 and 2018.[4]

The MAX system has a partially dedicated route which runs parallel to the BNSF Railway line, between the South Transit Center (south of Harmony Road) and Horsetooth Road and between

[4] City of Fort Collins Staff

Drake Road and University Avenue (CSU). This dedicated route is an integral part of the MAX service and is independent of traffic conditions. The MAX stations are spaced further apart than regular local-service bus routes cutting transit commute times.

Where street intersections are not present to provide east-west access to MAX and the Mason Trail, new grade-separated crossings help travelers move safely across the BNSF tracks including an overpass near the Spring Creek Station and an underpass near the Troutman Station.

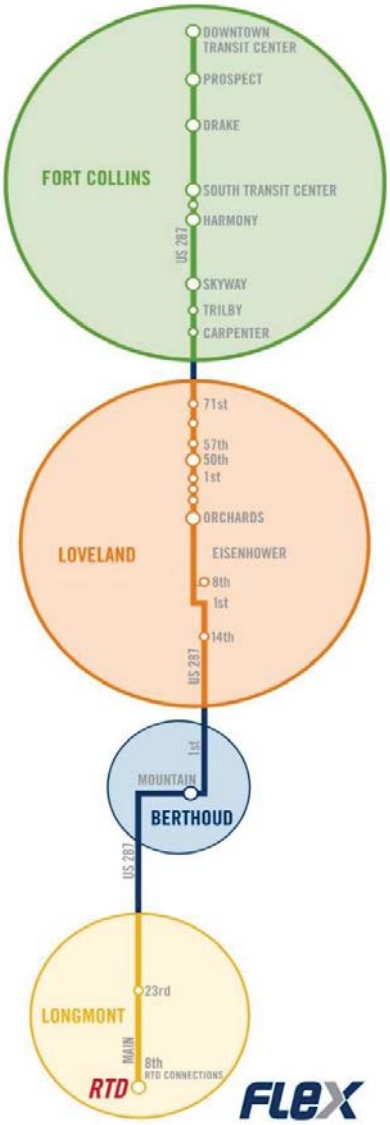
FLEX Regional Transit Service

In June 2010, the FoxTrot route was replaced with the FLEX route, extending service to Berthoud and Longmont. The route terminates at the Regional Transportation District's (RTD) at 8th and Coffman Park-n-Ride station in Longmont, ***Figure 3-3***. The service is operated by Transfort and funded through a regional partnership between the cities of Fort Collins, Longmont, and Loveland, the Town of Berthoud, and Boulder County. This service began as a three-year pilot project connecting riders in Berthoud, Fort Collins, and Loveland with the Boulder and Denver metro areas. During peak morning and afternoon commute times, an express route operates on 30-minute headways stopping only at key points between Fort Collins and Longmont. Off-peak service is provided on one-hour headways between Fort Collins and Loveland.

Prior to 2010, the FoxTrot route ran between the Foothills Mall in Fort Collins along US 287 to 8th Street between Lincoln Avenue and Cleveland Avenue in Loveland. In 2015, the service was awarded funding through the Denver Regional Council of Governments (DRCOG) Congestion Mitigation and Air Quality (CMAQ) call for projects to expand service to the City of Boulder beginning in 2016.

In 2012, FLEX had 184,649 passengers, 9,187 service hours, and 20.1 passengers per hour. Service characteristics and performance measures for FLEX are listed in ***Tables 3.4 and 3.5***.

Figure 3-3 FLEX Route Map



Source: *Transfort, 2015*

Table 3-7 FoxTrot and FLEX Service Characteristics, 2007-2013

Service	Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Cost	Annual Fares
FoxTrot	2007	89,642	67,128	3,930	$227,848	$14,827
	2008	108,176	66,911	3,918	$211,604	$15,958
	2009	111,228	67,347	3,973	$350,740	$14,965
FoxTrot & FLEX	2010	134,982	139,903	6,851	$594,555	$24,934
FLEX	2011	168,609	202,418	9,152	$759,359	$41,216
	2012	184,649	204,726	9,197	$744,654	$50,164
	2013	169,205	203,949	9,161	$764,222	$52,215

Source: *Transfort, 2015*

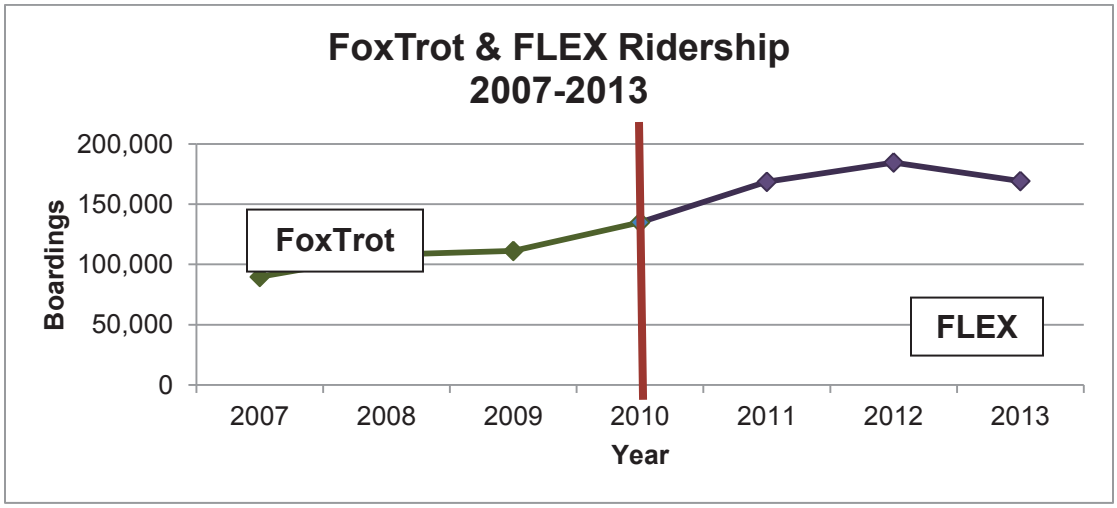
Table 3-8 FLEX Performance Measures, 2013

Performance Measure	Total
Cost per Operating Hour	$83.42
Passengers per Operating Hour	18.47
Cost per Passenger Trip	$4.52
Subsidy per Passenger Trip	$4.21
Farebox Recovery	6.8%

Source: *Transfort, 2013*

Figure 3-4 shows the increase in ridership along the corridor. The service ran as FoxTrot from 2007 until mid-2010 and became the current FLEX service in mid-2010.

Figure 3-4 FoxTrot and FLEX Ridership, 2007-2013



Source: *Transfort, 2015*

Strategic Plan Improvements

The Transfort Strategic Plan, adopted in 2009, includes an expansion of the fixed-route system for local and some regional services. The timeframe for expansion is dependent upon the development of revenues to fund new services. These improvements are divided into three phases:

Phase I: Modest growth of the system and anticipate MAX BRT service. Service to the PSD campuses is improved.

Phase II: Expands service, extends evening services, and begins the transition to a grid route configuration with higher frequencies. Regional services are identified between Fort Collins, Loveland, and Denver.

Phase III: Additional transit growth with longer hours, Sunday service, and expansion of regional service.

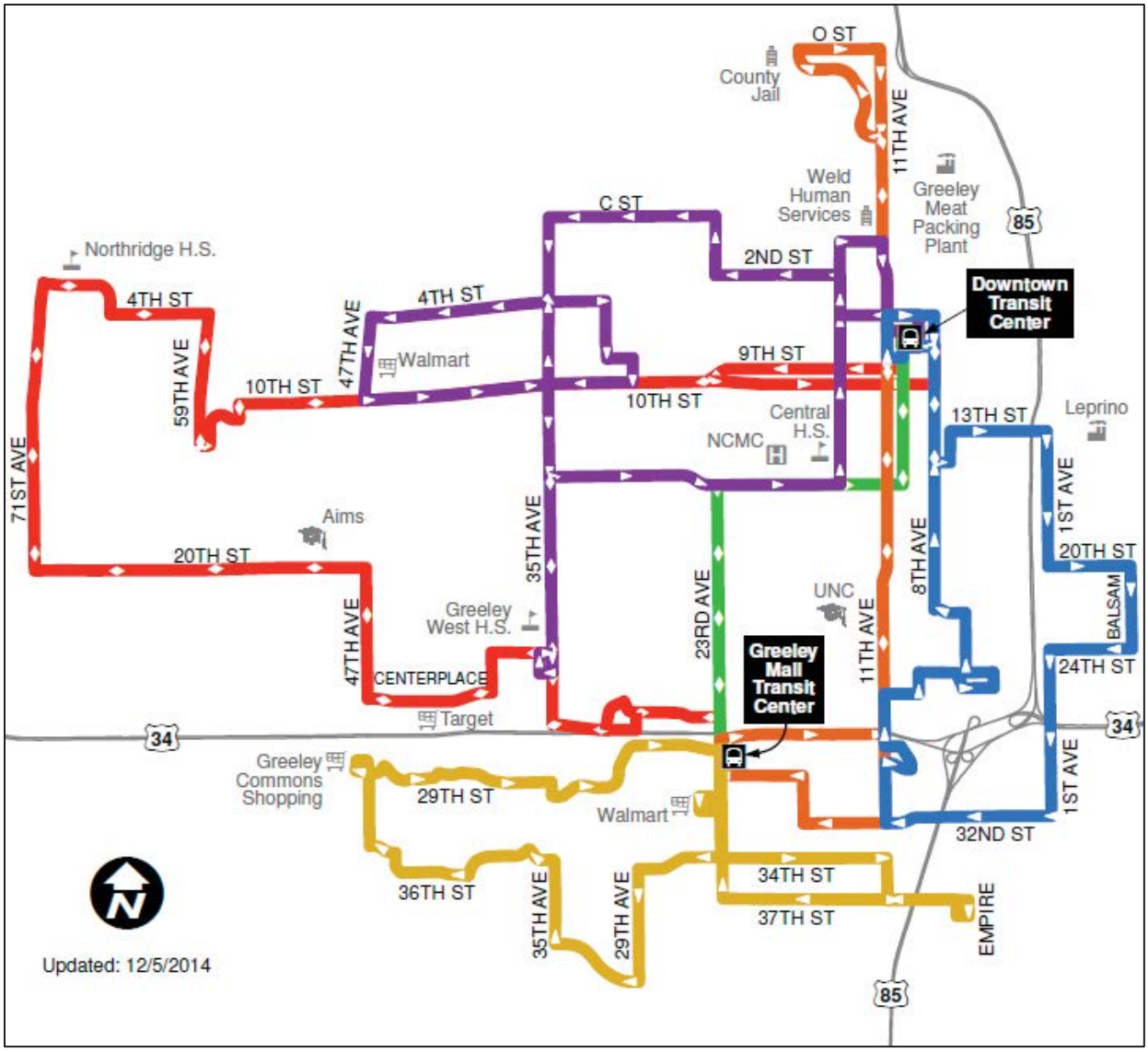
GREELEY-EVANS TRANSIT – GET

Greeley-Evans Transit (GET) is operated by the City of Greeley and provides fixed-route, paratransit services, and Call-N-Ride, to the public within Greeley, Garden City, and Evans. Service to Evans and Garden City is provided through an Inter-governmental Agreement (IGA).

As of 2015, GET operates seven local fixed-routes, including a campus route for the University of Northern Colorado (UNC), the UNC Boomerang. ***Figure 3-5*** illustrates the system's fixed-routes through July 31, 2016. ***Figure 3-6*** shows the system's fixed-routes proposed to begin August 1, 2016. The numbers on the map show the proposed route number. GET fixed-routes generally run from 6:30 a.m. to 7:30 p.m., Monday through Friday and from 7:00 a.m. to 5:30 p.m. on Saturday. The UNC Boomerang operates Monday through Friday when UNC is in session. Over the past few years, additional services have been added in the form of increased frequency on the current Orange Route (2013) and an additional service hour in the evening (2015). Paratransit service, a door-to-door service for persons who qualify under the ADA, operates within ¾-mile of fixed bus routes during the same time as fixed route. Call-n-Ride operates within the same service area as paratransit and offers extended service during the evening for the general public, until 8:30 pm Monday through Saturday. Call-n-Ride is also available on Sunday from 7:45 a.m. until 1:45 p.m. There is no service on major holidays.

GET charges a basic single-ride fare of $1.50, discounted to $0.75 for seniors, the disabled, and Medicare recipients. Riders under 18 with a valid K-12 student ID or state issued ID ride free. This program began in August 2014, and has resulted in a significant ridership increase. More specifically, student ridership increased from 6,850 for the fall semester in 2013 to 25,469 in 2014, a 272 percent increase. UNC students are not included in this program; however, they are allowed to ride free under the University program. Aims Community College students are eligible to purchase a semester pass for $64. A variety of multiple ride tickets and passes are also sold at a discount. Transfers are free.

Figure 3-5 GET Fixed-Route Services (2015)



Source: *GET, 2015*

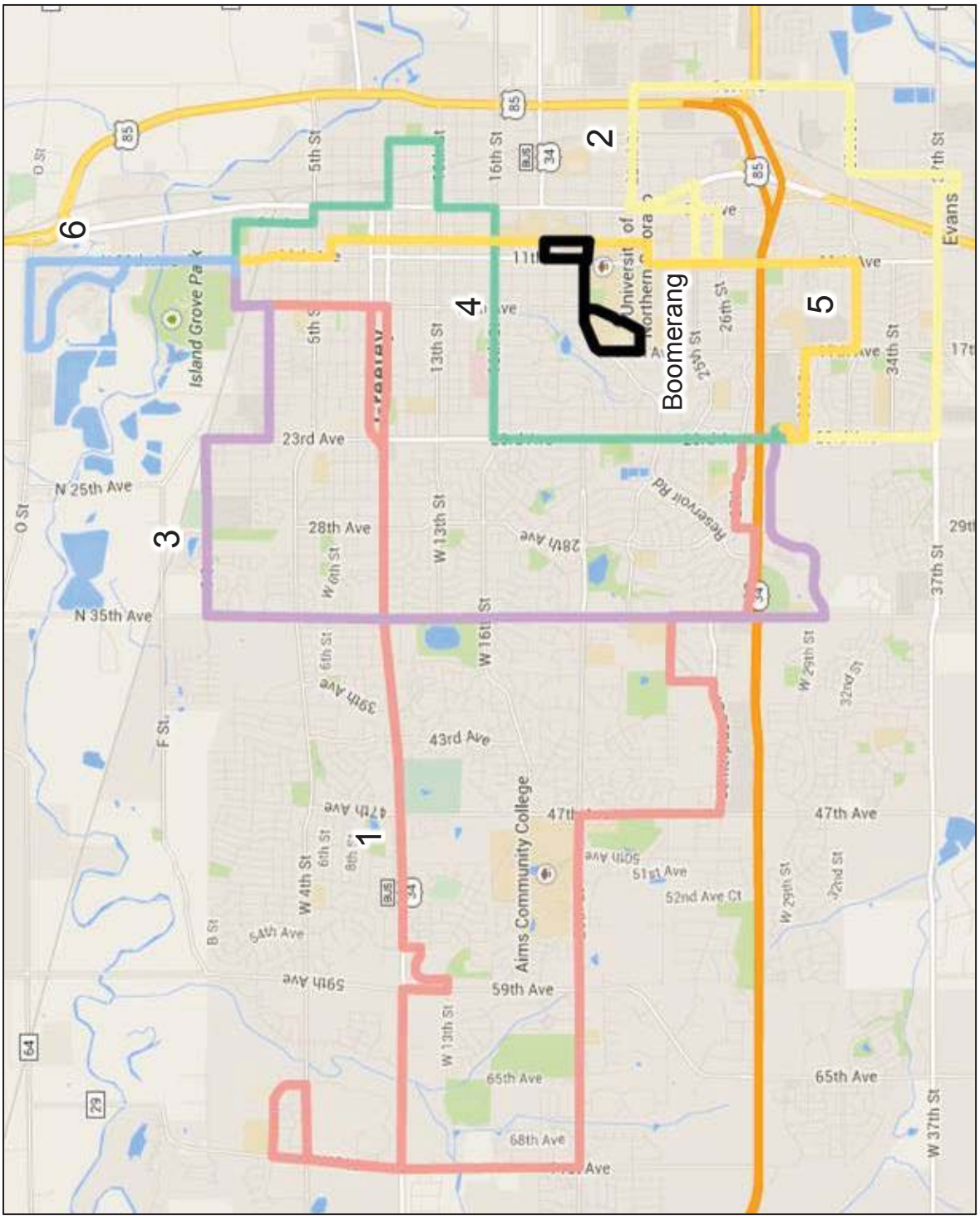


Figure 3-6 Proposed GET Fixed-Route Bus Services (2016)

Source: *GET, 2015*

Service Characteristics

GET carried over 532,000 passengers in 2013 on their fixed-route system. The fixed-route system's productivity was 16.47 riders per hour, as shown in ***Table 3-6***. Ridership has varied over the past few years due to significant route changes to the UNC Boomerang, both positively and negatively impacting ridership. More specifically, the Boomerang Route was changed in late 2009 resulting in a significant decrease in ridership. In 2013, routing was changed once again resulting in a 48 percent increase. Without including the UNC Boomerang service, ridership throughout the GET system has continued to grow.

Combined, the paratransit and demand-response services operated 13,328 hours of service and carried 25,007 riders for an average productivity of 1.88 riders per hour. This is up from 1.7 riders per hour in 2009. The paratransit and demand-response services use one-third of the total system's service hours. GET provides travel training to assist riders in learning to use the fixed-route buses for some or all of their trips.

Table 3-9 GET Route and Service Statistics, 2013

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
Red Route	107,758	6,671	16.15
Gold Route	26,509	3,382	7.84
Purple Route	32,767	3,380	9.69
Green Route	40,794	3,413	11.95
Orange Route	216,261	10,126	21.36
Blue Route	43,849	3,335	13.15
UNC Boomerang	64,156	2,006	31.98
Fixed-Route Subtotal	*532,904*	*32,312*	*16.47*
Paratransit/Demand-Response	25,007	13,328	1.88
TOTAL	**557,101**	**45,641**	**12.21**

Source: *City of Greeley – GET, 2013*

Vehicles

GET has a fleet of 27 vehicles, all running on diesel. GET uses nine of these vehicles for demand-response service and the remaining 18 for fixed-route service. All of the vehicles are wheelchair accessible, with two wheelchair tie-downs on the fixed-route vehicles and three on the demand-response vehicles. **Appendix B** has additional information on the GET fleet. GET is in the process of transitioning its fleet from body on chassis fixed-route diesel buses to low-floor heavy-duty CNG buses.

System Characteristics

Trends in basic system characteristics are illustrated in ***Table 3-7***. Over the six-year period of 2007 to 2013, ridership grew by 9.1 percent, service miles decreased by 0.5 percent, and service hours increased by 2.1 percent. Operating costs increased by 42.6 percent while annual fare revenue increased by 98.5 percent. This increase in fare revenue was due to increased

ridership on the fixed-route service as well as a fare increase in September 2008 and a bus pass increase in July 2010.

Table 3-10 GET Trends, 2007-2013

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Cost	Annual Fares
2007	504,487	589,635	45,222	$2,111,672	$282,296
2008	541,770	557,739	45,997	$2,557,364	$349,936
2009	555,754	537,251	45,285	$2,553,479	$406,712
2010	517,582	527,931	44,369	$2,542,641	$366,671
2011	507,271	555,751	46,492	$2,684,182	$466,439
2012	538,034	571,576	44,568	$2,633,583	$481,126
2013	550,193	586,791	46,182	$3,010,244	$560,372

Source: *City of Greeley – GET, 2015*

GET funds its $3 M in annual operating costs through fares, UNC contract revenues, and local and FTA funding. Service is provided to the City of Evans through a purchase of service contract with Evans.

GET system performance measures are shown in ***Table 3-8***. The system has a lower cost per operating hour compared to COLT and Transfort at $65.18, reflecting the limited staff available to run the system. The other performance measures reflect a basic system that has a high level of paratransit service compared to the fixed-route services provided.

Table 3-11 GET System-wide Performance Measures, 2013

Performance Measure	Total
Cost per Operating Hour	$65.18
Passengers per Operating Hour	11.91
Cost per Passenger Trip	$5.47
Subsidy per Passenger Trip	$4.09
Farebox Recovery	18.62%
Ridership per Capita	4.67
Cost per Capita	$25.55

Source: *City of Greeley – GET, 2013*

Planned Services

The City of Greeley has a strategic plan and has revisited its transit planning in the current update of the City's *2035 Transportation Vision Plan*. An updated transit plan is anticipated to be completed in 2015. A new route system is expected to start in August 2016.

COLT – CITY OF LOVELAND TRANSIT

The City of Loveland Transit (COLT) system is operated by the City of Loveland's Public Works Department. COLT's fixed-route service runs from 6:48 a.m. to 6:40 p.m., Monday through

Friday and from 8:48 a.m. to 5:40 p.m. on Saturday, with one-hour headways. Paratransit and senior door-to-door service is available during the same hours, for eligible passengers. The service is divided into three routes: 100, 200, and 300, ***Figure 3-7***.

A regular one-way adult fare is $1.25 and reduced fares are offered for seniors, youth, ADA passengers, and those with limited income. COLT offers 10-day, 20-day, and monthly passes, as well as discounted annual passes for persons with disabilities, seniors, and students. Regular paratransit trips are $2.00 each way and $1.00 for ADA eligible passengers and those with limited income. COLT offers a monthly billing process for all paratransit passengers. Youth ages 17 and under ride free.

COLT has a fleet of 10 vehicles:

- ≠ One Chevrolet Entervan,
- ≠ Three Ford cutaway paratransit buses,
- ≠ Three Ford cutaway fixed-route buses, and
- ≠ Three 32-passenger Gillig transit-style buses.

Please see **Appendix B** for additional COLT fleet information.

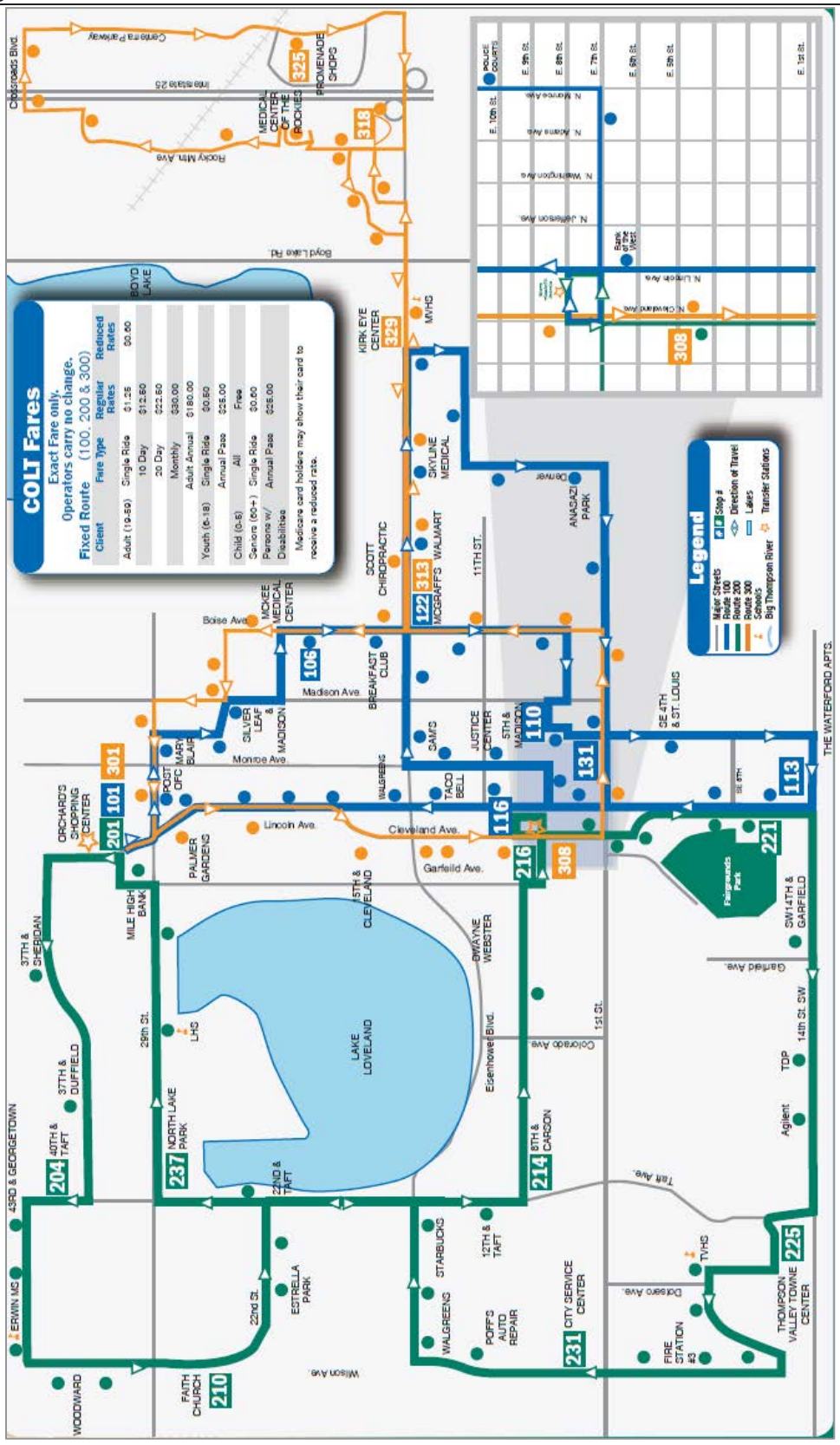


Figure 3-7 COLT Bus Routes

***Source:** City of Loveland– COLT, 2015*

COLT Service Characteristics

COLT carried over 135,061 passengers in 2013 on their fixed-route system. The fixed-route system's productivity was 12.76 riders per hour, as shown in ***Table 3-9***. The paratransit and demand-response services combined, operated 3,580 hours of service and carried 7,742 riders for an average productivity of 2.16 riders per hour. The paratransit and demand-response services use one-quarter of the total system's service hours. COLT provides travel training to assist riders in learning to use the fixed-route buses for some or all of their trips.

Table 3-12 COLT Route and Service Statistics, 2013

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
Route 100	33,434	3,528	9.48
Route 200	52,574	3,528	14.9
Route 300	49,053	3,525	13.92
Fixed-Route Subtotal	*135,061*	*10,581*	*12.76*
Paratransit/Demand-Response	7,742	3,580	2.16
TOTAL	**142,803**	**14,161**	**10.08**

Source: *City of Loveland Transit, 2015*

While the smallest of the fixed-route systems, COLT saw increases in all of its service characteristics between 2007 and 2013, ***Table 3-10***. During this period, ridership increased by 23.2 percent, service miles increased by 20 percent, and vehicle hours increased by 3.4 percent. Financially, COLT has seen an increase of almost 27 percent in its annual operating cost and a 20 percent increase in annual fare revenues.

Table 3-13 COLT Trends, 2007-2013

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Cost	Annual Fare Revenues
2007	115,895	184,058	13,617	$900,070	$68,518
2008	136,255	192,481	14,112	$948,463	$75,332
2009	155,695	200,370	12,237	$978,013	$76,468
2010	146,467	194,753	12,041	$952,127	$79,705
2011	133,555	207,048	13,265	$1,071,550	$114,240
2012	142,144	214,414	14,092	$1,150,000	$108,368
2013	142,803	220,916	14,085	$1,142,916	$82,208

Source: *City of Loveland – COLT, 2013*

Table 3-11 shows COLT's system-wide performance measures. The system has the lowest cost per capita of all the fixed-route systems.

Table 3-14 COLT System-wide Performance Measures, 2012

Performance Measure	Total
Cost per Operating Hour	$79.72
Passengers per Operating Hour	12.18
Cost per Passenger Trip	$11.90
Subsidy per Passenger Trip	$10.71
Farebox Recovery	9.40%
Ridership per Capita	2.15
Cost per Capita	$17.42

Source: *City of Loveland– COLT, 2013*

Strategic Plan Improvements

The COLT Strategic Plan, adopted in 2009, began implementation in 2010 with major route changes to expand the fixed-route system for local and limited regional services. Fixed-route service expansion included: east of I-25 to the Promenade Shops at Centerra; north to Crossroads Boulevard; and west of I-25 to the Medical Center of the Rockies facility. Future route changes and/or expansion are currently under consideration for implementation in the summer of 2015.

COLT engages in regular planning to keep its system current. The system has evaluated changes to local routes and demand-response services for ADA paratransit eligible passengers and the elderly.

BUSTANG

Bustang is an interregional express bus service which will be operated by a private provider under contract with CDOT. The Bustang service will provide a connection between the North Front Range region and Denver with six northbound and six southbound buses Monday through Friday. There will be three stops in the region: US 34 and I-25 in Loveland, Harmony Road, and two trips per day to and from the Downtown Transit Center in Fort Collins. The proposed schedule is shown in ***Table 3-12.*** One-way and multi-trip discount tickets will be sold, with single tickets available for purchase on all buses. There will also be a 25 percent discount for disabled persons and adults 65 years and over.[5] The service routes are shown in ***Figure 3-8***, the line to the North Front Range region is shown in green. At the Denver Station, the riders can connect to buses that travel to the Colorado Springs area as well as the rest of Denver and eventually to Denver International Airport (DIA).

Figure 3-8 Bustang Green Line Route

Source: *CDOT, 2015*

Table 3-15 Bustang Green Line Schedule

NORTH LINE - GREEN	SOUTHBOUND					
	North Line operates Monday - Friday Except Major Holidays					
	601	603	605	607	631	633
Downtown Transit Center *(Transfort)*	--------	--------	--------	--------	11:00 AM	3:00 PM
Harmony Road	5:20 AM	5:45 AM	6:15 AM	6:45 AM	11:20 AM	3:20 PM
U.S. 34 & I-25 Loveland	5:30 AM	5:55 AM	6:25 AM	6:55 AM	11:30 AM	3:30 PM
Denver Union Station Arrive	6:25 AM	6:50 AM	7:20 AM	7:50 AM	12:15 PM	4:15 PM
Denver Union Station Depart	6:30 AM	6:55 AM	7:25 AM	7:55 AM	12:20 PM	4:20 PM
Denver Bus Center	6:40 AM	7:05 AM	7:35 AM	8:05 AM	12:30 PM	4:30 PM

NORTH LINE - GREEN	NORTHBOUND					
	630	632	600	602	604	606
Denver Bus Center	7:00 AM	1:00 PM	4:05 PM	4:20 PM	5:00 PM	5:50 PM
Denver Union Station Arrive	7:10 AM	1:10 PM	4:15 PM	4:30 PM	5:10 PM	6:00 PM
Denver Union Station Depart	7:15 AM	1:15 PM	4:20 PM	4:35 PM	5:15 PM	6:05 PM
U.S. 34 & I-25 Loveland	8:05 AM	2:05 PM	5:10 PM	5:25 PM	6:05 PM	6:55 PM
Harmony	8:20 AM	2:20 PM	5:25 PM	5:40 PM	6:20 PM	7:10 PM
Downtown Transit Center *(Transfort)*	8:40 AM	2:40 PM	--------	--------	--------	--------

No Passengers will be handled where the entire trip is within Larimer County and within the RTD District

Source: *CDOT, 2015*

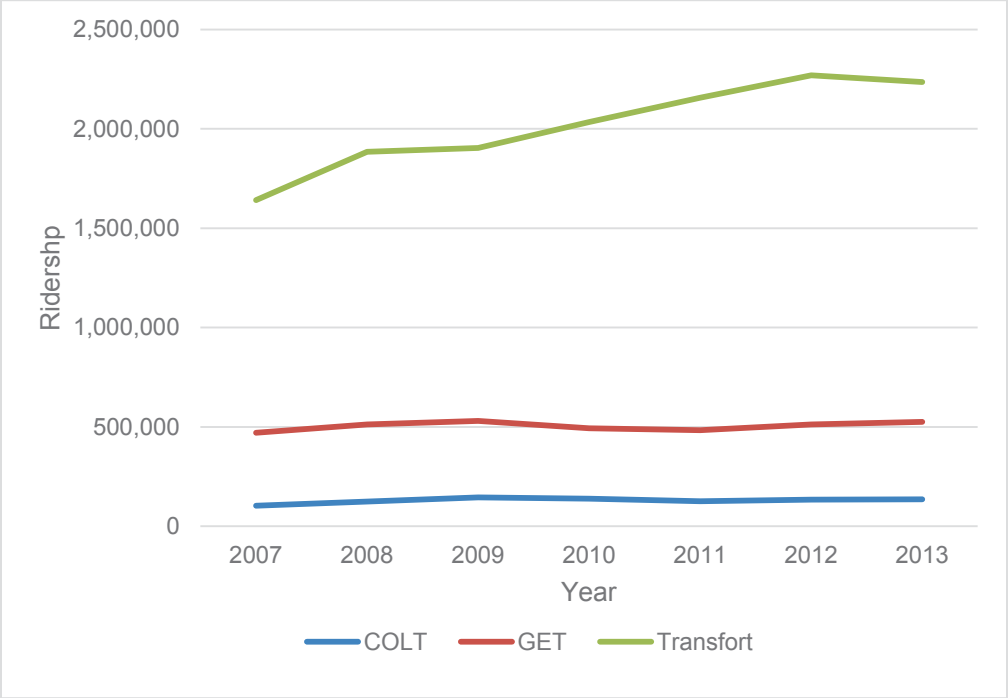
[5] www.ridebustang.com

FIXED-ROUTE COMPARISONS

The following section, ***Figures 3.9 through 3.13***, compares the three publicly-funded fixed-route systems, by system trends from 2007 to 2013.

System Trends

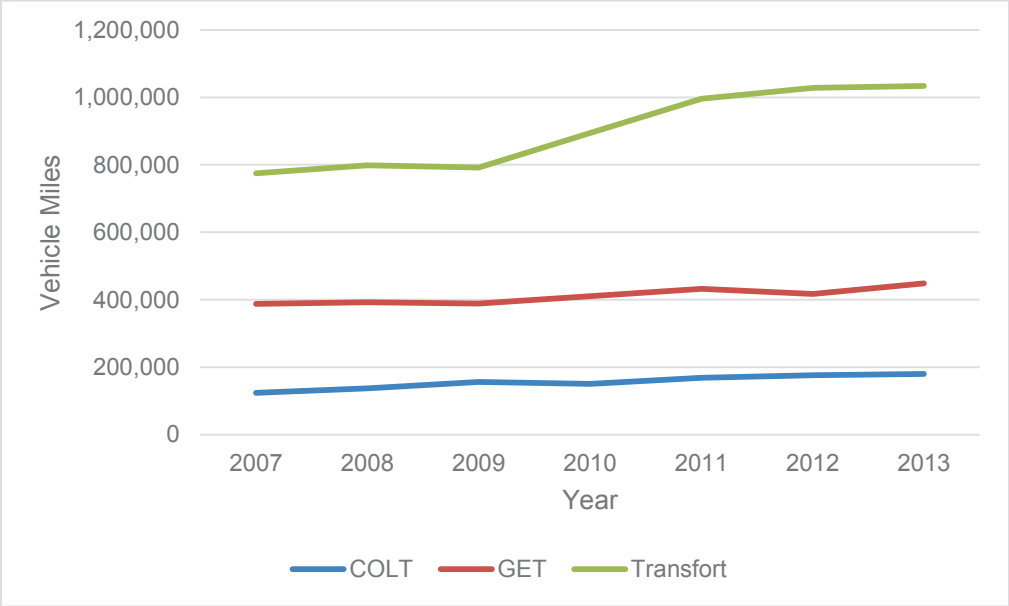
Figure 3-9 Fixed-Route Ridership, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

While all three transit agencies have seen increases in ridership throughout this period, Transfort's ridership increased at the greatest rate during this period, at 36.2 percent. COLT increased ridership by 30.2 percent and GET increased by 11.5 percent.

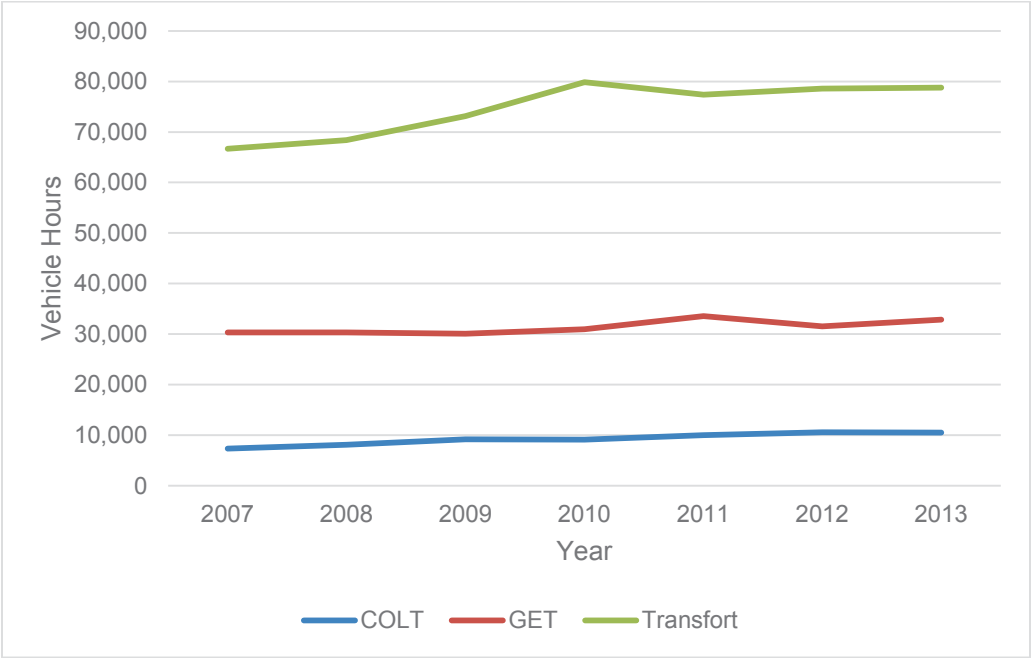
Figure 3-10 Fixed-Route Vehicle Miles Driven, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

COLT has seen the largest increase in the number of vehicle miles driven since 2007 of 45.3 percent, Transfort increased its vehicle miles driven by 33.5 percent, and GET saw an increase of 15.7 percent.

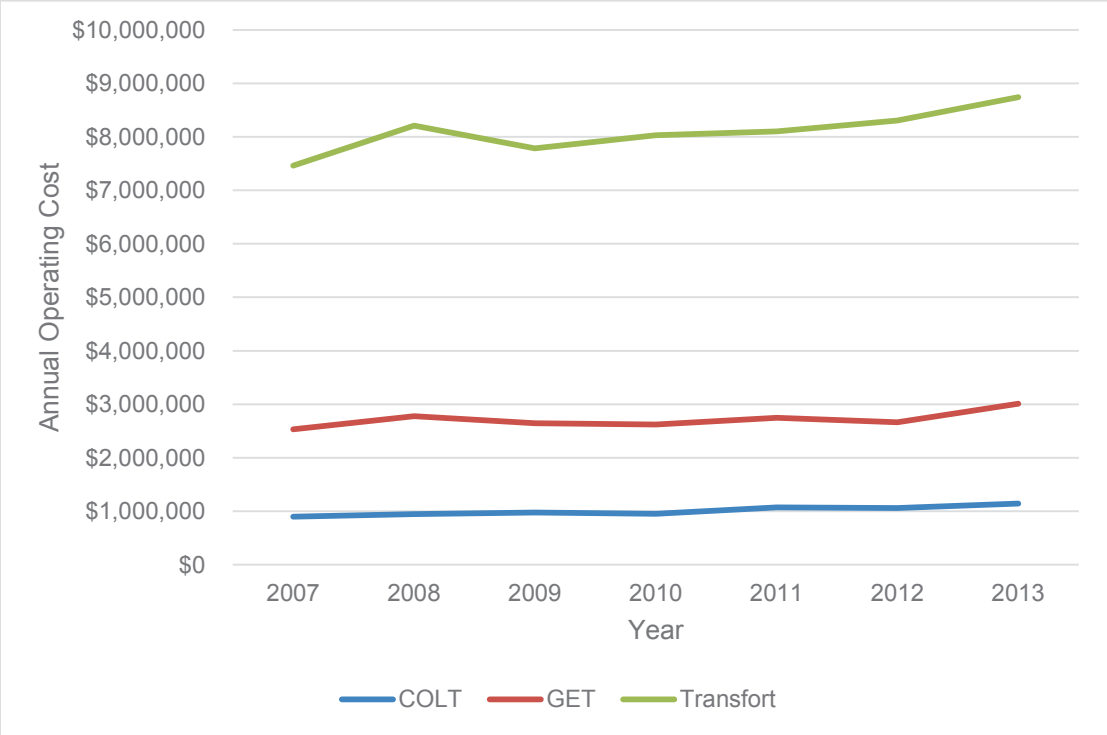
Figure 3-11 Fixed-Route Vehicle Hours, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

The number of vehicle service hours by Transfort has increased over the last seven years at 18.2 percent. COLT saw a significant increase at 43 percent and GET increased by 8.4 percent.

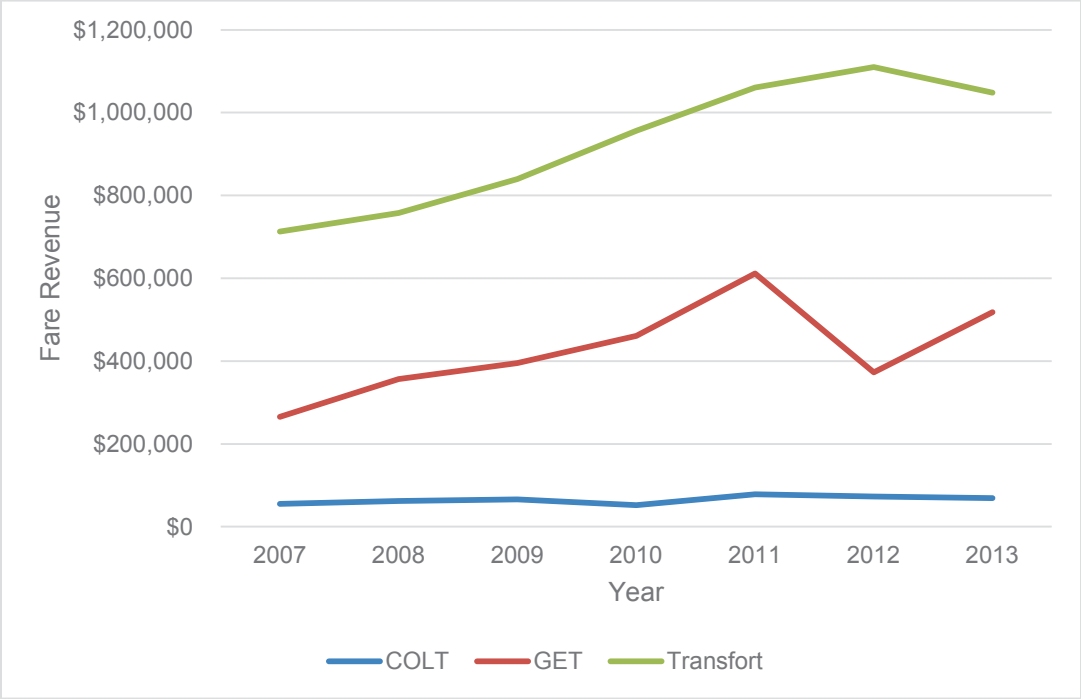
Figure 3-12 Fixed-Route Operating Costs, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Operating costs are the highest for Transfort, but all three have seen consistent increases in operating costs between 2007 and 2013. Transfort's operating costs have increased by 35.7 percent, GET's by 69.5 percent, and COLT's by 20.0 percent. Operating costs have increased as the ridership and service hours of the transit agencies increased. Transfort increased its operating costs at a similar percentage as the gains in ridership, while GET and COLT both saw operating costs increase faster than the increase in ridership.

Figure 3-13 Fixed-Route Fare Revenue, 2007-2013



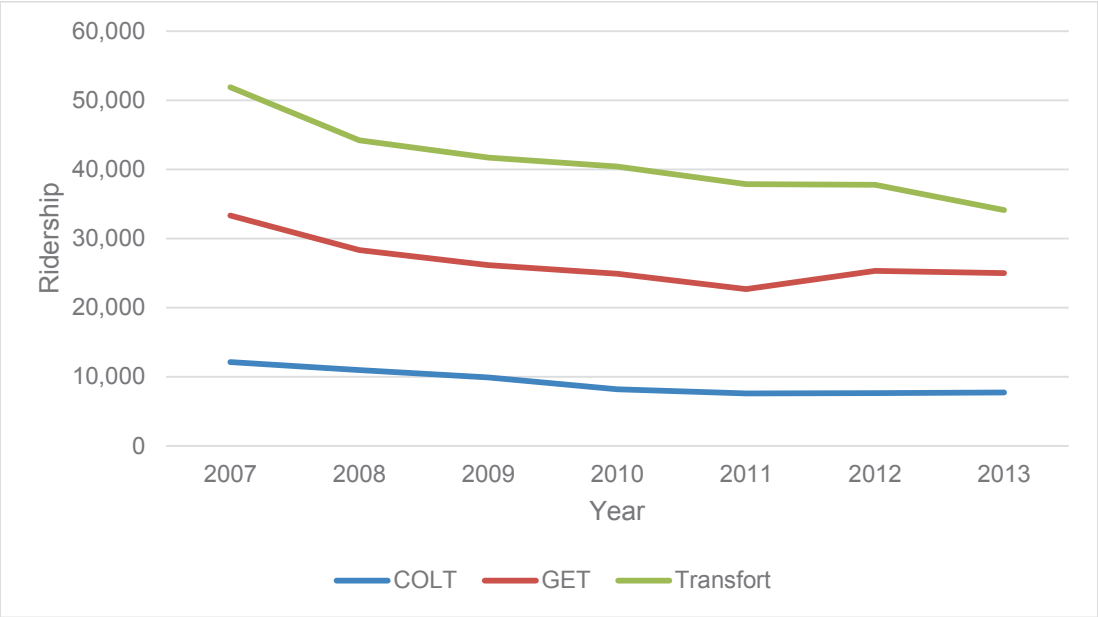
Source: *National Transit Database, COLT, GET, Transfort, 2015*

While all three transit agencies have experienced increased growth in fare revenue, GET experienced the most growth at 95.3 percent, followed by Transfort at 47.1 percent and COLT at 25.1 percent.

DEMAND-RESPONSE COMPARISONS

The following section, ***Figures 3.14 through 3.18***, compares the three publicly-funded demand-response systems, by system trends from 2007 to 2013.

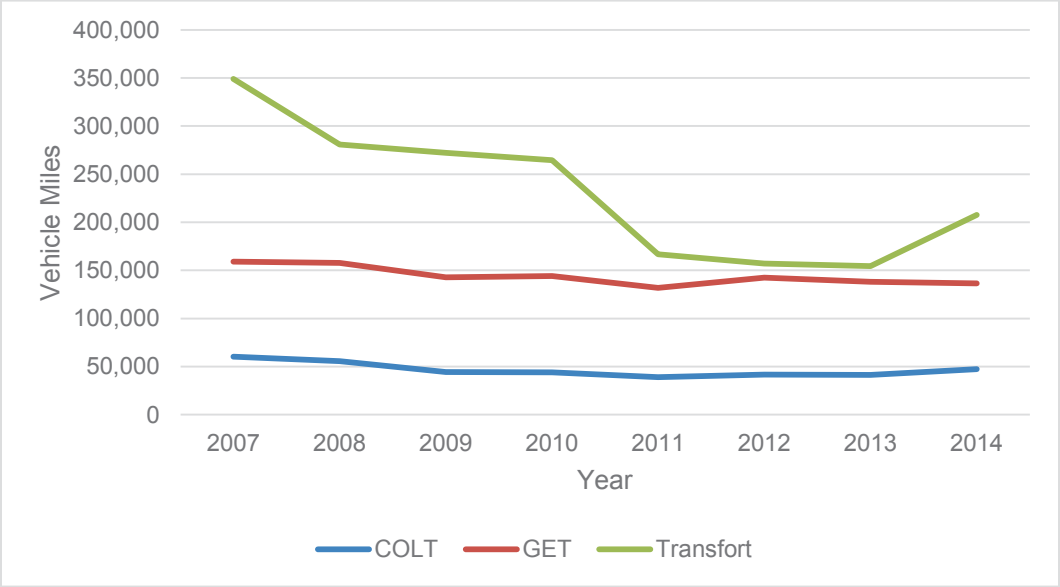
Figure 3-14 Demand-Response Ridership, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

All three agencies have seen a decrease in the ridership of the demand-response systems from 2007 to 2013. Ridership on COLT's demand-response system decreased by 36.3 percent, Transfort decreased by 34.2 percent, and GET decreased by 25 percent. Ridership has fallen as operating costs, vehicle miles, vehicle hours, and revenue have decreased.

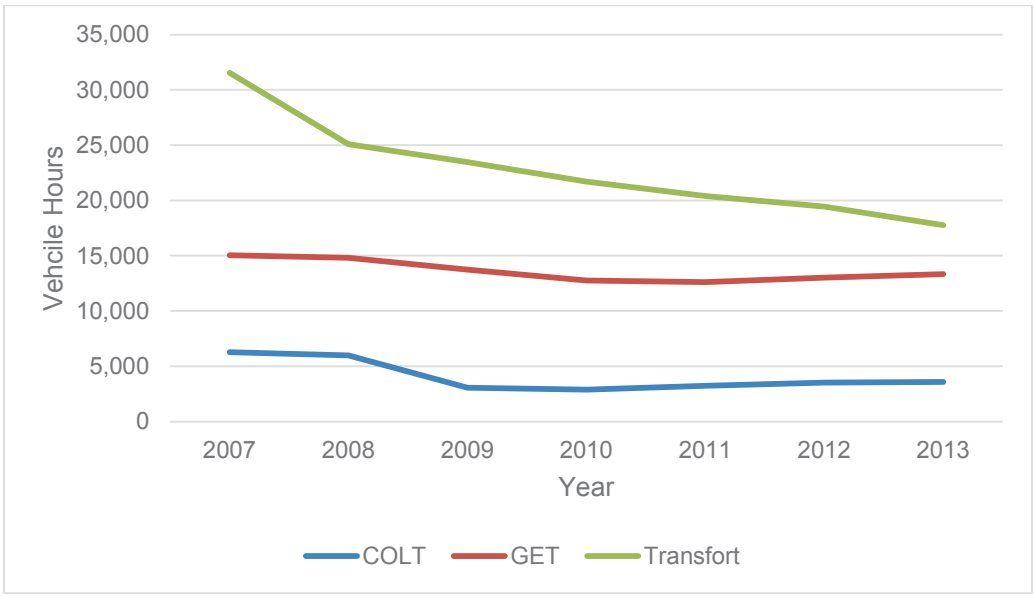
Figure 3-15 Demand-Response Vehicle Miles, 2007-2013



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Vehicle miles driven by the demand response routes have decreased in all three agencies, but have decreased the most for Transfort, 55.7 percent. COLT decreased by 31.8 percent and GET by 13.3 percent.

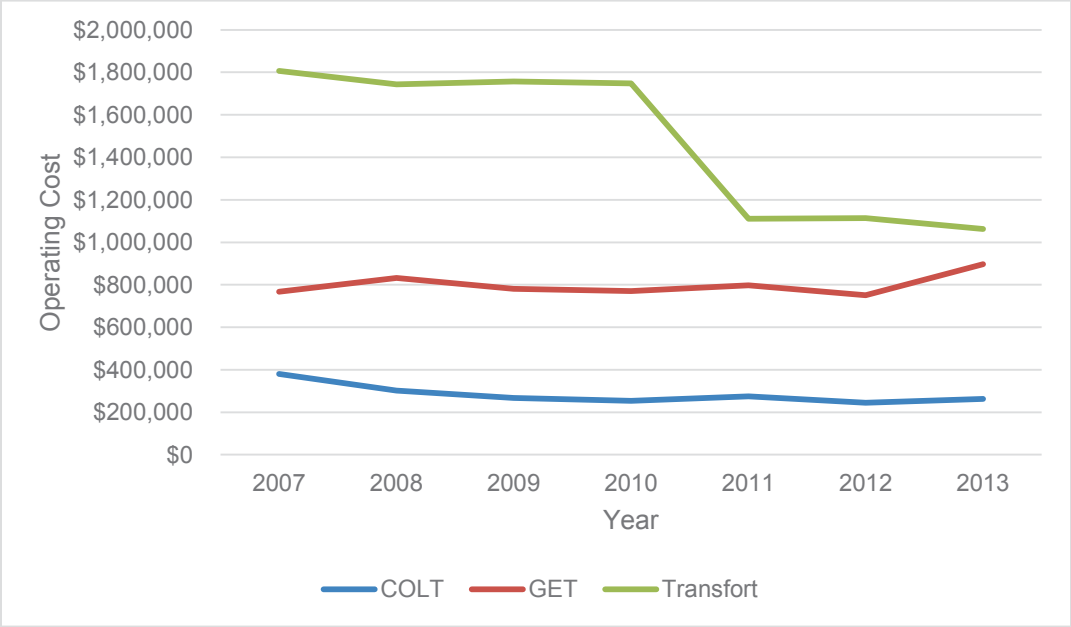
Figure 3-16 Demand-Response Vehicle Hours



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Vehicle hours driven have decreased similarly at both Transfort and COLT. Transfort decreased by 43.7 percent and COLT by 43 percent, while GET decreased by 11.3 percent.

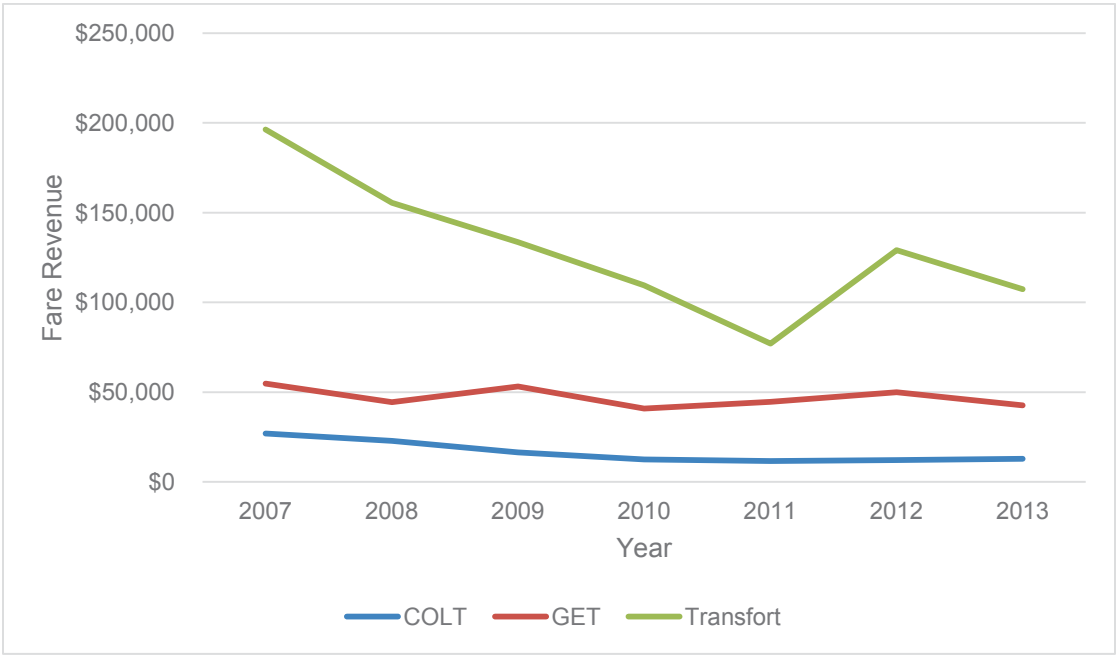
Figure 3-17 Demand-Response Annual Cost



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Annual operating costs have decreased for both Transfort and COLT. Transfort decreased by 41.2 percent and COLT decreased by 31 percent. GET increased the annual cost by 17 percent.

Figure 3-18 Demand-Response Fare Revenue



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Fare revenue has decreased in all three agencies. Fare revenue for COLT's demand-response system decreased by 52.4 percent, 45.3 percent for Transfort, and 22.1 percent for GET.

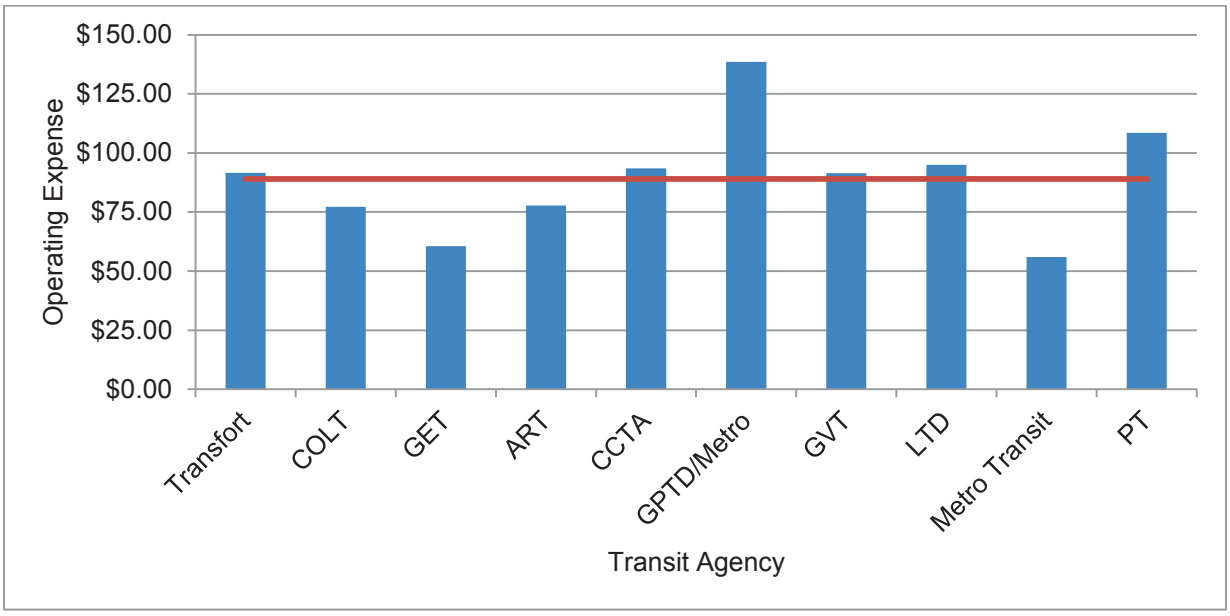
Performance Measures

To better compare the performance measures of the three regional transit agencies against one another and to look for any inconsistencies these agencies may share, a group of seven peer transit agencies from around the country was compiled. Using geographic and demographic data as the basis, seven comparable cities were chosen and are listed below. ***Figures 3.19 through 3.23*** show the performance measures discussed earlier in this section for each regional transit agency and include a comparison to the seven transit agencies selected. The peer transit agencies include:

1. Asheville Redefines Transit (ART) – Asheville, North Carolina, service area population: 83,393
2. Chittenden County Transportation Authority (CCTA) – Burlington, Vermont, service area population: 93,656
3. Grand Valley Transit (GVT) – Grand Junction, Colorado, service population: 128,124
4. Greater Portland Transit District (GPTD/Metro) – Portland, Maine, service area population: 94,873
5. Lane Transit District (LTD) – Eugene, Oregon, service area population: 297,500
6. Metro Transit System (Metro Transit)– Madison, Wisconsin, service area population: 253,075
7. Pueblo Transit System (PT) – Pueblo, Colorado, service area population: 136,550

The average of the 10 transit agencies (the seven peer and three regional transit agencies) was calculated for each of the performance measures and is displayed as a horizontal red average line in the figures that follow. The 2012 data was provided by the National Transit Database and analyzes only the fixed route bus service in each community.

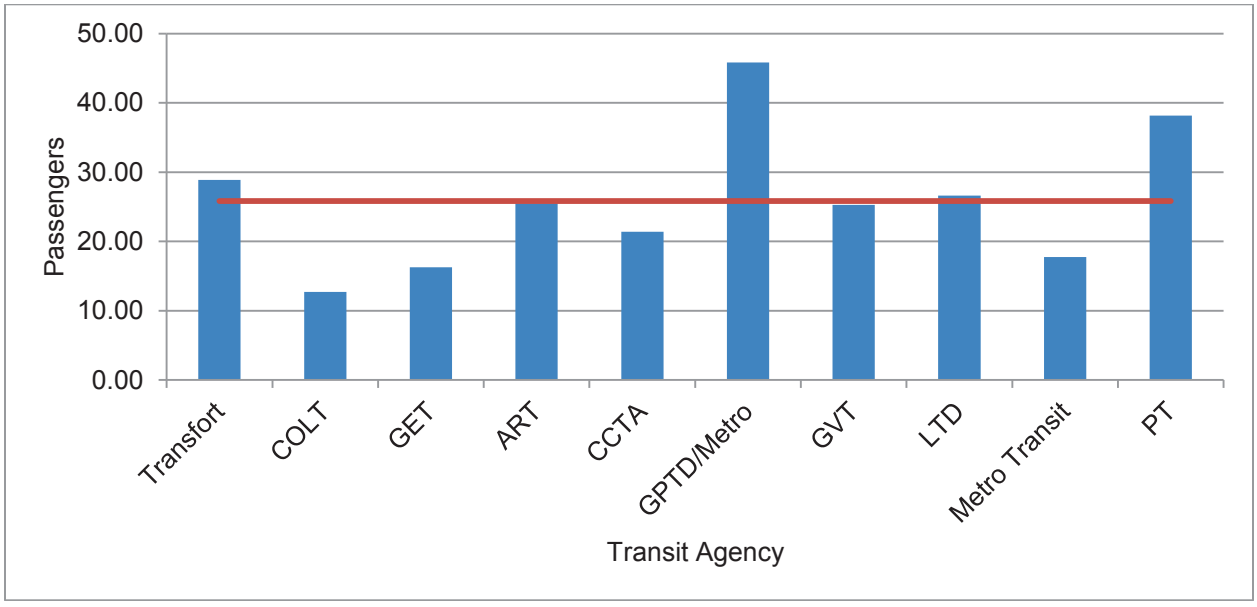
Figure 3-19 Operating Expense per Vehicle Revenue Hour, 2012



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Transfort had the highest operating expense per vehicle revenue operating hour among the three fixed-route agencies in the region in 2012 at $91.55. GET had the lowest cost at only $60.57 while COLT, at $77.18, below the average of the peer agencies.

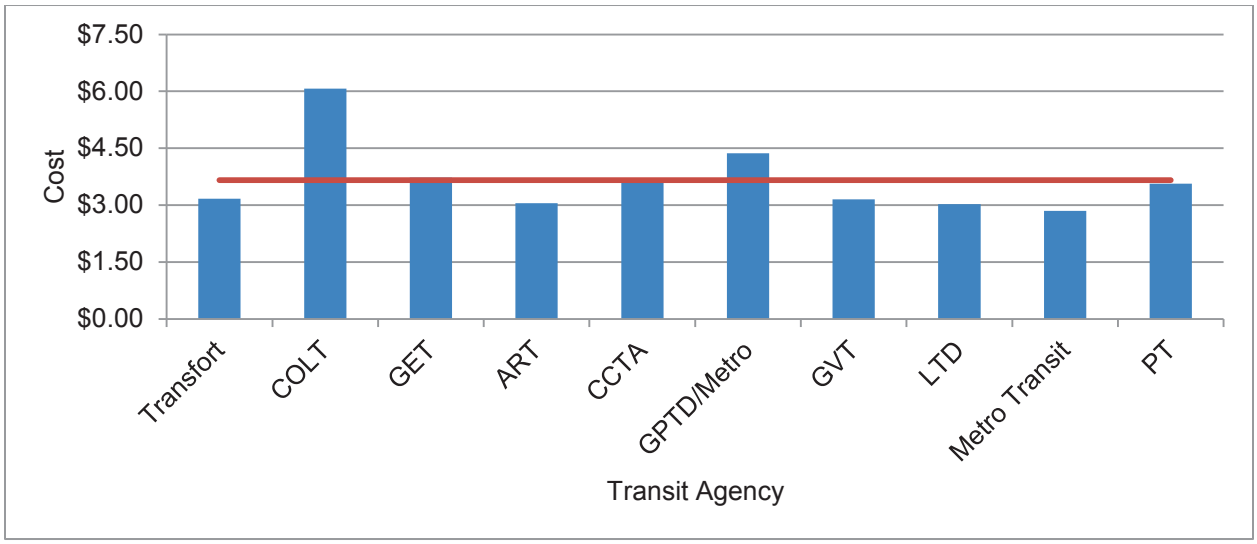
Figure 3-20 Fixed-Route Passengers per Operating Hour, 2012



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Transfort had the highest number of passengers per vehicle operating hour in 2012 at 28.9, which is above the peer average. COLT had the lowest number of passengers per hour at 12.7, and GET had 16.3.

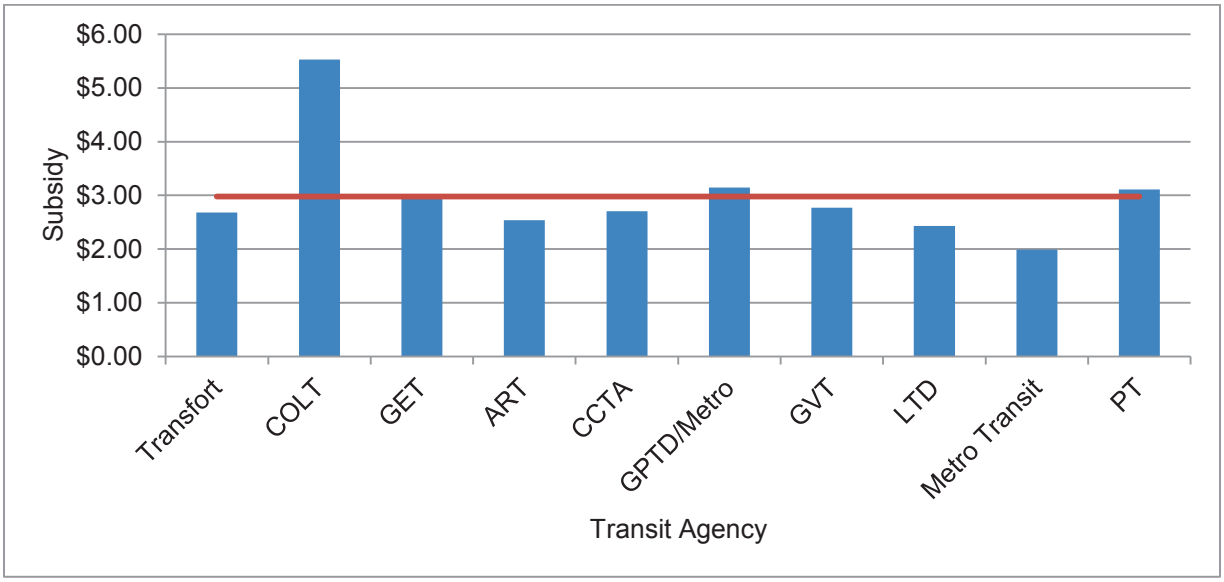
Figure 3-21 Fixed-Route Cost per Passenger Trip, 2012



Source: *National Transit Database, COLT, GET, Transfort, 2015*

Transfort had the lowest cost per passenger trip in the region and is the only local transit agency below the average of the peer agencies. COLT had the highest cost per passenger trip in 2012 at $6.07. This is almost twice the cost of Transfort at $3.17. GET's cost of $3.73 is slightly above the peer average.

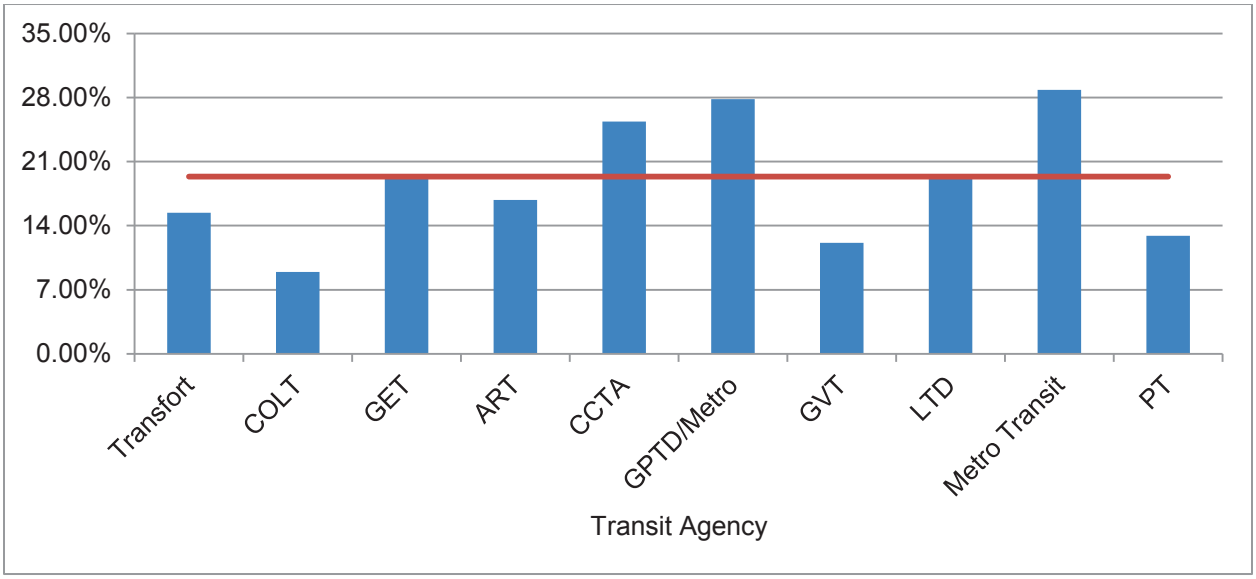
Figure 3-22 Fixed-Route Subsidy per Passenger Trip, 2012



Source: *National Transit Database, COLT, GET, Transfort, 2015*

COLT's subsidy per passenger trip at $5.53 was nearly twice the average of the peers at $2.98. Transfort was slightly under the peer average at $2.64 and GET was slightly over the average at $3.00.

Figure 3-23 Fixed-Route Farebox Recovery Rate, 2012



Source: *National Transit Database, COLT, GET, Transfort, 2015*

All three local transit agencies had a lower farebox recovery rate than the peer average of 19.4 percent. GET's 19.5 percent recovery rate was the highest of the local transit agencies, followed by Transfort at 15.4 percent and COLT at 9 percent.

DEMAND-RESPONSE ONLY SERVICE PROVIDERS

BATS – BERTHOUD AREA TRANSPORTATION SERVICES

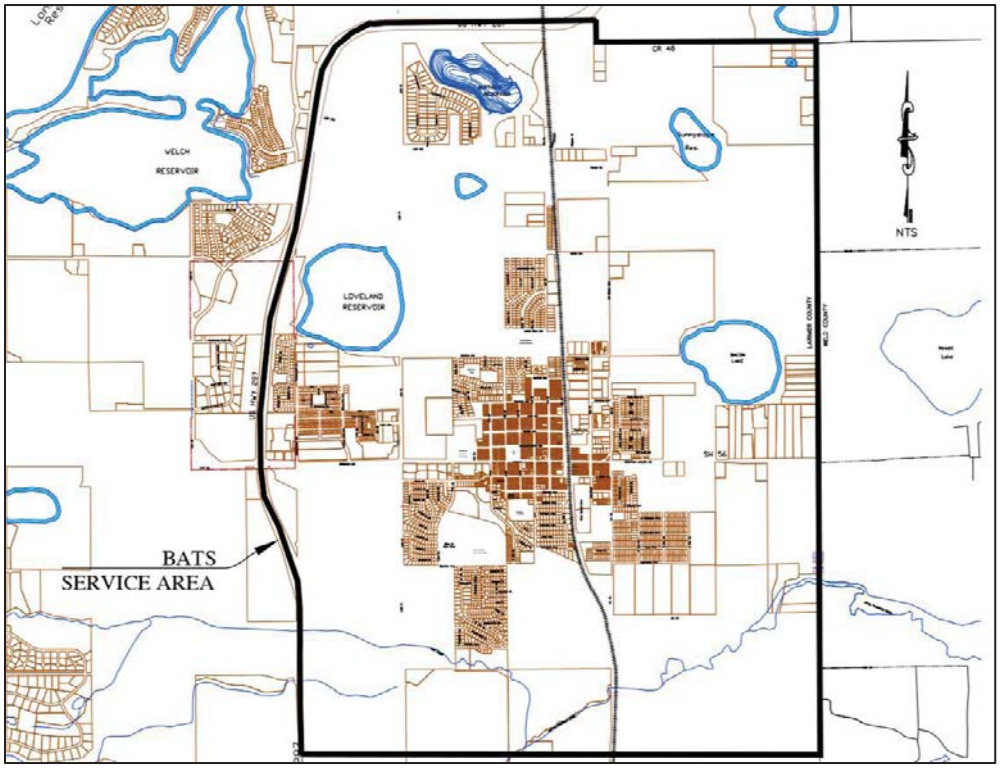
BATS is operated by the Town of Berthoud. This service was provided by the Golden Links Senior Center from 1992 until 2006 when Berthoud took over the service.

BATS provides shared-ride demand-response service for residents in an approximately eight square mile service area, ***Figure 3-24***. The service area includes the developed portion of Berthoud and the immediate area surrounding the Town.

BATS transports riders to Longmont on Mondays, with trips to Loveland provided each Tuesday through Friday. Out-of-town rider pickups begin at 8:00 a.m., with a return trip to Berthoud at 11:30 a.m. In-town trips are provided from 8:00 a.m. to 4:00 p.m., Monday through Friday. There is no service on holidays and any rides must be scheduled at least 24-hours in advance.

BATS fares are $1.00 for in-town trips and $4.00 for out-of-town trips, each way. The system has a small source of consistent revenue through a one-cent Town sales tax. The BATS fleet includes three buses equipped with wheelchair lifts, acquired through CDOT grants. See **Appendix B** for more details on the BATS fleet.

Figure 3-24 BATS Service Area



Source: *Town of Berthoud, 2015*

BATS Service Characteristics

BATS service characteristics and performance measures reflect the demand-response service mode. In March 2013, the BATS service area was reduced to an eight square mile area.

From 2007 to 2013, BATS ridership decreased by 20 percent, vehicle miles increased by 1.3 percent, vehicle hours decreased by 2.9 percent, operating costs increased by 12 percent, and annual fare revenues increased by 142 percent, see ***Table 3-13***. BATS 2012 performance measures are shown in ***Table 3-14***.

Table 3-16 BATS Trends, 2007-2013

Year	Ridership	Annual Vehicle Miles	Annual Vehicle Hours	Annual Operating Cost	Annual Fare Revenues
2007	12,189	81,642	5,378	$187,414	$8,520
2008	11,885	99,696	5,822	$220,746	$13,520
2009	14,273	112,172	6,253	$209,975	$17,571
2010	13,397	112,867	6,397	$284,675	$18,897
2011	13,254	112,224	6,493	$288,015	$20,771
2012	9,739	82,731	5,222	$210,324	$20,613
2013	4,715	23,596	2,250	$125,346	$8,103

Source: *Town of Berthoud – BATS, 2013*

Table 3-17 BATS System-Wide Performance Measures, 2012

Performance Measures - 2012	Total
Cost per Operating Hour	$40.28
Passengers per Operating Hour	1.9
Cost per Passenger Trip	$21.60
Subsidy per Passenger Trip	$19.48
Farebox Recovery	9.8%
Ridership per Capita	1.27
Cost per Capita	$27.53

Source: *Town of Berthoud – BATS, 2013*

SAINT – Senior Alternatives In Transportation

SAINT is a 501(c)(3) non-profit providing rides to seniors 60+ and adults with disabilities in Fort Collins and Loveland. SAINT volunteers drive their own vehicles. SAINT staff recruits volunteers, schedules rides, and provides a mileage allowance and extra insurance to the volunteers. SAINT's 500 clients are served by 160 volunteers and four staff members (one full-time and three part-time). In 2012, volunteer drivers in Fort Collins and Loveland provided over 25,000 rides to seniors in need.[6]

[6] SAINT website: www.saintvolunteertransportation.org

SAINT operates from 8:15 a.m. to 4:00 p.m., Monday through Friday. Weekend and evening rides are available in Fort Collins by special request. Riders must call to make reservations at least three business days in advance, with reservations taken Monday through Friday from 8:00 a.m. to 12:00 p.m. No fare is required; however, donations of $1.00 are suggested, with an average donation of $1.15.

Table 3-15 shows SAINT's performance measures for 2007 to 2013. The number of passengers, service hours, and miles all increased by 26 percent, while the cost increased by 14 percent.

Table 3-18 SAINT Trends, 2007-2013

Year	Passengers	Service Hours	Miles (Volunteer)	Cost	Donations[7]
2007	20,186	10,093	161,488	$176,750	$23,214
2008	20,165	10,083	161,320	$184,172	$23,190
2009	19,327	9,664	154,616	$179,900	$22,226
2010	19,648	9,824	157,184	$182,900	$22,595
2011	21,079	10,540	168,632	$189,750	$24,241
2012	25,454	12,727	203,632	$202,345	$29,272
2013	26103	13,051	208,824	$215,189	$26,164

Source: *SAINT, 2015*

RAFT

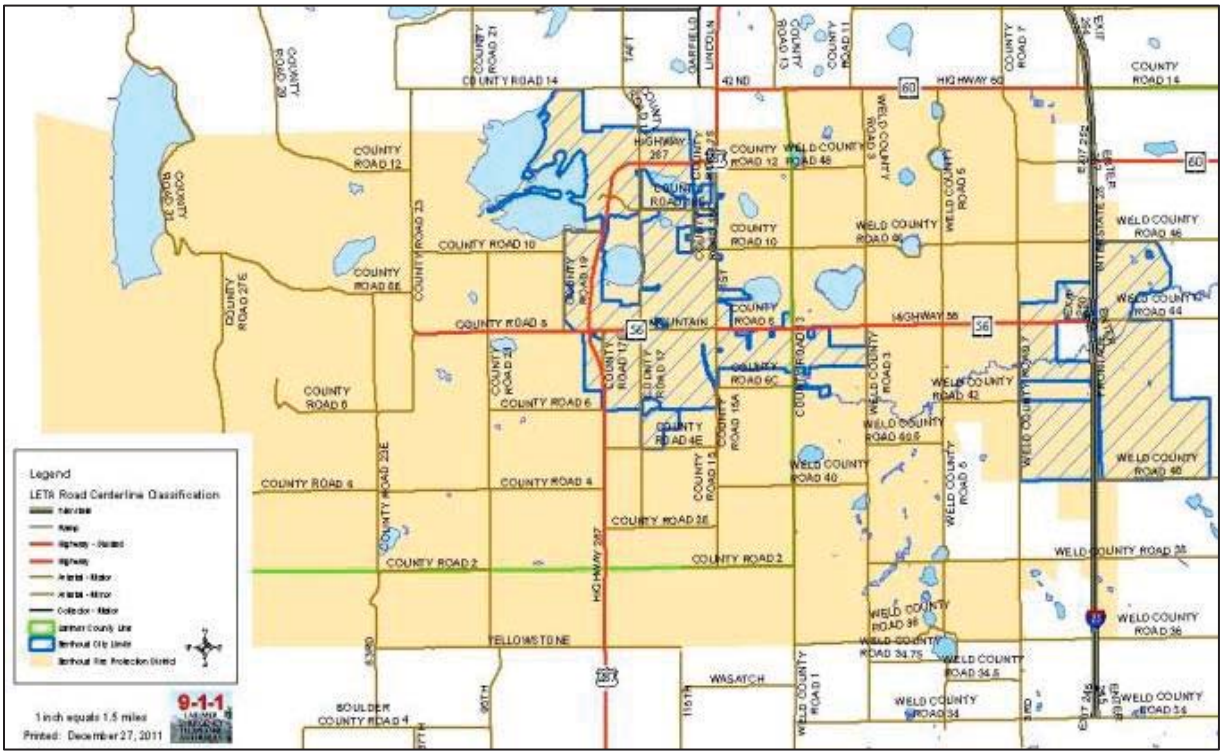
RAFT initiated service in January 2014 due to the reduction in the service area of BATS. RAFT is a non-profit volunteer transportation service which offers door-to-door, on-demand services to eligible seniors (65+) and adults (18+) with disabilities. RAFT operates under the Berthoud Area Community Center/Golden Links, Inc. The service relies on volunteer drivers; however, the service acquired an ADA van with funds from a NFRMPO New Freedom sub-grant. During its first year of service, volunteers drove approximately 22,000 miles, providing 960 trips for eligible individuals.

To be eligible, individuals must reside within the area served by the Berthoud Fire Protection District (ZIP code 80513), ***Figure 3-19***, in the area surrounding Berthoud, but outside of the area served by BATS. RAFT volunteers take riders into Berthoud, Longmont, Loveland, and adjacent areas. Individuals choosing to use RAFT must pre-register as a rider.

The Berthoud Fire District extends from State Highway 60/Larimer County Road 14, east to I-25, south to Yellowstone Road, and west to Carter Lake/Larimer County Road 31. ***Figure 3-25*** shows the Berthoud Fire Protection District.

[7] Donations estimated based on number of passengers and average donation per trip of $1.15.

Figure 3-25 Berthoud Fire Protection District



Source: *RAFT website, 2015*

There are no fees for rides. Volunteer drivers use their own vehicles and donations are encouraged. RAFT is funded through client contributions, grants from the Larimer County Office on Aging and the Berthoud Community Fund, other foundations, individual contributions, and assistance from the Berthoud Fire Protection District.

SENIOR RESOURCE SERVICES – VOLUNTEER TRANSPORTATION PROGRAM

Volunteers at SRS provide transportation for Weld County seniors in need of rides to medical appointments, the grocery store, senior centers, and/or special events. As of April 2014, SRS had 225 volunteer drivers serving 530 clients. SRS has five staff members and provides services from 8:00 a.m. to 5:00 p.m. In 2012, SRS provided approximately 15,000 trips.

TOTALTRANSIT—COLORADO NEMT

While the Weld Country Transportation Program and the Larimer Lift rural transportation services were discontinued services in 2011 and 2012 respectively, the State Department of Health Care Policy and Finance awarded the broker function for Non-Emergency Medical Transportation (NEMT) for Medicaid clients living in Larimer and Weld Counties to Total Transit—Colorado NEMT.

Total Transit—Colorado NEMT is the transportation broker responsible for coordinating NEMT travel for Medicaid eligible customers living in the counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld, ***Figure 3-26***. NEMT Services are provided to Medicaid eligible individuals who require transportation to a Medicaid funded medical appointment. This non-emergency transportation service employs ADA certified drivers who can assist passengers with special needs with transportation to medical appointments.

Figure 3-26 Total Transit—Colorado NEMT Service Area

Source: *Total Transit—Colorado NEMT website, 2015*

Total Transit—Colorado NEMT requires at least 48-hours of advance notice to schedule services. Riders must fill out a mileage reimbursement verification form, available on the Colorado NEMT website, for eligible trips taken using Total Transit—Colorado NEMT. The reimbursement rate is at the State mandated level of $0.37 per mile.[8] The trip must be within 25 miles of the pick-up location. Transportation for urgent care and after-hours may be provided based on Medicaid eligibility.

WINDSOR SENIOR RIDE PROGRAM

Senior Ride provides transportation assistance to Windsor residents age 55 and older who are unable to drive themselves. The service maintains one 13-passenger Starcraft van that is wheelchair accessible. The van can hold up to two wheelchairs and 11 passengers. The service employs two drivers who split the driving duties. Rides are provided to and from medical appointments, as well as to and from Senior Nutrition Lunches at the Windsor Community Recreation Center on Wednesdays and Fridays. Rides to grocery stores in town are available on Thursdays and Fridays, ***Table 3-16***.

[8] Colorado NEMT website: http://tticolorado.com/mileage-reimbursement/, 2015

Table 3-19 Windsor Senior Ride Program Schedule

Day	Appointment Times	Location	Fee
Monday	8:00 a.m. - 3:30 p.m.	Greeley, Fort Collins, Loveland, Windsor	$6.00
Tuesday	8:00 a.m. - 3:30 p.m.	Greeley, Fort Collins, Loveland, Windsor	$6.00
Wednesday	8:00 a.m. - 3:30 p.m.	Windsor	$4.00
Thursday	8:00 a.m. - 3:30 p.m.	Windsor	$4.00

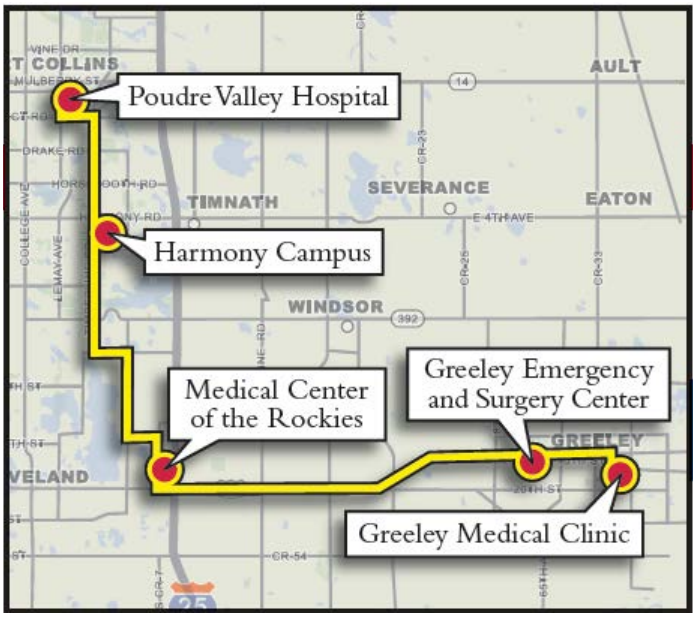
Source: *Town of Windsor– Windsor Senior Ride Program, 2015*

Rides can be scheduled by calling the Community Recreation Center between 7:00 a.m. and 10:00 p.m., Monday through Friday (7:00 a.m. to 8:00 p.m., Memorial Day through Labor Day), 8:00 a.m. to 6:00 p.m. on Saturdays, and 1:00 p.m. to 6:00 p.m. on Sundays. Rides must be scheduled at least 24-hours in advance, but one week is recommended as the service is popular and spots fill quickly.

CONNECTING HEALTH

Columbine Health Systems offers a free van ride service to medical appointments in Fort Collins, Greeley, and Loveland. The "Connecting Health" van travels between designated medical locations in the three cities Monday through Friday. Riders do not need to schedule a ride. The vans can hold up to 13 riders; however, the vans cannot accommodate wheelchairs. ***Figure 3-27*** shows the van's route.

Figure 3-27 Connecting Health Van Service Route



Source: *Columbine Health Systems website, 2015*

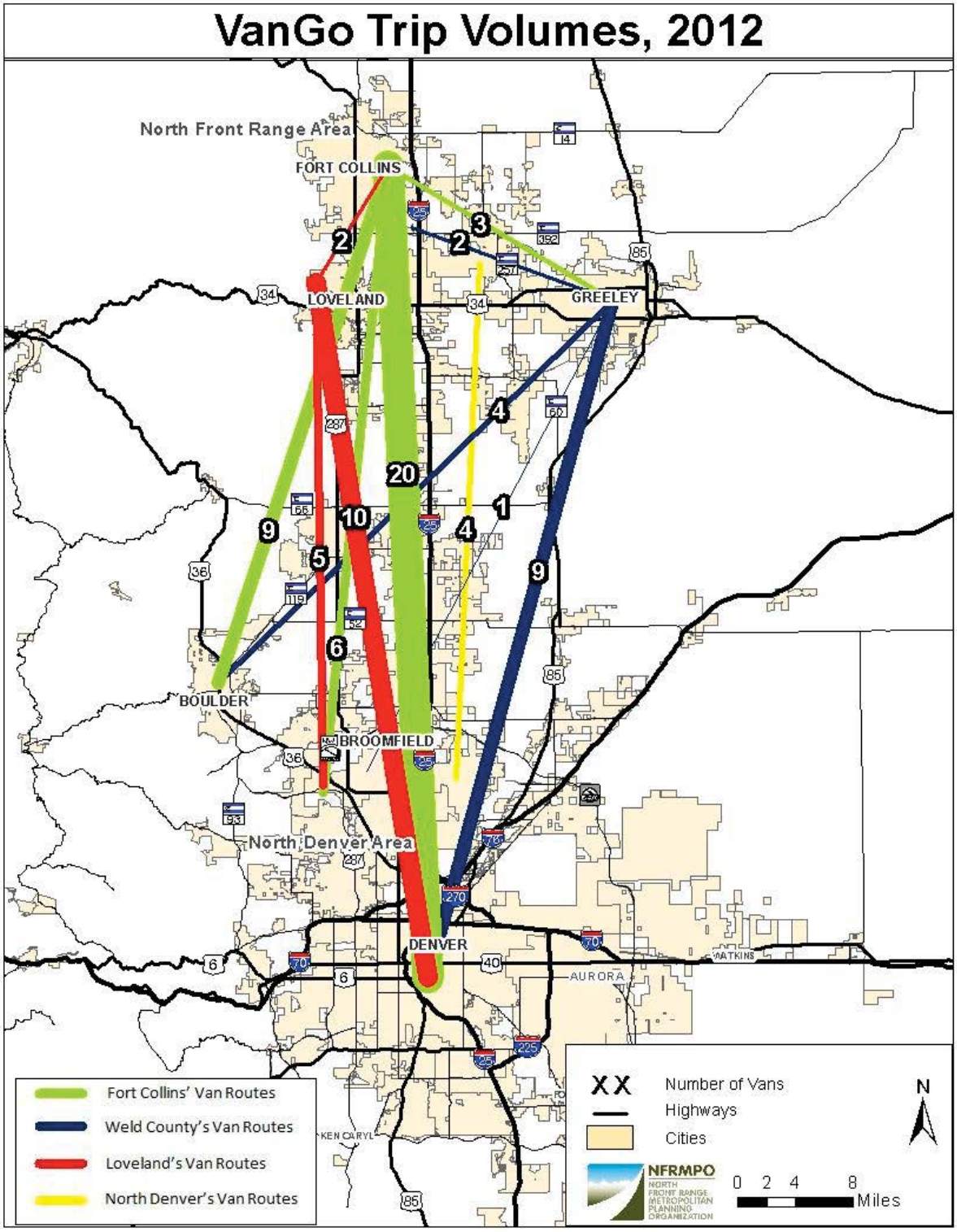
VANGO – VANPOOL SERVICES

VanGo Vanpool Services is a provider which links an average of six people with similar daily commutes together to share a van. Vanpool members pay a monthly fee which covers the costs of the administration of the program, fuel, maintenance, and insurance. Driving responsibility is shared among the vanpool members. VanGo reports the vehicle and passenger miles traveled to FTA to fund the purchase of the vehicles.

The VanGo fares are calculated using a zone system. There are a total of 13 20–square mile service areas, with VanGo currently serving 10 of the areas. Fares are computed according to the number of zones in the vanpool's route. For example, in 2012 a trip from Fort Collins to downtown Denver cost $227 per person, per month. The average price for a gallon of gasoline in 2012 was $3.60, making the VanGo vanpool option a cheaper alternative to driving to Denver alone on a daily basis.

Figure 3-28 illustrates the volume of VanGo trips in 2012 from various locations throughout the region and the Denver metropolitan area. Services along I-25, US 287, and US 85 are the most popular routes for vanpools. In 2012, there were 75 separate vanpools with 95 percent of the available seats occupied, 428 seats reserved out of 450 available seats.

Figure 3-28 VanGo 2012 Trip Volumes by Corridor



Source: *VanGo, NFRMPO Staff, 2014*

PRIVATE CARRIERS

Privately funded transportation services include taxi, airport shuttles, and intercity bus services operated by a variety of companies within the region.

ARROW/BLACK HILLS STAGE LINES

Arrow/Black Hills Stage Lines operates a route between Denver and Greeley with two daily trips in each direction. The stop in Greeley is located at the Greeley Transportation Center, 1200 A Street. The stop in Denver is located at the Denver Greyhound Center, Greyhound Bus Terminal, 1055 19th Street. A round-trip fare between Greeley and Denver is $46.50. The schedule as of February 2015 is shown in ***Table 3-17***.

Table 3-20 Arrow/Black Hills Intercity Bus Schedule

Route	Depart	Arrive
Greeley-to-Denver	5:35 a.m.	6:40 a.m.
Denver-to-Greeley	12:30 a.m.	1:35 a.m.

Source: *Arrow/Black Hills Stage Lines, February 2015*

EL PASO-LOS ANGELES LIMOUSINE EXPRESS

The El Paso-Los Angeles Limousine Express, Inc., operates in the US 85 corridor and has two departures per day from Greeley to Denver. The charge for a one-way fare is $15.00 for adults and $10.00 for children. The schedule as of February 2015 is shown in ***Table 3-18***. The Greeley terminal is located at 2410 8th Avenue in the Agency Boutique Seis Rosas. The Denver terminal is located at 2215 California Street, a few blocks from the Denver Bus Station.

Table 3-21 El Paso-Los Angeles Limousine Express Bus Schedule

Route	Depart	Arrive
Greeley-to-Denver	6:15 a.m.	7:45 a.m.
Greeley-to-Denver	5:00 p.m.	6:45 p.m.
Denver-to-Greeley	7:15 a.m.	8:45 a.m.
Denver-to-Greeley	9:45 p.m.	11:15 p.m.

Source: *El Paso-Los Angeles Limousine Express, Inc., February 2015*

GREEN RIDE COLORADO SHUTTLE

Green Ride, a door-to-door airport shuttle, provides trips between DIA and Fort Collins, as well as, between Laramie and Cheyenne, Wyoming, and DIA. Passengers share the vehicle with other travelers, while also sharing the overall cost of the service. Service between Fort Collins and DIA begins at 2:45 a.m. through 10:45 p.m. Service from DIA to Fort Collins begins at 5:00 a.m. and runs through 1:00 a.m. In Fort Collins, the service area is bounded by Carpenter Road, Overland Trail, Vine Drive, Mulberry Street, and I-25. Trips to or from locations outside those boundaries may be allowed during periods of low demand. Green Ride also takes reservations at Fort Collins hotels in and adjacent to the service area boundaries. The lowest standard fare with pick-up from one of the three stops in Fort Collins (CSU Transit Center, Foothills Mall, and Harmony Transportation Center) is $32.00. An adult fare with hotel pick-up is $38.00 and children 13 and under are $10.00. Door-to-door pick-up is also available and prices vary by service zone. Zones 1A and 2B are $43.00, while Zone X is $49.00. Green Ride also offers a $5.00 off Senior Fare Discount for adults 65 years and over. This reservation-based operation uses Dodge Caravans, 15-passenger vans, and 21-passenger buses.

GREYHOUND

Greyhound Lines, Inc. is the largest provider of intercity bus transportation in the nation and operates primarily between major cities. Greyhound travels along I-25 and provides service between Fort Collins and Denver. The Greyhound station in Fort Collins is located at the Plaza Hotel, 3836 East Mulberry Street. A one-way adult fare between Fort Collins and Denver is $24.50, and a round-trip fare is $48.50. There is no Greyhound service available to any of the other communities within the region. While the schedules change frequently, the schedule as of February 2015 is shown in ***Table 3-19***.

Table 3-22 Greyhound Intercity Bus Schedules

Route	Depart	Arrive
Fort Collins-to-Denver	5:40 a.m.	6:40 a.m.
Fort Collins-to-Denver	5:15 p.m.	6:15 p.m.
Denver-to-Fort Collins	12:30 a.m.	1:30 a.m.
Denver-to-Fort Collins	12:05 p.m.	1:05 p.m.

Source: *Greyhound Lines, Inc., February 2015*

SMART RIDES

Smart Rides Taxi Company was formed in July 2013 to fill a void in transportation services in the City of Greeley and Weld County. Smart Rides began service in July 2014 and provide a transportation service throughout Weld County. The base fare for a trip and the first ¼ mile is $4.00, with $2.00 charged for each additional mile, and $1.00 for each additional passenger over the age of 12. Smart Rides is working to expand their service area to allow them to drop off passengers outside of Weld County.

SUPER SHUTTLE

Super Shuttle provides scheduled service from communities in the region to DIA. They also operate the Yellow Cab taxi service in Fort Collins, Greeley, and Loveland. Super Shuttle has several stops in Greeley, Fort Collins, Loveland, and Windsor at a variety of hotels and other commercial businesses.

Service from DIA to communities in the I-25 corridor departs hourly between 6:00 a.m. and midnight. In the southbound direction the first bus departs Fort Collins at 3:10 a.m. Service from DIA to Greeley departs every two hours, with the first bus at 6:05 a.m. and continuing until 11:55 p.m. The fare from Fort Collins or Greeley to DIA is $40.00 one-way for the first passenger, with discounts are available for additional passengers.

PREVIOUS TRANSIT SYSTEM EFFORTS

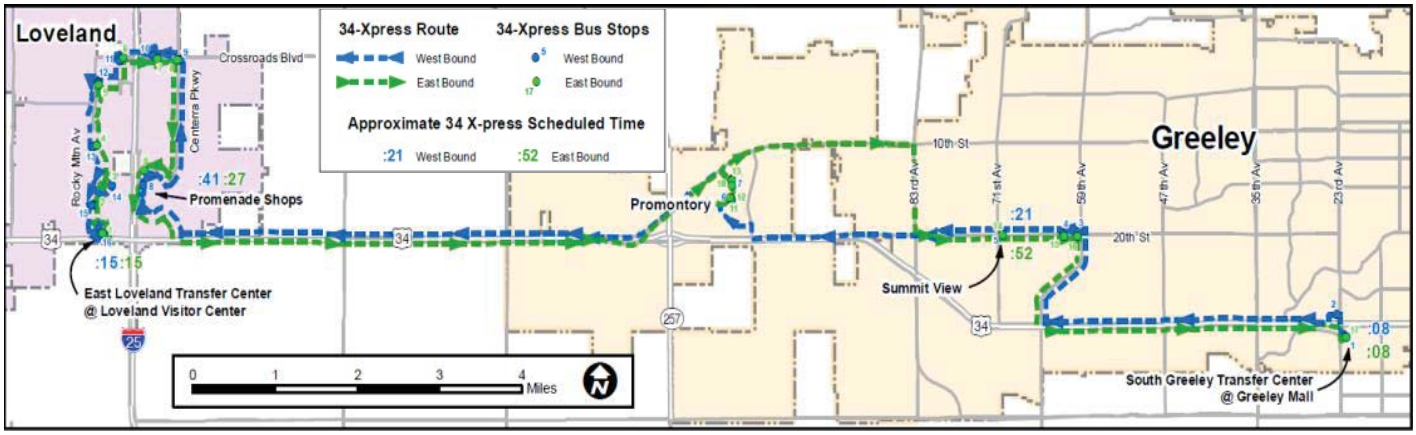
34 XPRESS

The 34 Xpress service, connecting Loveland and Greeley along US 34, began in August 2008. The service ran hourly from the East Loveland Transfer Center at the Loveland Visitor's Center to the South Greeley Transfer Center at the Greeley Mall, ***Figure 3-29***. Service later expanded to Saturdays, and ran every two hours. Funded through a mix of regional, state and federal resources, the 34 Xpress provided an important east-west transit connection. After a strong month of free rides, fares were charged based on distance: local service within Greeley or Loveland cost $1.00 with a transfer; and express service cost $2.00 between the two cities, plus $1.00 for transfers. The service was canceled in April 2010 before the two-year federal grant expired with funds transferred to other regional projects.

Low ridership can be related to a few issues with the service which are outlined below:

- ≠ **Non-direct Route** – The route attempted to provide service to unserved areas in both Greeley and Loveland, resulting in a significant increase in travel time between the cities. The route did not travel into either downtown area, resulting in additional time and cost for transfers.
- ≠ **Limited Connections to Other Regions –** Although FoxTrot was operational and connections to Fort Collins could be made, it required an additional transfer through the COLT system. This added additional time and expense to a rider's commute. Finally, service was not offered, as it is today to the RTD service area or through the soon to begin CDOT Bustang. The lack of useful regional transfers reduced the route's marketability and market.
- ≠ **Marketing -** Although limited marketing was completed before and during the project, the marketing campaign itself was limited by the route and service provided. More specifically, marketing was limited by the above mentioned service conditions.

Figure 3-29 34 Xpress Route



Source: *Greeley-Evans Transit, 2015*

REGIONAL TRANSPORTATION AUTHORITY

In 2002, the Colorado General Assembly passed legislation which allows counties and municipalities to join together and provide a funding mechanism for specific transportation needs within a specific geographic region. These collaborations, known as a Regional Transportation Authority (RTA), allow for cities and municipalities to raise funds for transportation projects, including through sales tax, vehicle registration fees, and visitor benefit taxes. The NFRMPO was involved in two efforts to create a regional transportation authority; however, both efforts failed to get on a ballot for voters.

According to the ***Northern Colorado Regional Transportation Authority: Lessons Learned and Future Perspectives*** presentation provided by the MPO and the Northern Colorado Legislative Alliance (NCLA), multiple issues caused the RTA to fail to get on the ballot in the region. The 2003 RTA effort did not consider the needs of local communities and did not engage the business community and community leaders. A diverse region means regional issues are not consistent, including the availability of or desire for transit, road conditions, and community needs.

The 2007 proposal included a mixture of regional funding and local funding for projects in an effort to consider the diversity of the region. A one percent sales tax and a $10.00 vehicle registration fee were expected to collect $652M in revenue. The largest amount of funding, 45 percent, would have gone to regional roadway projects, 13 percent would have been spent on regional transit and 42 percent would be given back to the communities to spend on local transportation needs. Stakeholders provided a list of on-system and off-system projects to be funded through the RTA. Two communities voted against joining the RTA, which created doubt in the success of the RTA.

Future attempts to create a Northern Colorado Regional Transportation Authority should consider the needs of each individual community, in addition to the needs of the region as a whole. A clear plan should be developed through community outreach, including both community stakeholders and the business community. Regional support is necessary to convince member jurisdictions to support the idea.

In 2011, the cities of Fort Collins and Loveland, the Town of Berthoud, Larimer County, and the NFRMPO conducted the ***North Front Range Transit Vision Feasibility Study***. The study considered the feasibility for a combined transit agency within the Transportation Management Area (TMA) to achieve cost-saving efficiencies. The study recommended Transfort and COLT should move forward with initial integration of fixed-route and paratransit operations between the two agencies. The new regional transit service entity would require an intergovernmental agreement (IGA) to operate which would provide short-term benefits and still allow for local governmental control. The report did not offer a timeline to integrate the transit services, but recommended forming a community Task Force to draft the IGA.

OTHER PLANNED TRANSIT SERVICES

NORTH I-25 ENVIRONMENTAL IMPACT STATEMENT RECOMMENDED PREFERRED ALTERNATIVE

Following seven years of work, from November 2003 through December 2011, the North I-25 Final Environmental Impact Statement (FEIS) Record of Decision (ROD) was signed in December of 2011 (see ***Figure 3-30***).

The transit elements of the I-25 FEIS preferred alternative included:

- Express Bus: Express bus service with 13 stations along I-25, US 34, and Harmony Road with service from Fort Collins and Greeley to downtown Denver and from Fort Collins to DIA. The new Bustang service will connect the North Front Range region with downtown Denver.
- Commuter Rail: Commuter (intercity) rail service with nine stations connecting Fort Collins to Longmont and Thornton using the BNSF Railway corridor, generally paralleling US 287 and tying into the FasTracks North Metro rail in Thornton which will connect to Downtown Denver. Passengers may also connect to the FasTracks Northwest rail in Longmont, which will travel to Boulder.
- Commuter Bus: Commuter bus service with eight stations along US 85 connecting Greeley to downtown Denver.

Although the main transit and roadway elements of the recommended preferred alternative have been identified, the necessary feeder routes have not been identified. Just as the recommended preferred alternative blended elements of two separate packages of transit services as analyzed in the draft FEIS, so too must the feeder routes. The Preferred Alternative included feeder routes as follows:

- Greeley–to-Windsor–to-Fort Collins: New route begins at US 85 and D Street in Greeley and proceeds west along US 34, north on SH 257, west on Harmony Road, north on Timberline Road, west on SH 14 to the Fort Collins Downtown Transit Center. Assumes 30-minute peak, 60-minute base service frequencies on weekdays, and 60-minute service on weekends.
- Greeley-to-Loveland (US 34): New route begins at US 85 and D Street in Greeley and proceeds west along US 34 (business route) to west Loveland (US 34 at Wilson Avenue). Assumes 15-minute peak, 30-minute base service frequencies on weekdays, and 30-minute service on weekends.
- Milliken-to-Johnstown-to-Berthoud: New route begins in Milliken, proceeds west on SH 60, south on I-25, west on SH 56 to the Berthoud commuter rail station. Assumes 60-minute peak, 60-minute base service on weekdays only.
- Firestone–to-Frederick-to-Erie: New route begins in Firestone, proceeds south on Colorado Avenue through the towns of Frederick and Dacono, west on CR 8 to the town

of Erie. A stop would be made at the CR 8 commuter rail station. Assumes 30-minute peak, 60-minute base service frequencies on weekdays only.

≠ Windsor–to-Fort Collins: New route begins at US 34 and SH 257, travels north on SH 257, west on Harmony Road to the BRT station at I-25. Assumes 30-minute peak, 60-minute base service frequencies on weekdays and 60-minute service on weekends.

≠ Johnstown–to-Firestone: New route begins at the Johnstown BRT station at I-25 at SH 56/60 and proceeds west on SH 56, south on US 287, east on SH 119 to the I-25/SH 119 BRT station. Assumes 60-minute all-day service frequency on weekdays only.

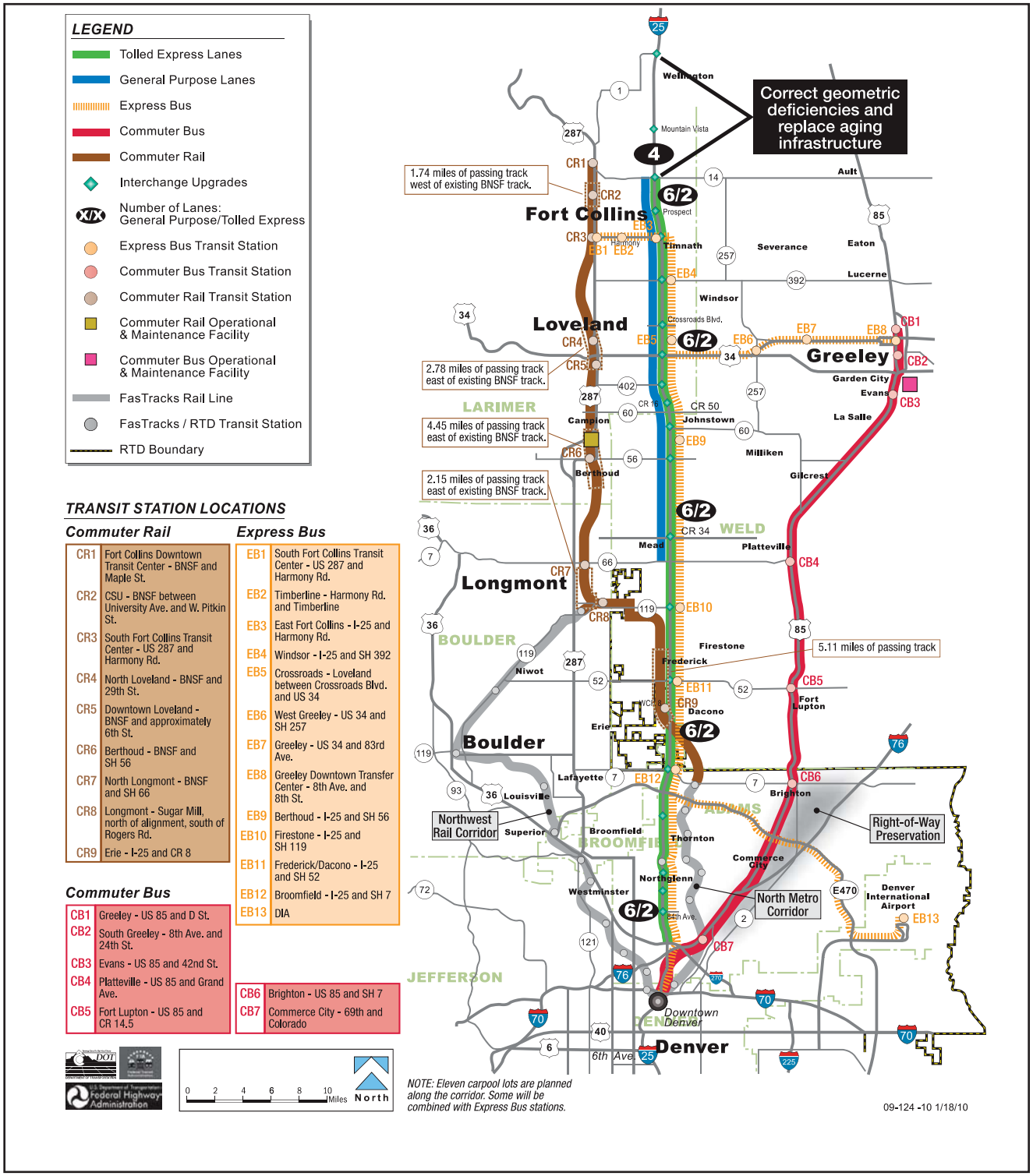
≠ Fort Lupton-to–Niwot: New route begins in Fort Lupton at SH 52/US 85, travels west on SH 52 to Niwot, terminating at the US 36 FasTracks commuter rail station. Assumes 30-minute peak, 60-minute base service on weekdays only.

≠ Loveland–to-Crossroads: New route begins in Loveland, travels east on US 34 to the Crossroads BRT station. Assumes 30-minute peak, 60-minute base service on weekdays only.

Figure 3-31 illustrates the proposed phasing of the improvements, with bus services developed early in the plan. Although right-of-way for the commuter rail in the US 287 corridor is proposed for purchase early, the construction of the commuter rail line is in Phase 3.

In October 2014, CDOT announced plans to add the segment of I-25 between 120th Avenue and SH 7. This section was not in the original 2011 FEIS as no funds had been identified for construction for that portion. Funds for this section have subsequently been identified and CDOT and Federal Highway Administration (FHWA) are in the process of adding this Proposed Action to a second ROD or ROD 2. This addition will also include adding one tolled express or managed lane in each direction along this segment.

Figure 3-30 I-25 FEIS Recommended Preferred Alternative



Source: *North I-25 Final Environmental Impact Statement (FEIS) Record of Decision (ROD), 2011*

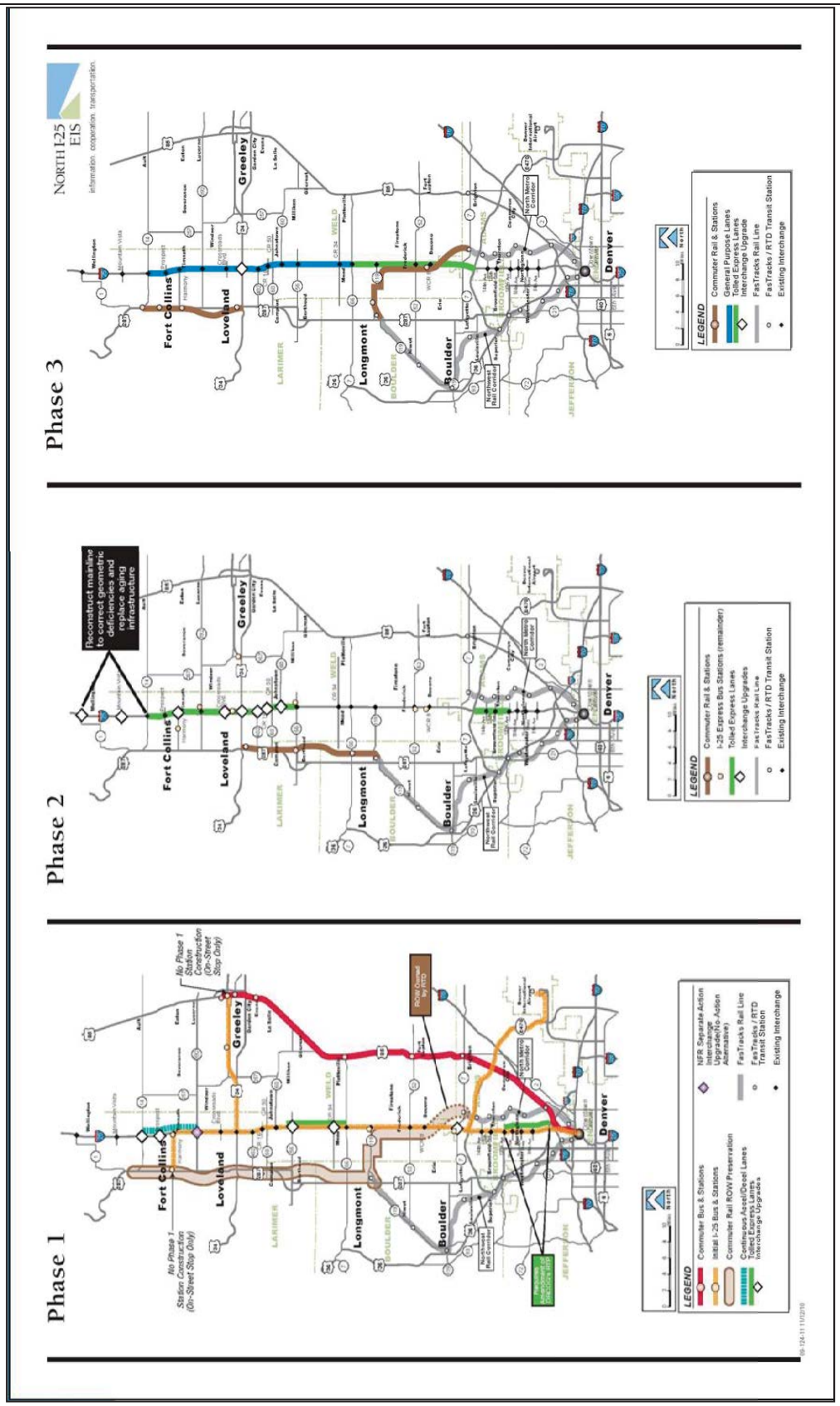


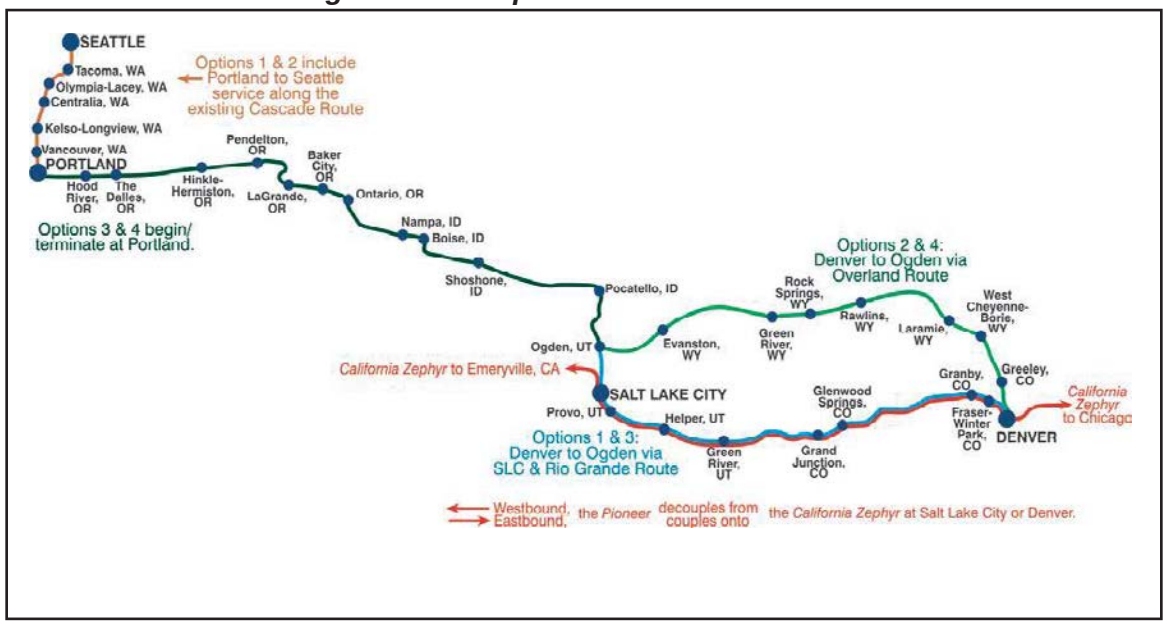
Figure 3-31 Proposed North I-25 Phasing

Source: *North I-25 Final Environmental Impact Statement (FEIS) Record of Decision (ROD), 2011*

AMTRAK PIONEER LINE

As a part of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), Amtrak evaluated two potential routes for the Pioneer Line. One of these routes would travel north from Denver through Greeley and on to Wyoming, ***Figure 3-32***. The report was completed in 2009 as required by PRIIA; however, no further work has been completed on the potential new routes and no decisions have been made as to when or if service will be reinstituted along the Pioneer Line.

Figure 3-32 Proposed Amtrak Pioneer Routes



Source: *Pioneer Route Passenger Rail Study, AMTRAK, 2009*

SUMMARY OF FINDINGS

1. Public transit networks have developed in the central urban areas with limited services available to rural residents. Though the transit networks are fairly constrained and are not geared to commuters throughout the North Front Range region, the area is experiencing an increase in the number of regional transit options. In Larimer County and for the communities along the I-25 corridor, there are plans to expand transit services, including the Bustang Service along I-25. The communities of Berthoud, Fort Collins, Longmont, Loveland, and Larimer County continue to operate and fund the FLEX system providing transit services on US 287 from Fort Collins to Longmont. This service will expand to Boulder beginning in 2016 using CMAQ funds.

2. The options for funding regional services are limited and require significant local matching funds. It is and will continue to be difficult to find the matching funds necessary for regional services as well as local services.

3. The role that the State will play in funding transit services of regional significance is difficult to predict. It is important to begin working with the State to determine the role of the State and local governments in funding regional services. This is particularly true for those services identified in the North I-25 FEIS. Through the Funding Advancements for Surface Transportation and Economic Recovery ACT (FASTER) bill the State General Assembly has made limited funds available, enabling CDOT's Division of Transit and Rail to consider funding of regional transit services. CDOT anticipates awarding capital grants totaling $5M annually in funding to local entities. Exactly how the remaining $10M in FASTER funds (identified as "State Projects") will be administered and managed is currently under discussion. Beginning in 2016, CDOT awarded some FASTER funds for operations for regional services. This will be critical for these services to be successful and for them to expand.

4. The vanpool routes can be considered as markers to show where commuters have an interest in shared-ride regional services. Successful vanpool routes can serve as low cost tests routes to determine the demand for shared or public transit services in key regional and inter-regional corridors. Integrating policies and decisions regarding development of transit services with related alternatives to driving such as walking, van-pooling, bicycling, and car-pooling, including Park-n-Ride facility development, may be a useful strategy.

5. Private intercity bus services operating between communities are limited and do not provide convenient commuter based schedules. The Super Shuttle services are frequent, but are focused only around DIA.

CHAPTER 4: DEMAND ANALYSIS

A variety of factors influence the demand for transit services. One factor is community values and the support of alternative transportation modes. Other factors include land use patterns, travel patterns within the communities and region, population and employment densities, transportation infrastructure, and the affordability and availability of viable transit services, including connecting services.

This chapter focuses on the potential demand for transit services in the proposed corridors, illustrated in ***Figure 4-1***. The corridors evaluated in this 2040 RTE are similar to the corridors evaluated in the North I-25 FEIS completed in December 2011 and in the 2035 RTE.

In addition to the services identified in the North I-25 FEIS, additional services will be needed to connect communities within the region to one another and to the services outlined in the EIS. As a result, nine potential transit corridors were analyzed:

1. Evans-to-Milliken-to-Berthoud along SH 60 and SH 56
2. Greeley/Evans-to-Denver along US 85
3. Greeley/Evans-to-Windsor-to-Fort Collins along US 34, SH 257, and Harmony Road
4. Greeley/Evans-to-Longmont along US 85, SH 66, and SH 119
5. Greeley/Evans-to-Loveland along US 34
6. Fort Collins-to-Bustang (Express Route)
7. Greeley/Evans-to-Bustang (Express Route)
8. Loveland-to-Bustang (Express Route)
9. Proposed North I-25 Commuter Rail Line from Fort Collins-to-Longmont

Tools for calculating future transit demand include basic demographic information and travel model outputs. For this 2040 RTE, the 2040 NFRMPO land use model and travel demand model, with a 2012 base year, evaluated potential transit demand.

The NFRMPO travel model includes trips internal to the region, as well as trips originating or ending outside the region (internal-external or external-internal), and originating and ending outside of the region (external-external). The NFRMPO completed a Household Survey in 2010 and used this information to complete the 2014 update to both the regional land use and travel demand models.

Using the updated regional travel demand model, the current and forecasted 2040 traffic volumes were examined. ***Figures 4.2 and 4.3*** show the congestion levels are very high on major regional roadways, and traffic begins to move to alternate routes (for example, from US 34 to SH 402 in Loveland); however, these routes also quickly become congested. Given the high levels of congestion, it will be important to emphasize how the various forms of passenger vehicle travel (automobile, carpools, vanpools, and transit) can work together to improve the overall carrying capacity of the roadway network.

Figure 4-1 Regional Transit Corridors for Evaluation

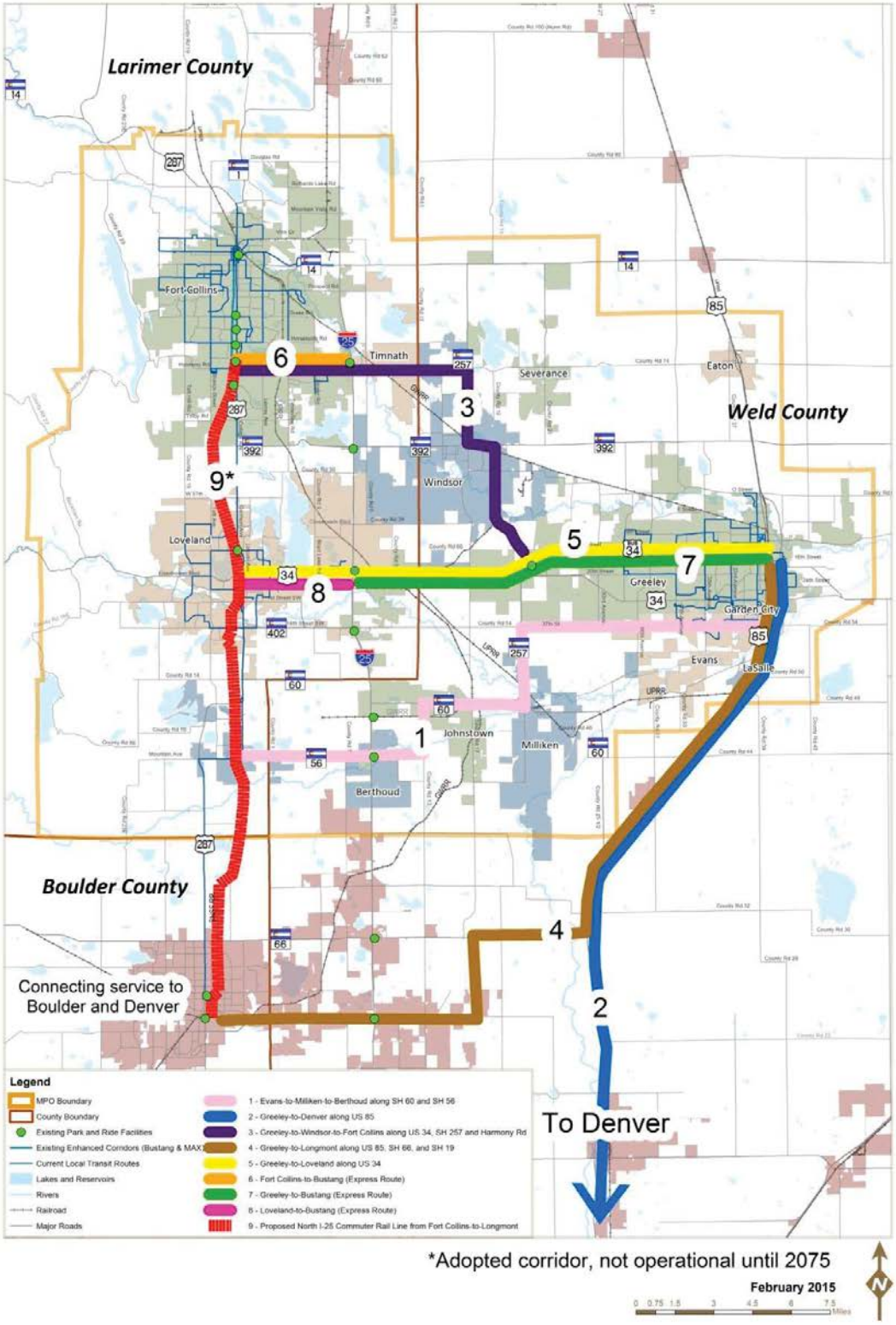


Figure 4-2 2012 Base Year Model Congestion Levels

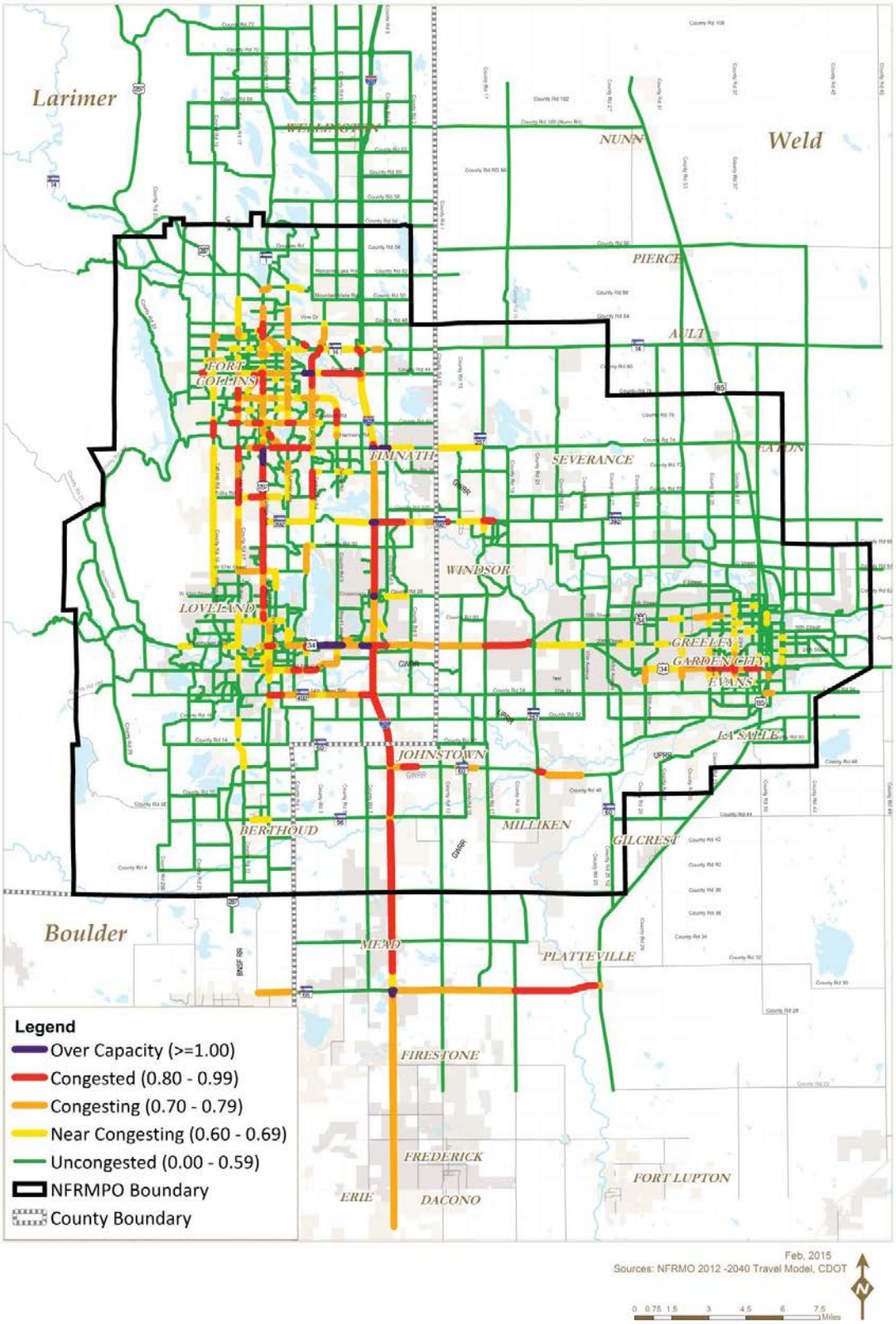
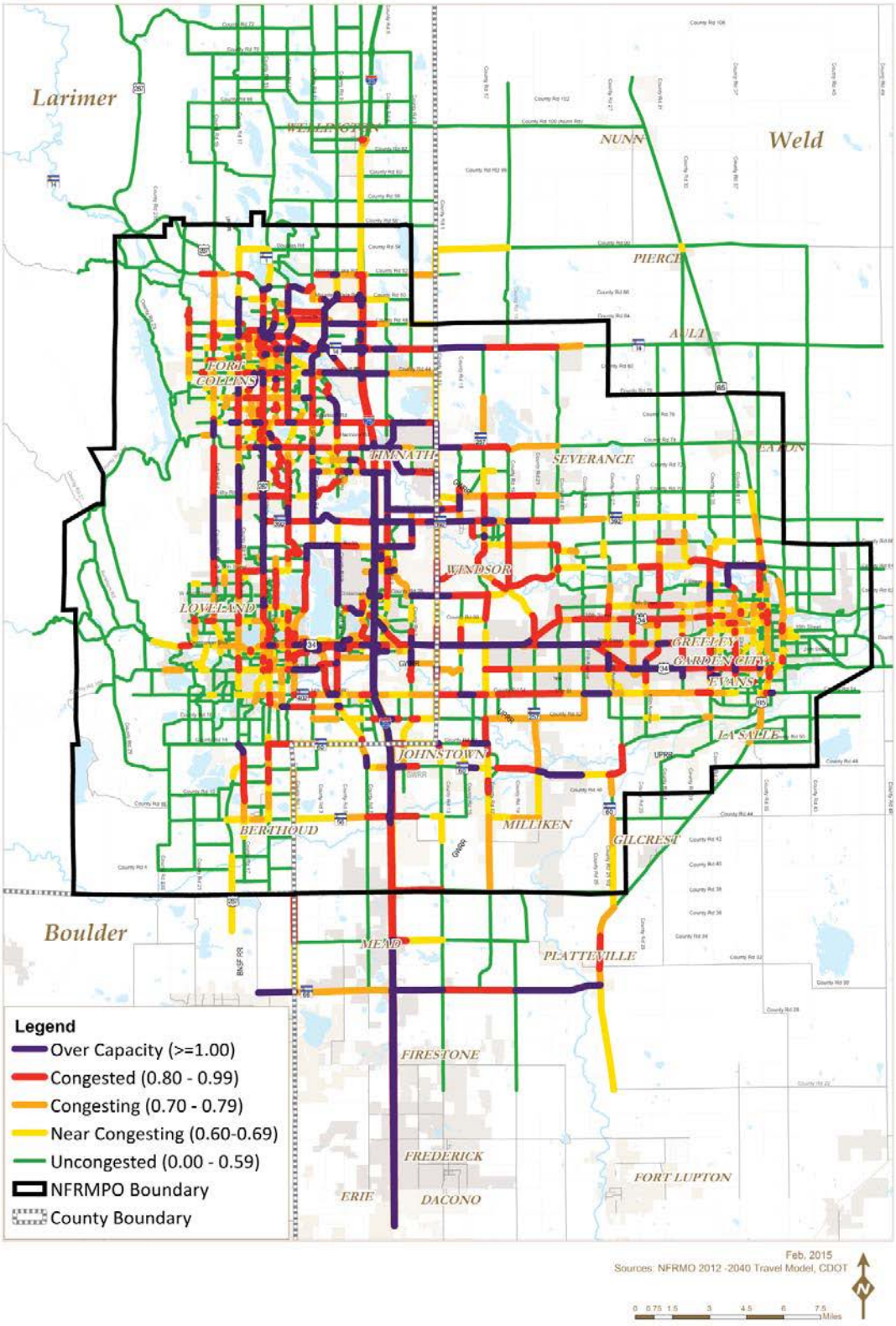


Figure 4-3 2040 Model Congestion Levels



For the proposed transit corridor analysis, staff used the 2040 travel demand model's subregion structure built in the model, detailed in **Chapter 2** and shown in ***Figure 2-3***. Each subregion is

made up of aggregated Traffic Analysis Zones (TAZs), smaller areas defined for use in travel modeling.[9] These subregions were used to provide information on where trips originated and were destined as well as the regional corridors they are most likely to travel along. The subregions, along with detailed trip tables with calculations for each subregion, are presented in ***Appendix C***.

The travel demand analysis included the following steps:

1. Creation of trip matrices for 2012, 2020, 2030, and 2040 to show all daily trips from TAZ to TAZ using the NFRMPO Travel Model.
2. The TAZ trip matrices produced were aggregated by subregion. There are seven subregions in the modeling area. Currently, no fixed-route transit exists or is proposed in subregions 5 (rural Larimer County) or 6 (rural Weld County) and they were removed, leaving five subregions for analysis.
3. The trip matrices were organized by mode share and all transit related tables were used, including: walk to local transit, walk to express, walk to premium, drive to local transit, drive to express, and drive to premium. An example of an express route is the CDOT Bustang on I-25. An example of a premium route is the MAX system in Fort Collins.
4. The trip matrices were validated based on current assumptions in the transit portion of the travel model. Examples include, but are not limited to:
    a) No fixed-route service currently exists between Greeley and Fort Collins, resulting in zero trips.
    b) More trips occur inside Fort Collins (subregion 3) due to increased availability of transit service.
    c) 'Other' (subregion 1) is farther away from transit service resulting in the least amount of trips.
    d) Trips are allocated between Loveland and Greeley/Evans in year 2020 because of the connection to the CDOT Bustang route.

The evaluation of the zone-to-zone trips showed some important changes as the region moves towards 2040:

- ≠ Overall trips nearly double in this time period. In 2012, the model estimates 2.9 Million daily person trips, while in 2040; the model estimates 5.1 Million daily person trips.
- ≠ Much of the growth is projected to occur in the middle of the region, along the I-25 corridor – from Timnath south to Mead and from Johnstown north to west Greeley.

[9] Land use model results are typically reviewed and analyzed by TAZ. TAZs are small areas defined for use in travel modeling. They are usually bordered by roadways or geographic features which limit direct travel between TAZs. They are often, but not always, made up of homogenous activity (i.e., all residential activity, all commercial activity, etc.).

SERVICE LEVEL OPTIONS

Four service level options have been identified for the North Front Range regional transit network. The service level options are described in detail in **Chapter 5**. Each reflects a different vision for the level of regional transit services which could be provided by 2040 and the rate at which these services could be developed. The options are:

1. **Status Quo:** Regional services are available in the US 287 corridor, between Fort Collins and Longmont, with the 2016 extension to Boulder. This service would operate at a higher level than FLEX operates today, allowing for anticipated growth in ridership. Service would be provided every 30-minutes in peak hours and hourly the rest of the day on weekdays and on Saturdays. Bustang service would be provided as anticipated by CDOT. No other regional services are provided except for vanpools/carpools.

2. **Basic:** A basic level of regional transit service would be available between communities in the North Front Range region and to Boulder, Longmont, and Downtown Denver, traveling on primary corridors. These services would provide an alternative for residents who wish to use transit or do not have access to automobile transportation. Selected corridors would have services run during the peak hour with four to five trips in the morning and afternoon, weekdays only.

3. **Moderate:** Regional services provide an alternative to automobile transportation, with express trips available on the busiest corridors. Residents could use transit for many trips, with frequent service and Saturday operation in busy corridors. Services within the corridors would vary between peak hour only service with four to five trips in the morning and afternoon to 30-minute service in the peak hours with hourly mid-day service, weekdays only.

4. **High:** Regional transit services would be available in most corridors, connecting to local services in the communities in the North Front Range. Transit options would be available for a full range of trips, operating through the evening hours and on Saturdays and Sundays. Park-n-Ride lots would provide auto access to regional services. Services within the corridors would vary between peak hour only service with four to five trips in the morning and afternoon, 30-minute service in the peak hours with hourly mid-day service, to 15-minute service in the peak hours with 30-minute mid-day service.

The alternatives reflect varying levels of service in each of the corridors identified in ***Figure 4-1***. More information on the individual corridors is provided later in this chapter. Each successive alternative builds on the previous one. For example, if the selected alternative is a high level of service, the region still needs to begin with a basic level of service and build up to the high level.

Both the moderate and high alternatives are supportive of the larger vision of a region connected with future rail service along the US 287 corridor. Both of these visions would develop bus services in the key rail corridors prior to the programmed development of rail services. The key rail corridor is US 287, based on the North I-25 FEIS. The Status Quo and

Moderate alternatives recognize the financial constraints on local government organizations. While the basic alternative is a step towards developing regional services, it would not result in the level of service and ridership that is a desirable precursor to regional and/or commuter rail services; however, nothing in these alternatives precludes the development of regional and/or commuter rail services.

Regional Commuter Rail Service

A fifth alternative incorporating regional commuter rail service was also identified to reflect a very high level of services. This alternative can be described as minimizing growth in Vehicle Miles Traveled (VMT) and meeting mobility needs through the construction of a robust regional transit system. With the anticipated population growth in the region, this would require a comprehensive set of strategies including changing land use policies and shifting significant resources from roadways to transit. This alternative would result in rail transit service in the busiest corridor, providing reliable and competitive services between communities on the rail line and to Boulder, Longmont, and Denver. Park-n-Ride lots would be located near most stations. This alternative would also require extensive local transit services within individual communities to connect to these regional corridors.

This alternative reflects the current vision of passenger rail services connecting the North Front Range and the Denver metro area. It also reflects the North I-25 FEIS, where commuter rail service is included, and the **Rocky Mountain Rail Authority High Speed Rail Feasibility Study** (2010), where high-speed rail is proposed along the I-25 corridor. In 2014, CDOT released a draft **Interregional Connectivity Study** which considered technologies, alignments, financing, and travel demand/ridership for the I-25 and I-70 corridors. The planning horizon for commuter rail service included in the North I-25 FEIS is 2075 and beyond the planning horizon of this current effort; however, regional and commuter rail should not be precluded from further study.

While a rail vision for the region has been studied, it is not included in this 2040 RTE analysis for three reasons:

1. Adequate analysis is beyond the scope and time horizon of this study, making accurate comparisons difficult; however, regional rail is being addressed outside of this planning effort. CDOT's Division of Transit and Rail completed the **Colorado State Freight and Passenger Rail Plan** in 2012. The approval of this plan by the Colorado Transportation Commission in March 2012 allows CDOT to be eligible for FRA funds.
2. The stakeholders for such an analysis and the format for public participation and involvement are not adequate to address such a major regional policy discussion; and
3. The focus of this plan is on building a foundation for regional transit services.

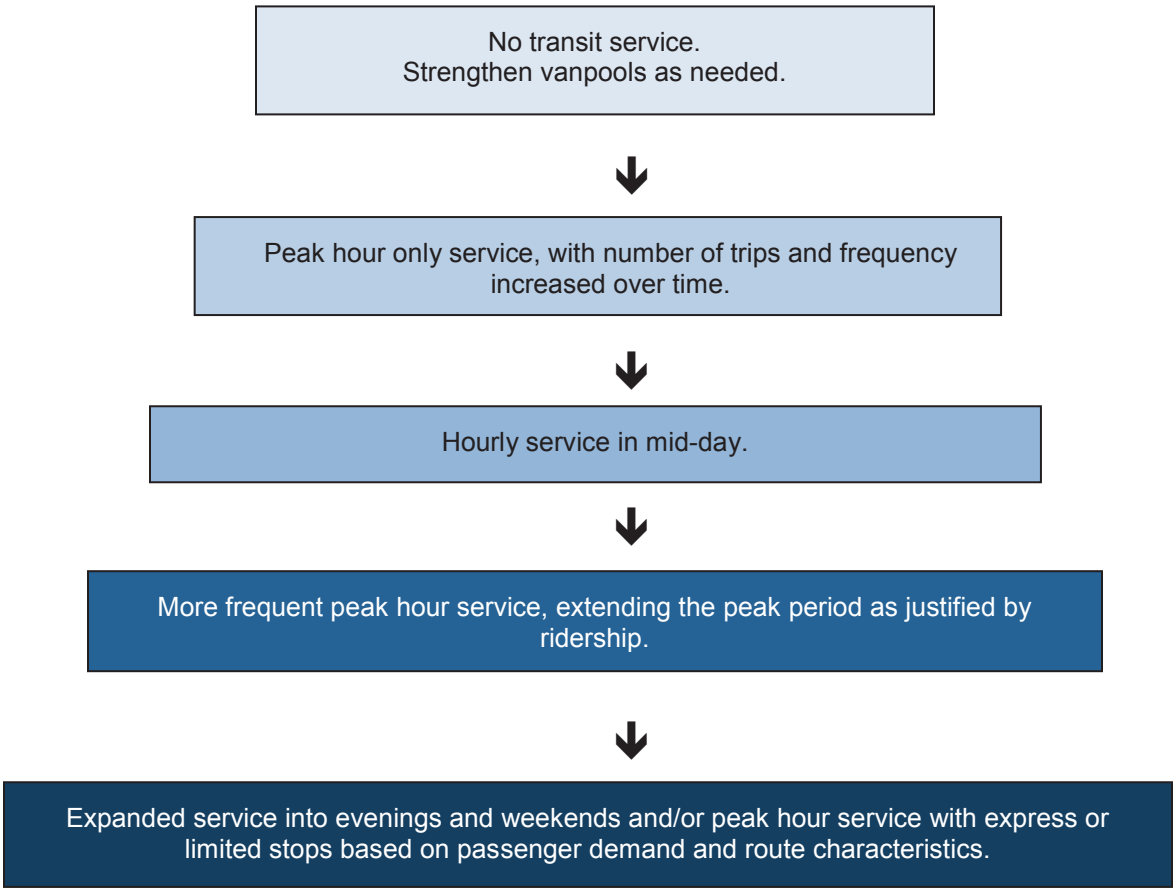
COMPARING SELECTED SERVICE ALTERNATIVES

To function effectively in the transportation network, regional transit services must be integrated with local transit services, park-n-ride facilities, and with other travel modes including bicycle and pedestrian connections. In the Status Quo, Basic, and Moderate alternatives, vanpools and carpools will serve an important role in offering connections where transit services are limited, especially for areas without direct transit connections on one or both ends of the trip. Even with the High alternative, vanpools and carpools would continue to play an important role in providing a diverse range of transportation options. Active promotion of the linkages between modes, Transportation Demand Management (TDM) techniques, and support for pedestrians and bicyclists is essential at all service levels.

Specialized transportation will continue to be provided at the local level, with local providers connecting individuals who require assistance to regional trips. Volunteer driver programs will also continue to be an important part of the regional system. Specifics for which corridors will feature service are shown in ***Table 5-1***. For the Basic alternative, only local connections and existing regional connections will be available for the general public. For the Moderate and High alternatives, scheduled trips are included between the most common destinations within the North Front Range region. The Moderate alternative includes three express trips per day in the busiest corridors within the region, one each in the morning, mid-day, and late afternoon. The High alternative expands this to five trips per day in the busiest corridors, with two trips in the morning and evening peaks, and one trip mid-day.

The development of transit service is illustrated in ***Figure 4-4***. The growth and development of transit service in each corridor follows the same pattern. The application of this development for each alternative is illustrated in ***Table 4-1***.

Figure 4-4 Development of Transit Service



For this analysis, it is useful to compare the estimated ridership for the four alternatives. ***Table 4-1*** identifies each corridor and the estimates for daily ridership demand in both directions. The estimates in ***Table 4-1*** reflect the ridership numbers from the NFRMPO travel demand model and the service levels discussed in detail in **Chapter 5**. The Status Quo alternative only considers additional FLEX service, which explains the lack of ridership on the eight corridors; however, as funding and service levels increase, ridership would increase as well.

Travel models are calibrated using real-world ridership and vehicle counts to ensure the ridership and traffic volumes predicted by the model match the observed volumes in the initial year. The difficulty with this method is that these are new transit service corridors with no ridership with which to compare.

Table 4-23 Comparison of Potential Daily Ridership by Corridor

Corridor	NFRMPO Travel Model Analysis for 2040			
	Status Quo	Basic	Moderate	High
1: Evans-to-Milliken-to-Berthoud along SH 60 and SH 56	0	0	203	37
2: Greeley/Evans-to-Denver along US 85	0	0	358	233
3: Greeley/Evans-to-Windsor-to-Fort Collins along SH 257 and Harmony Road	0	1,624	1,119	1,427
4: Greeley/Evans-to-Longmont along US 85, SH 66, and SH 119	0	0	0	300
5: Greeley/Evans-to-Loveland along US 34	0	1,581	1,535	2,270
6: Fort Collins-to-Bustang (Express Route)	0	4	18	2
7: Greeley/Evans-to-Bustang (Express Route)	0	0	71	6
8: Loveland-to-Bustang (Express Route)	0	0	38	4
FLEX Route	1,243	1,496	1,582	1,731
TOTAL	**1,243**	**4,701**	**4,924**	**6,010**

Source: *NFRMPO 2040 Regional Travel Demand Model, 2015*

CHAPTER 5: SERVICE & CORRIDOR ALTERNATIVES

This chapter describes the four transit service alternatives for the 2040 planning horizon. These alternative visions focus on developing services along regional transit routes.

This is a long-range plan with a 25-year planning horizon. With the projected population growth, regional transit services are anticipated to be part of the future transportation network. The region's desire for commuter rail service is also reflected in the North I-25 FEIS. The preferred plan includes bus and rail services with a comprehensive set of regional routes connecting the cities and towns with each other and with the Boulder and Denver metro areas.

Three key challenges in this planning effort are:

- ≠ Refining the vision for regional transit services;
- ≠ Identifying how long-term planning impacts near-term choices for transit service development, finance, and governance; and
- ≠ Setting practical, near-term objectives and strategies to move the region towards achieving this vision.

The North I-25 FEIS identified a multi-modal solution to address the anticipated north-south transportation needs for the corridor from a statewide perspective. This 2040 RTE examines many of the same corridors, but adds a focus on the east-west connections needed for regional mobility and connectivity. The focus is also on the practical steps necessary to develop the foundations for these regional services.

North Front Range communities support the BATS, COLT, GET, and Transfort systems through local general funds or sales taxes. Berthoud, Fort Collins, Longmont, Loveland, and Boulder County developed the FLEX regional service along the US 287 corridor, governed and funded through an intergovernmental agreement. A plan which includes a vision for developing regional transit services, a conceptual network plan, which goes beyond goals and strategies providing options for governance, funding, and operations could move the region towards implementing a cohesive regional transit service network.

Figures 5.1 through 5.4 illustrate each of the four service alternatives and the level of service that could be expected for each by 2040. Based on these projected levels,[10] ***Table 5-1*** provides information on the routes and service levels in each alternative. ***Table 5-2*** is intended to provide an understanding of the level of service proposed in each alternative and the associated costs to help frame the discussion for governance and financing. The information in ***Table 5-2*** is based on information provided in the 2040 NFRMPO Regional Travel Demand Model.

[10] Hours for each route have been calculated using current drive times plus an allocation of time for stops along the route. The number of stops and dwell time within each stop significantly affects overall route travel time. Increasing congestion has been assumed over time.

Figure 5-1 Status Quo Alternative

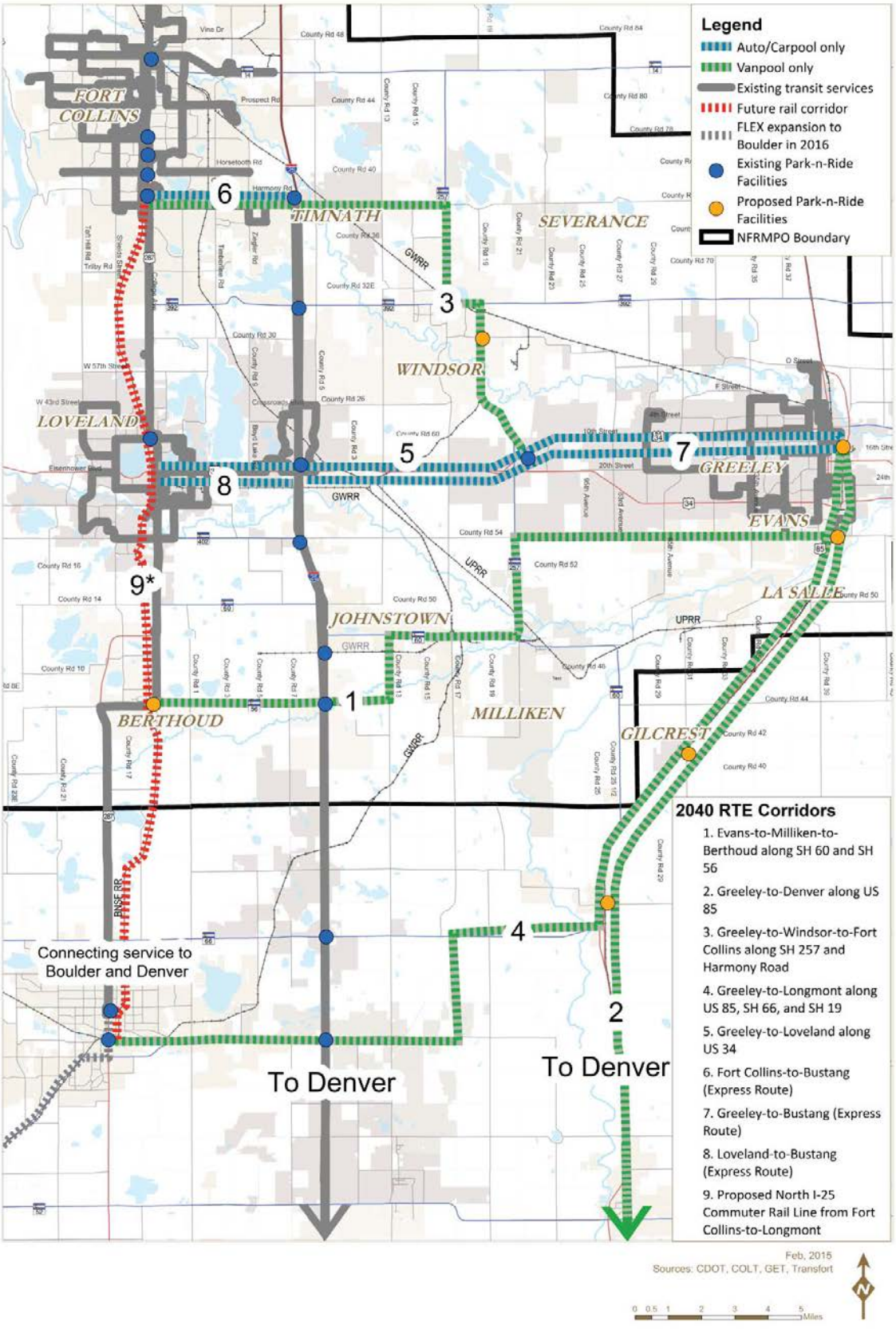


Figure 5-2 Basic Alternative

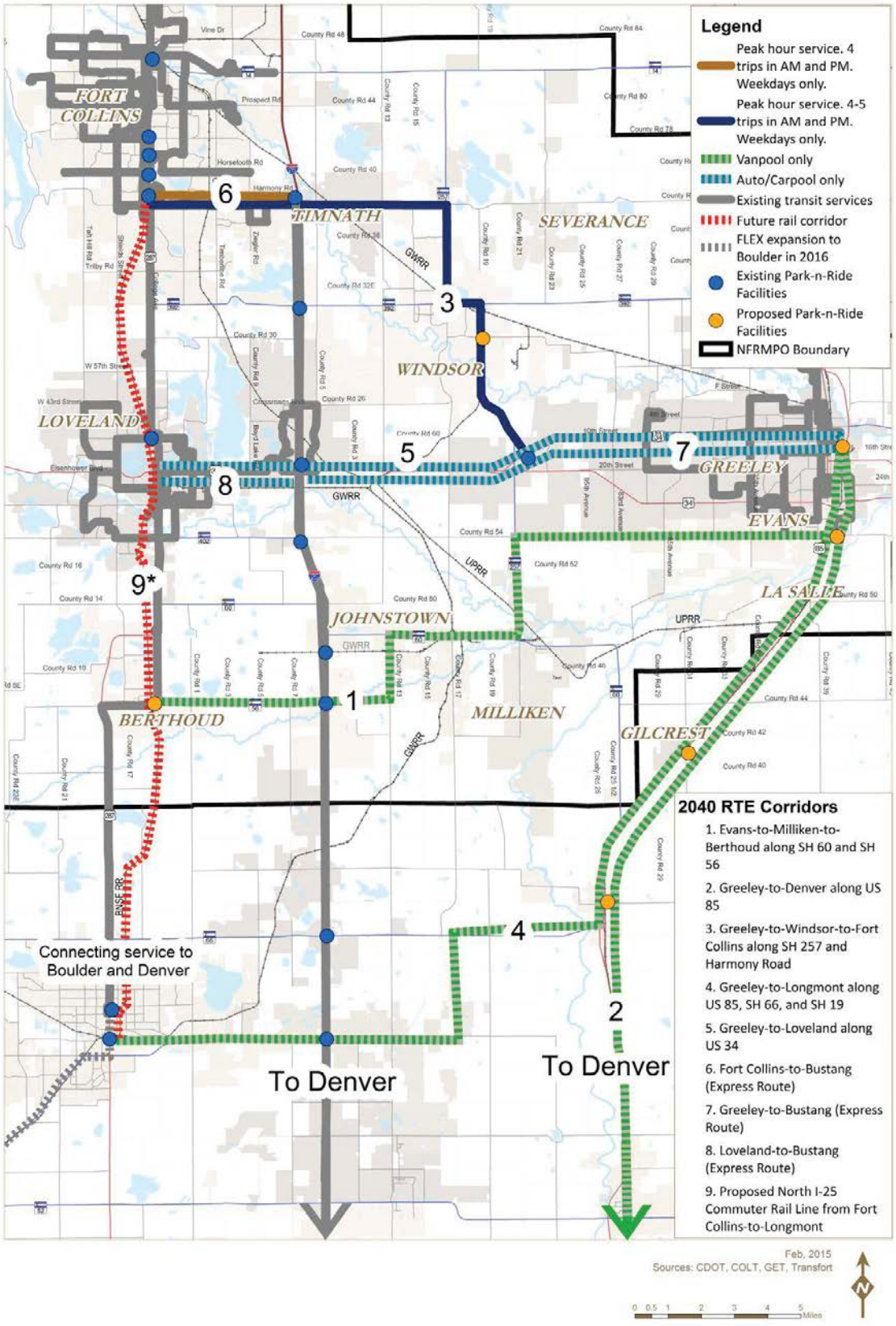


Figure 5-3 Moderate Alternative

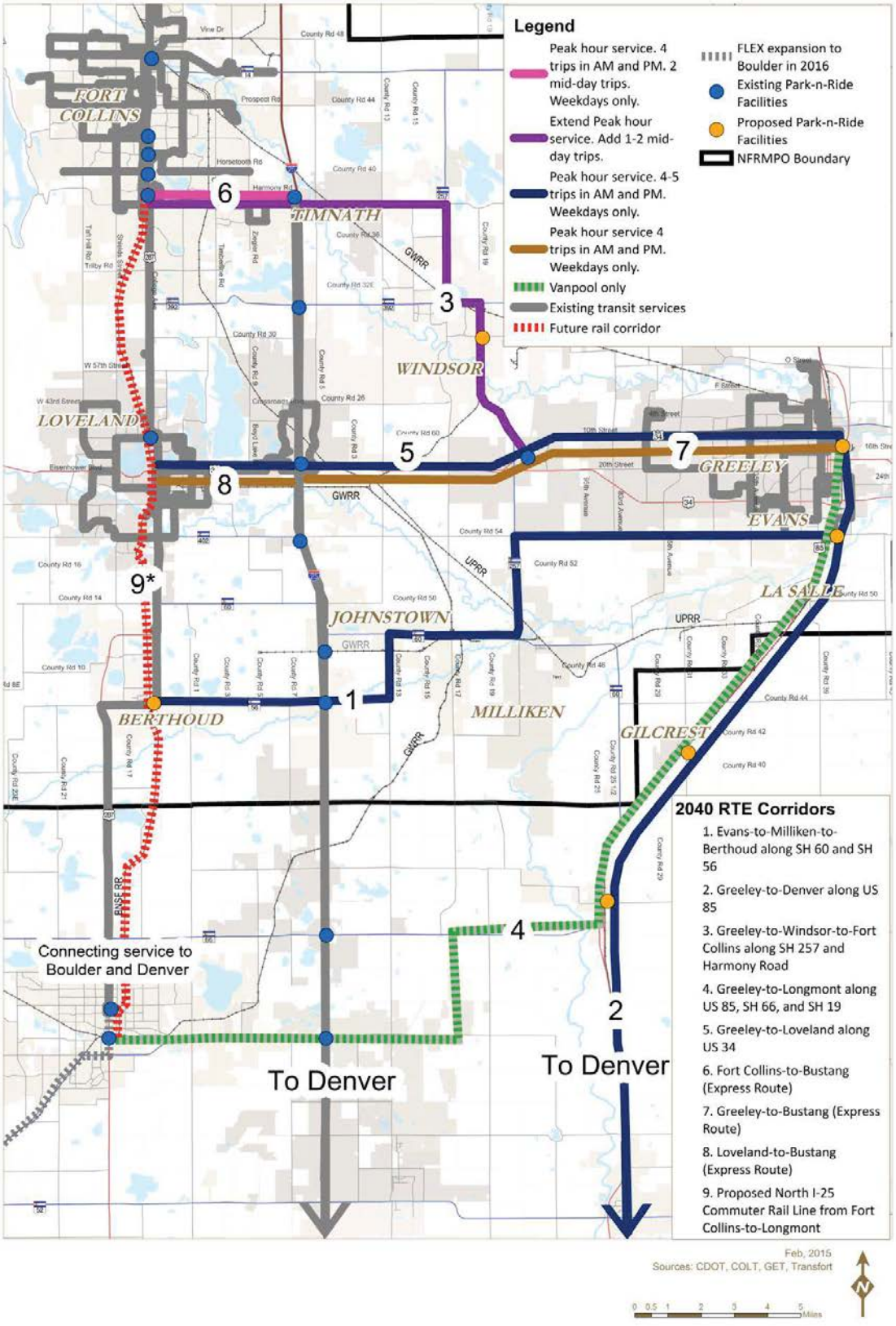


Figure 5-4 High Alternative

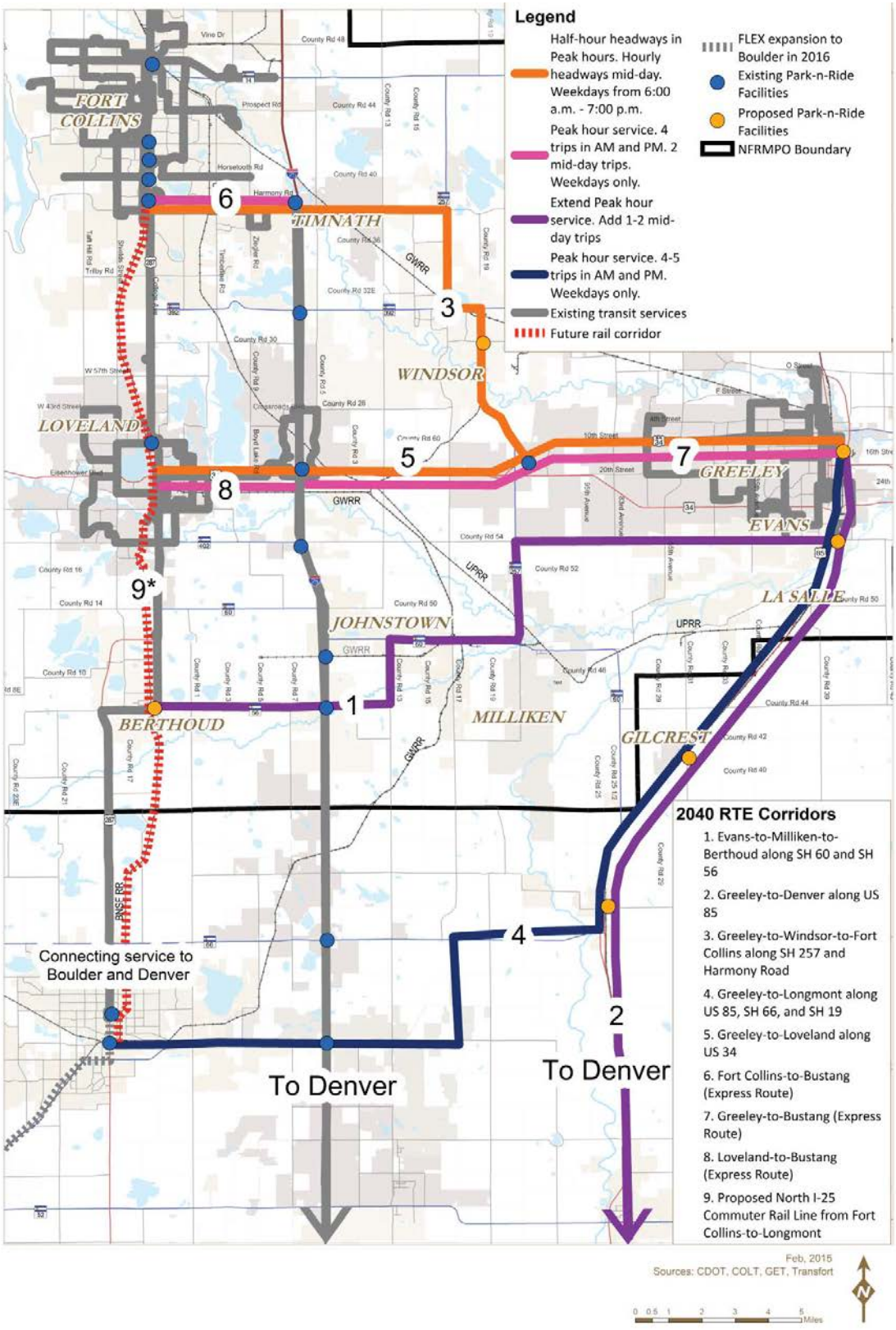


Table 5-24 Conceptual Service Plan

Corridor	Alternative			
	Status Quo	Basic	Moderate	High
Evans-to-Milliken-to-Berthoud along SH 60 and SH 56	Vanpool Only	Vanpool Only	Peak hour service. 4-5 trips in AM and PM. Weekdays only.	Extend Peak hour service. Add 1-2 mid-day trips
Greeley/Evans-to-Denver along US 85	Vanpool Only	Vanpool Only	Peak hour service. 4-5 trips in AM and PM. Weekdays only.	Extend Peak hour service. Add 1-2 mid-day trips
Greeley/Evans-to-Windsor-to-Fort Collins along US 34, SH 257 and Harmony Road	Vanpool Only	Peak hour service. 4-5 trips in AM and PM. Weekdays only.	Extend Peak hour service. Add 1-2 mid-day trips	Half-hour headways in Peak hours. Hourly headways mid-day. Weekdays from 6:00 a.m.-7:00 p.m.
Greeley/Evans-to-Longmont along US 85, SH 66, and SH 119	Vanpool Only	Vanpool Only	Vanpool Only	Peak hour service. 4-5 trips in AM and PM. Weekdays only.
Greeley/Evans-to-Loveland along US 34	Auto/Carpool Only	Auto/Carpool Only	Peak hour service. 4-5 trips in AM and PM. Weekdays only.	Half-hour headways in Peak hours. Hourly headways mid-day. Weekdays from 6:00 a.m.-7:00 p.m.
Fort Collins to Bustang (Express Route)	Auto/Carpool Only	Peak hour service. 4 trips in AM and PM. Weekdays only.	Peak hour service. 4 trips in AM and PM. 2 mid-day trips. Weekdays only.	Peak hour service. 4 trips in AM and PM. 2 mid-day trips. Weekdays only.
Greeley/Evans to Bustang (Express Route)	Auto/Carpool Only	Auto/Carpool Only	Peak hour service. 4 trips in AM and PM. Weekdays only.	Peak hour service. 4 trips in AM and PM. 2 mid-day trips. Weekdays only.
Loveland to Bustang (Express Route)	Auto/Carpool Only	Auto/Carpool Only	Peak hour service. 4 trips in AM and PM. Weekdays only.	Peak hour service. 4 trips in AM and PM. 2 mid-day trips. Weekdays only.

Table 5-25 Characteristics of Alternatives

Characteristic	Status Quo	Basic	Moderate	High
Annual Service Hours	17,737	42,479	85,382	160,820
Annual Miles	372,572	883,116	1,719,958	3,010,330
Peak Period Vehicles	4	11	17	30
Operating Costs at $90/hour	$1.6 M	$3.8 M	$7.7 M	$14.5 M
Annualized Vehicle Costs ($500,000/vehicle)	$0.1 M	$0.2 M	$0.3 M	$0.6 M
Annualized Operating Facility Costs	$0 M	$0.1 M	$ 0.2 M	$0.3 M
TOTAL ANNUAL COSTS	**$1.7 M**	**$4.1 M**	**$8.2 M**	**$15.4 M**

There is a general level of service, fleet size, and expenditure associated with each alternative. The actual development and demand may occur at a different rate in some corridors than is envisioned in this 2040 RTE. This would likely result in resources shifting between corridors, rather than increasing the overall level of service.

Regional services cannot exist apart from local and feeder services. Continued evolution of local transit services, as currently anticipated in the planning documents for each service, is expected. While residents will be able to access regional services by bus and car, it is important to provide effective transit access through local transit and bicycle and pedestrian facilities for residents who do not have access to automobiles.

The region is diverse and communities have varying levels of local services. Some areas do not provide local transit at all. Selecting a uniform vision for regional transit services is not required. When a transit service is being developed in a corridor, the emphasis will need to be on agreement between the communities to a specific level of regional services to connect them and ensure adequate access is provided so the service can be successful.

EVALUATION OF ALTERNATIVES

Perspectives on the recommendation for the region were solicited through meetings with local governments in the region. One such meeting was the City of Fort Collins Planning, Development, and Transportation Open House held at the Fort Collins Museum of Discovery on February 20, 2014. Additional meetings in other local communities were also held. Considerations in evaluating the alternatives included:

- **Transportation Network Diversity.** What is the relative importance of providing a diverse set of transportation options, and providing alternative transportation for various trip markets? Of serving peak commuter needs? Of building a foundation for more extensive service?

- **Corridors.** Are the corridors included in each alternative for transit service appropriate?
- **Regional Services Parallel to Local Service Levels.** How well do the proposed regional services match with planned local transit service levels? Unless it is anticipated that most riders will walk or drive to the regional stops, the lack of adequate feeder service will diminish ridership on regional routes. Similarly, residents and social service programs will likely want transit services that are balanced, with local services parallel in quality to regional options.
- **Financing.** Do the residents support taxes that would be needed to finance public transit? What is the capacity to finance the various levels of service? Financing of transit services in regional corridors will require partnerships between communities within the MPO as well as with entities outside the NFRMPO boundaries and the State.
- **Quantitative Performance Measures.** These may include riders per trip or service mile; passenger miles provided or reduced vehicle miles traveled; fare recovery ratio; or cost per trip.
- **Congestion Mitigation.** To what extent should regional services focus on meeting the needs of the transit dependent population, veterans, and the increasingly aging population and to what extent should it provide congestion relief?
- **Reduce Emissions.** What impact do the regional transit services have on the environment, and in particular air quality?

Ultimately the choices made on the appropriate level of regional transit services will reflect the priorities of the region. Different communities may select different alternatives, reflecting the diversity in the region.

CORRIDOR DEVELOPMENT

The basic service alternative was built from the corridors identified in **Chapter 4**. The service alternatives used mode share calculations to identify the approximate level of ridership anticipated in each corridor, appropriate for the conceptual level of planning undertaken in this 2040 RTE. It is useful to compare the corridors on other factors as well to identify the potential of and priorities for developing corridor services. This section identifies a variety of tools for evaluating the corridors and provides a summary comparison between the corridors.

Designing service for each of the potential corridors will require additional analysis for the exact routes, level of service, and phasing. Additionally, there will need to be a discussion of who the partners will be and how the new service will operate. Considerations such as proximity to an existing local service as well as ridership will need to be taken into account when determining the service operator. The development of corridor service plans for each corridor is

recommended. These plans would address detailed transit service planning issues as well as evaluate the potential for TDM activities.

Each route will also have unique logistical and access issues which must be considered. The timing and through routing must also be considered when routes are designed. The travel time and length of a route must be factored into the time needed to serve the route and the number of buses needed to keep it on schedule. This technical analysis should, and will necessarily, be supplemented by social and political considerations. Community or financial support may also incentivize certain routes. Ultimately, the best transit service plan will balance all of these factors: technical feasibility, social need, and political support.

EVALUATION OF POTENTIAL CORRIDORS

A variety of tools can be used to help decision-makers determine how to allocate financial and capital resources between corridors. Criteria are identified for initiating services in a corridor and for maintaining and expanding services. They can assist the MPO communities in building and supporting a comprehensive and cohesive network of regional services. These criteria can also be used to identify priorities for services among the various corridors.

Service Development Criteria

- ≠ Number of housing units, schools, and jobs within walking distance (½-mile) of bus stops.
- ≠ Number of housing units within driving distance, extending from ½- to 5-miles from park-n-ride facilities, transfer centers, or bus stops.
- ≠ Level of transit service connections.
- ≠ Number of vanpool riders traveling in a corridor. While the unique characteristics of vanpools make them an imperfect predictor of future transit systems, high numbers of vanpoolers in a corridor provide a ready market for a new transit system which may offer lower cost transportation to the passenger, independence, and more flexibility in travel time.
- ≠ Directness of service measured in travel time for the bus portion of route. If travel time is less than 1.5 times auto travel time, the corridor could be considered to have high potential; between 1.5 and 2 times auto travel time – medium potential; or more than 2 times auto travel time – low potential.[11]
- ≠ Is the land use development along a corridor conducive to transit service with good bicycle/pedestrian and bus access? Serving developments by diverting regional buses from their main route is typically unproductive. The gain in passengers from a specific development can be offset by the loss of passengers frustrated by the additional time en route.

[11] TCRP Report 165: Transit Capacity and Quality of Service Manual, Third Edition

Service development criteria are used to compare the efficiency of various corridors. It is also useful to consider when development is anticipated to occur and the transit services that might be appropriate in the corridor over time.

The corridor between Greeley and Loveland, along the US 34 corridor (Corridor 5), stands out. This corridor performed the best in the transit model analysis and would allow an east-west transit connection currently missing in the region. While a trial transit service, the 34 Xpress, operated along this corridor for almost two years and was subsequently terminated due to low ridership, the corridor analysis shows there is a future demand for this service. It is recommended the Greeley/Evans area to Loveland corridor along US 34 be high on the list of corridors where detailed service planning is carried out.

Another corridor where early development of services planning may also be useful is the Greeley/Evans area to Denver corridor along US 85 (Corridor 2). Commuter bus service along US 85 was identified in the preferred alternative for the North I-25 EIS. This is a corridor with logistical complexities, including roadway access for pedestrians, park-n-ride access, set-backs for buildings, and local transit connections. Construction of new park-n-ride facilities is underway due to current demand for multimodal connections and future transit service. It may be useful to identify how to connect riders for the first and last miles of their trips. Working through these issues early in the process provides more opportunities to overcome difficulties and establish successful services.

Service Standards

Regional service standards should be established as criteria for maintain or expanding services. It will be important to establish criteria for maintaining and expanding services, similar to the criteria for initial development. Categories for maintaining or expanding services may be quantitative or qualitative. Quantitative measures could include:

- Passengers per trip or per hour;
- Total cost and fare recovery per trip; and
- Passenger miles traveled or vehicle miles reduced.

These quantitative measures will need to show the investment in these services generally compare fairly with other transit service investments. The scales for the routes will be different due to distance traveled, making passengers per trip a better measure across corridors than passengers per hour or per mile.

The qualitative measures are more difficult to capture and will be guided by the network plan, goals, and objectives. Important categories include:

- Providing stable and continuous services;
- Building on successes; and
- Providing a comprehensive network with services to all major population and activity centers.

The quantitative measures are supportive of each other, for example, a route with high ridership will rank well in each category. On the other hand, the qualitative measures require finding

balance. Where resources are limited, choices to build on successes and placing additional resources into an existing route will pull resources away from establishing services in new corridors. This requirement for balance can be addressed in the development of the network plan and goals and also in evaluating governance and financing options.

Additionally, Environmental Justice (EJ) must be considered. EJ is defined by the EPA as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[12] This analysis includes the following principles:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations in relation to transportation improvements.
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.[13]

CONCLUSION

This chapter has provided the big picture of four basic service alternatives:

- ≠ Status Quo
- ≠ Basic
- ≠ Moderate
- ≠ High

A rail alternative was also described; however, detailed planning was not completed as it is outside the scope and time horizon of this 2040 RTE. The alternatives are described by the level and type of regional services that would be provided in each corridor.

Additionally, information has been provided on how the individual corridors compare with each other and tools for developing services. These include:

- ≠ Criteria for developing regional transit services;
- ≠ Criteria for maintaining or expanding regional services; and,
- ≠ The recommendation that detailed service planning occurs for each corridor prior to implementing transit services.

In considering the basic service alternatives, it will also be useful to conduct a detailed financial analysis. This will provide a break-out of how costs might be split between federal, State, and local sources.

Ultimately, the choices made as the appropriate level of regional transit services will reflect the priorities of the region. It is likely different communities will select different alternatives reflecting the diversity in the region.

[12] EPA, Environmental Justice Website: http://www.epa.gov/environmentaljustice/
[13] EPA, Environmental Justice Website: http://www.epa.gov/environmentaljustice/

SUMMARY OF RECOMMENDATIONS FROM CHAPTER 5

The best transit service plan will balance all of these factors: technical feasibility, social need, and political support. The region should:

- ≠ Assist smaller communities within the region with senior transit services between communities and to transit centers is a recommended priority for essentials, such as medical and grocery store trips;
- ≠ Develop service standards for each corridor; and
- ≠ Continue work set out in the previously completed feasibility studies.

CHAPTER 6: FUNDING & GOVERNANCE

Governance is the institutional structure used to oversee and provide services. The options discussed in this chapter range from institutional structures to the initial processes used to make decisions. Funding is closely related as funding options are often defined or limited by governance structures. The funding options also influence the governance structure by defining the agencies that pay for service and the control they have over those services.

FUNDING

The transit alternatives presented in **Chapters 4 and 5** require reliable and stable funding sources. Even the Status Quo alternative, which continues the current FLEX service with the 2016 expansion to Boulder, requires stable, ongoing funds for operation. Additionally, if the service continues or expands, capital for replacement and expansion vehicles will be needed. Currently within the region:

- ≠ Local communities have difficulty funding local transit services. FTA funds are available, but these must be augmented with local funds to cover operational costs. Systems with more extensive transit services must also further augment their FTA funds to maintain their capital foundation. In many cases, this means transit must compete for allocations from a jurisdiction's General Fund.
- ≠ There is uncertainty in the level of FTA funding that will be available in the future due to potential changes in urbanized area boundaries and because new long-term transportation legislation is needed.
- ≠ The role of the State in funding transit services is new, appears to be limited, and continues to change.

Several partners may share funding responsibilities for regional transit services. As a result, each corridor could have a different set of partners and funding structure. Additionally, funding may include a mixture of federal, state, and local funds. There are sources of operating funds available for pilot projects (such as CMAQ funding), but providing long-term regional transit services requires stable, on-going funding sources.

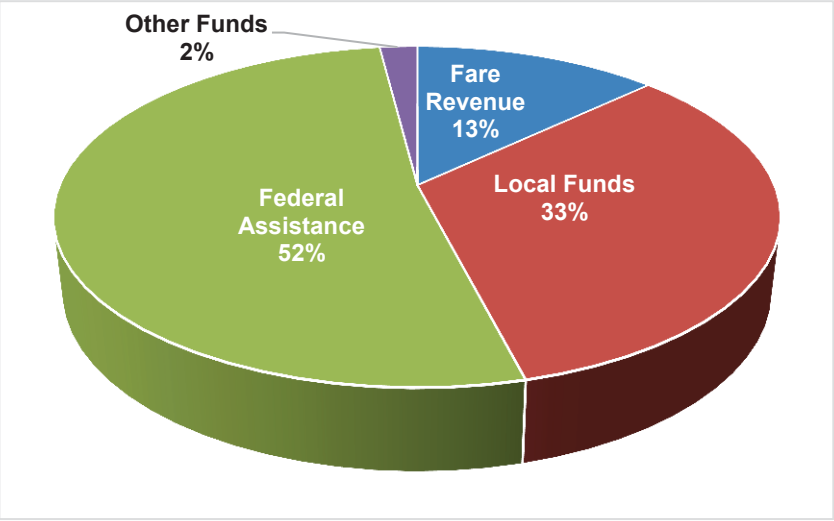
It concludes with a discussion of the funding issues needing to be addressed as the region and State begin to develop regional transit services.

REVENUE BREAKOUTS: FEDERAL, MATCH, AND FARES

Funds for transit come from a combination of federal funds, matching funds, and operating revenues (including fares and advertising). The percentage from federal, local, and operating revenues can be estimated. This estimate provides a basis for discussing the funds required for each alternative and the role of federal, State, and local funding for capital and operating expenditures.

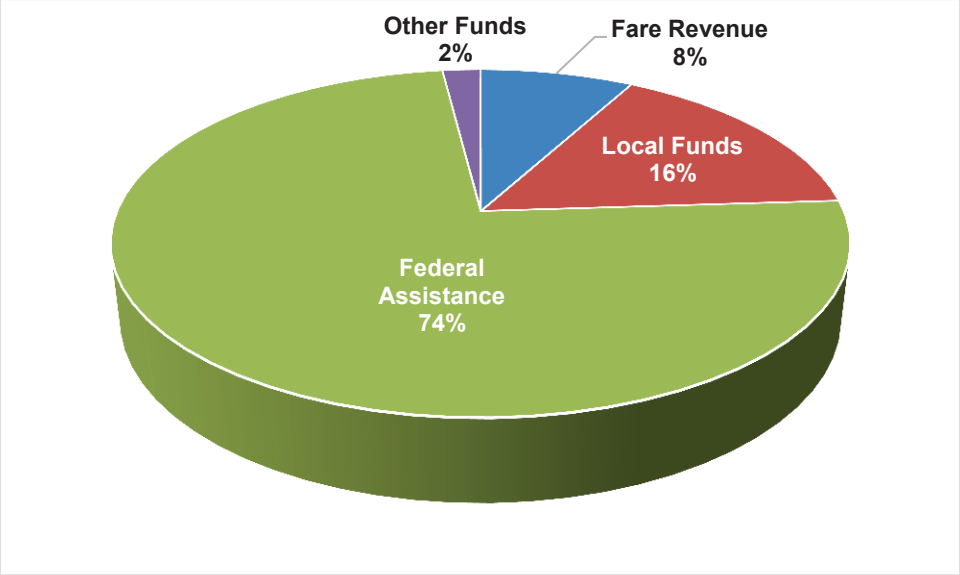
Figures 6.1 through 6.4 illustrate the revenue breakouts for 2012 for the operating expenses associated with North Front Range regional transit services. The percentage of funding from fare revenues or other operating revenue sources, such as advertising, varies by agency. ***Figure 6-1*** shows the average for the three local transit agencies. Currently, fare and operating revenues make up an average of 13 percent of the funding for the three services. Federal and local/matching funding make up a majority of the revenues for these services. Federal assistance ranges from 30 percent for Transfort to 74 percent for COLT. Local/matching funds range from 16 percent for COLT to 52 percent for Transfort. Matching funds may be sales tax, student fees, or revenues from other sources. The remaining one to three percent of the funding comes from other revenue generators such as advertising.

Figure 6-1 Typical Regional Average Transit Operating Revenues, 2012 Data



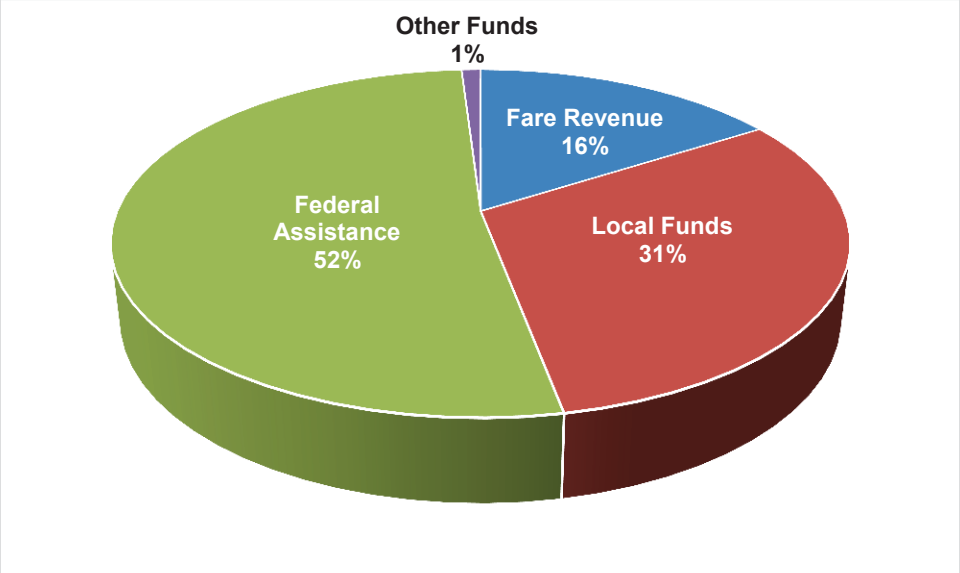
Source: *National Transit Database Transit Profiles, 2015*

Figure 6-5 COLT Operating Revenues, 2012 Data



Source: *National Transit Database Transit Profiles, 2015*

Figure 6-6 GET Operating Revenues, 2012 Data



Source: *National Transit Database Transit Profiles, 2015*

CHAPTER 7: PUBLIC INVOLVEMENT

Public involvement is essential for the planning process and requires a varied approach to be successful. In the case of the 2040 RTE, the NFRMPO approached the general public as well as local communities and transit providers for input. As with the 2035 RTE, the 2040 RTE incorporates the public's guidance for priorities, needs, and values regarding the development of regional transit services. Local governments act as a key audience as they are the entities responsible for fiscally balancing the needs for local and regional services. Working on both a local and regional level, local governments aims to foster relationships, establish governance structures, and set local priorities.

The NFRMPO has taken steps to create a more robust public involvement program. Staff held meetings and gave presentations throughout 2013 and 2014 to educate the public and officials, while also staffing public meetings and attending community events. Through this process, the MPO has devised a plan which reflects the needs and values of the communities based on their input.

MOBILITY COUNCIL INITIAL COMMENTS

In April 2013, MPO staff presented information to the Larimer County Mobility Council (LCMC) and the Weld County Mobility Council (WCMC) at their respective meetings. The Mobility Councils consist of transit and human service agency representatives, bringing together individuals who work with transit-dependent populations. Following the presentations, members provided feedback and described the needs and values of their organizations.

Both mobility councils described the difficulty individuals with disabilities have to get to work or to medical appointments. Appointments, both within and outside of the region, can be difficult to reach for those who have mobility issues.

Both LCMC and WCMC members mentioned the need for improved intra- and interregional connections. For Weld County, connections along I-25, US 85, and US 34 were cited as the most important. Larimer County stated connecting Fort Collins to other major municipalities in the region is a priority, especially as a way to improve employment transportation for its growing workforce.

Both LCMC and WCMC members highlighted the need to connect the major urban centers within the region to Metro Denver. Many people have medical appointments and/or are employed in the Metro area, but do not have reliable transportation options. LCMC members stated, while there are transportation alternatives like Connecting Health Van, VanGo, and Greyhound, each of these have a variety of issues, including price and schedule which are not convenient for a majority of work schedules or appointments.

INITIAL PUBLIC OUTREACH

PRESENTATIONS TO LOCAL STAKEHOLDERS

MPO staff provided local jurisdictions with the opportunity to participate in the public involvement phase of this 2040 RTE. Local jurisdictions referred the presentations to the Transportation Advisory Boards (TAB), a collection of city staff and appointed members who consider local and regional transportation issues with the potential to update their local Transportation Master Plans. Additionally, staff reached out to other local groups, transportation or otherwise, to have a wider range of feedback and participation.

The organizations and events the MPO reached out to and participated in late 2013/early 2014 included:

- ≠ Greeley Citizen Transportation Advisory Board;
- ≠ Windsor Business Expo;
- ≠ Larimer County Mobility Council
- ≠ Weld County Mobility Council;
- ≠ City of Fort Collins Transportation Board;
- ≠ Fort Collins Transportation and Planning Open House;
- ≠ Fort Collins Salud Family Health Centers “Block Party”; and
- ≠ City of Loveland Transportation Advisory Board.

Information presented to each group included an overview of the MPO, project goals for the 2040 RTE, and how the 2040 RTE fits in with previous and existing planning efforts. Staff stressed the 2040 RTE does not replace local plans, but rather works in tandem with them.

Feedback from the public was wide-ranging and informative. Board member comments mentioned the need for better connectivity to work, better services between cities, as well as improved services for those who face economic hardships. Transit is seen as a way to help connect people to jobs, especially for those individuals without cars. Board members also asked about what impediments exist for implementing and operating transit within the region.

Public comments also recommended transit services be extended into southeastern Fort Collins, specifically in the area south of Harmony Road. Intense development has led to insufficient transit connections in this area.

PARTNERSHIP WITH CDOT

In addition to working with local jurisdictions, MPO staff worked with CDOT as they completed their Statewide Transit Plan. Partnering with CDOT allowed the MPO to understand the local trends, needs, and capabilities in the larger statewide arena. CDOT undertook the *Statewide Transit Survey of Older Adults and Adults with Disabilities* as part of the Statewide Transit Plan outreach. CDOT provided the North Front Range Transportation Planning Region survey responses to the MPO, **Appendix D,** allowing the MPO to incorporate the responses into this 2040 RTE.

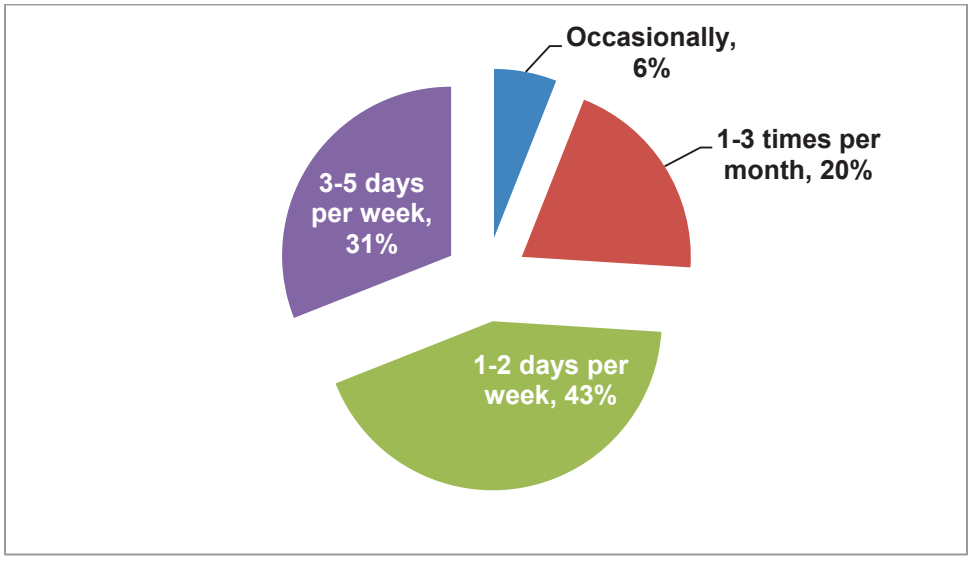
SURVEY

In 2013, MPO staff developed a survey to obtain feedback from the public on transit in the region. Specifically the survey focused on what improvements are needed to increase ridership and usage. The survey was available at the public outreach events as well as online beginning in August 2013 through September 2014. Combined, 138 completed surveys were received, providing feedback on the perception of transit in the region. Participants ranged in age, occupations, needs, and values and provided insight into how transit is viewed in the region.

The survey was short, with seven questions asking if transit usage would increase if more transit was provided, where the respondents' journeys might begin and end, and the purpose of potential transit trips. Respondents were not required to answer every question, but were invited to choose multiple options from the list or create their own answers.

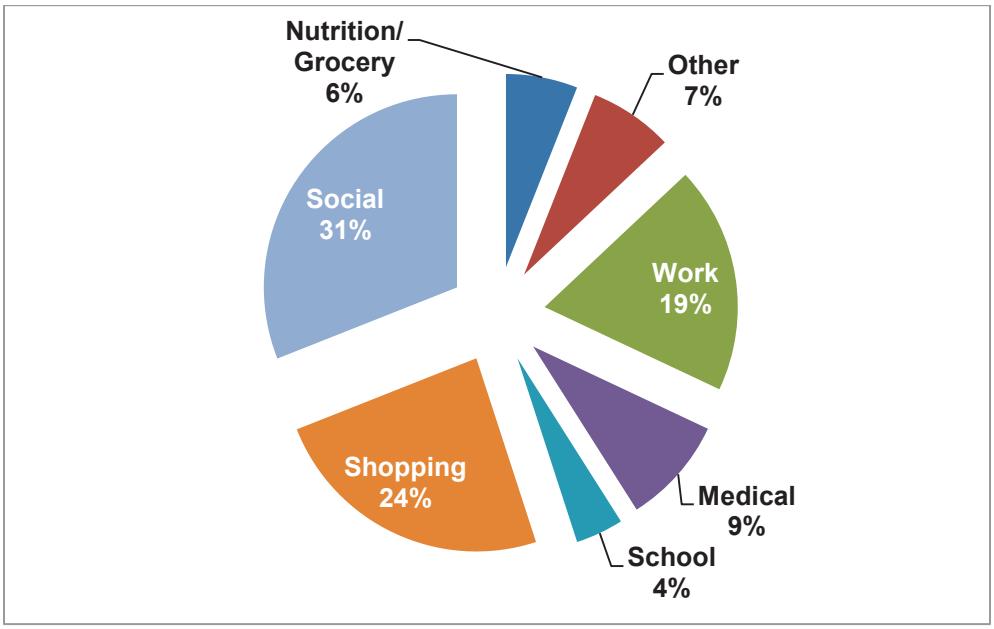
Figures 7.1 through 7.4 summarize the responses to this survey. Nearly half of respondents stated they would take transit one to two days per week, and nearly a third would take it multiple days per week. Social reasons provide the most potential transit trips followed by shopping. Frequency and saving time and money were most important to potential transit users. Fort Collins provides the highest number of potential transit users with a strong demand for service to the Denver metro area. Conversely, the smaller communities of Eaton, Johnstown, Milliken, and Severance provide few potential transit trips.

Figure 7-1 Frequency of Use of Potential Transit Options



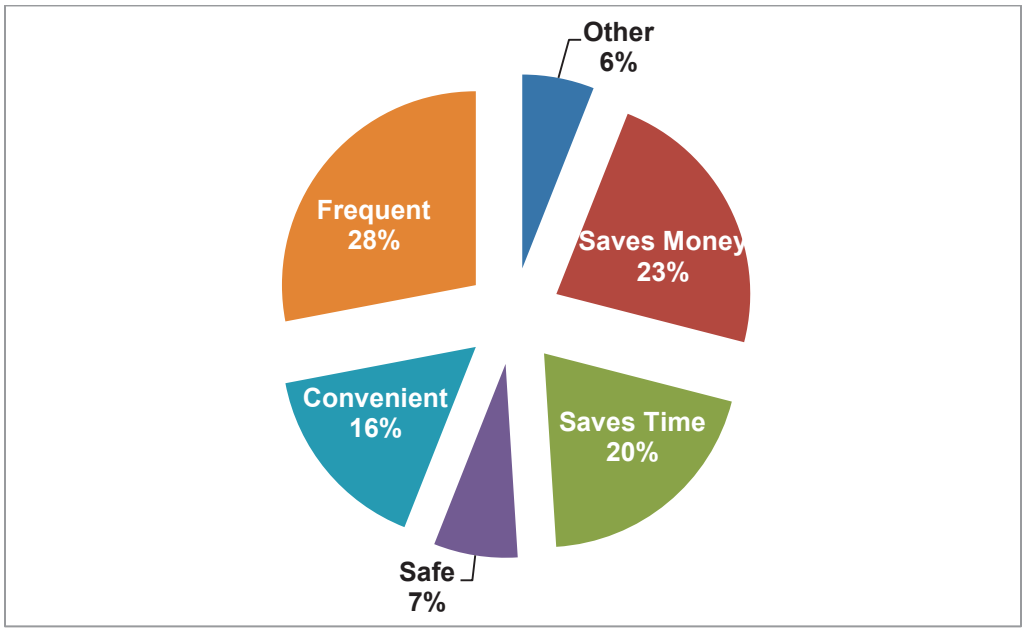
Source: *NFRMPO 2040 RTE Survey Responses, 2014*

Figure 7-2 Reasons to Take Potential Transit Trips



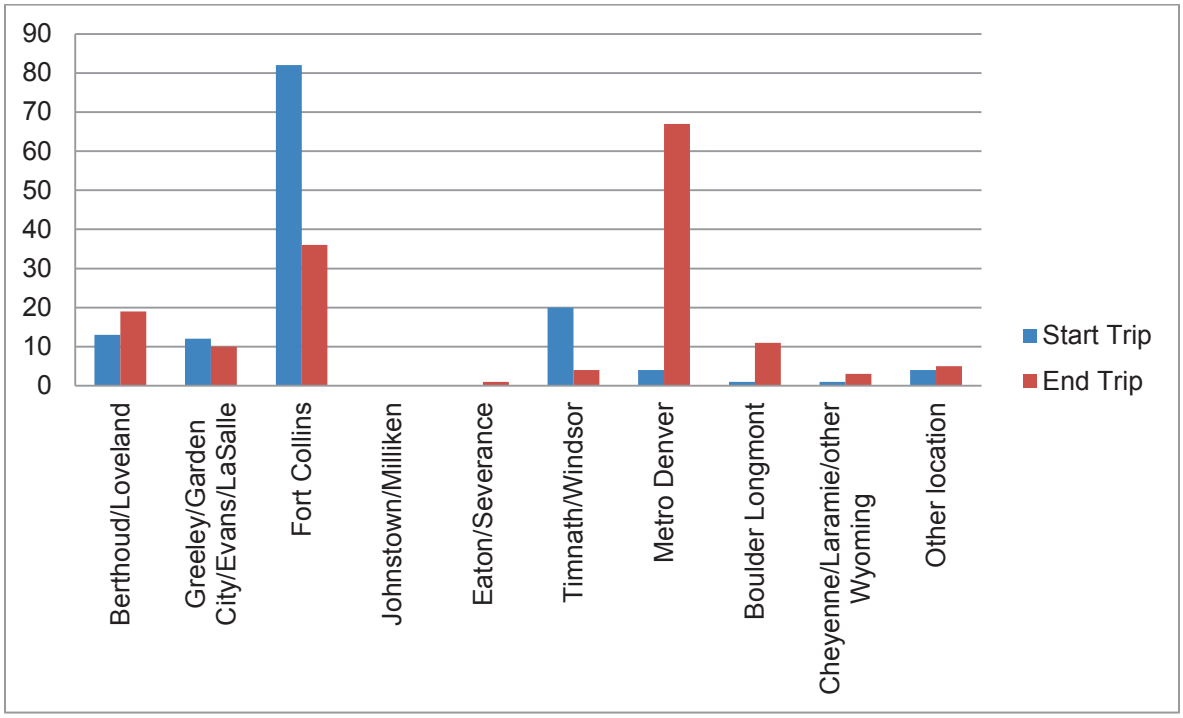
Source: *NFRMPO 2040 RTE Survey Responses, 2014*

Figure 7-3 Reasons to Use Transit



Source: *NFRMPO 2040 RTE Survey Responses, 2014*

Figure 7-4 Potential Transit Start and End Points



Source: *NFRMPO 2040 RTE Survey Responses, 2014*

TAC AND PLANNING COUNCIL

At the October 2014 Technical Advisory Committee (TAC) meeting, staff presented four additional corridors to be considered as the 2040 RTE Transit Scenarios, for a total of nine corridors. These nine corridors are shown in ***Figure 4-1*** in **Chapter 4** and include:

- ≠ Evans-to-Milliken-to-Berthoud along SH 60 and SH 56
- ≠ Greeley-to-Denver along US 85
- ≠ Greeley-to-Windsor-to-Fort Collins along US 34, SH 257, and Harmony Road
- ≠ Greeley-to-Longmont along US 85, SH 66, and SH 119
- ≠ Greeley-to-Loveland along US 34
- ≠ Fort Collins-to-Bustang (Express Route)
- ≠ Greeley-to-Bustang (Express Route)
- ≠ Loveland-to-Bustang (Express Route)
- ≠ Proposed North I-25 Commuter Rail Line from Fort Collins-to-Longmont

TAC concurred with the recommended removal of the FLEX service to Longmont and the Bustang from Fort Collins-to-Denver as these corridors are committed or currently in service. The North I-25 Commuter Rail was included, although the anticipated year of operation, 2075, is beyond the scope of this 2040 RTE.

Staff provided an update on the transit corridor additions at the Planning Council Meeting on November 2014. Councilmembers were given time to critique the possible transit corridors and favored the corridors being considered. The public in attendance also provided comments concerning the most important routes to consider, specifically mentioning the connection between Greeley and I-25; one of the 2040 RTE Corridors to be evaluated.

2014-2015 PUBLIC MEETINGS

As part of the public outreach for the 2040 Regional Transportation Plan, MPO staff attended multiple events and meetings to discuss the 2040 RTE corridors. Staff brought a large map of the corridors to these events and discussed transit needs in the region with the public. To engage a wide audience, staff participated in a wide variety of meetings and staffed booths at local events. The events and meetings staff attended included:

- Larimer County Mobility Council—December 18, 2014;
- Greeley Citizens Transportation Advisory Board —January 26, 2015;
- Weld County Mobility Council—January 27, 2015;
- Loveland Transportation Advisory Board—February 2, 2015;
- GET Open House—February 9, 2015;
- Loveland Public Library—February 10, 2015;
- Transfort South Transit Center—February 12, 2015;
- Colorado State University Student Union—February 17, 2015;
- Fort Collins Transportation Board—February 18, 2015;
- US 85 Coalition—March 12, 2015;
- Hwy 287 Corridor Coalition—March 26, 2015; and
- Greeley Chamber of Commerce Local Government and Business Affairs Committee—April 3, 2015.

Comments were varied; however, they focused on the need for regional transit connections. Both bus and commuter rail connections were brought up to help solve connectivity issues within the region and to Denver. A common issue cited was the need for an east-west connection between Greeley and Fort Collins and Greeley and Loveland, similar to the 34 Xpress bus. One key recommendation was that staff should analyze why routes like the 34 Xpress was not successful to ensure the same mistakes do not happen in the future. Additionally, there should be connections to DIA which do not require a transfer at Denver's Union Station.

A Greeley Citizens Transportation Advisory Board (TAB) member stated the region should not just be looking at buses for 2040 because transportation technology is improving rapidly. A large number of citizens wondered why the commuter rail service to Denver is expected in 2075. Many commented they would support the service if it started sooner.

Students at CSU provided input regarding transit at the CSU Transit Center. Students mentioned the low frequency of the buses leads to crowding on routes that serve the CSU Transit Center. In inclement weather, when more students ride the bus, they stated it is common to miss the bus due to overcrowding. Students also mentioned connections to Denver as one of

their primary concerns. One student stated they cannot connect to the CSU campus via transit because there are no routes from Laporte.

The TAB members suggested staff maintain a regional dialogue about transit by having transportation experts from around the country discuss and present to the public on transportation issues. Because many citizens are not aware of new technologies, laws, or policies impacting transportation, the region may benefit from a series of speakers on these topics.

Staff collected verbal and written responses received at the public meetings and events. These testimonies are available at the NFRMPO offices.

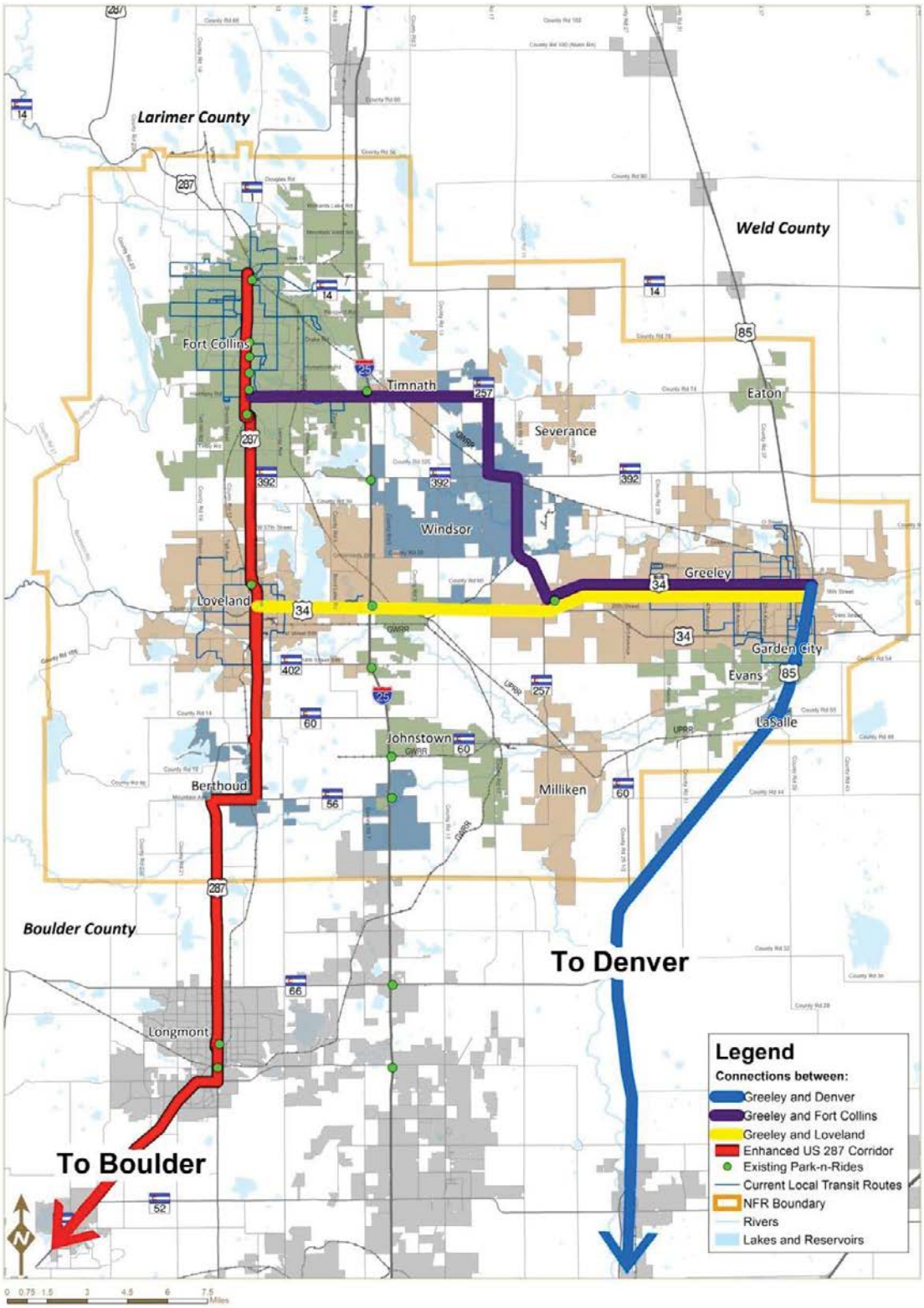
CHAPTER 8: MOVING FORWARD
RECOMMENDATION

For the 2035 RTE, the NFRMPO Planning Council selected the Basic Alternative with the addition of service along US 85 (Corridor 2) as the preferred alternative (Basic+). However, for the 2040 RTE, the NFRMPO is moving forward with suggested actions based on the recommendations of the three local transit agencies, TAC, input received during the public outreach phase, and previously completed studies, specifically the 2013 **North Front Range Transit Vision Feasibility Study**. The recommendation includes:

- Further study into the transit connections between:
  - Fort Collins and Greeley/Evans area;
  - Greeley/Evans area and Loveland; and
  - Greeley/Evans area and Denver.
- Additional service and investment along the US 287 corridor.

Figure 8-1 shows the three city-to-city connections for further study and the two enhanced transit service corridors for further investment.

Figure 8-1 2040 RTE Recommendation



Focusing on the broad connections between cities rather than on the corridors themselves allows for a more comprehensive transit analysis. There are a variety of reasons to operate and fund regional transit services, which should be analyzed on a case-by-case basis. Special considerations for transit trips include access to medical facilities and employment centers, and connectivity for transit-dependent groups. In-depth analysis provides the greatest flexibility and allows for unique considerations for each connection. For example, studying connections between Greeley and Fort Collins may lead to the study of routes through Timnath and Windsor and/or a route through Loveland.

Rather than focusing on the specifics of each corridor in this document, the 2040 RTE recommends transit in the region expand upon existing services, existing relationships, and previous studies. Further studies of the recommended connections will also refine the planning process and result in changes as services are implemented.

As identified in **Chapter 6**, there are significant questions to resolve regarding governance, funding, and service delivery. Previous studies, like the 2013 **North Front Range Transit Vision Feasibility Study**, presented recommendations for further studies, actions for implementation, and potential partnerships. As the region moves forward with regional transit, a consideration of previously completed work should guide future actions. The North Front Range region has a successful regional funding and governance model in the FLEX service.

The region should build on its successes in transit, such as the IGA model used for the FLEX service and the partnership funding GET. Through a mixture of town, city, and county subsidies, Transfort operates the FLEX service through partnership each member jurisdiction. Transfort continues to operate as the transit operator with input from each member community. Transfort has an existing governing structure, and the ability to operate and maintain the vehicles. This is not to say all future regional transit should be operated by Transfort, but rather the process for governance and funding could be replicated. Similar to Transfort operating FLEX, GET operates service in Evans and Garden City through IGAs. Using this mechanism, GET provides routes through the two communities without having to introduce a new governance structure or provide funding for these services itself.

It is anticipated it will take at least three years to establish service in a new corridor once the financial and institutional issues are addressed. The three year estimate allows time for project programming, budgeting funds, acquiring equipment, and implementing service.

The expansion of FLEX and MAX services should continue based on the respective strategic plans that exist. The FLEX service will be expanded to the City of Boulder in 2016, which opens the door for additional service hours and further connections. Transfort's 2009 **Strategic Operating Plan** discussed possible investment in the MAX service including the expansion of service along West Elizabeth Street through the CSU campus. Between the extended FLEX and MAX services, a continuous transit corridor will run from downtown Fort Collins to downtown Boulder. This will provide connections to local COLT, RTD, and Transfort routes, five transit centers, and two major universities.

Table 8-1 summarizes the actions completed in the region since 2011, when the 2035 RTE was adopted and the North I-25 FEIS was completed.

Table 8-26 Summary of Actions Since 2011

Action	Date	Result
Examination of Regional Transit	April 2013	***North Front Range Transit Vision Feasibility Study*** (did not include GET)
MAX BRT Service Began	May 2014	Increased use of transit in the Mason Corridor and Fort Collins
3 years of Funding for FLEX route extension to Boulder service in 2016	2014	DRCOG CMAQ funding to extend FLEX service to Boulder.
Extension of Transfort service to Bustang	February 2015	Link between local transit route and interregional route.
Establish Bustang service	July 2015	Service between Fort Collins/Loveland and Denver

Table 8-2 lists recommendations to help move the North Front Range region towards regional transit connections.

SUMMARY

This 2040 RTE provides a long-range vision for regional transit services, but the focus of the recommended actions is short term because the plan will be updated again in four years. Further action should be taken as the connection analyses are completed. The region has had success in working together on transit, as shown by the FLEX route and the partnerships funding GET. It is through cooperative action and many small steps that a regional transit vision will become a reality.

The 2040 RTE recommendation includes:

- Further study into the transit connections between:
  - Fort Collins and Greeley/Evans area;
  - Greeley/Evans area and Loveland; and
  - Greeley/Evans area and Denver.
- Additional service and investment along the US 287 corridor.

Table 8-27 Summary of Recommendations

Action	Timeframe	Responsibility
Establish multimodal actions and strategies as part of 2015 CMP update	2015	MPO staff
Establish corridor priorities ≠ Program funding for corridor studies ≠ Align resources for regional transit service development and TDM activities	2016	Planning Council
Establish MPO process for involving stakeholders in development of regional transit connections ≠ As needed committees with staff support ≠ Representation in regional discussions ≠ Communication channels	2016	Planning Council
COLT extension to Bustang	2016	COLT
FLEX extension to connect CSU and University of Colorado (CU) in Boulder	2016	Transfort
Adopt policy positions which support local, state, and federal initiatives that build funding options for regional transit services.	2016-2017	Planning Council
Park-n-Ride to accommodate Bustang	2016-2017	Fort Collins/CDOT
Support local finance options that recognize and allow for the funding of regional services.	Ongoing	Local Communities/Planning Council
Include development of regional transit connections as a priority in project evaluation and selection criteria	Ongoing	Planning Council with TAC support
Monitor progress towards completing these actions	Ongoing	TAC with MPO staff support
Work with local providers to develop a regional fare structure to provide distance-based fares and seamless transfers between systems	Ongoing	Transit agencies with MPO staff support
Extend MAX hours of service	Ongoing	Transfort

APPENDICES

Appendix A: Related Planning Studies
Appendix B: Provider Data
Appendix C: Demand Analysis
Appendix D: NFRMPO Regional Transit Element Survey *(2013)*

APPENDIX A:
Related Planning Studies

Extensive local transit planning has occurred in the North Front Range region since the 2004 edition of the RTE. As mentioned in **Chapter 1**, this 2040 RTE does not take the place of these transit plans, but rather uses this work as a foundation. These previous regional studies include, but are not limited to:

- North Front Range 2040 Regional Transportation Plan *(2015)*
- CDOT Statewide Transit Plan *(2015)*
- Interregional Connectivity Study *(2014)*
- 2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO) *(2013)*
- NFRMPO Coordinated Public Transit/Human Services Transportation Plan *(2013)*
- North Front Range Transit Vision Feasibility Study *(2013)*
- Colorado State Freight and Passenger Rail Plan *(2012)*
- The Greeley Transportation Master Plan Update *(2011)*
- The North I-25 Environmental Impact Statement *(2011)*
- Rocky Mountain Rail Authority High-Speed Rail Feasibility Study *(2010)*
- Amtrak Pioneer Route Passenger Rail Study *(2009)*
- COLT Transit Plan Update *(2009)*
- Transfort Strategic Plan *(2009)*
- 2008 Colorado Statewide Intercity and Regional Bus Network Plan *(2008)*
- The Greeley Evans Transit Strategic Plan *(2006)—update coming in 2015*
- Johnstown, Milliken & Windsor Short-Range Transit Plan *(2006)*
- The Mason Corridor Plan *(2000)*

APPENDIX B:
Provider Data

Transfort

Description	Date Acquired	Wheel Chair Accessible	Seat Capacity	Stand Capacity	WC Capacity	Condition	Fuel Type	Notes
35' 1993 GILLIG PHANTOM	06/30/1993	Yes	37	28	2	Good	Bio-Diesel	Inactive
35' 1993 GILLIG PHANTOM	09/09/1993	Yes	37	28	2	Good	Bio-Diesel	Inactive
35' 1993 GILLIG PHANTOM	09/09/1993	Yes	37	28	2	Good	Bio-Diesel	Inactive
35' 1997 GILLIG PHANTOM	03/01/1997	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1997 GILLIG PHANTOM	03/01/1997	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1997 GILLIG PHANTOM	03/01/1997	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1997 GILLIG PHANTOM	03/01/1997	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
40' 1997 GILLIG PHANTOM	03/01/1997	Yes	43	26	2	Good	Bio-Diesel	Due for Replacement
35' 1998 GILLIG PHANTOM	06/17/1998	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1998 GILLIG PHANTOM	06/17/1998	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1998 GILLIG PHANTOM	06/30/1998	Yes	37	28	2	Good	Bio-Diesel	Due for Replacement
35' 1998 GILLIG PHANTOM	06/17/1998	Yes	37	28	2	Good	Bio-Diesel	
29' 2001 GILLIG LOW FLOOR	09/28/2001	Yes	28	22	2	Good	Bio-Diesel	
29' 2001 GILLIG LOW FLOOR	09/28/2001	Yes	28	22	2	Good	Bio-Diesel	
29' 2001 GILLIG LOW FLOOR	09/28/2001	Yes	28	22	2	Good	Bio-Diesel	
29' 2001 GILLIG LOW FLOOR	09/28/2001	Yes	28	22	2	Good	Bio-Diesel	
29' 2001 GILLIG LOW FLOOR	09/28/2001	Yes	28	22	2	Good	Bio-Diesel	
32' 2005 ELDORADO BUS LOW FLOOR	03/10/2006	Yes	32	10	2	Good	CNG	
2008 NABI BUS 35LFW3510.01	05/15/2008	Yes	30	30	2	Very Good	CNG	
2008 NABI BUS 35LFW3510.01	05/15/2008	Yes	30	30	2	Very Good	CNG	
2008 NABI BUS 35LFW3510.01	05/15/2008	Yes	30	30	2	Very Good	CNG	
2009 NABI BUS 40LF	6/15/2009	Yes	36	43	2	Very Good	CNG	
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	

Description	Date Acquired	Wheel Chair Accessible	Seat Capacity	Stand Capacity	WC Capacity	Condition	Fuel Type	Notes
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	
2009 NABI BUS 40LF	2/5/2010	Yes	36	43	2	Very Good	CNG	
2009 INTERNATIONAL 3200	11/1/2010	Yes	25	10	1	Good	CNG	
2011 NABI LF 40 FOOT	9/21/2011	Yes	36	43	2	Very Good	CNG	
2011 NABI LF 40 FOOT	9/21/2011	Yes	36	43	2	Very Good	CNG	
2011 NABI LF 40 FOOT	9/21/2011	Yes	36	43	2	Very Good	CNG	
2011 NABI LF 40 FOOT	11/2/2011	Yes	36	43	2	Very Good	CNG	
2011 NABI LF 35 FOOT	11/15/2011	Yes	30	30	2	Very Good	CNG	
2011 NABI LF 35 FOOT	11/28/2011	Yes	30	30	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI BRT ARTIC	12/15/2013	Yes	43	73	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	
2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	

2013 NABI LF 35 FOOT	1/15/2014	Yes	30	30	2	Very Good	CNG	

Source: Transfort, March 2014

Greeley-Evans Transit (GET)

Year	Make/Model	Date Placed in Service	Seat Capacity	WC Capacity	Fuel	Replacement Date
1987	Chevrolet Custom Deluxe Pickup	8/31/1987	3	0		1/1/2014
1990	Ford Van	3/5/1990	11	0		TBD
2002	Thomas PT Van	6/28/2002	14	3	Diesel-50	TBD
2003	Ford Crown Victoria	5/28/2003	6	0		1/1/2014
2004	Ford Goshen	5/27/2004	14	3	Diesel-55	1/1/2013
2004	Ford Goshen	6/15/2004	14	3	Diesel-55	1/1/2013
2005	Ford E450	5/5/2005	14	3	Diesel-55	1/1/2013
2005	Ford E450	6/1/2005	14	3	Diesel-55	1/1/2014
2005	Ford E450	6/30/2005	14	3	Diesel-55	1/1/2014
2007	Ford Senator	6/7/2007	14	3	Diesel-50	1/1/2014
2007	Ford Starcraft	6/7/2007	14	3	Diesel-50	1/1/2014
2008	Chevrolet Express	4/25/2008	14	3	Diesel-50	1/1/2015
2008	Champion Defender	6/16/2008	23	2	Diesel-50	1/1/2015
2008	Champion Defender	6/16/2008	23	2	Diesel-50	1/1/2015
2008	Champion Defender	11/5/2008	23	2	Diesel-50	1/1/2015
2008	Champion Defender	11/11/2008	23	2	Diesel-50	1/1/2016
2008	Champion Defender	12/10/2008	23	2	Diesel-50	1/1/2016
2008	Champion Defender	12/15/2008	23	2	Diesel-50	1/1/2016
2010	Champion Defender	1/28/2010	23	2	Diesel-50	1/1/2017
2010	Champion Defender	2/1/2010	23	2	Diesel-50	1/1/2017
2010	Champion Defender	2/1/2010	23	2	Diesel-50	1/1/2017
2010	Champion Defender	2/10/2010	23	2	Diesel-50	1/1/2017
2010	Chevrolet Senator	7/7/2010	14	3	Diesel-50	1/1/2018
2011	Champion Defender	3/3/2011	23	2	Diesel-50	1/1/2018
2011	Champion Defender	3/14/2011	23	2	Diesel-50	1/1/2018
2011	Champion Defender-Hybrid	3/30/2011	23	2	Diesel-50	1/1/2021
2012	Champion Defender	7/19/2012	23	2	Diesel-50	1/1/2019
2013	Champion Defender	7/26/2012	23	2	Diesel-50	1/1/2019
2013	Champion Defender	8/17/2012	23	2	Diesel-50	1/1/2019
2013	Champion Defender	9/4/2012	23	2	Diesel-50	1/1/2019

2013	Champion Defender	10/15/2012	23	2	Diesel-50	1/1/2019

Source: GET, March 2014

City of Loveland Transit (COLT)

Unit	Usage	Status	Year	Unit Condition	Model	Chassis Make	Body Make	Seat Capacity	Fuel
8008	Fixed	Active	2004	Excellent	E450 Van	Ford	StarTrans	20	Gas
8018	Para	Active	2002	Fair	E350 Van	Ford	Thomas	21	Diesel
8019	Fixed	Active	2011	Excellent	E450 Van	Ford	StarTrans	23	Gas
8021	Fixed	Active	2011	Excellent	E450 Van	Ford	StarTrans	23	Gas
8022	Para	Active	2007	Good	E350	Ford	StarCraft	8	Gas
8024	Para	Active	2007	Good	E350	Ford	StarCraft	8	Gas
8026	Utility	Active	2007	Good	Mini Van	Chevrolet	Uplander	5	Gas
8060	Fixed	Active	2009	Good	Trans	Gillig	Gillig	35	Diesel
8070	Fixed	Active	2011	Excellent	Trans	Gillig	Gillig	35	Diesel
8080	Fixed	Active	2011	Excellent	Trans	Gillig	Gillig	35	Diesel

Berthoud Area Transportation Services (BATS)

Quantity	Year	Manufacturer	Seated Capacity	Standing Capacity	Fuel Type	Replacement Year	Notes
1	2008	Ford E 350 Brahn	8	1	Unleaded	2015	A van will be replaced every 5 years
1	2009	Ford E 350 Star Craft	12	1	Unleaded	2020	
1	2010	Ford E 350 Turtle Top	10	1	Unleaded	2025	High-mile vehicle, may replace sooner

Source: BATS, March 2014

APPENDIX C:
Demand Analysis

The travel demand analysis included the following steps:

1. Creation of trip matrices for 2012, 2020, 2030, and 2040 to show all daily trips from Traffic Analysis Zone (TAZ) to TAZ using the NFRMPO Travel Model.

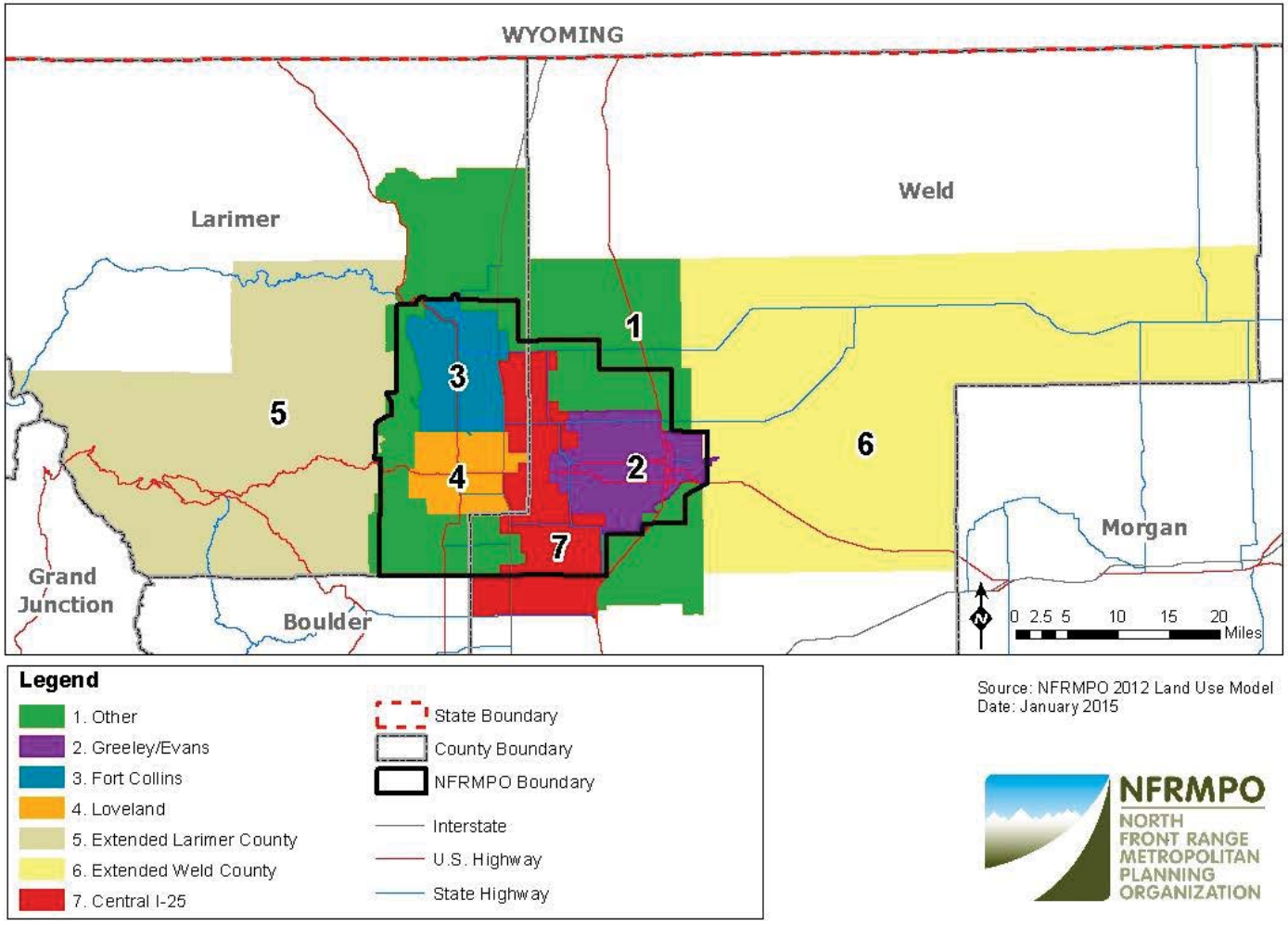
2. The trip matrices produced were aggregated by subregion. There are seven subregions in the modeling area. Currently, no fixed-route transit exists or is proposed in subregions 5 or 6 so they were removed, leaving five subregions for analysis.

3. The trip matrices were organized by mode share and all transit related tables were used, including: walk to local transit, walk to express, walk to premium, drive to local transit, drive to express, and drive to premium. An example of an express route is the MAX in Fort Collins. An example of a premium route is the CDOT Bustang on I-25.

4. The trip matrices were validated based on current assumptions in the transit portion of the travel model. Examples include, but are not limited to:
    e) No fixed-route service exists from Greeley to Fort Collins, resulting in zero trips.
    f) More trips inside Fort Collins (subregion 3) due to increased availability of transit service.
    g) 'Other' (subregion 1) is farther away from service resulting in the least amount of trips.
    h) Trips are allocated between Loveland and Greeley/Evans in year 2020 because of the connection to the CDOT Bustang route.

Figure C.1 shows the regional model's subregions. Tables are also included showing each transit trip table. The summary is presented by year (2012, 2020, 2030, and 2040) and then for each mode share as explained in step 3.

Figure C-1 Map of Subregions



Total Transit Trips in Subregions (2012, 2020, 2030, and 2040)

2012 Total Transit Trips					
Subregion	1	2	3	4	7
1	0	0	70	29	0
2	0	789	0	0	0
3	31	0	6159	14	0
4	69	0	304	384	1
7	0	0	1	3	0

2020 Total Transit Trips					
Subregion	1	2	3	4	7
1	5	0	78	93	10
2	5	919	10	0	0
3	2701	0	2627	30	2
4	78	0	83	331	2
7	4	0	1	1	0

2030 Total Transit Trips					
Subregion	1	2	3	4	7
1	7	0	115	96	16
2	6	1012	10	0	0
3	337	0	2964	32	2
4	89	0	93	369	5
7	6	0	2	5	12

2040 Total Transit Trips					
Subregion	1	2	3	4	7
1	13	0	168	88	14
2	36	1174	8	0	0
3	360	0	3264	96	4
4	88	0	173	458	7
7	29	0	4	6	1

Total Transit Trips in Subregions - Driving to Premium (2012, 2020, 2030, and 2040)

2012 Total Drive to Premium Transit Trips					
Subregion	1	2	3	4	7
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
7	0	0	0	0	0

2020 Total Drive to Premium Transit Trips					
Subregion	1	2	3	4	7
1	1	0	0.	0	0
2	0	0	10	0	0
3	0	0	191	1	0
4	0	0	18	0	0
7	0	0	0	0	0

2030 Total Drive to Premium Transit Trips					
Subregion	1	2	3	4	7
1	2	0	0	0	0
2	0	0	10	0	0
3	0	0	207	1	0
4	0	0	20	0	0
7	0	0	0	0	0

2040 Total Drive to Premium Transit Trips					
Subregion	1	2	3	4	7
1	4	0	2	0	0
2	0	0	7	0	0
3	34	0	395	19	0
4	0	0	64	6	0
7	4	0	2	0	0

Total Transit Trips in Subregions - Driving to Express (2012, 2020, 2030, and 2040)

2012 Total Drive to Express Transit Trips					
Subregion	1	2	3	4	7
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
7	0	0	0	0	0

2020 Total Drive to Express Transit Trips					
Subregion	1	2	3	4	7
1	3	0	9	10	6
2	4	0	0	0	0
3	62	0	0	0	0
4	4	0	0	0	0
7	2	0	0	0	0

2030 Total Drive to Express Transit Trips					
Subregion	1	2	3	4	7
1	4	0	14	9	8
2	5	0	0	0	0
3	78	0	0	0	0
4	6	0	0	0	0
7	3	0	0	0	0

2040 Total Drive to Express Transit Trips					
Subregion	1	2	3	4	7
1	9	0	17	7	5
2	35	0	0	0	0
3	25	0	0	0	0
4	13	0	0	0	0
7	21	0	0	0	0

Total Transit Trips in Subregions - Walking to Premium Transit (2012, 2020, 2030, and 2040)

2012 Total Walk to Premium Transit Trips					
Subregion	1	2	3	4	7
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
7	0	0	0	0	0

2020 Total Walk to Premium Transit Trips					
Subregion	1	2	3	4	7
1	0	0	40	0	0
2	0	0	0	0	0
3	104	0	1027	18	0
4	0	0	52	0	0
7	0	0	0	0	0

2030 Total Walk to Premium Transit Trips					
Subregion	1	2	3	4	7
1	0	0	52	0	0
2	0	0	0	0	0
3	130	0	1088	16	0
4	0	0	56	0	0
7	0	0	0	0	0

2040 Total Walk to Premium Transit Trips					
Subregion	1	2	3	4	7
1	0	0	43	0	0
2	0.0	0	0	0	0
3	196	0	1102	47	0
4	0	0	49	0	0
7	0	0	0	0	0

Total Transit Trips in Subregions - Walking to Express Transit (2012, 2020, 2030, and 2040)

2012 Total Walk to Express Transit Trips					
Subregion	1	2	3	4	7
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
7	0	0	0	0	0

2020 Total Walk to Express Transit Trips					
Subregion	1	2	3	4	7
1	0	0	13	14	3
2	0	0	0	0	0
3	85	0	0	0	0
4	24	0	0	0	0
7	2	0	0	0	0

2020 Total Walk to Express Transit Trips					
Subregion	1	2	3	4	7
1	0	0	13	14	3.
2	0	0	0	0	0
3	85	0	0	0	0
4	24	0	0	0	0
7	2	0	0	0	0

2040 Total Walk to Express Transit Trips					
Subregion	1	2	3	4	7
1	0	0	28	17	5
2	0	0	0	0	0
3	82	0	0	0	0
4	29	0	0	0	0
7	4	0	0	0	0

Total Transit Trips in Subregions - Walking to Local Transit (2012, 2020, 2030, and 2040)

2012 Total Walk to Local Transit Trips					
Subregion	1	2	3	4	7
1	0	0	71	29	0
2	0	789	0	0	0
3	31	0	6159	14	0
4	69	0	304	384	1
7	0	0	1	3	0

2020 Total Walk to Local Transit Trips					
Subregion	1	2	3	4	7
1	0	0	15	69	1
2	0	919	0	0	0
3	20	0	1410	11	2
4	50	0	12	331	2
7	0	0	0	1	0

2030 Total Walk to Local Transit Trips					
Subregion	1	2	3	4	7
1	0	0	26	75	3
2	1	1012	0	0	0
3	26	0	1669	14	2
4	59	0	17	369	5
7	0	0	1	5	1

2040 Total Walk to Local Transit Trips					
Subregion	1	2	3	4	7
1	0	0	78	64	3
2	1	1174	0	0	0
3	23	0	1767	29	3
4	46	0	59	451	7
7	0	0	2	6	1

APPENDIX D:
NFRMPO Regional Transit Element Survey (2013)

Answering this questionnaire will help public agencies make plans for future regional transit services. **Regional transit would take riders to places where the Fort Collins, Greeley and Loveland public bus systems do not currently go.** *Thank you!*

If regional transit service would become available, would I use it?	**☐Yes**	**☐No**
If "yes," how many times each week?	**☐1-2 days ☐3-5 days**	**Other**_____ _____

My transit trips would be for:
Check the most likely purpose(s):

☐Work ☐Medical ☐School ☐Shopping ☐Social ☐Nutrition/Grocery

Other (not included above) ▪ *write in*: _____

My use of regional transit would be more likely if it would:
Check two of the most likely reason(s):

☐save me money	**☐save me time**	**☐make me feel safe**	**☐stop nearby so my walk would be short**	**☐run often during the hours I need it**

Other (not included above) ▪ *write in*: _____

I would start my transit trip from: *Choose only one:*	
Berthoud/Loveland	☐
Greeley/Garden City/Evans/LaSalle	☐
Fort Collins	☐
Johnstown/Milliken	☐
Eaton/Severance	☐
Timnath/Windsor	☐
Other Larimer County locations ▪ *write in*: _____	☐
Other Weld County locations ▪ *write in*: _____	☐
Metro Denver	☐
Boulder/Longmont	☐
Cheyenne/Laramie/Other Wyoming	☐
Other Colorado ▪ *write in*: _____	☐
Other (not included above) ▪ *write in*: _____	☐

More questions on next page

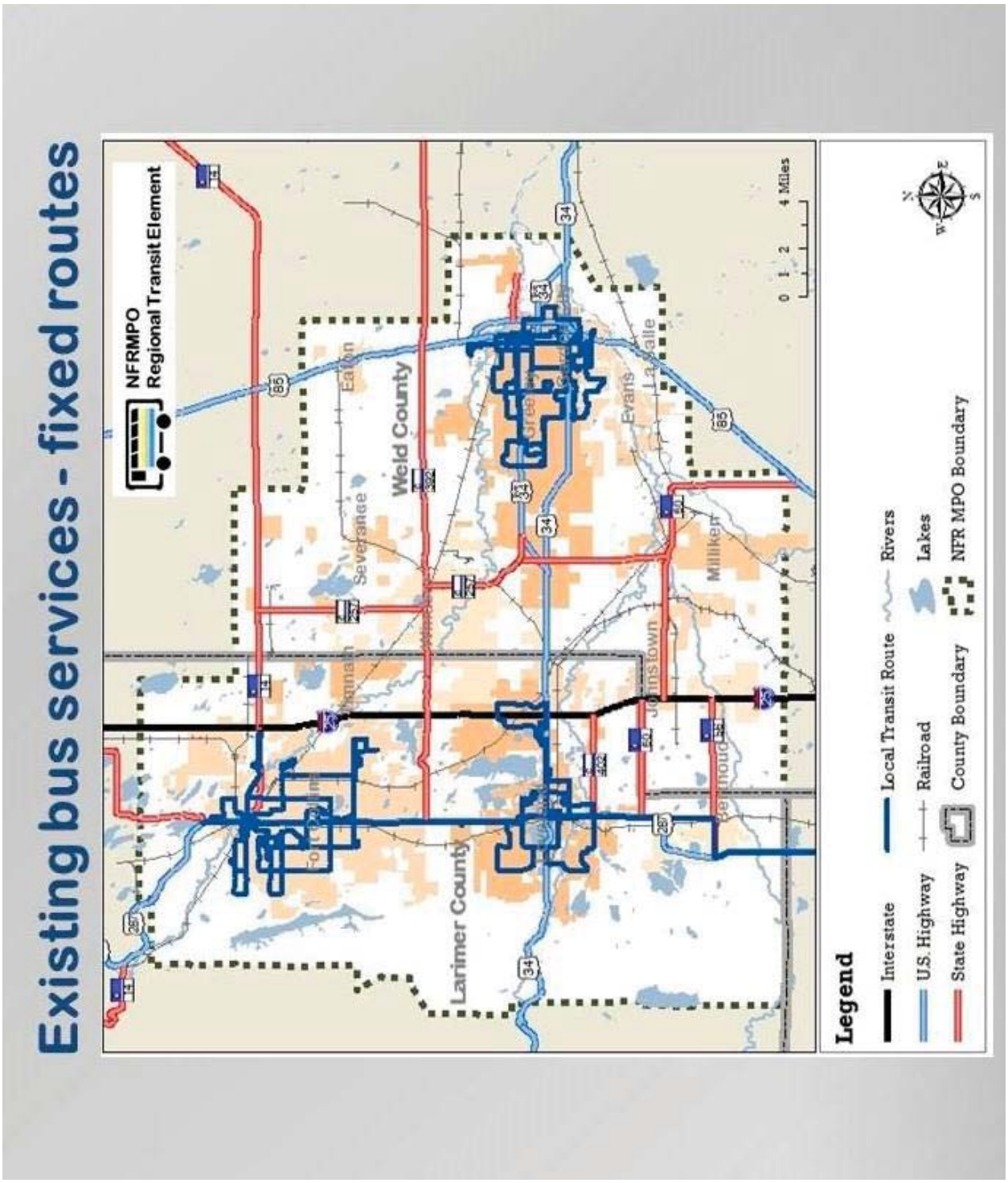
"NFRMPO" is the North Front Range Metropolitan Planning Organization **2013**

The top three places I would go on transit would be:

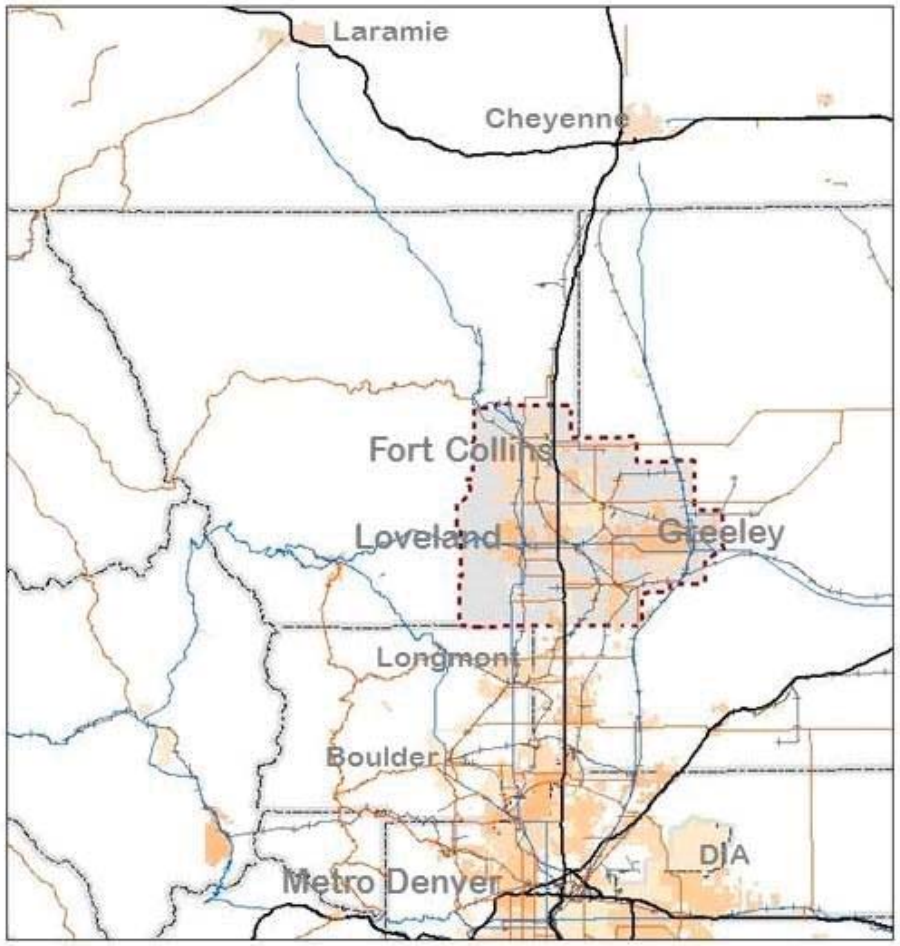
It is acceptable for two or three choices to be the same location if it is more important than others.

	1st Choice	2nd Choice	3rd Choice
Berthoud/Loveland	☐	☐	☐
Greeley/Garden City/Evans/LaSalle	☐	☐	☐
Fort Collins	☐	☐	☐
Johnstown/Milliken	☐	☐	☐
Eaton/Severance	☐	☐	☐
Timnath/Windsor	☐	☐	☐
Other Larimer County locations ▪ *write in*: _____	☐	☐	☐
Other Weld County locations ▪ *write in*: _____	☐	☐	☐
Metro Denver	☐	☐	☐
Boulder/Longmont	☐	☐	☐
Cheyenne/Laramie/Other Wyoming	☐	☐	☐
Other Colorado ▪ *write in*: _____	☐	☐	☐
Other (not included above) ▪ *write in*: _____	☐	☐	☐

Please share any additional comments about your transportation use or needs


Existing bus services - fixed routes
NFRMPO
Regional Transit Element
Weld County
Larimer County
Eaton
Severance
Evans
Johnstown
Milliken
Legend
Interstate
U.S. Highway
State Highway
Local Transit Route
Railroad
County Boundary
Rivers
Lakes
NFR MPO Boundary
0 1 2 4 Miles

Potential Inter-Regional Connections



NFRMPO
Regional Transit Element

Where would you want transit services to go in the future?

Legend

- Interstate Highway
- U.S. Highway
- State Highway
- Railroad
- NFR MPO Boundary
- County Boundary

0 5 10 20 Miles

N W E S

NFRMPO
NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

DISCUSSION ITEM: 2040 Regional Transportation Plan:
Chapter 1: Introduction
Chapter 12: Implementation

AGENDA ITEM SUMMARY (AIS)

North Front Range Transportation & Air Quality Technical Advisory Committee (TAC)

Meeting Date	Agenda Item	Submitted By
June 17, 2015	Discussion of 2040 Regional Transportation Plan Chapters 1 and 12	Becky Karasko

Objective / Request Action

Staff is providing the fifth of five groups of chapters for the 2040 Regional Transportation Plan (RTP) for TAC review and comment.

- ☐ Report
- ☐ Work Session
- ☑ Discussion
- ☐ Action

Key Points

- MPO staff is developing the 2040 RTP, scheduled for September 2015 Council approval
- The 2040 RTP includes a long term transportation vision for the region

Committee Discussion

At their February 18, 2015 meeting, TAC requested staff provide a revised schedule of when staff would require Committee review and input on the 2040 RTP chapters.

Supporting Information

The 2040 RTP is a federally-mandated plan for MPOs and includes a long-term transportation vision for the region. The 2040 RTP summarizes the existing transportation system: roadways, transit, bicycle and pedestrian infrastructure, the environment, and includes a fiscally constrained corridor plan for the future.

Chapter 1 provides an introduction to the 2040 RTP and its purpose. Chapter 12 provides the implementation plan for the 2040 RTP.

Advantages

Providing the chapters as they are drafted allows TAC to maximize their time and input in reviewing the 2040 RTP chapters. Staff will provide presentations on the changes to the RTP to summarize changes to assist TAC in their review.

Disadvantages

None noted.

Analysis /Recommendation

Staff requests TAC members review the portions of the 2040 RTP Chapters 1 and 12 applicable to their jurisdictions for accuracy and content.

Attachments

RTP Chapters:

- Chapter 1: Introduction
- Chapter 12: Implementation

Rev. 9/17/2014

Chapter 1: Introduction

A. Background

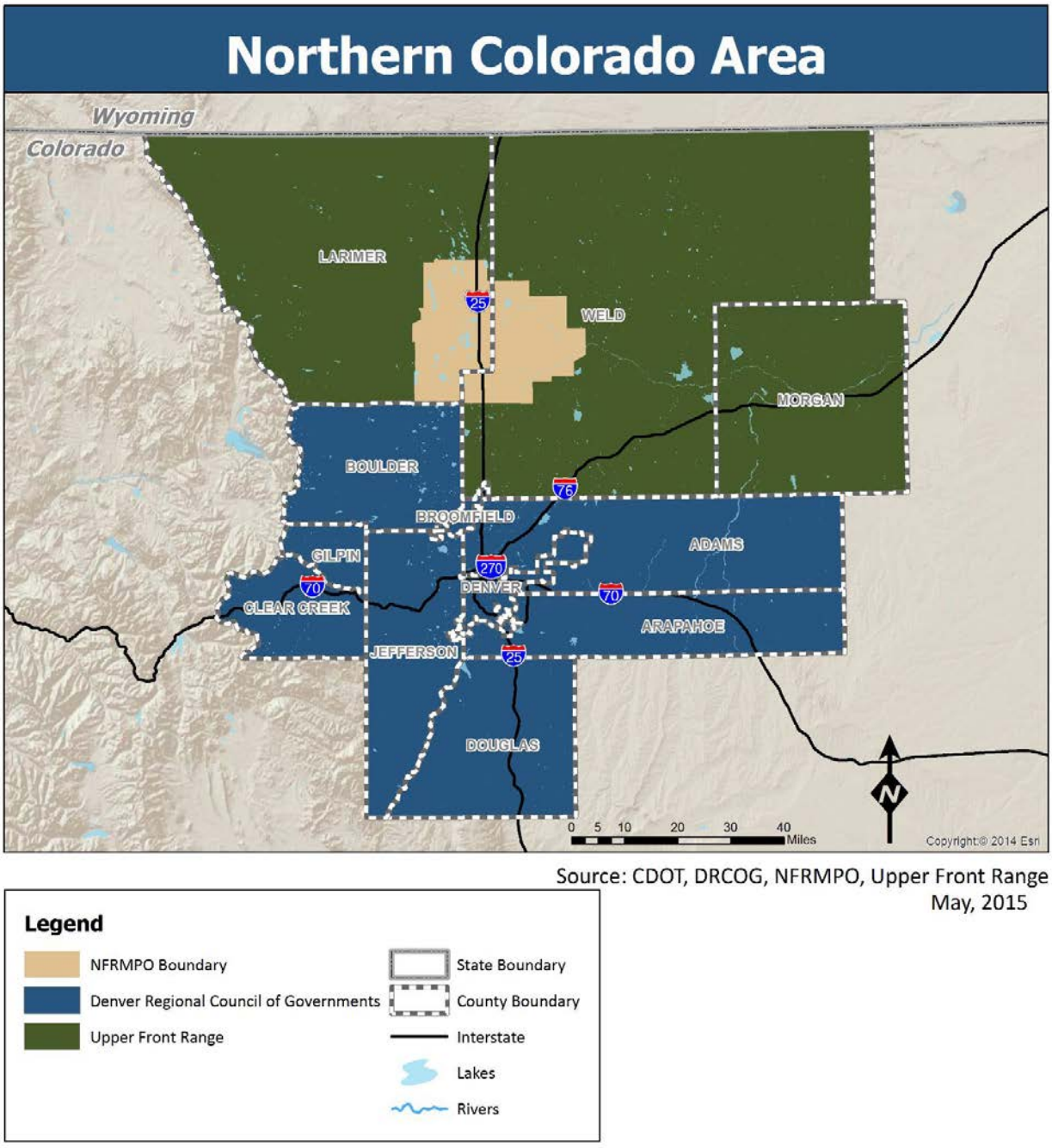
In 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA), directing each state to prepare a multi-modal transportation plan. This directive was continued with the Transportation Equity Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and most recently with Moving Ahead for Progress in the 21st Century (MAP-21), signed into law on July 6, 2012. The Colorado Department of Transportation (CDOT) has divided the state into 15 transportation planning regions (TPRs), including the North Front Range (NFR), each of which is required to prepare a Regional Transportation Plan (RTP). These RTPs are used as the basis for Colorado's long range *Statewide Transportation Plan*.

The North Front Range (NFR) region, shown in **Figure 1.1**, is surrounded on three sides by the Upper Front Range TPR and the Denver Regional Council of Governments (DRCOG) to the south. The NFR region includes 13 incorporated communities and portions of two counties, including: the cities of Evans, Fort Collins, Greeley, and Loveland; the towns of Berthoud, Eaton, Garden City, Johnstown, LaSalle, Milliken, Severance, Timnath, and Windsor; and Larimer and Weld counties.

The North Front Range Transportation and Air Quality Planning Council (NFRT&AQPC), also known as the North Front Range Metropolitan Planning Organization (NFRMPO), is responsible for long range regional transportation planning. The NFRMPO has undertaken this current effort to extend the 2035 RTP horizon to the year 2040. This 2040 plan is MAP-21 compliant. The NFRMPO region has two air quality maintenance areas for carbon monoxide: Fort Collins and Greeley. The entire NFRMPO region is also included in the nine county nonattainment area for ozone. Due to this air quality nonattainment status, the NFRMPO is required to update its long range transportation plan every four years.

This planning process is conducted under the direction of the NFRMPO Planning Council, composed of one representative from each of the 15 member governments, the Colorado Transportation Commission, and the Colorado Department Public Health and Environment's (CDPHE) Air Pollution Control Division (APCD). A Technical Advisory Committee (TAC), made up of representatives from the jurisdictions within the region, CDOT, and APCD, makes recommendations to the Planning Council. This 2040 Plan was developed by NFRMPO staff with technical input from the TAC.

Figure 0.1 North Front Range Metropolitan Planning Area



Source: *NFRMPO Staff, 2015*

B. Planning Process

The long range planning process is guided by MAP-21, the current federal transportation legislation. The authorization act first expired September 30, 2014 and has been extended through July 31, 2015. This document contains eight planning factors which are part of a continuous, cooperative, and comprehensive (3C) process:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for all motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase the accessibility and mobility of people and for freight;
5. 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;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing transportation system.[1]

This plan is corridor-based; the projects listed are those analyzed during the determination of conformity with air quality regulations. The vision plan and the financial plan are at the corridor-level except for the first four years of the plan which includes the adopted FY 2016-2019 TIP, giving greater flexibility in project selection at the Transportation Improvement Program (TIP) level. The TIP is the project programming list which must be included in CDOT's Statewide Transportation Improvement Program (STIP).

C. Values, Visions, Goals, and Objectives

As a part of this plan, and to comply with the requirements in MAP-21, NFRMPO staff, TAC, and the Planning Council developed Goals, Objectives, Performance Measures, and Targets, adopted on September 4, 2014. A more in-depth discussion of these can be found in **Chapter 4**. The Vision Statement for the 2040 RTP is:

We seek to provide a multi-modal transportation system that is safe, as well as socially and environmentally sensitive for all users that protects and enhances the region's quality of life and economic vitality.

Goals and Objectives

Goal 1: Foster a transportation system that supports economic development and improves residents' quality of life.

- *Objective 1:* Conforms to air quality requirement.
- *Objective 2:* Maintain transportation infrastructure and facilities to minimize that need for replacement or rehabilitation.

[1] 23 CFR 450.306: http://www.ecfr.gov/cgi-bin/text-idx?SID=ed64c2d38520df874e4096dc246c863b&node=se23.1.450_1306&rgn=div8

- *Objective 3:* Investment in infrastructure.

Goal 2: Provide a transportation system that moves people and goods safely, efficiently, and reliably.

- *Objective 4:* Reduce number of severe traffic crashes.
- *Objective 5:* Use the Congestion Management Process (CMP) to reduce congestion.
- *Objective 6:* Reliable travel times.

Goal 3: Provide a multi-modal system that improves accessibility and transportation system continuity.

- *Objective 7:* Support transportation services for all, including the most vulnerable and transit-dependent populations.
- *Objective 8:* Implement Regional Transit Element, Regional Bicycle Plan, and North I-25 EIS.
- *Objective 9:* Develop infrastructure that supports alternate modes and connectivity.

Goal 4: Optimize operations of transportation facilities.

- *Objective 10:* Use Transportation Demand Management (TDM) techniques to reduce congestion and optimize the system.
- *Objective 11:* Implement Intelligent Transportation Systems (ITS).
- *Objective 12:* Enhance transit service in the NFR.
- *Objective 13:* Reduce project delivery timeframes.

D. Other Plans and Studies

During the completion of this 2040 RTP, several regional transportation planning efforts influenced the development of this document. Numerous transportation studies have been, or are being, prepared by individual counties, cities, and towns within the NFRMPO, all of which served as input for this plan. Brief descriptions of some of the regional plans and studies follow; however, this is not an exhaustive list.

2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO)

The report projected economic and demographic data to the year 2040. The information developed in the report provides control totals for use in the Land Use Allocation Model which then distributes the data geographically. The allocation model supplies the Transportation Analysis Zone (TAZ) level information to the Regional Travel Demand Model. The forecast was brought down to a sub-regional level consisting generally of Fort Collins, Greeley, Loveland, and the areas outside of the sub-regions, but within the North Front Range modeling boundary (see **Figure 3-1** in **Chapter 3**).

Regionally Significant Corridors Study

The *Regionally Significant Corridors Report* was completed and approved in September 2006 and will continue to be used in this plan update. The study process included defining regional significance using specified criteria, corridor grouping, and corridor tier ranking. All of the Regionally Significant Corridors (RSCs) are included in 2015 Congestion Management Process (CMP) and receive more in-depth discussion in **Chapter 9**.

North I-25 Environmental Impact Statement (EIS)

The North I-25 Environmental Impact Statement (EIS) began in the fall of 2003. The study analyzed potential environmental impacts, identified mitigation measures, and prepared the environmental decision document required under the National Environmental Policy Act (NEPA). The study addressed roadway widening, upgrades, new alignments, interchange modifications, and transit alternatives between the Denver metropolitan area and Northern Colorado. A Record of Decision (ROD) was signed by FHWA in December 2011. In October 2014, a public open house was held to discuss additional improvements to the EIS document. A ROD 2 for the North I-25 EIS is anticipated in summer 2015. A ROD 1 reevaluation was begun in January 2015. This reevaluation examined the portion of I-25 from SH14 to SH 392 and is anticipated to be completed in late summer 2015.

Long Range Transportation Demand Management Plan

The NFRMPO Planning Council approved the *Long Range Transportation Demand Management Plan* (TDM Plan) in December 2010. The purpose of the TDM Plan is to recommend TDM strategies for implementation through 2035. Supporting these recommendations is an outline for a clear process to select, fund, and evaluate these strategies. The TDM evaluation techniques developed for the plan were coordinated with the enhancement of the 2010 CMP, which was updated concurrently with the TDM Plan.

North Front Range Transit Vision Feasibility Study

The *North Front Range Transit Vision Feasibility Study* was completed in April 2013. The study was a joint effort by the cities of Fort Collins and Loveland, the Town of Berthoud, Larimer County, and the NFRMPO. The purpose of the Study was to identify to feasibility for an integrated regional transit governance, decision-making model, and a related operational structure for the North Front Range communities involved in the study. The recommendation from the study included moving forward with initial integration of fixed-route and paratransit operations of Transfort and COLT, creating a new regional transit entity through an inter-governmental agreement between the cities of Fort Collins and Loveland.[2]

2040 Regional Transit Element

The NFRMPO Planning Council approved the *2040 Regional Transit Element* (RTE) in August 2015. The 2040 RTE replaces the 2035 RTE and is part of this 2040 RTP. The purpose of the 2040 RTE is to guide the development of a regional transit system in the North Front Range.

Colorado State Freight and Passenger Rail Plan

CDOT published its *State Freight and Passenger Rail Plan* in March 2012. This plan fulfilled the requirements of the Railroad Safety Enhancement Act of 2008 and was integrated into the *Statewide Long Range Multi-Modal Plan*. Additional information on the study process and conclusions can be found on the CDOT website: https://www.codot.gov/projects/PassengerFreightRailPlan/StatePassengerRailPlan-Tasks/SPRP-FinalPlanMaster.

[2] ***North Front Range Transit Vision Feasibility Study***, April 2013

Freight Policy

Ahead of this 2040 RTP, the NFRMPO Planning Council approved the 2040 RTP Goals, Objectives, Performance Measures, and Targets (GOPMT). These GOPMT specifically address freight through Goal 2 and the 2040 RTP Plan Policy:

- Goal 2: *Provide a transportation system that moves people and goods safely, efficiently, and reliably*
- 2040 RTP Plan Policy: *Support freight performance in partnership with CDOT*

In fall 2015, staff will begin work on the first Regional Freight Plan for the North Front Range region. This effort has been included in the FY2016 Unified Planning Work Program (UPWP).

E. Summary of Public Participation Process

The 2040 RTP reflects community input on the issues and concerns for the transportation future of the North Front Range region. During the 2040 RTP development, the NFRMPO staff used a variety of public involvement tools to gather input, as set out in the MPO's *Public Involvement Plan* (PIP). The MPO reached out to those who live, work, recreate, and/or spend time in the North Front Range, and established a regional plan for the future based on feedback received. As outlined in the PIP, the public was notified of and involved in the development of the plan through:

- Publication of events, dates, and updates in the quarterly *On the Move* Newsletter;
- Surveys;
- Posting on the NFRMPO's website, Twitter, and blog;
- Creation of the 2040 RTP website;
- Creation of a Community Remarks website; and
- Attendance and presentations at local meetings and events throughout the region.

Staff divided the outreach process into three phases corresponding to the needs of the plan. As the RTP was developed, the methods evolved. The phases included:

1) *Plan Development* – staff engaged the public for community concerns, needs, and issues with the existing transportation system. Activities included online and in-person surveys, public meetings, and public events.
2) *Public Review* – The public provided feedback as staff completed draft chapters of the 2040 RTP. Activities included posting the draft chapters on the MPO's website, and presenting information at public meetings.
3) *RTP adoption and Conformity Determination* – Upon completion of the plan, it was approved and adopted by the Planning Council. Additionally, the NFRMPO provided a 30-day public comment period leading to a public hearing for the Air Quality conformity determination. Dates of these Planning Council meetings and the conformity determination were posted on the MPO's social media and website.

Social Media

The MPO used a variety of internet tools to reach out to the public, ensuring up-to-date and interactive tools were made available.

- Events and meetings were posted as they were scheduled and were tweeted on the MPO's twitter account (@NFRMPO).
- The MPO created a website where draft chapters, meeting schedules, and contact information were made available. The website was updated often to ensure up-to-date information was available. www.nfrmpo.org/Projects/2040RTP.aspx
- Community Remarks allowed the public to provide comments on a Google Map website. The tool allowed users to "vote up" and "vote down" comments, which streamlined comments and provided additional interactivity. Those who "vote down" a comment were required to explain their dislike or disapproval, allowing additional input that could be incorporated into the 2040 RTP. www.communityremarks.com/northfrontrange/

Surveys

The MPO used two surveys to distinguish the needs of the community in the existing and future transportation system. Surveys provided staff a direct understanding of regional transportation issues, where, how, and why people commute, and what modes of transportation are impacted by congestion or are used most often. The analysis of these surveys is included in the *Summary of Public Input* section of this chapter.

The first survey, open through summer 2014, engaged the public in their understanding of congestion in the region. The short survey, called the 2014 Congestion Survey, asked the following questions:

- Where do you live? Where do you work/volunteer?
- What is your primary commute method?
- What do you think causes heavy traffic and congestion? What does heavy traffic/congestion mean to you?
- How often do you experience heavy traffic/congestion?
- Select the factors you consider important when making travel decisions for your commute trip.
- How do you avoid heavy traffic?
- How does the current traffic congestion compare to five years ago?
- What is your age range/category? What is your household income category? What is the highest level of education you have completed?

The second survey, available in winter and spring 2015, requested input on the overall transportation system in the region. The 2040 RTP Survey asked questions meant to engage the public about improvements for, concerns about, and issues related to transportation in the region. The survey asked the following questions:

- In what city do you live?
- In what city do you work or spend a majority of your time?
- What are your most common modes of commuting?
- If you use an alternative commute mode, what motivated you to do so?
- If you drive alone to work, what are your main reasons for doing so?
- Would you be willing to pay an additional tax to fund regional transportation projects?
- If you were given money from the hypothetical tax, what categories would you fund?
- Where do you feel improvements can and should be made to improve transportation in the region?

Both surveys took advantage of the partnerships the NFRMPO has formed with community groups. The survey link was sent to the Larimer County and Weld County Mobility Councils, VanGo vanpoolers, *On the Move* recipients, members of the Northern Colorado Bike & Ped Collaborative, and multiple senior groups. Paper copies of the survey and business cards with the survey link were also distributed at the events and meetings staff attended.

Events and Meetings

Staff coordinated public outreach at multiple events and meetings throughout early 2015. To reach a wide audience, the MPO made efforts to attend a diverse group of meetings within the region. When possible, the MPO worked with other agencies and organizations. The events mixed presentations, staffed tables, and face-to-face interactions to both inform the public about the 2040 RTP process and obtain feedback. The events and meetings included:

- Larimer County Mobility Council—December 18, 2014;
- Greeley Citizens Transportation Advisory Board (CTAB)—January 26, 2015;
- Weld County Mobility Council—January 27, 2015;
- Loveland Transportation Advisory Board—February 2, 2015;
- GET Open House—February 9, 2015;
- Loveland Public Library—February 10, 2015;
- Transfort South Transit Center—February 12, 2015;
- Colorado State University Student Union—February 17, 2015;
- Fort Collins Transportation Board—February 18, 2015;
- US 85 Coalition—March 12, 2015;
- Highway 287 Corridor Coalition—March 26, 2015; and
- Greeley Chamber of Commerce Local Government and Business Affairs Committee—April 3, 2015.

At these meetings, staff discussed regional transportation issues with the public and community groups. A summary of comments and responses are included in the *Summary of Public Input* section of this chapter and raw data is located in **Appendix A**.

Air Quality Conformity

The NFRMPO issued a public hearing notice in regional newspapers and on the NFRMPO website on May 30, 2015 to meet the 30-day noticing requirement for air quality conformity. All Transportation Plans in non-attainment and maintenance areas are required to run air quality conformity, including the RTP and TIP. The boundaries and pollutants for air quality conformity in the NFRMPO are detailed in **Chapter 4**.

The Planning Council opened the public hearing on July 9, 2015 for public comment, there was no/X number of public comment during the hearing. After the hearing, the Council made a positive air quality conformity determination for the RTP and TIP. The AQCC concurred with the Council adoption on July/August, 2015 and FHWA and FTA concurred on September XX, 2015. USDOT approved the air quality conformity determination effective on September XX, 2015.

F. Summary of Public Input

An analysis of the input from public outreach is detailed in this section. Raw data and responses are included in **Appendix A**.

Outreach Events

MPO staff attended events throughout the 2040 RTP outreach phase. Staff recorded notes from these events and have summarized them by theme in **Table 1-1.** The themes include: bicycle and pedestrian; roads; transit; and other. Notes from events are included in **Appendix ##**. Surveys were provided at these events and are summarized in the *2015 Survey* section of this chapter.

Table 1-0-1: Public Outreach Themes

Theme	Comments
Bicycle and Pedestrian	• Provide regional bicycle trail connections between cities • Create bicycle facilities along Mulberry Street
Roads	• Fix and expand US 34 through Loveland • Expand I-25 between Fort Collins and Longmont • Fix congestion on College Avenue during afternoon commute
Transit	• Provide east-west transit connection between Greeley and Loveland • Provide transit connection between Greeley and Fort Collins • Provide connection points for COLT, GET, and Transfort • Educate public about innovative transportation funding, tools, facilities, and technologies • Research why transit initiatives like 34 Xpress and the Regional Transportation Authority failed in the past • Provide a transit connections to Denver and Denver International Airport • Connect Windsor and Timnath to COLT and Transfort • Provide a connection from Laporte and Wellington to Fort Collins • Extend service hours and, frequency on FLEX • Encourage COLT, GET, and Transfort to introduce a regional transit pass • Expand service hours and frequency to college campuses
Other	• Ensure the transportation system is equitable and affordable for aging and low income populations

Survey Results

2014 Survey

The 2014 Congestion Survey was created for the 2014 CMP Annual Report and asked participants to describe the causes, effects, and implications of congestion in the region.

In response to the question, “What do you think causes heavy traffic and congestion?” residents largely responded in two ways: 71.4 percent of respondents answered there are too many people on the road; 50 percent of residents responded traffic signals are ineffective or unorganized; road condition received 23.8 percent of responses; and weather accounted for 10 percent of responses.

The survey asked respondents to describe what heavy traffic or congestion means to them. The largest percentage, 49.1 percent, of respondents responded six to 10 miles per hour less than the posted speed meant roads are “congested”. This was followed by 41.7 percent who defined it as 11-15 miles per hour less than the posted speed, while 39.4 percent of responded defined it as a complete stop at a location other than a traffic signal or stop sign.

Additionally, 48.8 percent of respondents stated they experience heavy traffic or congestion a few times per week, while 42.8 percent stated they faced it daily.

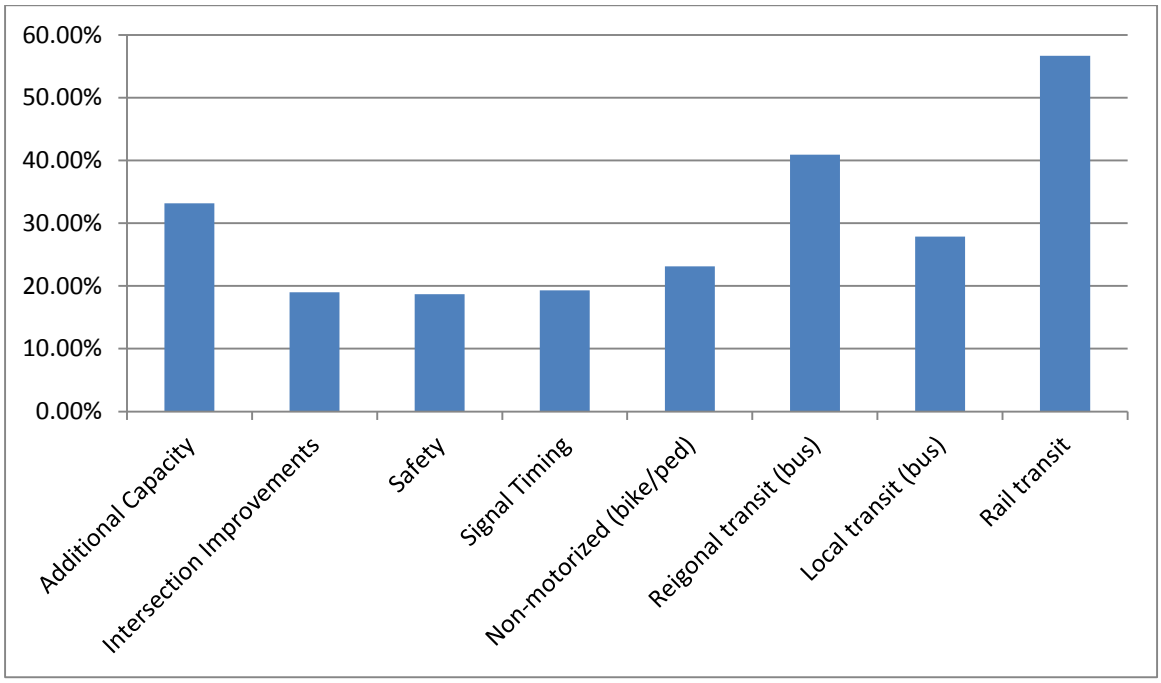
Question 13 of the survey asked respondents to provide comments about congestion in the region. The responses have been summarized in **Table 1-2**. Answers are organized into five sections: (1) alternatives; (2) coordination; (3) safety, education and enforcement; (4) roads; and (5) other.

Table 1-0-2: 2014 Survey Themes	
Theme	**Comments**
Alternatives	• Provide public transit alternatives to driving on I-25 • Complete the bicycle trail between Timnath and Fort Collins • Provide a rail passenger corridor linking the communities of the Front Range • Encourage businesses to provide flexible work schedules to spread out traffic • Encourage use of public transit, carpooling/sharing, bicycle and pedestrian facilities
Coordination	• Coordinate construction projects to provide additional alternative routes • Coordinate traffic signals to allow efficient movement of cars, including longer left turn signals • Coordinate street crossings with MAX, freight railroads, trails, and cars
Safety, Education & Enforcement	• Reduce tailgating and distracted driving • Enforce cell phone restrictions while driving to ensure drivers are attentive to the road • Enforce speed limits • Ensure drivers drive in right lane on I-25 and merge safely • Educate drivers to stay in proper lane when turning
Roads	• Expand I-25 to three lanes in each direction between Longmont and the Colorado/Wyoming border • Expand US 34 to three lanes in each direction through Loveland • Provide additional east-west route between Loveland and Greeley • Provide alternate route between Fort Collins and southeast Larimer County • Connect Kechter Road in Fort Collins to River Pass Road in Timnath • Widen Harmony Road east of I-25 • Build railroad overpasses at Harmony Road and Mason Street; Horsetooth Road and Mason Street; Mason Street and Drake Road; Mason Street and Prospect Road • Enhance ITS systems by alerting drivers to accidents and delays before they enter I-25 • Limit truck traffic on Berthoud Hill due to slower speeds, dangerous passing
Other	• Prioritize projects to ensure projects with highest need are handled first • Move Port of Entry away from Exit 268 (Prospect Road) • Work with freight railroads to encourage freight movement outside of commuting hours • Work with State and federal governments to increase transportation funding, and keep it in line with growth and inflation • Use Bluetooth and location data from smartphones to analyze traffic patterns and optimize traffic signals

2015 Survey

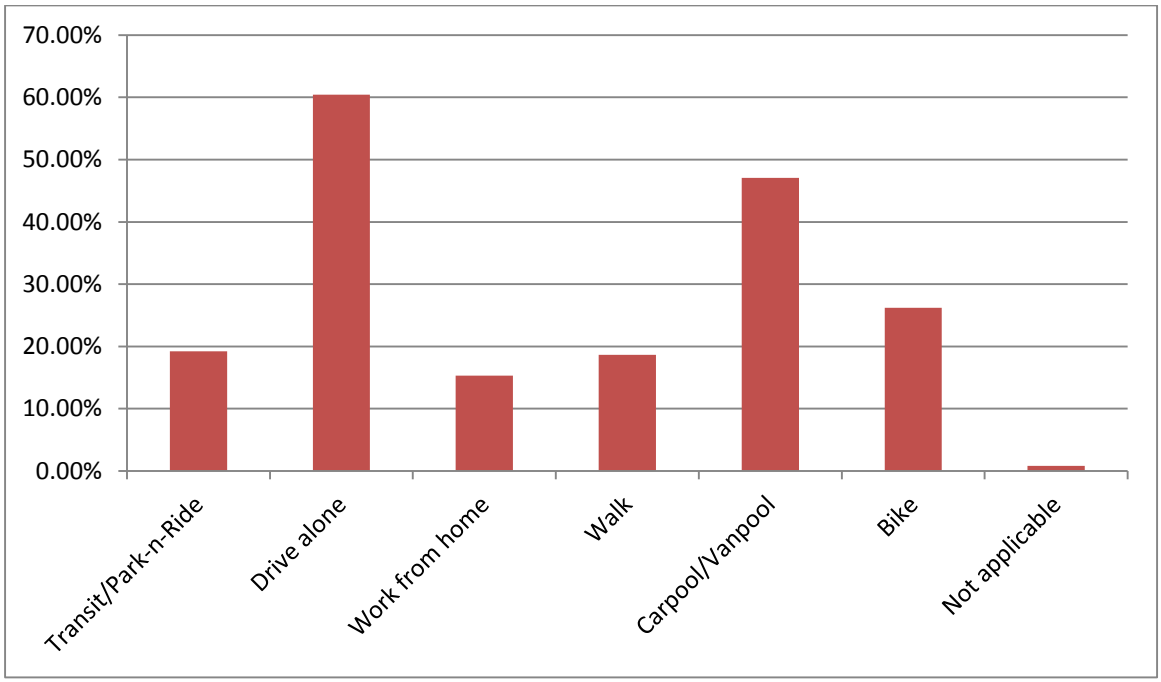
When asked, "If you were given money from a regional transportation tax, what categories would you fund?", respondents supported additional transit and roadway capacity. Respondents were asked to pick the top three categories they would fund. Overall, 56.5 percent of respondents supported spending the regional tax on rail transit, 41 percent supported additional regional transit buses, and 33.2 percent supported additional roadway capacity.

Table 1-0-3 If you were given money from a regional transportation tax, which categories would you fund?



MPO staff used the 2015 survey to understand the reasons involved in choosing a mode of travel. To begin, the survey asked for a respondents' three most common modes of commuting. 60.4 percent of respondents drive alone, while 47.5 percent of respondents carpool or vanpool, and 26.4 percent of respondents ride their bicycle.

Table 1-4 What are your most common modes of commuting?



Building on the three most common modes of commuting, the survey asked two questions regarding commute mode choice: “If you use an alternative commute mode, what motivated you to do so?” and “If you drive alone to work, what are your main reasons for doing so?” The majority, 60.1 percent, of respondents stated cost or time savings influenced their decision to not drive alone; 49.4 percent of respondents wanted to save wear and tear on their personal vehicles; and 42 percent of respondents wanted to improve air quality or for environmental reasons. On the other hand, 32.2 percent of respondents stated they work an irregular work schedule and need to drive as a result; and 30.3 percent of respondents need a car at their place of employment for either personal or company business.

Table 1-5 If you use an alternative commute mode, what motivated you to do so?

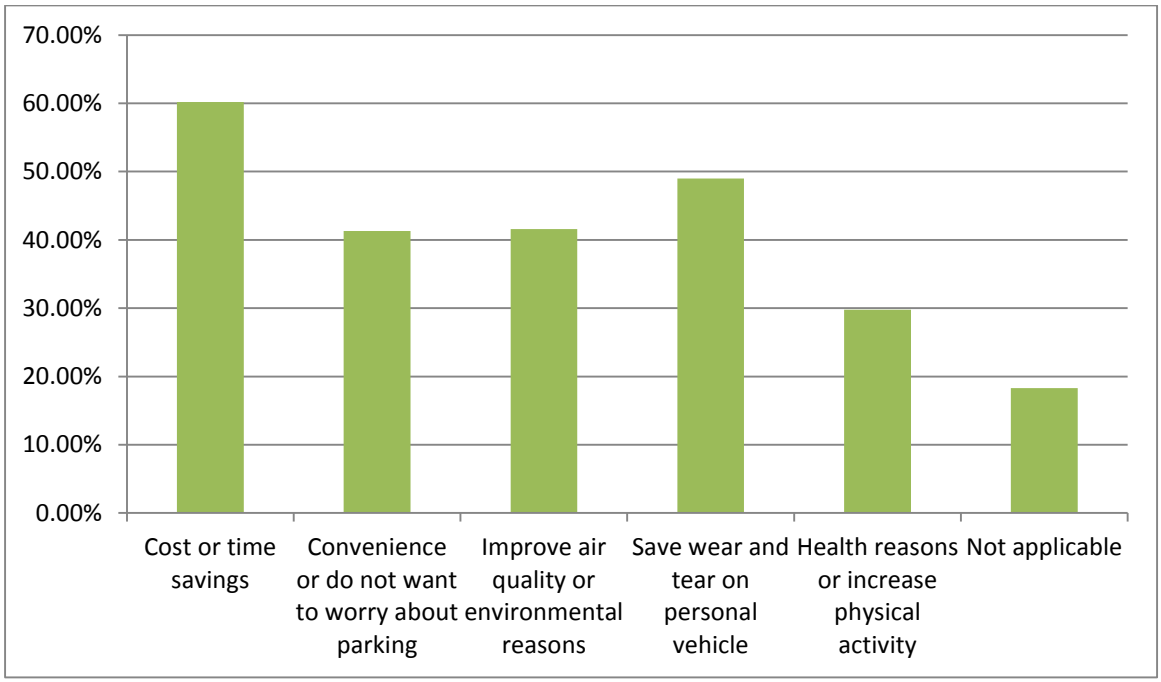
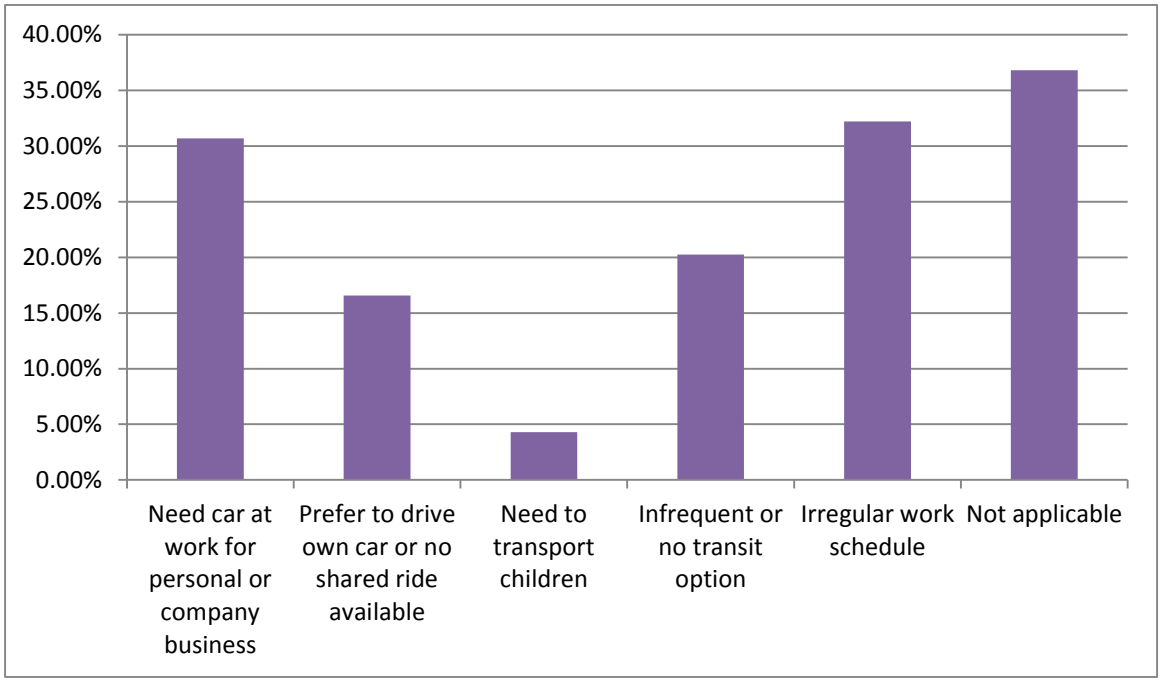


Table 1-6 If you drive alone to work, what are your main reasons for doing so?



Comments from the survey question "Where do you feel improvements can and should be made?" are categorized into five transportation modes: bicycle and pedestrian; highways; local roads; transit; and other. The most common comments are listed in **Table 1-3**. Some of the comments, like expanded transit and bicycle/pedestrian projects, are explored in the *NFRMPO Regional Bicycle Plan* and the 2040 RTE.

Table 1-7: 2015 Survey Themes	
Theme	**Comments**
Bicycle and pedestrian	• Add trail connections between Fort Collins and Loveland • Improve bicycle trails outside of cities • Build safe crossing for Poudre River Trail across I-25 to Fort Collins • Expand bicycle trail to Southeast Fort Collins • Increase bicycle parking • Ensure sidewalks are ADA-accessible • Create a dedicated bicycle trail along US 85 • Create a bicycle trail from Berthoud to Fort Collins
Highways	• Expand capacity on I-25 from SH 66 to SH 14 • Expand capacity on US 34 • Improve US 287 through the region, including surface treatment • Expand SH 402 • Create a diagonal connection between northwest Greeley and Fort Collins
Local roads	• Build roundabout at Canyon Avenue & Magnolia Street • Improve intersections at College Avenue and Trilby Road; Timberline Road and Horsetooth Road; and the Harmony Road Corridor • Signal improvement at County Route 17 and US 34 • Signal improvement along 10th Avenue in Greeley • Improve intersection at Taft Avenue and 43rd Street
Transit	• Provide transit connection on US 34 between Greeley and Loveland • Provide additional transit along US 287 • Provide transit connection to Denver, Denver International Airport, and metro Park-n-Rides • Provide longer service hours in Fort Collins, including Sundays and late nights • Build light rail between Fort Collins, Greeley, and Loveland • Provide transit connections between Evans, Greeley, and Windsor • Provide quicker local bus routes within cities • Provide connections to Wellington and Laporte • Expand MAX routes to other important corridors, including to Loveland • Provide bus route to southeast Fort Collins • Enable regional cohesion between municipal transportation hubs • Create a bus route from Eaton to downtown Greeley • Expand service on US 287 south of Harmony Road to ensure connections to senior and social services along corridor • Provide a transit connection between Fort Collins and Windsor • Provide rail transit between Fort Collins and Cheyenne, WY • Improve lighting at bus stops
Other	• Build cities at human scale, not for cars • Convert Old Town Fort Collins to a car-free zone • Expand MPO to include Estes Park • Decrease number of at-grade railroad crossings throughout region

Chapter 12: Implementation

A. Plan Amendment Process

The North Front Range Metropolitan Planning Organization (NFRMPO) updates the Regional Transportation Plan (RTP) every four years, as required by federal law for air quality nonattainment and maintenance areas. However, between RTP updates, amendments to the RTP may be necessary. Amendments can be triggered by new regionally significant projects or by substantially modified project descriptions. A plan amendment could also be necessary if substantial financial resources become available that were not anticipated during this 2040 plan process.

To initiate a plan amendment, a local community, Colorado Department of Transportation (CDOT) or the federal government provides information to the NFRMPO outlining the specific amendment request along with a clear explanation of the reason for the amendment or the source of the new funding. NFRMPO staff review the request and determine how the request should be processed. The Technical Advisory Committee (TAC) and NFRMPO Planning Council approve all amendments prior to submission to CDOT and Federal Highway Administration (FHWA). If the amendment requires an air quality conformity determination, it must follow that process prior to the Plan Amendment being completed.

B. Transportation Improvement Program (TIP)

The MPO is responsible for the creation and adoption of a Transportation Improvement Program (TIP) for the region at least every four years. FHWA and FTA determine if the TIP is consistent with the adopted RTP and if it was produced through the continuing, cooperative, and comprehensive (3C) transportation process. This requires the MPO to produce and maintain a multi-year TIP, fiscally constrained by program and year. The FY2016-2019 TIP presents a four-year program of multi-modal projects using a combination of federal, state, and local funds, and identifies the type of improvement, the funding source(s), the sponsoring entity(ies), and an implementation schedule. Projects in the TIP must come from an approved RTP, follow the Congestion Management Process (CMP) outlined therein, and in non-attainment areas, show conformity according to air quality budgets outlined in the Statewide Implementation Plan (SIP). The TIP is included without changes in the Statewide Transportation Improvement Program (STIP), developed by CDOT and approved by the Governor.

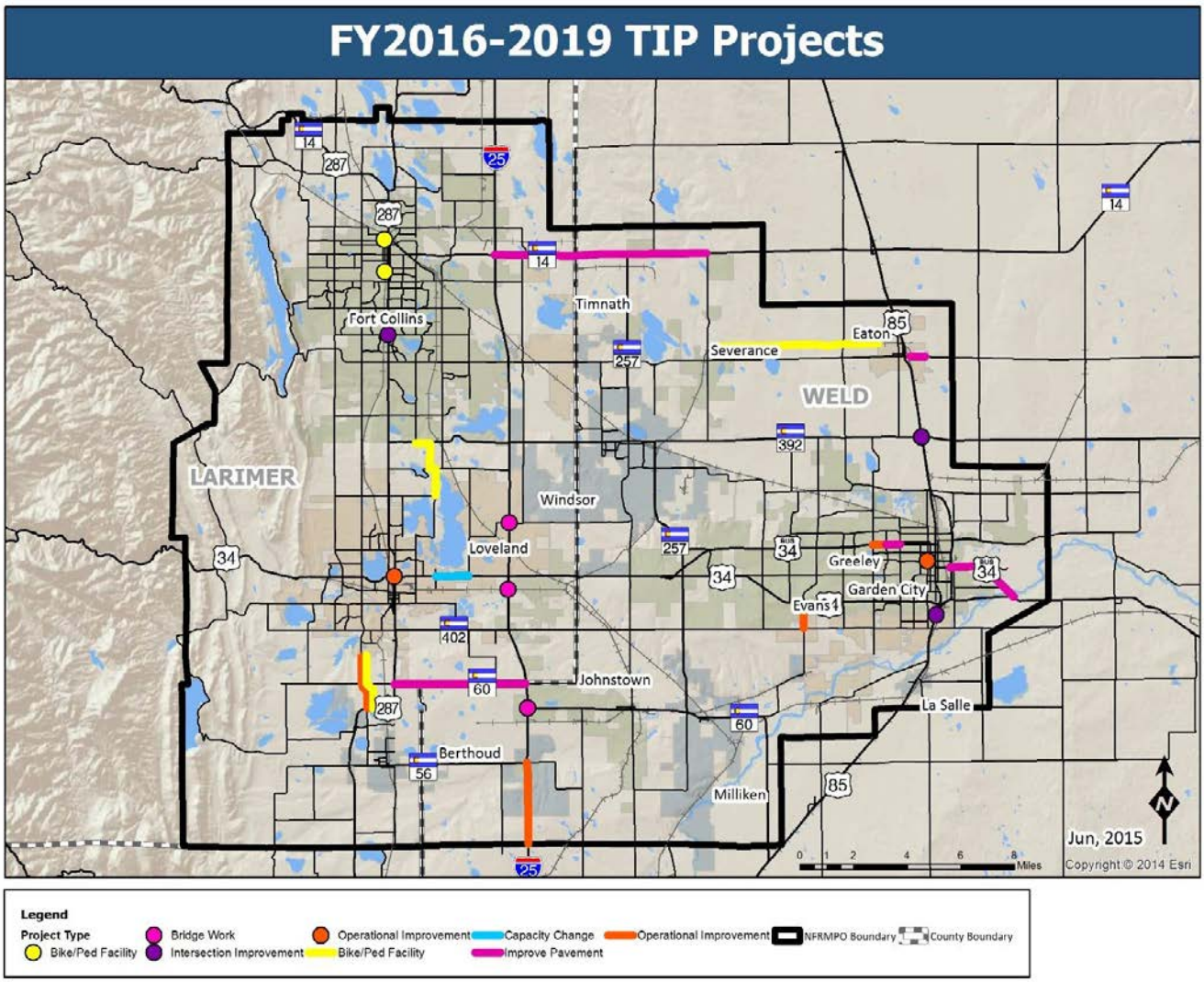
Moving Ahead for Progress in the 21st Century (MAP-21) requires the TIP include:

- To the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets established in the 2040 RTP, linking investment priorities to those performance targets.
- A priority list of proposed federally supported projects and strategies to be carried out within each four-year period after the initial adoption of the TIP.

- A financial plan which demonstrates how the TIP can be implemented, indicating resources from public and private sources reasonably expected to be available to carry out the program, and identifying innovative financing techniques to finance projects, programs, and strategies.
- In air quality nonattainment and maintenance areas, the TIP shall give priority to timely implementation of Transportation Control Measures (TCMs) contained in the applicable SIP in accordance with the Environmental Protection Agency's (EPA) transportation conformity regulations.

Figure 12-1 shows the location of projects included in the FY2016-2019 TIP.

Figure 12-1: FY2016-2019 TIP Projects



C. Fiscally Constrained Plan

MAP-21 requires the 2040 RTP include sufficient financial information for demonstrating projects included in the RTP can be implemented using funds that are reasonably expected to become available over the life of the plan (FY2016–FY2040). Fiscal constraint means the total cost of all transportation projects and expenditures cannot exceed projected financial resources available. To demonstrate project fiscal constraint,

the NFRMPO worked with local communities to determine capacity projects that would be completed by 2040 (see *2040 RTP Regionally Significant Corridors* section). Available funds to implement these projects are derived from eligible federal, state, and local funds outlined in the *Roadway Maintenance, Operations, Rehab, and Safety* and *Congestion Management* categories included in ***Chapter 10*, Table 10-1**.[1] The NFRMPO estimates $583.5M should reasonably become available over the life of the 2040 RTP to complete capacity projects on Regionally Significant Corridors (RSCs). **Table 12-1** identifies available capacity funds, FY2016-2019 TIP programmed capacity projects, and the 2040 RTP modeled capacity project costs.

Table 12-1: 2040 RTP Capacity Fiscal Constraint (FY2016 $ shown in thousands)

Anticipated Funds for Capacity Projects	Amount
Federal and State Funds Available	$215,109
Local Funds Available	$368,452
Total	**$583,561**
FY2016-2019 TIP Programmed Capacity Projects	$8,344
Remaining Capacity Funds Available	**$575,217**
2040 RTP Modeled Capacity Project Costs	$566,399
Difference	**$8,818**

D. 2040 RTP Regionally Significant Projects

A 2040 RTP Regionally Significant Project is any fiscally constrained project that impacts the roadway network located on a RSC, defined in ***Chapter 2***. This includes any capacity or non-capacity air quality project on a RSC, such as additional lane-miles or new intersections, and includes a specific funding source. A funding source is required to ensure a realistic forecast. All member jurisdictions, including CDOT, were asked to provide information on projects that fit this criteria, with a year of improvement between 2015 and 2040. These project lists were collected for the RTP and are included in the 2040 NFRMPO Regional Travel Demand Model (RTDM). These projects are shown in **Figure 12-2**. Individual project information is detailed in **Table 12-2**.

[1] Eligible programs include Regional Priority Program (RPP), FASTER Safety, Highway Safety Investment Program, STP-Metro, and local funds.

Figure 12-2: 2040 RTP Regionally Significant Projects

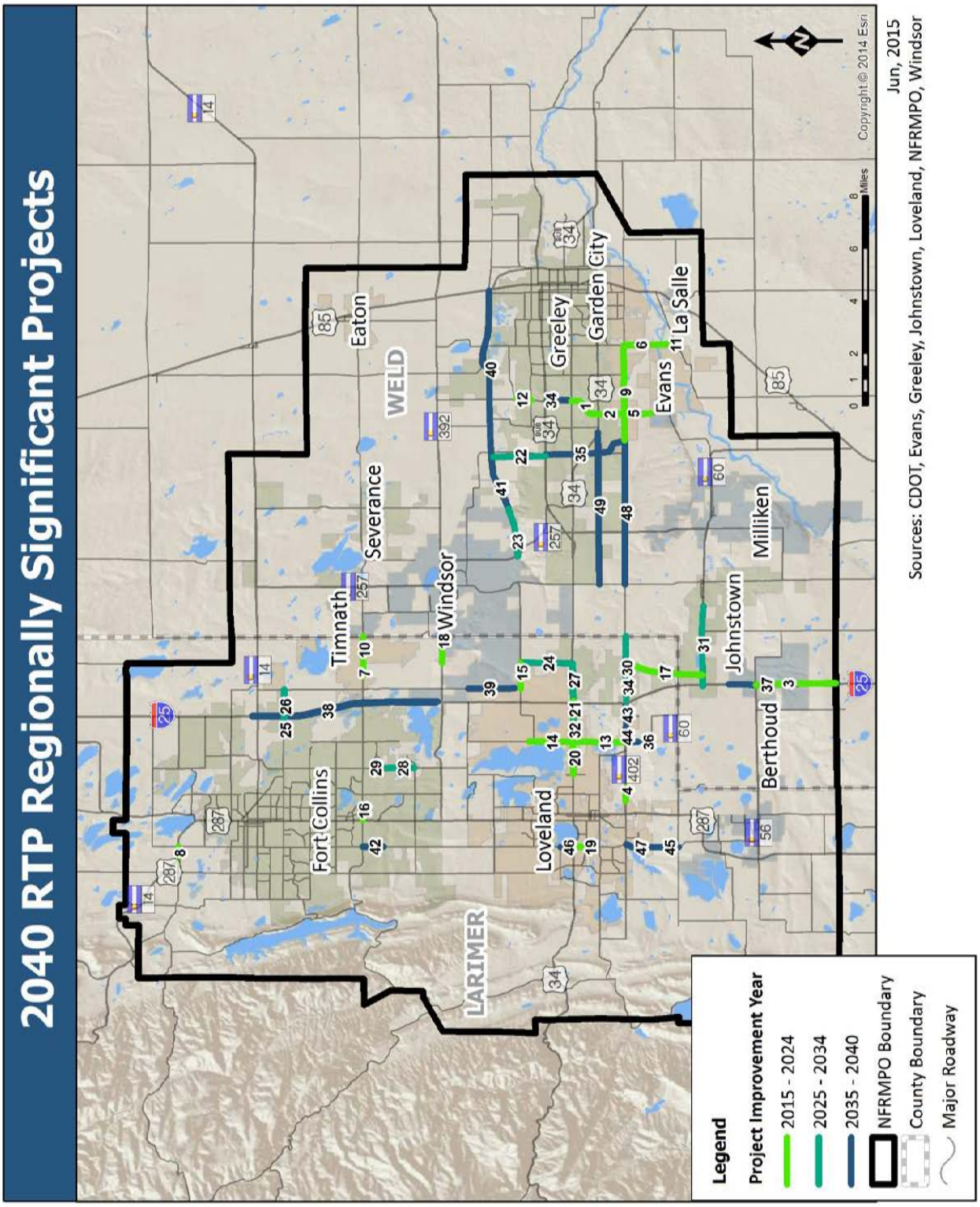


Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2015 Network								
1	**59th Avenue**	20th Street	US 34 Bypass	2	3	2015	$1,500	Greeley – Capital Improvement Program
2	**65th Avenue**	US 34 Bypass	Weld CR 54	2	4	2015	$3,000	Greeley – Road Development Funds
3	**I-25 Southbound**	Approximately Mile Marker 247	Approximately Mile Marker 249	2	3	2015	$9,700	NFRMPO – STP-Metro Funds
4	**SH 402**	St. Louis Avenue	Boise Avenue	2	4	2015	$6,000	Loveland General Fund – CDOT
5	**65th Avenue**	37th Street	49th Street	2	4	2016	$1,000	Evans – Capital Projects Street Fund Future Development
6	**35th Avenue**	37th Street	49th Street	2	4	2016	$1,000	Evans – Capital Projects Street Fund Future Development
7	**Harmony Road**	RR tracks	Three Bell Parkway (Larimer CR 3)	2	4	2016	$3,325	Timnath – General Fund/Adjacent Development

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2015 Network (Cont.)								
8	**US 287**	Shields Street	Laporte Bypass	2	4	2016	$22,000	CDOT – FASTER Safety/RAMP
9	**37th Street**	35th Avenue	Two Rivers Parkway	2	4	2018	$1,500	Evans – Capital Projects Street Fund Future Development
10	**Harmony Road**	Three Bell Parkway (Larimer CR 3)	Lathem Parkway (Larimer CR 1)	2	4	2018	$3,500	Timnath – General Fund/Adjacent Development
11	**35th Avenue**	49th Street	Weld CR 35 & Weld CR 394	0	4	2020	$1,500	Evans – Capital Projects Street Fund Future Development
12	**59th Avenue**	4th Street	C Street	2	4	2020	$2,400	Greeley – Road Development Funds
13	**Boyd Lake Avenue**	Larimer CR 20C	US 34	2	4	2020	$1,988	Loveland – General Fund
14	**Boyd Lake Avenue**	US 34	Canal	2	4	2020	$2,732	Loveland – Centerra Metro District
15	**Crossroads Boulevard**	Centerra Parkway	Larimer CR 3	2	4	2020	$2,365	Loveland – General Fund

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2015 Network (Cont.)								
16	**Harmony Road**	College Avenue	Boardwalk Drive	4	6	2020	$9,349	Fort Collins – Street Oversizing Fund, Developer Contribution, Sales Tax
17	**Larimer CR 3**	Weld CR 50	Larimer CR 18	2	2	2020	$7,605	Johnstown – Johnstown/Adjacent Developers
18	**SH 392**	17th Street	Larimer CR 3	2	4	2020	$1,500	Windsor – Road Impact Fee and Adjacent Development
19	**Taft Ave.**	Arkins Branch	US 34	4	4	2020	$10,509	Loveland – General Fund
20	**US 34**	Denver Avenue	Boyd Lake Avenue	4	6	2020	$5,245	Loveland – General Fund- CDOT
21	**US 34**	Rocky Mountain Avenue	I-25	2	2	2020	$2,792	Loveland - Centerra Metro District
2025 Network								
22	**83rd Avenue**	US 34 Business (10th Street)	US 34 Bypass	2	4	2025	$5,900	Greeley – Road Development Funds
23	**Crossroads Boulevard**	Great Western Drive	SH 257	0	3	2025	$5,000	Windsor – Road Impact Fee & Adjacent Development

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2025 Network (Cont.)								
24	**Larimer CR 3**	US 34	Crossroads Boulevard	0	2	2025	$8,073	Loveland – General Fund
25	**Prospect Road**	North Summitview Drive	I-25	2	4	2025	$7,500	Fort Collins – Street Oversizing Fund, Developer Contribution, Sales Tax
26	**Prospect Road**	I-25	Growth Management Area Boundary	2	4	2025	$3,000	Fort Collins – Street Oversizing Fund, Developer Contribution, Sales Tax
27	**US 34**	Centerra Parkway	Kendall Parkway (Larimer CR 3E)	4	6	2025	$5,568	Loveland – Centerra Metro District
28	**Timberline Road**	Trilby Road	Kechter Drive	2	4	2025	$15,000	Fort Collins – Street Oversizing Fund
29	**Timberline Road**	Kechter Drive	Battlecreek Drive	2	4	2025	$2,003	Fort Collins – Street Oversizing Fund, Developer Contribution, Sales Tax
30	**Larimer CR 18**	I-25 Frontage Road	Weld CR 13	2	4	2030	$13,890	Johnstown – Adjacent Developers

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2025 Network (Cont.)								
31	**SH 60**	I-25	Weld CR 15	2	4	2030	$17,363	Johnstown – CDOT
32	**US 34**	Boyd Lake Avenue	Rocky Mountain Avenue	2	2	2030	$4,291	Loveland – General Fund - CDOT
33	**US 34**	I-25	Centerra Parkway	4	6	2030	$2,066	Loveland – General Fund - CDOT
2035 Network								
34	**59th Avenue**	US 34 Bypass	20th Street	2	4	2035	$3,500	Greeley – Road Development Funds
35	**83rd Avenue**	Weld CR 54	Weld CR 64	2	3	2035	$7,000	Greeley – Road Development Funds
36	**Boyd Lake Avenue**	SH 402	Larimer CR 20E	2	4	2035	$6,300	Loveland – General Fund
37	**I-25**	Weld CR 38	SH 56	2	4	2035	$85,000	CDOT Strategic Projects, Strategic Transit A, Local Funds (City of Loveland), Flexible Funds – RTP, Other STP Metro, CMAQ, FASTER Safety (1)

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2035 Network (Cont.)								
38	**I-25**	SH 392	SH 14	2	4	2035	$137,000	CDOT Strategic Projects, Strategic Transit A, Local Funds (City of Loveland), Flexible Funds – RTP, Other STP Metro, CMAQ, FASTER Safety
39	**North Fairground Avenue/Larimer CR 5)**	Rodeo Road	71st Street (Larimer CR 30)	2	4	2035	$3,000	Loveland – General Fund
40	**O Street**	SH 85	83rd Avenue	1	3	2035	$4,700	Greeley – Road Development Funds
41	**O Street**	83rd Avenue	Weld CR 23	0	3	2035	$7,400	Greeley – Road Development Funds
42	**Shields Street**	Fossil Creek Drive	Harmony Road	2	4	2035	$6,500	Fort Collins – Street Oversizing Fund
43	**SH 402**	Approximately Heron Drive	I-25	2	4	2035	$33,378	Loveland – General Fund – CDOT
44	**SH 402**	US 287	St. Louis Avenue	2	4	2035	$3,000	Loveland – General Fund – CDOT

Table 12-2: 2040 RTP Regionally Significant Projects								
Project Map Number	Street Name	From	To	Number of Lanes		Year of Improve-ment	Cost (thousands)	Funding Source
				Before	After			
2035 Network (Cont.)								
45	**Taft Avenue/ Larimer CR 17**	SH 60/Larimer CR 14	28th Street Southwest/ Larimer CR 16	2	4	2035	$6,123	Loveland – General Fund
46	**Taft Avenue**	US 34	22nd Street	4	4	2035	$7,314	Loveland – General Fund
47	**Taft Avenue**	28th Street Southwest	14th Street Southwest	4	4	2035	$3,920	Loveland – General Fund
48	**Weld CR 54**	35th Avenue	Weld CR 17	1	3	2035	$6,800	Greeley – Road Development Funds
49	**Weld CR 56**	US 34 Bypass	Weld CR 17	0	2	2035	$21,000	Greeley – Road Development Funds

E. Environmental Mitigation Analysis

SAFETEA-LU and MAP-21 set requirements for MPOs and state DOTs to identify potential environmental mitigation activities in their long range plans.[2] These activities should be developed alongside Federal, State, land management, and regulatory agencies. Federally funded transportation projects are required to complete the National Environmental Policy Act (NEPA) process, as discussed in ***Chapter 5***. As part of the NEPA process, transportation projects must analyze potential impacts to the environment. Federal Register *40 CFR § 1500.1(b): Purpose* describes the NEPA process as a way to help public officials make decisions based on an understanding of environmental consequences, and to take actions that protect, restore, and enhance the environment.[3]

MPO staff analyzed the potential impacts of transportation projects according to the environmental features detailed in ***Chapter 5***. Transportation projects included are from the FY2016-2019 TIP and the 2040 RTP Regionally Significant Projects list. Project impacts are shown in **Table 12-3**. It is important to note projects may be counted in more than one category because they may impact more than one environmental resource. As a result, column totals may be more than the total number of planned projects.

Transportation projects affect each resource differently, depending on the resource's location within the region. The most impacted resource is Energy Production due to the span of the Wattenberg Gas Field across much of Weld County. Wetlands may be affected by 22 projects. Only one Historical and Archeological Site may be impacted by transportation projects. Three transportation projects will be located atop the Laramie-Fox Hills aquifer (Water Resources), while 14 projects will be located within a 100-year flood zone. Four projects will be built within potential Conservation Areas. As each project goes forward, the respective agency/jurisdiction will need to study individual project impacts on each environmental resource.

[2] 49 U.S.C. 5303: http://www.fta.dot.gov/documents/chap53MAP21.pdf
[3] 40 CFR § 1500.1(b): http://environment.fhwa.dot.gov/projdev/tdmmitig2.asp

Table 12-3: Environmental Mitigation Analysis							
Project Type (Total Number of Projects Planned)	Number of Projects Potentially Impacting Resources[4]						
	Historical and Archeological Sites	Flood Zones	Water Resources	Wetlands	Conservation Areas	Energy Production	Total
Bridge (3)	0	0	0	0	0	2	2
Intersection Improvement (4)	0	0	0	0	1	3	4
Bike/Ped Facility (5)	0	0	0	1	0	1	2
Operational Improvement (6)	0	0	0	2	0	4	6
Pavement (5)	0	3	1	2	0	4	10
Capacity (52)	1	11	2	17	3	23	57
Total	1	14	3	22	4	37	

Figures 12-2 through 12-7 show the transportation projects in relation to the region's environmental resources.

[4] Projects may be present in more than one column, reflecting the multiple resources the project may impact. Total number of projects affecting resources may be more than actual number of projects.

Figure 12-2: Historic and Archaeological Sites

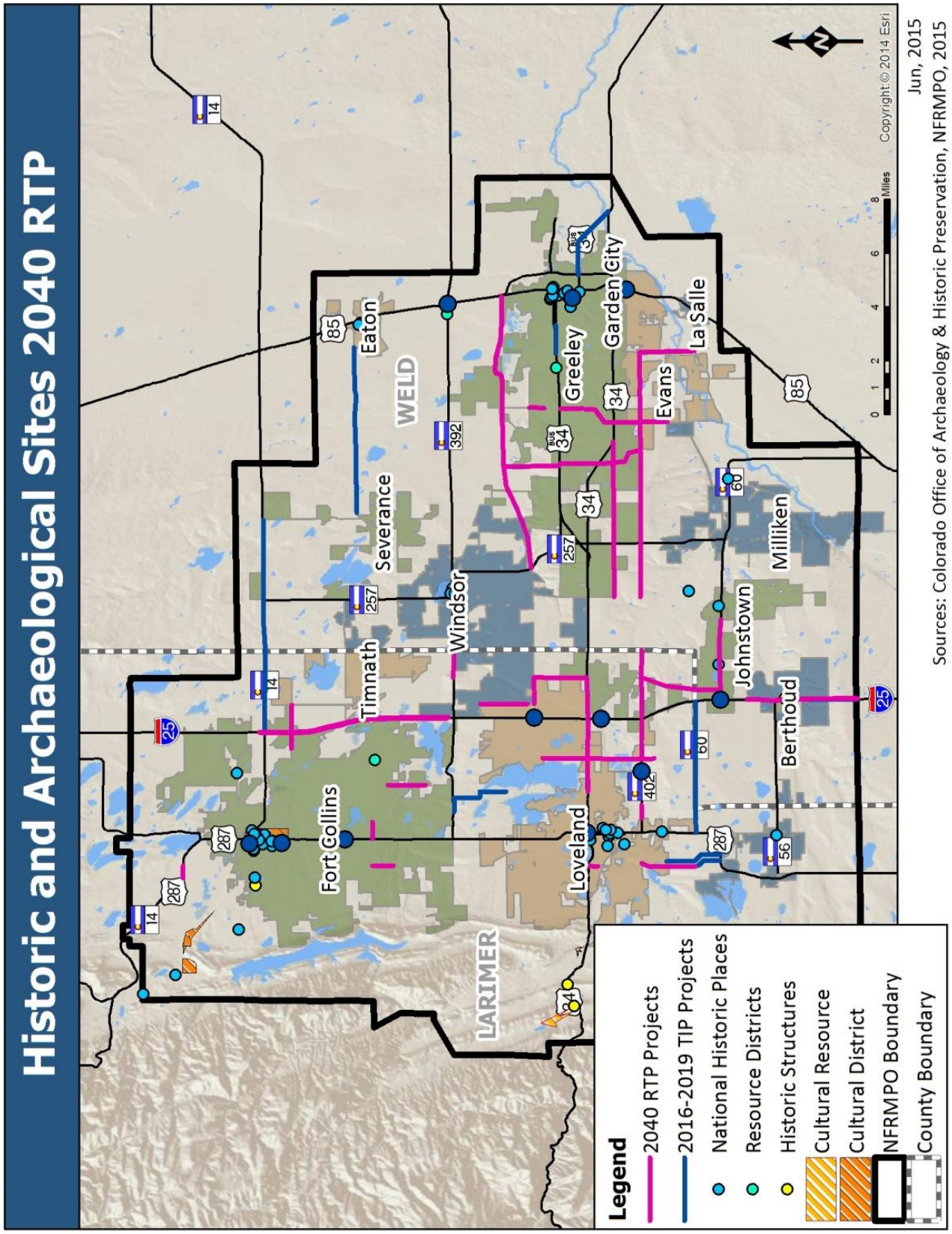


Figure 12-3: Flood Plains

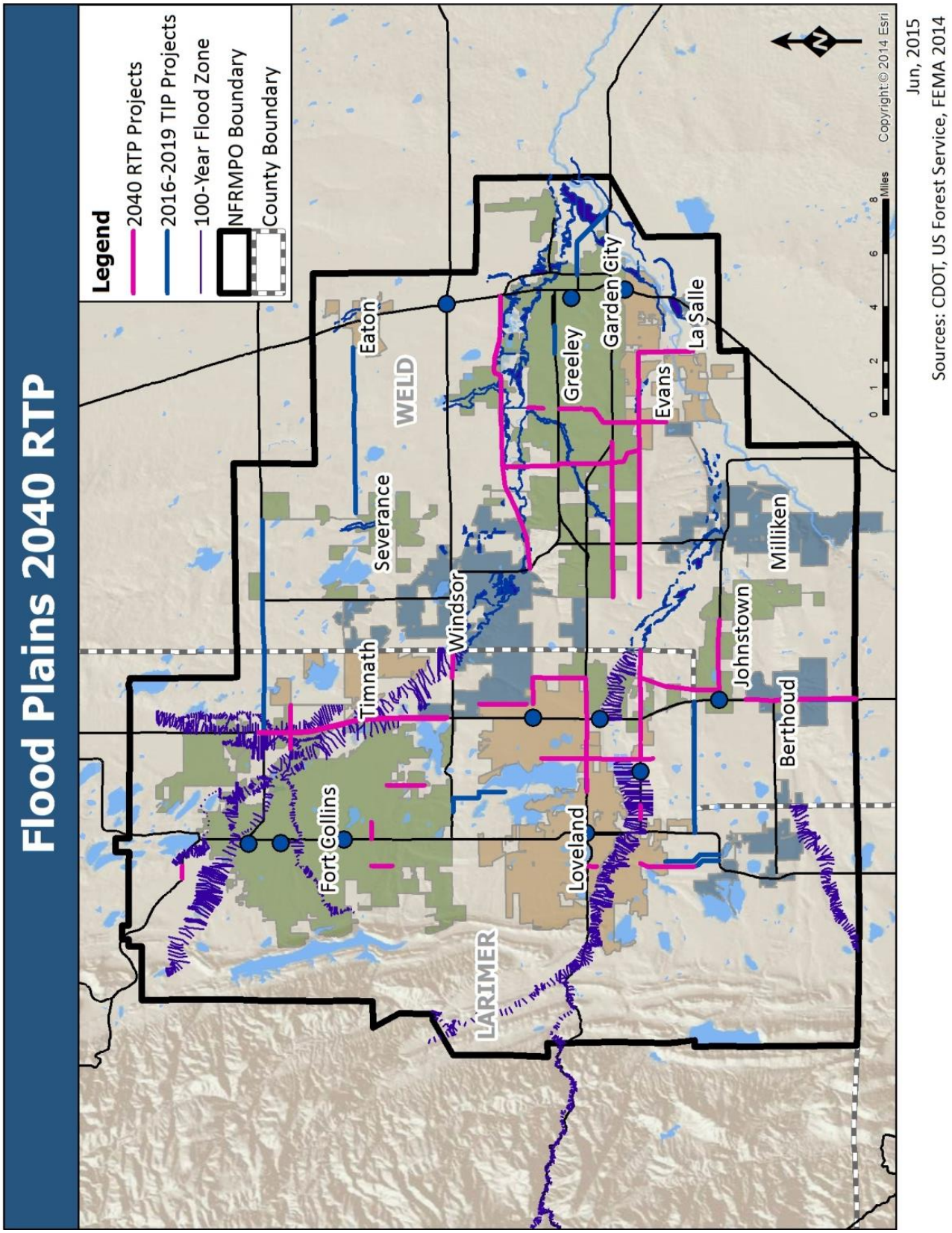


Figure 12-4: Water Resources

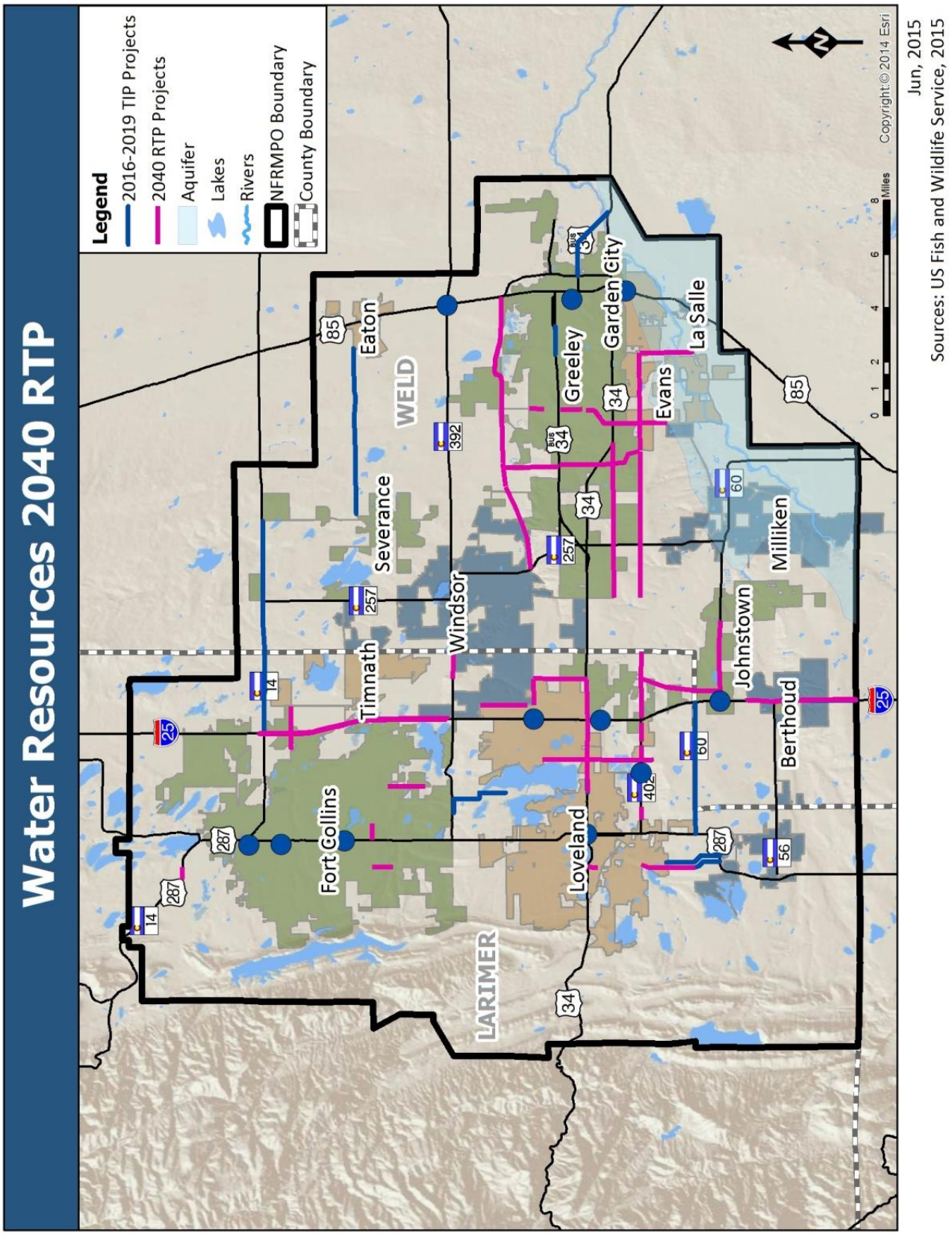


Figure 12-5: Wetlands

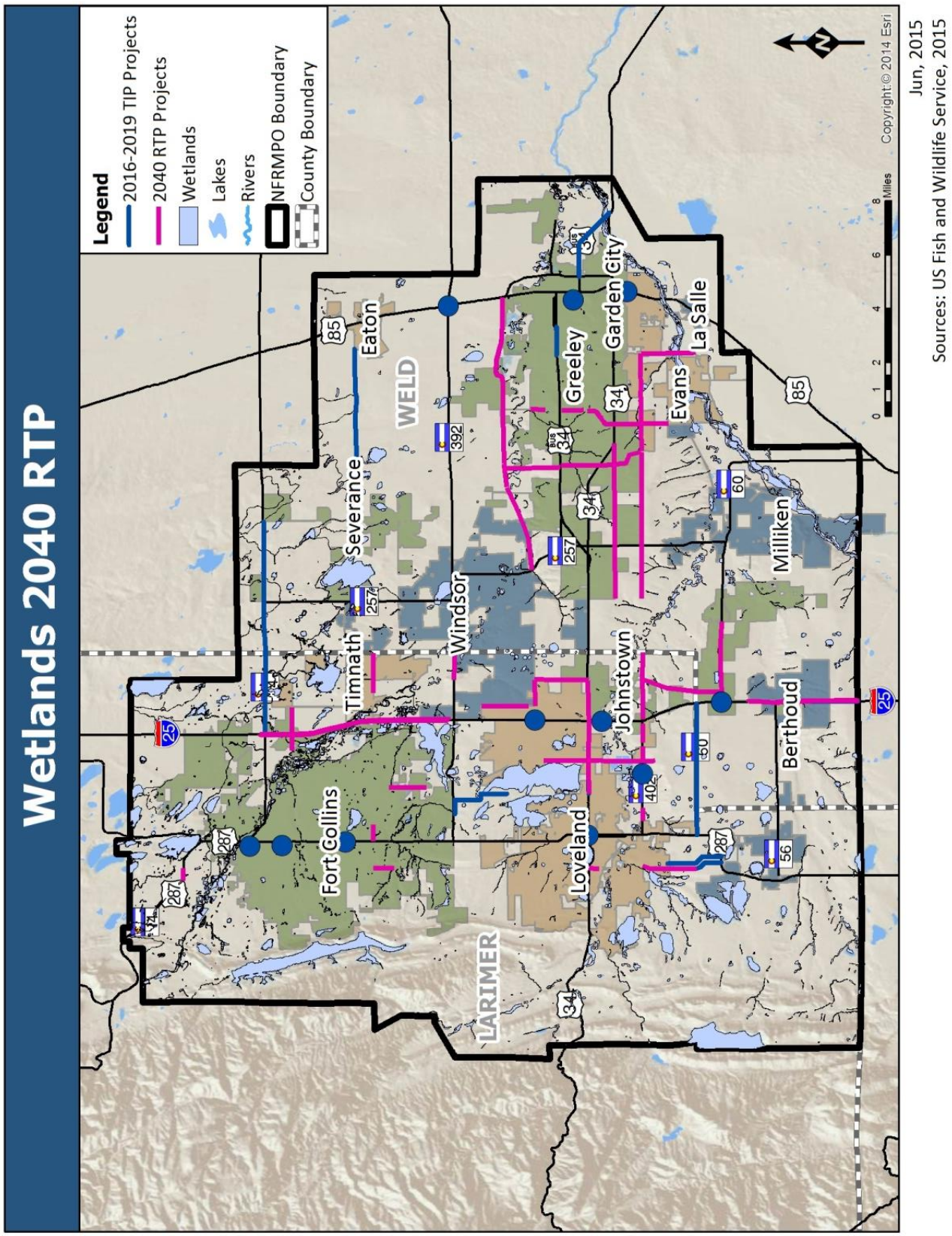


Figure 12-6: Conservation Areas

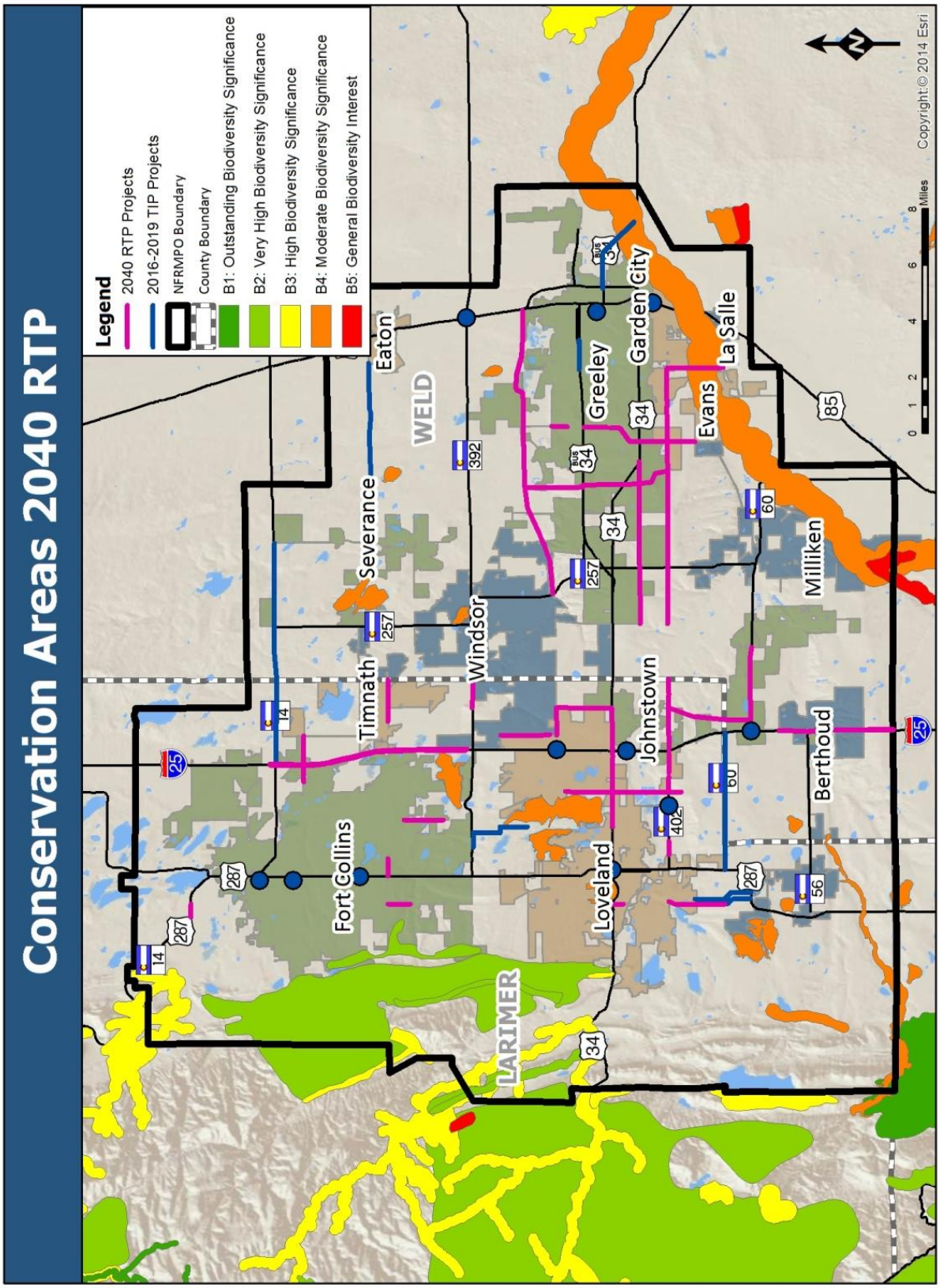
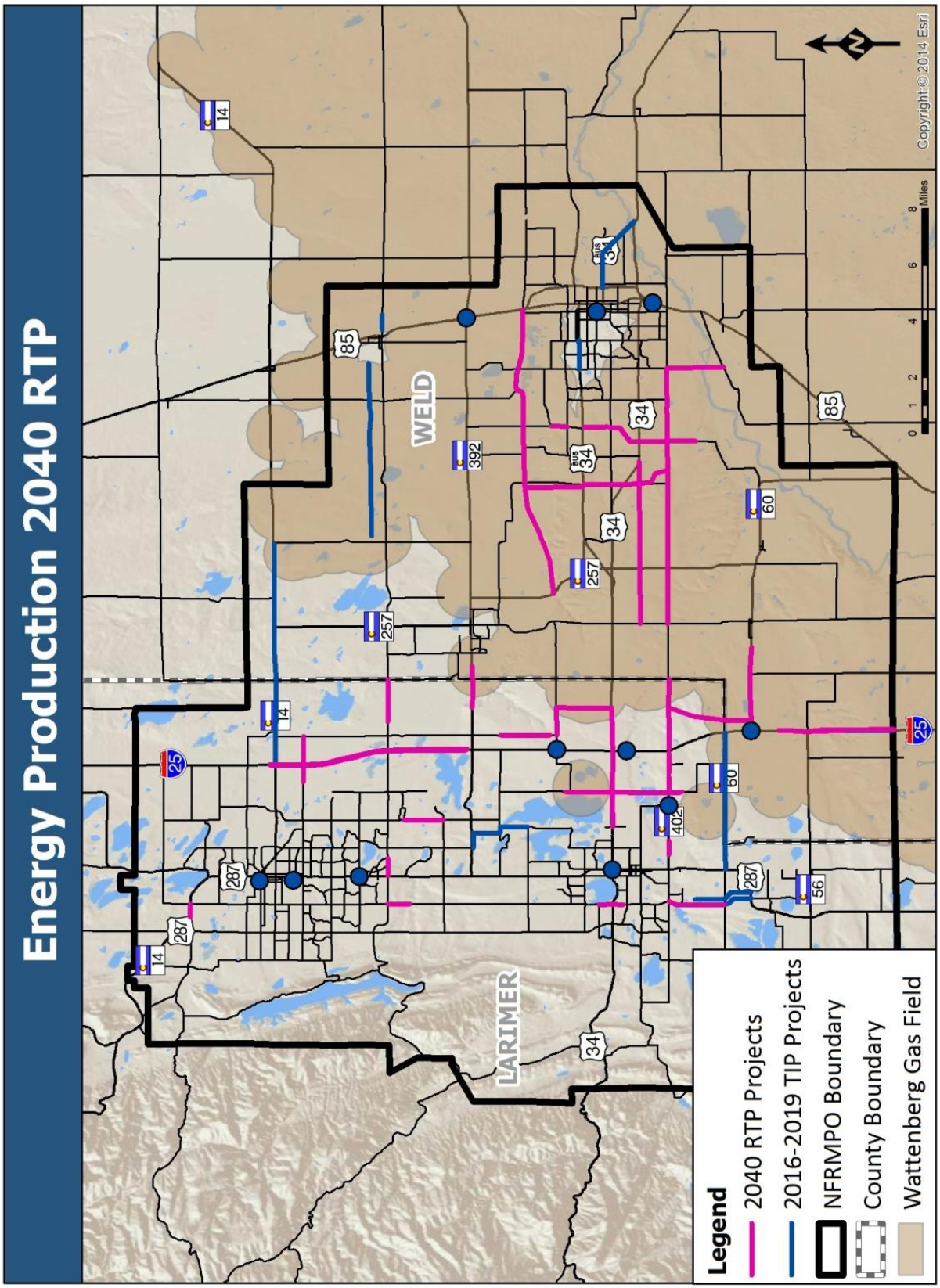


Figure 12-7: Energy Production



F. Environmental Justice Analysis

An Environmental Justice (EJ) analysis must be completed on all projects included in the 2040 RTP. Projects that lie within ¼-mile of or adjacent to an EJ population are considered EJ. If it does not, the project is considered Non-EJ. The benefits and burdens of each project must be examined on all EJ and Non-EJ projects. An overall analysis on projects in the RTP determines if it meets EJ requirements. The analysis process follows the three guiding principles outlined in DOT order 5610.2(a) listed in ***Chapter 3***.

An EJ analysis also includes a determination of whether the transportation related activity will result in a "disproportionately high and adverse effect on human health and the environment" as defined in DOT order 5610.2(a) as listed in ***Chapter 3***. All EJ procedures are completed by NFRMPO staff. **Table 12-4** lists the total number of EJ and Non-EJ projects included in the FY2016-2019 Transportation Improvement Program (TIP). The FY2016-2019 TIP contains a fiscally constrained list of projects covering the first four years of funding in the RTP. **Table 12-5** includes all projects on Regionally Significant Corridors (RSCs) in the North Front Range Region that are modeled for air quality purposes. **Figure 12-8** shows all of the EJ and Non-EJ projects.

An overall EJ analysis of projects included in the FY2016-2019 TIP and RTP shows 49 percent of projects are being completed in and 31 percent of the overall funding is being spent in EJ areas. Non-EJ areas contain 51 percent of projects being completed and 69 percent of overall funding spent. **Table 12-6** includes an EJ analysis of projects by type. EJ areas benefit from the addition of bicycle and pedestrian, operational improvement, intersection improvement, and pavement improvement projects. While 42 percent of capacity projects are being completed in or adjacent to EJ areas, only 28 percent of capacity project funds are being spent on those projects. Capacity projects could present a burden to EJ area by separating communities and creating an unsafe environment for bicyclists and pedestrians crossing roadways.

Transit projects included in the FY2016-2019 TIP are not included **Figure 12-8,** but project totals are included in the overall EJ analysis. The three major transit operators in the region have received Congestion Mitigation and Air Quality (CMAQ) funds to purchase new alternative fuel buses. Since the three transit operators provide services in EJ areas, all three projects are considered to be a benefit to EJ areas.

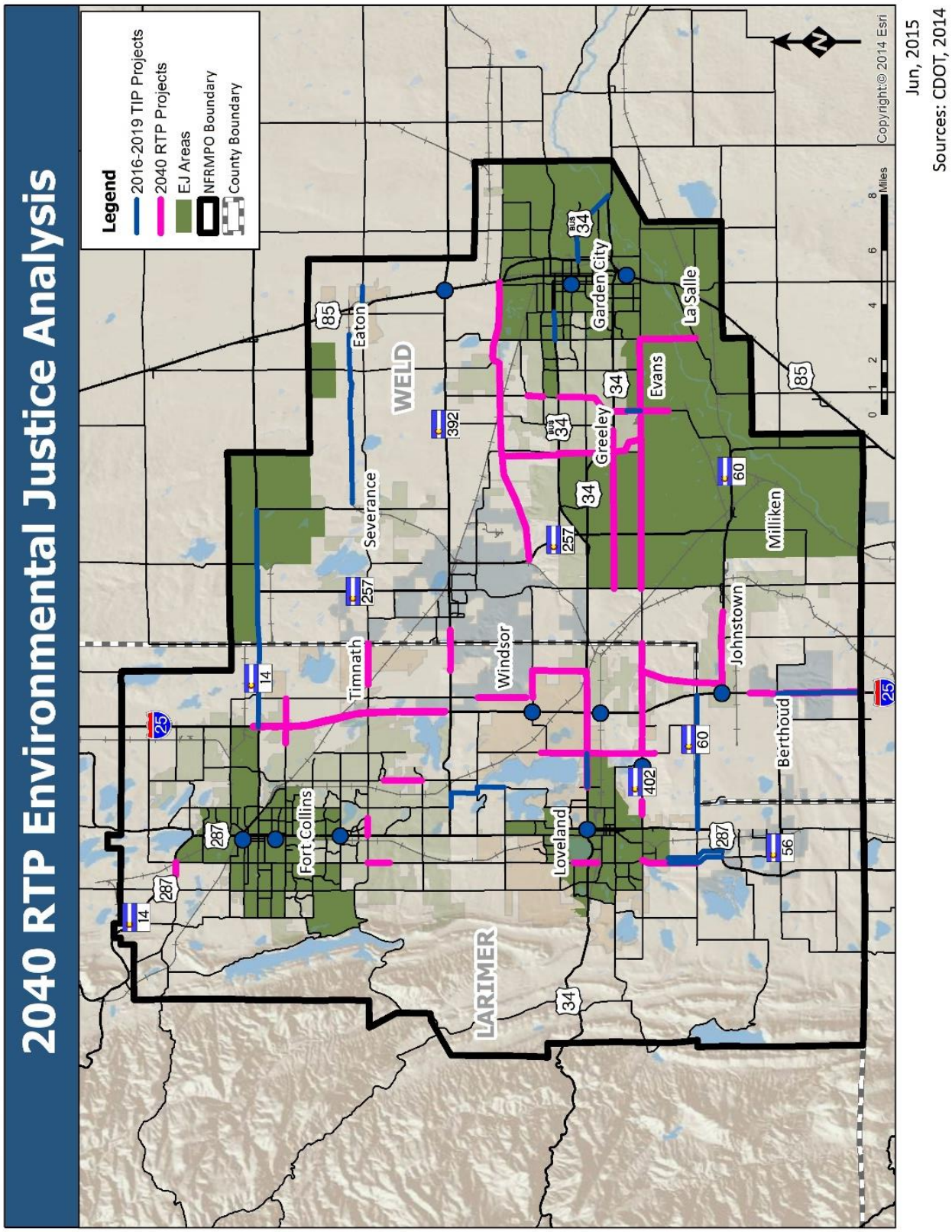
Table 12-4: FY2016-2019 TIP EJ Projects (FY2016 $ shown in thousands)

Totals	EJ Areas	Non-EJ Areas	Total
Total Number of Projects	17	10	**27**
	63%	37%	**100%**
Total Investment Amount	$34,972	$13,847	**$48,819**
	72%	28%	**100%**

Table 12-5: 2040 RTP EJ Projects (FY2016 $ shown in thousands)			
Totals	**EJ Areas**	**Non-EJ Areas**	**Total**
Total Number of Projects	20	29	**49**
	40%	60%	**100%**
Total Investment Amount	$159,022	$418,077	**$577,099**
	20%	80%	**100%**

Table 12-6: EJ Projects by Type (FY2016 $ shown in thousands)			
Totals	**EJ Areas**	**Non-EJ Areas**	**Total**
Bike/Ped Facility	3	2	**5**
	$1,814	$1,251	**$3,065**
Bridge Work	0	3	**3**
	$0	$2,555	**$2,555**
Intersection Improvement	2	2	**4**
	$3,283	$5,000	**$8,283**
Operational Improvement	5	1	**6**
	$5,468	$3,316	**$8,784**
Capacity Change	21	29	**50**
	$160,322	$418,077	**$578,399**
Improve Pavement	3	2	**5**
	$14,206	$1,725	**$15,931**
Transit	3	0	**3**
	$8,901	$0	**$8,901**
Total	**37**	**39**	**76**
	$193,994	**$431,924**	**$625,918**

Figure 12-8: 2040 RTP Environmental Justice Analysis

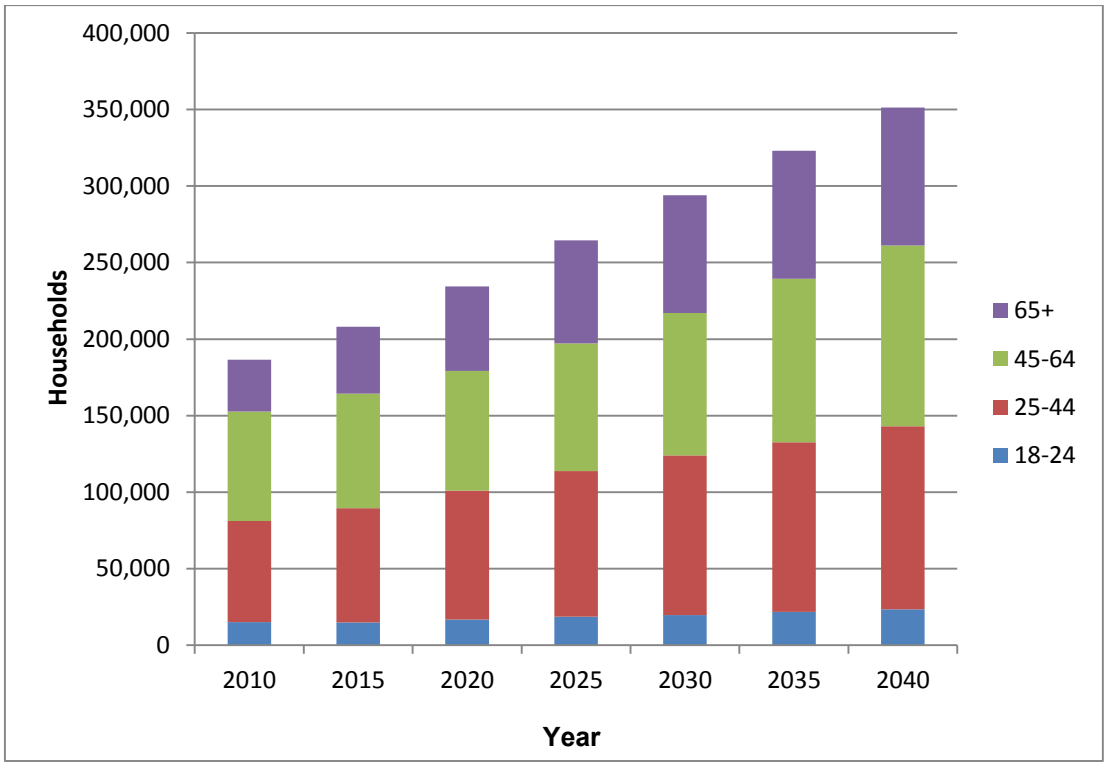


G. Emerging Trends

The North Front Range region has experienced rapid growth in recent years, resulting in an area with a 2012 population of approximately 450,000 people. This growth is continuing and population projections show that by 2040, the North Front Range area population will double. This population growth will place an even greater demand on the movement of people and goods on an already stressed and aging transportation system.

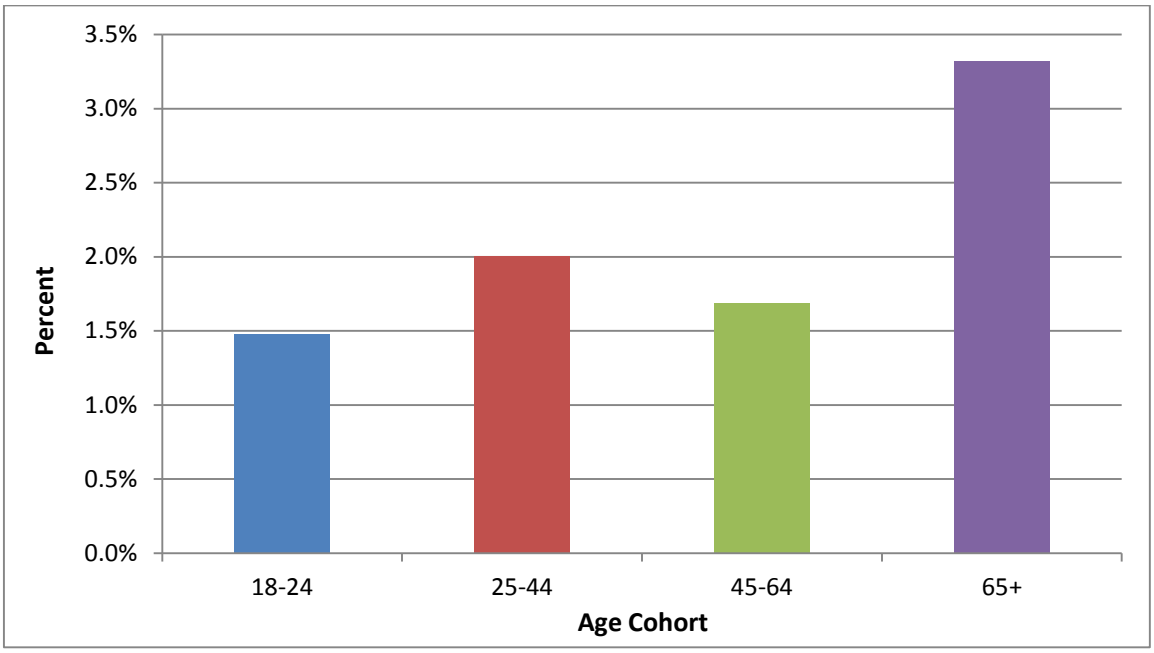
This population growth will occur in all age cohorts; however, households headed by the oldest cohort, those aged 65 years and older, will grow the fastest. This cohort will grow from 18 percent of the population in 2010 to 26 percent of the population by 2040. This equates to a growth rate of over 166 percent, from 33,000 to over 90,000. Additionally, this cohort will increase more than three percent every year on average through 2040. This is over twice the growth rate for the group with the smallest gains, the 18-24 cohort. The average annual growth rate for all segments is shown in **Figures 12-8 and 12-9**.

Figure 12-9: Household Growth by Head of Household Age Group, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

Figure 12-10: Average Annual Household Growth Rate by Age Group, 2010-2040



Source: *2040 Economic and Demographic Forecast North Front Range Metropolitan Planning Organization (NFRMPO), 2013*

Knowing the age cohort growth projection rates is important for transportation as it allows time to plan to better meet the needs of the age groups needing additional or specialized transit services. Based on this projection, providing more transportation options for the aging population should be a priority in the region over the next 25 years. Future transportation trends the region should consider in future planning efforts could include:

- Seniors needing transportation to medical appointments, the grocery store, and social events, etc.;
- A higher number of people commuting via transit, bicycles, or walking versus automobiles;
- Decreased transportation funding;
- Higher gas prices; and
- New and emerging transportation technologies, including self-driving automobiles.

As the region moves toward 2040, these emerging trends will need to be to be factored into the transportation planning process and into the allocation of transportation funds to those projects providing the greatest benefit to the region's population.

DISCUSSION ITEM: Additional CMAQ Funding Allocation

AGENDA ITEM SUMMARY (AIS)

North Front Range Transportation & Air Quality Technical Advisory Committee (TAC)

Meeting Date	Agenda Item	Submitted By
June 17, 2015	Additional CMAQ Funding Allocation	Josh Johnson

Objective / Request Action

Allocate additional FY2014 CMAQ revenue from CDOT.

- ☐ Report
- ☐ Work Session
- ☑ Discussion
- ☐ Action

Key Points

- CDOT's Office of Financial Management and Budget (OFMB) has completed its final reconciliation for FY2014
- The reconciliation lists an additional CMAQ allocation of $406,878 for the NFRMPO
- Additional allocation is to be programmed for FY2016 CMAQ projects

Committee Discussion

This is the first time TAC has seen the reconciliation.

Supporting Information

CDOT's OFMB released a memo on May 20, 2015 regarding changes in FY2014 allocations. The changes included an additional CMAQ allocation for the NFRMPO based on actual revenues received from FHWA. The adjustments are being applied to currently open FY2015 pools; however, the allocations are being rolled forward to FY2016 due to CDOT STIP deadlines.

Advantages

Allocating additional CMAQ funds ensures the funds are programmed in a timely manner and allows the TIP to remain fiscally constrained.

Disadvantages

None noted.

Analysis /Recommendation

Staff requests TAC members review the attached tables and make a recommendation on allocating the additional CMAQ funds.

Attachments

- CDOT Reconciliation Memo
- NFRMPO CMAQ Project Funding Schedule

Rev. 9/17/2014

COLORADO
Department of Transportation
Division of Accounting and Finance

Division of Accounting and Finance
4201 E. Arkansas Ave., Room 235
Denver, CO 80222-3400

DATE: May 20 2015
TO: MPOs, TPRs, and Region Transportation Directors (RTDs)
FROM: Maria Sobota, Acting Chief Financial Officer, Division of Accounting and Finance (DAF) & Jeff Sudmeier, Manager, Multimodal Planning Banch, Division of Transportation Development (DTD)
SUBJECT: FY 14 Revenue Reconciliation

After further review of Fiscal Year 2014 actual revenues, the Office of Financial Management and Budget (OFMB) has completed its final annual reconciliation. Please note that there are slight differences from the preliminary analysis that OFMB completed to the Transportation Commision in November of 2014. The attached tables outline additional/reduced FY 14 allocations by formula to the CDOT Regional and Statewide program pools, cost centers and/or to Metropolitan Planning Organizations (MPOs). This includes:

- Statewide administered programs:
  - Planning and Research
  - Highway Safety Improvement
  - Rail Road Crossing
  - FASTER Safety
  - Bridge Enterprise
  - High Performance Transportation Enterprise
  - Recreational Trails
  - Aeronautics
  - Safety Education Funds
  - State Infrastructure Bank
- Locally administered programs:
  - Transportation Alternatives Program (TAP)
  - Congestion Mitigation and Air Quality (CMAQ) Improvement Program
  - Surface Transportation- Metro (STP-M)
  - Metropolitan Planning (Metro-PL)
  - Bridge Off System
- Transportation Commission Contingency Reserve Fund (TCC)

Additional allocations are based on approved FY14 adopted formulas, where applicable. We have received actual revenues for FY 2014 from FHWA, HUTF, FTA, and various other revenue sources, which may be higher or lower than original estimates. Due to the timing of these adjustments, the adjustment will be applied to the currently opened FY15 pools and cost centers.

If you have questions or concerns, please feel free to contact Andrew Wheeler at 303-757-9499 or Eric Ehrbar at 303-757-9581.

Attachments
Attach A: FY 14 Additional Revenue Allocations/Deductions
CC: Region Planners, Region Business Managers, DTD Liaisons

Local Programs

	Budget Estimate	Actuals	Fed/State Increase/(Decrease)	Local Change
STP-Metro	**$ 39,420,570**	**$ 39,594,702**	**$ 174,132**	**$ 36,198**
DRCOG	$ 29,265,223	$ 29,394,496	$ 129,273	$ 26,873
PPPACG	$ 6,895,463	$ 6,925,922	$ 30,459	$ 6,332
NFRMPO	$ 3,259,884	$ 3,274,284	$ 14,400	$ 2,993
Total	**$ 39,420,570**	**$ 39,594,702**	**$ 174,132**	**$ 36,198**

	Budget Estimate	Actuals	Fed/State Increase/(Decrease)	Local Change
CMAQ Improvement	**$ 37,317,093**	**$ 38,315,830**	**$ 998,737**	**$ 207,613**
DRCOG	$ 19,324,014	$ 22,760,655	$ 3,436,641	$ 714,393
PPPACG	$ 680,534	$ 780,932	$ 100,398	$ 20,870
NFRMPO	$ 2,131,843	$ 2,538,721	$ 406,878	$ 84,580
UFR	$ 463,624	$ 532,285	$ 68,661	$ 14,273
Region 1	$ 677,222	$ 875,338	$ 198,116	$ 41,183
Region 2	$ 165,580	$ 165,580	$ -	$ -
Region 3	$ 331,160	$ 331,160	$ -	$ -
Region 4	$ -		$ -	$ -
Region 5	$ 331,160	$ 331,160	$ -	$ -
CMAQ Natural Gas Vehicles	$ 13,211,957	$ 10,000,000	$ (3,211,957)	$ (667,687)
Transfer to other programs	$ -		$ -	$ -
Total	**$ 37,317,094**	**$ 38,315,831**	**$ 998,737**	**$ 207,613**

	Budget Estimate	Actuals	Fed/State Increase/(Decrease)	Local Change
TAP	**$ 9,374,386**	**$ 9,599,124**	**$ 224,738**	**$ 56,185**
Urban Areas > 200,000	$ 2,980,597	$ 3,052,052	$ 71,455	$ 17,864
Areas < 200,000	$ 1,005,662	$ 1,029,772	$ 24,110	$ 6,028
Areas < 5,000	$ 700,934	$ 717,738	$ 16,804	$ 4,201
Flexible	$ 4,687,193	$ 4,799,562	$ 112,369	$ 28,092
Total	**$ 9,374,386**	**$ 9,599,124**	**$ 224,738**	**$ 56,185**
DRCOG	$ 2,212,748	$ 2,265,796	$ 53,048	$ 13,262
PPPACG	$ 521,367	$ 533,866	$ 12,499	$ 3,125
NFRMPO	$ 246,481	$ 252,389	$ 5,908	$ 1,477
Total	**$ 2,980,596**	**$ 3,052,052**	**$ 71,456**	**$ 17,864**
Region 1	$ 1,214,760	$ 1,243,882	$ 29,122	$ 7,281
Region 2	$ 1,147,585	$ 1,175,096	$ 27,511	$ 6,878
Region 3	$ 1,500,856	$ 1,536,837	$ 35,981	$ 8,995
Region 4	$ 1,696,133	$ 1,736,795	$ 40,662	$ 10,165
Region 5	$ 834,456	$ 854,461	$ 20,005	$ 5,001
Transfer to other programs	$ -	$ -	$ -	$ -
Total	**$ 6,393,790**	**$ 6,547,072**	**$ 153,282**	**$ 38,320**

	Budget Estimate	Actuals	Fed/State Increase/(Decrease)	Local Change
Bridge Off System	$ 5,203,541	$ 5,310,182	$ 106,641	$ 26,660
Metro Planning	$ 4,715,740	$ 4,745,140	$ 29,400	$ 6,112

Statewide Programs

	Budget Estimate	Actuals	Fed/State Increase/(Decrease)	Local Change
TCC-State Funds	$ 435,800,000	$ 437,790,574	$ 1,990,574	$ -
TCC-Federal Funds	$ 334,028,797	$ 335,419,099	$ 1,390,302	$ -
FASTER Safety	$ 101,900,000	$ 106,186,683	$ 4,286,683	$ -
Planning and Research	$ 10,280,379	$ 10,280,379	$ -	$ -
Highway Safety Improvement	$ 26,557,116	$ 26,764,010	$ 206,894	$ -
Railroad Grade Separation	$ 1,476,863	$ 1,495,374	$ 18,511	$ -
Railroad At-Grade	$ 1,476,862	$ 1,495,373	$ 18,511	$ -
Recreational Trails	$ 1,591,652	$ 1,591,652	$ -	$ -
Aeronautics	$ 42,800,000	$ 36,882,264	$ (5,917,736)	
Safety Education Funds	$ 2,620,000	$ 3,234,868	$ 614,868	
State Infrastructure Bank	$ 500,000	$ 608,466	$ 108,466	
Total	**$ 959,031,669**	**$ 961,748,742**	**$ 2,717,073**	**$ -**
Bridge Enterprise	$ 115,481,900	$ 119,646,415	$ 4,164,515	$ -
High Performance Transportation Enterprise	$ 3,500,000	$ 6,570,854	$ 3,070,854	
Grand Total	$ 1,174,044,900	$ 1,185,530,990	$ 11,486,090	$ 332,767

FY 2016-2019 CMAQ Project Funding Schedule

Projects approved by Planning Council on December 4, 2014

A. Leftover funding total (must be spent in 2016 or before):	**$1,605,904**
B. Additional leftover funding needed to be allocated:	**$582,580**
C. Available Federal Funding FY 2016-2019:	**$12,185,866**
D. Total Available Funding (Line A + Line C):	**$13,791,770**

CMAQ Pool	Project Sponsor	Project Name	Federal Request	Federal Recommendation Reduction	Unfunded	Rank	Leftover funding needed to be allocated	Federal Fiscal Year			
								2016	2017	2018	2019
Signal Timing	Greeley	Greeley Comprehensive Traffic Signal Timing	$185,000	$185,000	$0	1	$35,537	$185,000			
	Loveland	Loveland Traffic Optimization	$380,000	$380,000	$0	4		$380,000			
	Loveland	Loveland Adaptive Signals	$770,000	$0	$770,000	6					
CNG Bus Replacement	Greeley	GET CNG Bus Replacement	$5,892,933	$3,880,230	$2,012,703	5	$304,107	$764,842	$778,567	$778,567	$1,558,255
	Fort Collins	Transfort CNG Bus Replacement	$3,311,600	$2,762,936	$548,664	7		$1,177,857	$791,926	$793,154	
	Loveland	COLT CNG Bus Replacement	$2,208,000	$726,616	$1,481,384	8				$363,308	$363,308
CNG Equipment	Weld County	Vehicle Replacement /Facility Expansion/LaSalle Vehicle Replacement	$5,303,429	$4,508,114	$795,315	2,3	$242,936	$1,466,306	$1,252,472	$887,936	$901,400
	Loveland	Loveland CNG Vehicle Replacement	$2,343,720	$383,147	$1,960,573	9			$127,716	$127,716	$127,716
	Larimer County	Larimer County CNG Vehicle Replacement	$1,473,662	$383,147	$1,090,515	10		$95,787	$95,787	$95,787	$95,787
Total			$21,868,344	$13,209,190	$8,659,154	-	$582,580	$4,069,791	$3,046,467	$3,046,467	$3,046,466

Total of $23,836 needed to be distributed among the bus projects to make up for fully funding the signal timing projects. It was distributed by amount awarded. $12,550 was taken out of GET in 2016, $8,936 out of Transfort in 2016. Both projects had $1,175 taken out additionally to make up for the Loveland portion, $2,350 total. Transfort gets the $1,175 back in 2018 and GET in 2019.